UNITED STATES PATENT AND TRADEMARK OFFICE

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ESPLIN & ASSOCIATES
c/o DISNEY ENTERPRISES, INC.
5411 Avenida Encinas
Suite 100
Carlsbad, CA 92008

EXAMINER
JOO, JOSHUA

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UNITED STATES PATENT AND TRADEMARK OFFICE
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BEFORE THE PATENT TRIAL AND APPEAL BOARD
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Ex parte ROGER BRENT MILNE, JEFFREY C. WARD,
MICHAEL G. INGOLDBY, JONATHAN B. BALLAGH,
THOMAS E. FISCHABER, and KRISTA M. MARKS
_____

Appeal 2019-000201
Application 12/851,538
Technology Center 2400
_____

Before SHARON FENICK, MICHAEL M. BARRY, and
RUSSELL E. CASS, *Administrative Patent Judges*.

CASS, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellant[1] appeals under 35 U.S.C. § 134(a) from the Examiner's rejection of claims 1–20 under 35 U.S.C. § 101, which constitute all the pending claims. Appeal Br. 25.[2] We have jurisdiction under 35 U.S.C. § 6(b).

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[1] We use the word "Appellant" to refer to "applicant" as defined in 37 C.F.R. § 1.42. Appellant lists Disney Enterprises, Inc. as the real party in interest. Appeal Brief filed June 11, 2018 ("Appeal Br.") 3.

[2] Rather than repeat the Examiner's positions and Appellant's contentions in their entirety, we refer to the above mentioned Appeal Brief, as well as the following documents for their respective details: the Non-Final Action mailed January 5, 2018 ("Non-Final Act."); the Examiner's Answer mailed

We affirm.

I. BACKGROUND

The present invention relates to systems and methods for content filtering. Spec. ¶ 4. The Specification explains that the identification of inappropriate text is important for Internet sites that allow users to contribute text, such as online chat-type applications. *Id.* ¶ 17. Content filtering is particularly challenging when children are creating the content, the Specification explains, because they have a tendency to be creative and a natural desire to test the rules. *Id.* ¶ 19. Typically, content created by a user will be checked to determine if it contains words on a "black" list, but children may attempt to subvert the blacklist by adding spaces or other letters or characters to words on the blacklist. *Id.* For example, the word "ABCD" may be written as "A_B_C_D, A B C D, ABC$, AB!D, A_B_C_$, and the like." *Id.* ¶ 20. The blacklist may be expanded to include permutations of the original blacklisted words, but this increases the time needed to compare a word against the blacklist and requires greater computing resources. *Id.*

According to the Specification, the present invention seeks to solve this problem by pre-processing the input, thereby allowing a much smaller blacklist to be used. *Id.* ¶ 22. This pre-processing includes several steps. *Id.* ¶ 31. First, the input is collapsed around white space within the input by turning all whitespace into space characters and removing repeated spaces so that single spaces remain. *Id.* ¶ 32. Next, character strings (words) are formed by removing punctuation and underscoring, and selectively

August 6, 2018 ("Ans."); and the Reply Brief filed October 8, 2018 ("Reply Br.").

removing whitespace characters. *Id.* ¶ 33. Whitespace can be identified for removal by examining the contents of adjacent words for length, vowel counts, consonant counts, and other statistical language patterns. *Id.* ¶ 36. For example, whitespace may be selectively deleted between words that have less than two vowels. *Id.* The word output is then expanded by generating multiple possible interpreted words by defining a list of characters and strings that each expand into a list of one more additional characters and strings, and then creating derived words based on these additional characters and strings. *Id.* ¶¶ 41–43. The expanded word output is then reviewed for any repeated letters or symbols, because objectionable words in the English language do not have more than two repeating characters. *Id.* ¶ 45. Following this pre-processing, the pre-processed input is evaluated against the blacklist in a known manner. *Id.* ¶ 30.

Claim 1 is illustrative and is reproduced below with numerals added at the beginning of each limitation, so that it may be referred to more clearly throughout this Decision:

> 1. A method for content filtering, the method comprising the steps of:
>
> [i] receiving an input of characters entered by a user on a client device;
>
> [ii] standardizing the input of characters into one or more character strings, wherein standardizing the input of characters into one or more character strings comprises processing the input of characters to:
>
>> [iii] selectively remove white spaces based on a statistical language pattern comprising examining content of words having more than one character, wherein the content of words is selected from the group consisting of vowel counts and consonant counts;

> [iv] break the one or more character strings into
> words at remaining white space boundaries; and

> [v] expand one or more of the words resulting
> from breaking the one or more character strings;

> [vi] compare the one or more character strings against a
> blacklist; and

> [vii] provide, based upon the one or more character
> strings matching a character string included on the blacklist, an
> indication that the one or more character strings are included on
> the blacklist.

Appeal Br. 27 (Claims Appendix).

II. PATENT ELIGIBILITY UNDER 35 U.S.C. § 101

A. *Section 101*

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 U.S. 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. v. CLS Bank Int'l*, 573 U.S. 208, 216 (2014).

In determining whether a claim falls within an excluded category, we are guided by the Court's two-step framework, described in *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66 (2012), and *Alice*. *Alice*, 573 U.S. at 217–18 (citing *Mayo*, 566 U.S. at 75–77). 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, 67 (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 182 n.7 (quoting *Corning v. Burden*, 56 U.S. 252, 267–68 (1854))); 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 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 187; *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 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 quotation marks 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.* (alterations in original) (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.*

B. USPTO Section 101 Guidance

In January of 2019, the United States Patent and Trademark Office ("USPTO") published revised guidance on the application of § 101, which was updated in October 2019. USPTO, *2019 Revised Patent Subject Matter Eligibility Guidance*, 84 Fed. Reg. 50 (Jan. 7, 2019) ("2019 Guidance"); October 2019 Update: Subject Matter Eligibility, 84 Fed. Reg. 55942 (available at the USPTO's website) ("October 2019 PEG Update"). Under the 2019 Guidance, we first look to whether the claim recites the following:

(1) any judicial exceptions, including certain groupings of abstract ideas (i.e., mathematical concepts, certain methods of organizing human activities such as a fundamental economic practice, or mental processes); and

(2) additional elements that integrate the judicial exception into a practical application (*see* MPEP §§ 2106.05(a)–(c), (e)–(h)).

See 2019 Guidance, 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 2019 Guidance, 84 Fed. Reg. at 56.

III. ANALYSIS

A. *The Examiner's Rejection and Appellant's Contentions*

In the Non-Final Office Action, the Examiner rejects claims 1–20 under 35 U.S.C. § 101 as directed to non-statutory subject matter. Non-Final Act. 4. The Examiner determines, *inter alia*, that claims 1–20 are directed to a process of receiving data, analyzing data, comparing data to a list, and providing an action based on the comparison, which is similar to content filtering, which has been determined to be an abstract idea. *Id.* at 3, 5; Ans. 3, 6–7. The Examiner further determines that the additional element in claim 1 beyond the abstract idea is merely the step of "receiving an input of characters entered by a user on a client device," which is merely a conventional function of a general purpose computer, and does not make the invention significantly more than the abstract idea. Non-Final Act. 5–6. The Examiner also determines that the additional limitations in claims 11 and 20 (processors, a memory, and computer readable program code),

simple recite components of a general purpose computer and also do not amount to significantly more than the abstract idea itself. *Id.* at 6–8.

Appellant contends that the claims are not directed to an abstract idea, but rather to technological improvements to the field of filtering content. Appeal Br. 17–20. According to Appellant, the specific limitations improve over existing techniques, and therefore provide a technological improvement as in *Trading Techs. Int'l, Inc. v. CQG, Inc.*, 675 F. App'x 101 (Fed. Cir. 2017). *Id.* at 20–22. Appellant further contends that the claims pass Step 2B because the claimed method of standardizing the input characters is unconventional and unknown, and that the claims are therefore similar to those in *Bascom Global Internet Services, Inc. v. AT&T Mobility LLC*, 827 F.3d 1341 (Fed. Cir. 2016). *Id.* at 23–25.

B.   *Analysis under Step 2A, Prong 1, of the 2019 Guidance*

Under Step 2A, Prong 1, of the 2019 Guidance, we first must determine whether any judicial exception to patent eligibility is recited in the claim. The 2019 Guidance identifies three judicially excepted groupings: (1) mathematical concepts, (2) certain methods of organizing human activity such as fundamental economic practices, and (3) mental processes. 2019 Guidance, 84 Fed. Reg. at 52–53. Based on existing Supreme Court and Federal Circuit precedent, the 2019 Guidance has identified "mental processes" as including "concepts performed in the human mind (including an observation, evaluation, judgment, opinion)." *Id.* at 53 (footnote omitted). The "mental processes" judicial exception also includes concepts that can be performed by a human with a pen and paper as well as those that can be performed entirely in the mind. *See* October 2019 PEG Update at 9 ("a claim that encompasses a human performing the step(s) mentally with

the aid of a pen and paper recites a mental process"); *Intellectual Ventures I LLC v. Symantec Corp.*, 838 F.3d 1307, 1318 (Fed. Cir. 2016) (finding claims to be patent ineligible because "with the exception of generic computer-implemented steps, there is nothing in the claims themselves that foreclose them from being performed by a human, mentally or with pen and paper").

Claim 1, as drafted, recites steps for filtering content provided by a user that can be performed in the human mind or by a human using pen and paper without the use of computers or other technological elements. These steps are discussed in more detail below.

First, claim 1, limitation [ii] recites the step of "standardizing the input of characters into one or more character strings, wherein standardizing the input of characters into one or more character strings comprises processing the input of characters." This step can be performed by having a human review a series of characters received at an input and break up the series of characters into a number of words using a set of rules.

Claim 1, limitation [iii] recites that the step of "standardizing the input of characters into one or more character strings" includes the step of "selectively remov[ing] white spaces based on a statistical language pattern comprising examining content of words having more than one character, wherein the content of words is selected from the group consisting of vowel counts and consonant counts." This step can be performed by identifying words in the input of characters that have less than two vowels and deleting whitespace between the letters of those words so that, for example, A B C D becomes ABCD. *See* Spec. ¶ 36. This is a step that can be performed by a human in the mind or with pen and paper.

Claim 1, limitation [iv] recites that the step of "standardizing the input of characters into one or more character strings" includes the step of "break[ing] the one or more character strings into words at remaining white space boundaries." This step can be performed by a human in the mind or with pen and paper by reviewing the character strings, visually identifying remaining white space boundaries, and breaking up the character strings into words at those white space boundaries, for example by writing down each of the words identified in this step.

Claim 1, limitation [v] recites that the step of "standardizing the input of characters into one or more character strings" includes the step of "expand[ing] one or more of the words resulting from breaking the one or more character strings." The Specification explains that this step can be performed by identifying certain characters that can be used to represent other characters or combinations of characters, such as having a "!" represent either an "!," a "l," or an "i". Spec. ¶¶ 41–43. Then, additional words are created by replacing the original character (e.g., "!") with one of the other identified characters (e.g., "l" or "i"). ¶¶ 41–42. For example, "F!ne" could be expanded to include "Fine" or "Flne." This step can be performed by a human in the mind or using pen and paper, for example, by visually identifying particular characters, and writing the expanded words with substitute characters together with the original word on a piece of paper.

Claim 1, limitation [vi] recites the step of "compar[ing] the one or more character strings against a blacklist." This step can be performed by a human in the mind or using pen and paper by visually observing a character

string and comparing it to a blacklist of objectionable words on a piece of paper to determine if a match exists.

Claim 1, limitation [vii] recites the step of "provid[ing], based upon the one or more character strings matching a character string included on the blacklist, an indication that the one or more character strings are included on the blacklist." This step could be performed by a human by using a pen to place an indicator next to a character string that is included on the blacklist, such as by circling or placing a check mark next to the offending character string.

Appellant argues that steps [ii]–[vi] do not recite an abstract idea because they are "directed to technological improvements to the technological field of filtering content," citing paragraphs 2–3 and 17–21 of the Specification. Appeal Br. 17–18. Appellant further argues that these steps "reduce the ability of a user to subvert the blacklist while still maintaining a small blacklist as when compared to traditional techniques, thereby reducing the processing resources and time required to determine if a word or a permutation of a word should be filtered." *Id.* at 18. However, Appellant drafted these claim elements without including any limitations referring or relating to computer technology. As drafted, these steps could feasibly be performed by a human in the mind or using pen and paper, particularly in situations where processing speed is not of the essence, and therefore they do not recite an improvement to a technological field. *See* October 2019 PEG Update at 13 ("it is important to keep in mind that an improvement in the judicial exception itself . . . is not an improvement in technology").

Appellant cites to paragraph 17 of the Specification, which states that
"[i]n some cases (e.g., online chat-type applications) where complete real-
time moderation is impractical, an automated software solution is
necessary." Spec. ¶ 17. Claim 1, however, does not limit the claim to online
chat-type applications or other computer applications where moderation by a
human is impractical and an automated software solution is necessary. It
would be improper to read these limitations from the specification into the
claim, particularly because the specification does not limit the use of the
invention to computer environments where performance of the claimed steps
by a human would be impractical. *Id.* ¶ 17 (merely stating that "[i]n some
cases" an automated software solution is necessary).

We also do not agree that this case is analogous to the claims at issue
in *Trading Techs. See* Appeal Br. at 20–22. In *Trading Techs.*, the claims at
issue "require a specific, structured graphical user interface paired with a
prescribed functionality directly related to the graphical user interface's
structure." 675 Fed. Appx. 1004. It is this improved graphical user interface
that constituted an improvement to computer technology. *Id.* at 1004–05.
Here, by contrast, steps [ii]–[vi] do not require a graphical user interface.
Indeed, these steps do not recite any computer technology at all.

For these reasons, we determine that claim 1 recites a mental process,
which is one of the recognized judicial exceptions to patent eligibility. *See*
2019 Guidance, 84 Fed. Reg. at 52–53.

C.   *Analysis under Step 2A, Prong 2, of the 2019 Guidance*

Having determined that the claims recite a judicial exception, we next
consider whether the claims recite "additional elements that integrate the
[judicial] exception into a practical application." *See* 2019 Guidance,

84 Fed. Reg. at 54; MPEP §§ 2106.05(a)–(c), (e)–(h). We determine that they do not do so.

Aside from the steps discussed above that can be performed by a human in the mind or with pen and paper, the remaining limitation of claim 1 is the step of "receiving an input of characters entered by a user on a client device." We agree with the Examiner that this limitation merely represents a generic computer component (a client device) performing generic computer functions (receiving an input of characters entered by a user). Non-Final Act. 5–6; Ans. 4. Independent claim 11 further includes a "computer program product" comprising "a non-transitory computer readable program code," and independent claim 20 further includes "one or more processors" and "a memory operatively connected to the one or more processors," which we also agree are generic computer components performing generic computer functions. *See* Non-Final Act. 6–7; Ans. 4; Spec. ¶¶ 55, 63 (disclosing that "system processor 42" is "a general-purpose processor" and that "computer program instructions may be provided to a processor of a general purpose computer").

The inclusion of these generic computer components does not take the claims out of the mental process category of abstract ideas. As the 2019 Guidance explains, "[i]f 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." 2019 Guidance, 84 Fed. Reg. at 52 n.14. *See also* October 2019 PEG Update at 8 ("The courts have found claims requiring a generic computer or nominally reciting a generic computer may still recite a mental process even though the claim limitations

are not performed entirely in the human mind."). Federal Circuit precedent is in accord. *See Mortg. Grader, Inc. v. First Choice Loan Servs. Inc.*, 811 F.3d. 1314, 1324 (Fed. Cir. 2016) (holding that computer-implemented method for "anonymous loan shopping" was an abstract idea because it could be "performed by humans without a computer"); *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."); *CyberSource Corp. v. Retail Decisions, Inc.*, 654 F.3d 1366, 1375, 1372 (Fed. Cir. 2011) (holding that the incidental use of "computer" or "computer readable medium" does not make a claim otherwise directed to process that "can be performed in the human mind, or by a human using a pen and paper" patent eligible).

Consequently, the additional limitations in claim 1 beyond the judicial exception do not serve to integrate the judicial exception into a practical application.

D. Analysis under Step 2B

Under Step 2B, we determine whether claim 1 includes additional elements individually or in combination that provide an inventive concept and, therefore, amount to significantly more than the exception itself. *See* 2019 Guidance, 84 Fed. Reg. at 56; *Alice*, 573 U.S. at 221. We agree with the Examiner that claim 1 does not include additional elements that provide any such "inventive concept," and that claim 1 does not add limitations beyond the judicial exception that are not "well-understood, routine, [or] conventional" in the field. *See* MPEP § 2106.05(d); *Alice*, 573 U.S. at 221.

As discussed above with respect to Step 2A, Prong 2, the only additional element in claim 1 beyond those which recite an abstract idea is the step of "receiving an input of characters entered by a user on a client device," and the only additional elements in claims 11 and 20 beyond those discussed involve a "computer program product," "a non-transitory computer readable program code," "one or more processors," and/or "a memory operatively connected to the one or more processors." However, as discussed above, these are simply generic computer elements. As such, we agree with the Examiner that they are well-understood, routine, and conventional and are therefore insufficient to provide an "inventive concept" that amounts to significantly more than the abstract idea itself. *See* Non-Final Act. 5–7; Ans. 4–5; *Alice*, 573 U.S. at 223 ("the mere recitation of a generic computer cannot transform a patent-ineligible abstract idea into a patent-eligible invention").

> Appellant contends that claim 1 passes *Alice* Step 2B because it,

> requires something more than a generic computer by filtering content by standardizing the input of characters into character strings by removing white spaces of the character string using a statistical language pattern, breaking the character string into words, expanding the words, and comparing the expanded words to a blacklist to determine if the word is included in the blacklist.

Appeal Br. 23. However, as explained above with respect to Step 2A, Prong 1, the steps that Appellant identifies here fall into the mental process category and therefore are part of the judicial exception itself.

> In a similar vein, Appellant argues that

> standardizing the input characters by selectively removing white spaces, breaking the character strings into words, and expanding the words to essentially remove any subversion

> techniques that a user may have used to modify an offensive
> word into a word that may not be included on the blacklist is
> unconventional and unknown.

Id. at 24. These steps, again, are mental process steps that are part of the judicial exception itself. They, therefore, are not "additional elements" sufficient to provide an inventive concept that provides "significantly more" than the abstract idea itself.

Finally, we disagree with Appellant that these mental process steps are similar to *Bascom*, and to Example 34 of the USPTO's *Subject Matter Examples: Business Methods*, 3–4 (Dec. 15, 2016), which was based on the *Bascom* decision. Appeal Br. 25. In *Bascom*, the claim limitations at issue did not recite mental process steps devoid of computer technology, but rather were directed to "the installation of a filtering tool at a specific location, remote from the end users-with customizable filtering features specific to each end user." 827 F.3d at 1350. The claim specifically recited that this filtering tool was implemented using specific computer technology, namely,

> a remote ISP server coupled to said client computer and said
> Internet computer network, said ISP server associating each
> network account to at least one filtering scheme and at least one
> set of filtering elements, said ISP server further receiving said
> network access requests from said client computer and
> executing said associated set of logical filtering elements.

Id. at 1345. By contrast, the claims at issue do not recite improvements to an ISP server or to other computer technology, but rather recite mental process steps carried out using generic computer elements.

Consequently, we agree with the Examiner that independent claims 1, 11, and 20 are directed to patent-ineligible subject matter. We therefore

sustain the rejection of these claims, as well as the rejection of dependent claims 2–10 and 12–19, which are not argued separately.

CONCLUSION

We affirm the Examiner's rejections of claims 1–20 under 35 U.S.C. § 101 as directed to non-statutory subject matter.

In summary:

Claims Rejected	35 U.S.C. §	Reference(s)/Basis	Affirmed	Reversed
1–20	101	Eligibility	1–20	

TIME PERIOD FOR RESPONSE

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).

AFFIRMED