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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte AL CHAKRA, LIAM HARPUR, and JOHN RICE

Appeal 2017-004713
Application 14/243,726[1]
Technology Center 2600

Before MICHAEL J. STRAUSS, JON M. JURGOVAN, and KARA L. SZPONDOWSKI, *Administrative Patent Judges*.

JURGOVAN, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellants appeal under 35 U.S.C. § 134(a) from the Examiner's Final Rejection of claims 8–21. We have jurisdiction under 35 U.S.C. § 6(b).

We affirm.[2]

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[1] Appellants identify International Business Machines Corporation as the real party in interest. App. Br. 1.

[2] Our Decision refers to the Specification ("Spec.") filed April 2, 2014, the Final Office Action ("Final Act.") mailed January 4, 2016, the Appeal Brief ("App. Br.") filed April 28, 2016, the Examiner's Answer ("Ans.") mailed December 14, 2016, and the Reply Brief ("Reply Br.") filed January 27, 2017.

CLAIMED INVENTION

The claims are directed to adjusting text in a message based on the recipient's interests (e.g., traveling, collecting baseball cards) and/or personality traits (e.g., hates loud music). Abstract. Claim 8, reproduced below, is representative of the claimed invention:

> 8. A computer program product for adjusting text in a message to sustain recipient's interest in the message, the computer program product comprising a nontransitory computer readable storage medium having program code embodied therewith, the program code comprising the programming instructions for:
>
> receiving a message for one or more recipients;
>
> identifying said one or more recipients to receive said message;
>
> retrieving information regarding said identified one or more recipients, wherein said information comprises interests and/or personality traits of said identified one or more recipients;
>
> utilizing a linguistic engine to generate words and phrases associated with an interest and/or personality trait of a first recipient of said identified one or more recipients; and
>
> utilizing natural language processing to change words and ordering of words in said message to include words and phrases associated with an interest and/or personality trait of a first recipient of said identified one or more recipients.

App. Br. 44 ("Claims App'x").

REJECTIONS

Claims 8–21 stand provisionally rejected on the ground of nonstatutory double patenting over claims 1–7 of US Application No. 14/608,407. Final Act. 4–7. This rejection remains provisional because the

copending application relied upon by the Examiner has not issued as a patent as of the mailing date of this Decision. Accordingly, we do not reach this provisional rejection in our decision.

Claims 8–21 stand rejected under 35 U.S.C. § 101 as directed to non-statutory subject matter. Final Act. 7–9.

Claims 8, 10–15 and 17–21 stand rejected under 35 U.S.C. § 102(a)(2) based on Vellal (US 2014/0359480 A1, published Dec. 4, 2014). Final Act. 9–12.

Claims 9 and 16 stand rejected under 35 U.S.C. § 103(a) based on Vellal and Goeldi (US 2010/0119053 A1, published May 13, 2010). Final Act. 12–13.

ANALYSIS

§ 101 Rejection

Patent eligibility is a question of law that is reviewable *de novo*. *Dealertrack, Inc. v. Huber*, 674 F.3d 1315, 1333 (Fed. Cir. 2012) ("*Dealertrack*").

Patentable subject matter is defined by 35 U.S.C. § 101, as follows:

> [w]hoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

In interpreting this statute, the Supreme Court emphasizes that patent protection should not preempt "the basic tools of scientific and technological work." *Gottschalk v. Benson*, 409 U.S. 63, 67 (1972) ("*Benson*"); *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 71 (2012) ("*Mayo*"); *Alice Corp. Pty. Ltd. v. CLS Bank Int'l*, 134 S. Ct. 2347, 2354 (2014) ("*Alice*"). The rationale is that patents directed to basic building

blocks of technology would not "promote the [p]rogress of [s]cience" under the U.S. Constitution, Article I, Section 8, Clause 8, but instead would impede it. Accordingly, laws of nature, natural phenomena, and abstract ideas, are not patent-eligible subject matter. *Thales Visionix Inc. v. U.S.*, 850 F.3d 1343, 1346 (Fed. Cir. 2017) (citing *Alice*, 134 S. Ct. at 2354).

The Supreme Court set forth a two-part test for subject matter eligibility in *Alice* (134 S. Ct. at 2355). The first step is to determine whether the claim is directed to a patent-ineligible concept. *Id.* (citing *Mayo*, 566 U.S. at 76–77). If so, then the eligibility analysis proceeds to the second step of the *Alice/Mayo* test in which 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." *Alice*, 134 S. Ct. at 2357 (quoting *Mayo*, 566 U.S. at 72, 79). The "inventive concept" may be embodied in one or more of the individual claim limitations or in the ordered combination of the limitations. *Id.* at 2355. The "inventive concept" must be significantly more than the abstract idea itself, and cannot be simply an instruction to implement or apply the abstract idea on a computer. *Id.* at 2358. "'[W]ell-understood, routine, [and] conventional activit[ies]' previously known to the industry" are insufficient "to transform an abstract idea into a patent-eligible invention." *Id.* at 2359–60 (citing *Mayo*, 566 U.S. at 73).

The Examiner determines "[t]he claims are directed to the abstract idea of adjusting text in a message to sustain recipients' interest in the message." *Id.* The Examiner determines "[v]iewed as a whole, [the] additional claim elements do not provide meaningful limitations to transform the abstract idea into a patent eligible application of the abstract idea such

that the claims amount to significantly more than the abstract idea itself." *Id.* at 8–9.

In particular, the Examiner determines "[a]ll the steps of Appellant[s'] claims are an abstract concept that could be performed in the human mind, or by a human using a pen and paper." Ans. 4. The Examiner also states "[t]he claims need meaningful limitations that go beyond generally linking the use of an abstract idea to a particular technological environment." *Id.* at 4–5. The Examiner further notes "mental processes—or processes of human thinking—standing alone are not patentable even if they have practical application." *Id.* at 5 (citing *In re Comiskey*, 554 F.3d 967, 979 (Fed. Cir. 2009) ("*Comiskey*")). In addition, the Examiner quotes *Benson* at 67, stating "[p]henomena of nature . . ., mental processes, and abstract intellectual concepts are not patentable, as they are the basic tools of scientific and technological work." *Id.*

The Examiner further determines that claims 8–14 recite a computer program product that does not exclude "transitory forms" as described in the Specification, and thus is not directed to statutory subject matter under § 101 for this additional reason. Final Act. 9.

After reviewing Appellants' arguments for patentability, we agree with the Examiner's determination that claims 8–21 are directed to non-statutory subject matter and, thus, we sustain the § 101 rejection against claims 8–21.

Initially, we note that independent claims 8 and 15 recite a "computer program product" and "system" which ostensibly fit within the statutory categories of "manufacture" and "machine" as set forth in 35 U.S.C. § 101. Accordingly, we proceed to analyze the claims under the *Alice/Mayo* test.

Under the first step of *Alice/Mayo*, the Examiner determines the claims are directed to the abstract idea of adjusting text in a message to sustain recipients' interest in the message. Final Act. 8. The Examiner's statement of the abstract idea mirrors the preambles of claim 8 and 15, and is indeed something that can be performed in the human mind or using pen and paper, as the Examiner determines. For example, one could write a message to recipients that is proofread by another and modified to make it more interesting based on knowledge the proofreader has of the recipients' interests and personalities, using the human mind or pen and paper. We agree with the Examiner's determinations concerning the identification of the abstract idea the claims are "directed to" under step one of *Alice/Mayo*.

In analyzing whether an idea is abstract, our reviewing court has held that "the decisional mechanism courts now apply is to examine earlier cases in which a similar or parallel descriptive nature can be seen—what [the] cases were about, and which way they were decided. . . . [This] is the classic common law methodology for creating law when a single governing definitional context is not available." *Amdocs (Israel) Ltd. v. Openet Telecom, Inc.*, 841 F.3d 1288, 1294 (Fed. Cir. 2016).

The relevant case law establishes the present claims are directed to an abstract idea. Specifically, our reviewing court found that email filtering with user-set criteria was directed to an abstract idea. *Intellectual Ventures I LLC v. Symantec Corp.*, 838 F.3d 1307 (Fed. Cir. 2016). Also, our reviewing court found user-customizable content filtering of information retrieved from the Internet to be an abstract idea. *Bascom Global Internet Services, Inc. v. AT&T Mobility LLC*, 827 F.3d 1341 (Fed. Cir. 2016) ("*Bascom*"). These cases are relevant because user-customization means

that wanted and unwanted content may be defined according to users' interests and personality traits. Retrieval of information defining the wanted and unwanted content in a multi-user environment requires use of the users' identities. *See, e.g., Bascom*, *supra*. Although the claimed invention involves adjusting a message, rather than blocking or allowing access to requested content like these cases, the use of user identities to retrieve information for taking action with respect to the content of email messages is similar. Another case of our reviewing court found the claims directed to the abstract idea of creating a "dynamic document" using content from multiple electronic records. *Intellectual Ventures I LLC v. Capital One Fin. Corp.*, 850 F.3d 1332 (Fed. Cir. 2017). Similarly, the claimed invention uses information retrieval to adjust the message content to be sent to a recipient.

Accordingly, reviewing the relevant precedents, we determine the claims in this case are firmly on the side of reciting an abstract idea.

Appellants argue that the claims recite elements, such as messages communicated between computers, retrieval of interests and/or personality traits, and use of a processor, linguistic engine, and natural language processing, that are not performed in the human mind or using pen and paper. App. Br. 3–7. However, the issue under *Benson* and *Comiskey* is whether the claims *could* be performed in the human mind or using pen and paper, not whether they *are* performed mentally as claimed. *See CyberSource Corp. v. Retail Decisions, Inc.*, 654 F.3d 1366, 1375 (Fed. Cir. 2011) ("That purely mental processes can be unpatentable, even when performed by a computer, was precisely the holding of the Supreme Court in Gottschalk v. Benson."). We agree with the Examiner the claimed

limitations could be performed in the human mind or using pen and paper. Ans. 4. Accordingly, the claims are directed to an abstract idea.

Turning to step two of the *Alice/Mayo* analysis, the Examiner determines the functions recited in claims 8 and 15 can be performed by a user, and that the additional elements of the claim "do not provide meaningful limitations to transform the abstract idea into a patent eligible application of the abstract idea such that the claims amount to significantly more than the abstract idea itself." Final Act. 8–9. We agree with the Examiner's assessment.

Although the two "utilizing" functions of claims 8 and 15 involve a "linguistic engine" and "processor," "[c]ourts have examined claims that required the use of a processor or computer and still found that the underlying, patent-ineligible invention could be performed via pen and paper or in a person's mind." *Versata Dev. Group, Inc. v. SAP Am., Inc.*, 793 F.3d 1306, 1335 (Fed. Cir. 2015).

> In order for the addition of a machine to impose a meaningful limit on the scope of a claim, it must play a significant part in permitting the claimed method to be performed, rather than function solely as an obvious mechanism for permitting a solution to be achieved more quickly, i.e., through the utilization of a computer for performing calculations.

SiRF Tech., Inc. v. Int'l Trade Comm'n, 601 F.3d 1319, 1333 (Fed. Cir. 2010) ("*SiRF*").

In this case, the claims are directed to adjusting a message to make it more interesting in order to sustain recipients' interest and the claims merely use a computer to improve the performance of adjusting the message. As in *SiRF*, the claimed invention does not improve performance of the computer, or some other technology.

Moreover, the appropriate inquiry in this regard is whether the claim recites "significantly more" than the abstract idea under the second step of *Alice/Mayo*. "For the role of a computer in a computer-implemented invention to be deemed meaningful in the context of this analysis, it must involve more than performance of 'well-understood, routine, [and] conventional activities previously known to the industry.'" *Content Extraction and Transmission LLC v. Wells Fargo Bank, Nat. Ass'n*, 776 F.3d 1343, 1347–48 (Fed. Cir. 2014) (citing *Alice*, 134 S. Ct. at 2359). "[M]ethod claims, which merely require generic computer implementation, fail to transform that abstract idea into a patent-eligible invention." *Alice*, 134 S. Ct. at 2350.

The "linguistic engine" is claimed so generally it could be interpreted not only as a part of a processor or computer, but also as the part of the human mind responsible for speech and language functions. Further, the "processor" of claims 8 and 15 is not identified in the record as something other than generic and well-known in industry. Rather, the processor is described in the Specification as included in "a general purpose computer, special purpose computer, or other programmable data processing apparatus," which are well known uses for a generic processor. Spec. ¶ 34; *see also* Spec. ¶ 26. Claims that recite a "processor" in this way have been determined ineligible for patent protection. *Intellectual Ventures I LLC v. Capital One Bank (USA)*, 792 F.3d 1363 (Fed. Cir. 2015).

Commensurately, the recited "natural language processing" is not identified as providing an inventive concept. The Specification does not describe what it is, which implies that the term is well known to industry, assuming the Specification meets the requirements of § 112. Spec. ¶¶ 15,

42, 45, 54. Other evidence suggests "natural language processing" dates back to 1954, and mentions Jabberwacky, a 1982 chatterbot with the stated aim to "simulate natural human chat in an interesting, entertaining and humorous manner." https://en.wikipedia.org/wiki/History_of_natural_language_processing (last viewed 9/26/18). Thus, we find no inventive concept in "natural language processing" as it is claimed.

We also note that claims 8 and 15 involve computerization of some aspects of a human activity that have been performed for decades, if not centuries. For example, a sales executive provides a general message about a sales initiative to account managers who customize the message for prospective customers based on their interests or personalities (e.g., likes and dislikes). Or a museum executive provides a letter to a donor relationship manager who customizes the letter to individuals on a list to suit the interests and personalities of particular donors to urge them to give to a fundraising campaign. Or a parent helps a child revise a letter to a grandparent to include the child's activities that would be interesting to the grandparent.

Although it may be a feat to accomplish these human tasks with a computer, thus, emulating human intelligence, the claimed invention provides no particularity to specify how these tasks are performed by the computer. Merely claiming use of a computer to achieve a result that is well known to have been performed by humans does not capture the technical detail of what makes it possible for the computer to carry out human functions to particularize a message to recipients according to their interests or personalities. In this connection, we are mindful that the inquiry is "whether the claims in these patents 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, Inc. v. Bandai Namco Games Am. Inc.*, 837 F.3d 1299, 1314 (Fed. Cir. 2016) (citing *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1336 (Fed. Cir. 2016); *Rapid Litig. Mgmt. Ltd. v. CellzDirect, Inc.*, 827 F.3d 1042, 1048 (Fed. Cir. 2016)). As the claims are presented on appeal here, the latter is the case. In other words, the claimed invention is missing an "inventive concept" sufficient to transform the abstract idea embodied therein into patent-eligible subject matter.

Appellants state that claims 8–21 address a business challenge of assisting an author in composing a message to sustain the recipient's interest in the message. App. Br. 8–9. At the same time, Appellants argue the additional elements of the claims other than the abstract idea are "rooted in computer technology" similar to *DDR Holdings, LLC v. Hotels.com*, 773 F.3d 1245 (Fed. Cir. 2014). *Id.*

However, the problem the claimed invention solves is not technological in nature; it is instead a problem existing in business (and other realms of human activity), as Appellants acknowledge. App. Br. 8. The only features of the claims that could be considered technological are the "computer program product" "system" "linguistic engine" and the "processor" but these are recited in such a general, generic, functional, and result-based manner that the claims fail to capture, with particularity, aspects of the invention that make it possible for these elements to provide a solution to the "business challenge." Under similar circumstances, our reviewing court has held patent claims ineligible. *See Amdocs (Israel) Ltd. v. Openet Telecom, Inc.*, 841 F.3d 1288, 1301–02 (Fed. Cir. 2016) (summarizing cases in which claims found to be ineligible subject matter).

In the Reply Brief, Appellants argue the claims "are not a purely mental process that could otherwise be performed **in any reasonable amount of time and with any reasonable expectation of accuracy** without the use of a computer." Reply Br. 2–5 (emphasis omitted).

We find no language in the claims that implies any speed or accuracy constraint that a human could not attain, necessitating the use of a computer. And the issue would still remain, as discussed with respect to *SiRF*, *supra*, whether the computer as claimed is being used merely for its well-known purposes to improve speed and accuracy of adjusting messages relative to what a human could achieve, or whether the claim recites detailed structure and functions the computer uses to emulate human behavior in adjusting messages to be more interesting to a recipient.

Appellants also argue in the Reply Brief that the claims are focused on an improvement that assists an author in composing a message to sustain the recipients' interest in the message. Reply Br. 6–8. However, the claims fail to recite the particulars that make it possible to achieve the result of adjusting a message to sustain a recipients' interest, so we disagree the claims are focused on an improvement that could constitute a transformative inventive concept.

Appellants further argue in the Reply Brief

> the Examiner needs to clearly articulate the reason(s) why the claimed invention is not eligible, for example, by providing a reasoned rationale that identifies the judicial exception recited in the claim and why it is considered an exception, and that identifies the additional elements in the claim (if any) and explains why they do not amount to significantly more than the exception.

Reply Br. 9.

We reviewed the Examiner's findings and determinations and are satisfied the Examiner clearly set forth a prima facie case by identifying the abstract idea contained in the claims and explaining why the additional elements in the claim do not amount to "significantly more" than the abstract idea. Final Act. 8–9, Ans. 3–5. In addition, we have set forth our own additional analysis, as patent eligibility is reviewable *de novo*, and reach the same conclusion as the Examiner. *See Dealertrack, supra*. Thus, we find Appellants' argument to be unpersuasive.

Appellants further argue in the Reply Brief that the Examiner failed to provide evidence that the claimed invention can be performed in the human mind or by a human using a pen and paper. Reply Br. 9. This appears to repeat Appellants' earlier argument, which is unpersuasive for reasons previously stated.

Also, in the Reply Brief, Appellants argue that the machine-or-transformation test is not the determinative test for patent eligibility. Reply Br. 10. From the record, the Examiner did not rely on the machine-or-transformation test. Accordingly, this argument is unpersuasive.

Appellants go on to argue in the Reply Brief that it is transformative under the machine-or-transformation test to change words and ordering of words in a message to include words and phrases associated with the interest and/or personality trait of the recipient according to claim 1. Reply Br. 10. For all of the foregoing reasons, which we will not repeat here, Appellants have not shown the additional elements of the claim amount to "significantly more" than the abstract idea. Thus, we do not agree with Appellants' argument.

We also note that the objective of claims 8 and 15 appears to be "to sustain recipient's interest in the message." However, claims 8 and 15 do not recite sending the message to the recipient and the recipient having their interest sustained by the modified message. Thus, as recited, claims 8 and 15 do not ever achieve the objective stated in their preambles. Although dependent claims 11, 14, 18, and 21 address sending the message to a recipient, the remaining claims do not. In any case, the interest of the recipient in the modified message is a state of mind and it would be difficult to see how this could add "significantly more" to the claim without the recipient performing some technical action in response to interest in the message.

For all of the foregoing reasons, viewed as a whole, Appellants have not demonstrated that the claimed invention involves an inventive concept that is "significantly more" than the abstract idea recited in the claims.

We also note that significant preemption would result from a patent on the claimed invention. Specifically, a patent encompassing changing a message according to interests or personality traits of a recipient using a generic "linguistic engine" and "processor" along with well-known "natural language processing" would significantly foreclose use of the abstract idea embodied in the claims. In any case, even if the claims do not entirely preempt use of the abstract idea, "the absence of complete preemption does not demonstrate patent eligibility." *Ariosa Diagnostics, Inc. v. Sequenom, Inc.*, 788 F.3d 1371, 1379 (Fed. Cir. 2015).

Considering all of the foregoing, we determine that the claims as a whole are directed to patent-ineligible subject matter under 35 U.S.C. § 101 based on the *Alice/Mayo* framework.

Regarding the additional basis that claims 8–14 are non-statutory subject matter because they could be in "transitory form" (Final Act. 9; Ans. 5), we note that claim 8 recites a "non-transitory computer readable storage medium" and thus we do not sustain the Examiner with respect to this ground of unpatentability.

§ 102(a)(2) Rejection

Appellants assert that Vellal does not disclose "utilizing natural language processing to change words and ordering of words in said message to include words and phrases associated with said interest and/or personality trait of said first recipient of said identified one or more recipients" as recited in claims 8 and 15. App. Br. 18, 21. The Examiner finds this feature is disclosed in Vellal. Final Act. 11 (citing Vellal ¶¶ 37–39, 47, 52); Ans. 12 (citing ¶¶ 38–39).

The Examiner is correct insofar as Vellal teaches synonymous or semantically related keywords can be used to retrieve messages related to a displayed message, which involves changing words. *See* Vellal ¶ 38. However, although Vellal discloses ordering of messages based on keywords (e.g., ¶ 4), we find no mention of changing the ordering of words in a message. We read the claimed "processing to change words and ordering of words in said message" in the conjunctive to require both changing words and word ordering. Since the Examiner has not shown that Vellal discloses changing the ordering of words in a message, we do not sustain the rejection of claims 8 and 15 and their dependent claims under 35 U.S.C. § 102(a)(2).

§ 103 Rejection

Claims 9 and 16 depend from claims 8 and 15, respectively, and, thus, incorporate all of their limitations. We find no mention of changing word

order in a message in Goeldi. The Examiner has not shown Goeldi teaches or suggests this deficiency of Vellal indicated with respect to the § 102(a)(2) rejection, and, for this reason, we determine claims 9 and 16 would not have been obvious to a person of ordinary skill in the art on this record. We, therefore, do not sustain the § 103 rejection of claims 9 and 16.

DECISION

We do not reach the provisional rejection of claims 8–21 on the ground of nonstatutory double patenting.

We affirm the rejection of claims 8–21 under 35 U.S.C. § 101 as directed to non-statutory subject matter but do not affirm the "transitory form" ground of rejection.

We reverse the rejection of claims 8, 10–15, and 17–21 under 35 U.S.C. § 102(a)(2).

We reverse the rejection of claims 9 and 16 under 35 U.S.C. § 103(a).

Because we affirm at least one ground of rejection with respect to each claim on appeal, we affirm the Examiner's decision rejecting claims 8–21. *See* 37 C.F.R. § 41.50(a)(1).

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). *See* 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED