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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte CHRISTOPHER JOHN MCGREAL

Appeal 2017-003766
Application 12/172,028
Technology Center 3600

Before ST. JOHN COURTENAY III, DENISE M. POTHIER, and
STACY B. MARGOLIES, *Administrative Patent Judges*.

COURTENAY, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellant appeals under 35 U.S.C. § 134(a) from a final rejection of claims 18–20, which are all the claims pending in this application. Claims 1–17 were withdrawn in response to a restriction requirement. We have jurisdiction over the pending claims under 35 U.S.C. § 6(b).

We affirm.

STATEMENT OF THE CASE

Introduction

Appellant’s invention “relates to commerce systems for use on the Internet. More particularly, the present invention relates to a system and method managing [I]nternet ad campaigns.” Spec. ¶ 2.

Representative Claim

Claim 18 is representative of the invention and reads as follows:

18. A network- based subscriber profiling system, comprising:

a subscriber profile database hosted on a computer system comprising at least one processor and memory and records of subscriber online behavior related to the number of times a subscriber engaged with a first group and a second group, the groups identified through subscriber interactions with email links and web pages; and

a module hosted on a computer system comprising at least one processor and memory comprising program code which when executed by the subscriber profiling system causes the subscriber profiling system to perform

a weighting operation based on at least one of a plurality of variables related to the subscriber behavior related to the number of times the subscriber engaged with the first group and the second group, the weighting operation determining a first group relevance and a second group relevance for the subscribers; and

a selection operation for selecting content to include in a marketing message to the subscriber, the content based on the first group relevance and the second group relevance for the subscriber based on the determination made by the weighting operation.

Br. 21–22 (contested *weighting operation* limitation emphasized in italics).

Rejections

- A. Claims 18–20 are rejected under 35 U.S.C. § 101 as being directed to patent-ineligible subject matter. Final Act. 4–5.
- B. Claim 18 is rejected under pre-AIA 35 U.S.C. § 102(a) as being anticipated by “Applicant’s Background[,] see at least paragraphs

[0006-0008],” hereinafter “AAPA” (Applicant’s Admitted Prior Art).
Final Act. 5–6.

C. Claims 19 and 20 are rejected under pre-AIA 35 U.S.C. § 103(a) as
being obvious over AAPA in view of Schadt et al. (US 2007/0260523
A1, published Nov. 8, 2007) (hereinafter “Schadt”). Final Act. 6–7.

Issues on Appeal

Did the Examiner err in rejecting claims 18–20 under 35 U.S.C. § 101
as being directed to patent-ineligible subject matter?

Did the Examiner err in rejecting claim 18 under pre-AIA 35 U.S.C.
§ 102(a) as being anticipated by AAPA?

Did the Examiner err in rejecting claims 19 and 20 under pre-AIA
35 U.S.C. § 103(a), as being obvious over the combined teachings and
suggestions of AAPA and Schadt?

ANALYSIS

We have considered all of Appellant’s arguments and any evidence
presented. To the extent Appellant has not advanced separate, substantive
arguments for particular claims, or other issues, such arguments are waived.
See 37 C.F.R. § 41.37(c)(1)(iv). We highlight and address specific findings
and arguments for emphasis in our analysis below.

Mayo/Alice Analysis under 35 U.S.C. § 101

Under 35 U.S.C. § 101, a patent may be obtained for “any new and
useful process, machine, manufacture, or composition of matter, or any new
and useful improvement thereof.” The Supreme Court has “long held that
this provision contains an important implicit exception: Laws of nature,

natural phenomena, and abstract ideas are not patentable.” *Alice Corp. Pty. Ltd. v. CLS Bank Int’l*, 134 S. Ct. 2347, 2354 (2014) (quoting *Ass’n for Molecular Pathology v. Myriad Genetics, Inc.*, 569 U.S. 576, 589 (2013)). The Supreme Court in *Alice* reiterated the two-step framework previously set forth in *Mayo Collaborative Services v. Prometheus Laboratories, Inc.*, 566 U.S. 66, 82–84 (2012), “for distinguishing patents that claim laws of nature, natural phenomena, and abstract ideas from those that claim patent-eligible applications of those concepts.” *Alice*, 134 S. Ct. at 2355.

The first step in that analysis is to determine whether the claims at issue are directed to one of those patent-ineligible concepts, such as an abstract idea. Abstract ideas may include, but are not limited to, fundamental economic practices, methods of organizing human activities, an idea of itself, and mathematical formulas or relationships. *Id.* at 2355–57.

If the claims are *not directed* to a patent-ineligible concept, *the inquiry ends*. See *Visual Memory LLC v. NVIDIA Corp.*, 867 F.3d 1253, 1262 (Fed. Cir. 2017).

Otherwise, the inquiry proceeds to the second step in which the elements of the claims are considered “individually and ‘as an ordered combination’ to determine whether the additional elements ‘transform the nature of the claim’ into a patent-eligible application.” *Alice*, 134 S. Ct. at 2355 (quoting *Mayo*, 566 U.S. at 79, 78). We consider the question of whether the claims are directed to a *specific improvement* in the capabilities of the computing devices, or, instead, “a process that qualifies as an ‘abstract idea’ for which computers are invoked merely as a tool.” *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1336 (Fed. Cir. 2016).

We, therefore, decide under step two whether the claims: (a) set forth an *inventive concept* that provides a specific means or method that *improves* the relevant technology, or (b) are directed to a result or effect that itself is the abstract idea, in which the claims merely invoke generic processes and machinery. *See Enfish*, 822 F.3d at 1336.

Rejection A under 35 U.S.C. § 101

Regarding the first part of the *Alice/Mayo* analysis, the Examiner concludes claims 18–20 are directed to the abstract idea of “managing ad campaigns based on interactions/engagements which is considered a *fundamental economic practice and a method of organizing human activities*.” Final Act. 4 (some emphases omitted).¹

Regarding the second step of the *Mayo/Alice* analysis, the Examiner finds that claims 18–20 do not recite “limitations that are ‘significantly more’ than the abstract idea because the claims do not recite an improvement to another technology or technical field, an improvement to the functioning of the computer itself, or meaningful limitations beyond generally linking the use of an abstract idea to a particular technological environment.” *Id.* The Examiner finds that “[t]he limitations are merely instructions to implement the abstract idea on a computer and require no more than a generic computer to perform generic computer functions that are

¹ “Patent eligibility under § 101 presents an issue of law.” *Accenture Glob. Servs., GmbH v. Guidewire Software, Inc.*, 728 F.3d 1336, 1340 (Fed. Cir. 2013).

well-understood, routine and conventional activities previously known to the industry.” *Id.* at 4–5 (emphasis added).²

In the Answer, the Examiner further explains the basis for the § 101 rejection of claims 18–20 as follows:

The process could be done by a human analog (by hand or *merely thinking*). The limitations are merely instructions to implement the abstract idea on a computer and require no more than a generic computer to perform generic computer functions that are *well-understood, routine and conventional activities previously known to the industry*. This concept is not “necessarily rooted in computer technology in order to overcome a problem specifically arising in the realm of computer networks” (see *DDR Holdings, LLC vs Hotels.com et al* (Fed. Cir. 2014)). Furthermore, this concept is similar to the concepts of data recognition and storage, comparing new and stored information and using rules to identify options, organizing information through mathematical organizations, and structuring a sales force or marketing company, which have all been found by the courts to be abstract.

Ans. 2–3 (bolding, underlining, and italics omitted) (first and second emphasis added).

Thus, the Examiner concludes that claims 18–20 are not patent-eligible under 35 U.S.C. § 101.

Mayo/Alice Analysis — Step 1

In response, and regarding *Alice* Step 1, Appellant contends that “Applicant Admitted Prior Art (AAPA) does not mention a weighting

² The patent eligibility inquiry may contain underlying issues of fact. *Mortg. Grader, Inc. v. First Choice Loan Servs. Inc.*, 811 F.3d 1314, 1325 (Fed. Cir. 2016). In particular, “[t]he question of whether a claim element or combination of elements is well-understood, routine and conventional to a skilled artisan in the relevant field is a question of fact.” *Berkheimer v. HP Inc.*, 881 F.3d 1360, 1368 (Fed. Cir. 2018).

feature much less the weighting operation recited in the claims. The Schadt et al. reference also fails to teach a weighting feature.” Br. 10.

Appellant further contends:

Appellant respectfully submits that a weighting operation for determining relevance of a first group and a second group which is based, at least in part, on the recency of a subscriber’s engagement with a first group or the recency of the subscriber’s engagement with a second group is the additional element that amounts to significantly more than the judicial exception. As pointed out and explained below (See Argument D and Argument E), this is *one novel and unobvious aspect* of the invention of claims 18–20. A weighting operation based on recency of the subscriber’s engagement is not taught nor suggested by the AAPA or the Schadt et al. [references]. The Examiner has *failed to find references which show or suggest this aspect of the invention*. Therefore, it is inventive and is significantly more than just an abstract idea.

Br. 10, emphases added.

Appellant’s arguments directed to a purported point of novelty are not persuasive. The Supreme Court emphasizes: “[t]he ‘novelty’ of any element or steps in a process, or even of the process itself, is of no relevance in determining whether the subject matter of a claim falls within the § 101 categories of possibly patentable subject matter.” *Diamond v. Diehr*, 450 U.S. 175, 188–89 (1981). Our reviewing court further guides that “[e]ligibility and novelty are separate inquiries.” *Two-Way Media Ltd. v. Comcast Cable Commc’ns, LLC*, 874 F.3d 1329, 1340 (Fed. Cir. 2017); *see also Affinity Labs of Tex., LLC v. DIRECTV, LLC*, 838 F.3d 1253, 1263 (Fed. Cir. 2016) (holding that “[e]ven assuming” that a particular claimed feature was novel does not “avoid the problem of abstractness”).

Appellant also argues that the Examiner “identifies a particular abstract idea [but] has not demonstrated how this abstract idea is embodied in the pending claims.” Br. 11. We disagree. The Examiner has shown that the abstract idea of managing ad campaigns based on interactions/engagements is embodied in the claims. Final Act. 2–3; Ans. 2–3. For example, claims 18–20 recite records of subscriber online behavior related to the number of times a subscriber “engaged” with a first group and a second group and program code for selecting content to include “a marketing message,” the content based on at least the number of times the subscriber “engaged” with the first group and the second group.

Appellant further urges that the pending claims are not of a scope to preempt the purported abstract concept of managing ad campaigns based on interactions/engagements. Br. 11.

However, our reviewing court provides applicable guidance: “[w]hile preemption may signal patent ineligible subject matter, the absence of complete preemption does not demonstrate patent eligibility.” *Ariosa Diagnostics, Inc. v. Sequenom, Inc.*, 788 F.3d 1371, 1379 (Fed. Cir. 2015). Therefore, we are not persuaded by Appellant’s argument regarding the absence of complete preemption.

Moreover, but for the recitation of a generic processor or computer, we find at least the recited functions of implementing a mathematical algorithm (“a weighting operation based on at least one of a plurality of variables” – claim 18) and the “selection operation” (*id.*) could be performed as mental steps, or with the aid of pen and paper. *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*.”); see also *Synopsys, Inc. v. Mentor Graphics Corp.*, 839 F.3d 1138, 1146–47 (2016) (“While the Supreme Court altered the § 101 analysis since *CyberSource* in cases like *Mayo* and *Alice*, we continue to ‘treat[] analyzing information by steps people go through in their minds, or by mathematical algorithms, without more, as essentially mental processes within the abstract-idea category.’”) (quoting *Elec. Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350, 1354 (Fed. Cir. 2016)).

Thus, we conclude claims 18–20 are directed to the abstract idea of a *fundamental economic practice*³ (“a selection operation for selecting content to include in a marketing message to the subscriber” — claim 18), that could be performed as mental steps, albeit with the aid of pen and paper. Therefore, on this record, we are not persuaded of error regarding the Examiner’s legal conclusion that claims 18–20 on appeal are directed to the abstract idea of a fundamental economic practice that could be performed as mental steps. Final Act. 4; Ans. 2 (by “merely thinking”).

Mayo/Alice Analysis – Step 2

Because the claims are directed to an abstract idea, we turn to the second part of the *Alice/Mayo* analysis. We analyze the claims to determine if there are additional limitations that individually, or as an ordered

³ The Examiner concludes “the claims are directed towards the concept of managing ad campaigns based on interactions/engagements which is considered a *fundamental economic practice* and a method of organizing human activities; therefore the claims are drawn to an abstract idea.” Final Act. 4, Emphasis added.

combination, ensure the claims amount to “significantly more” than the abstract idea. *Alice*, 134 S. Ct. at 2357.

Regarding *Alice* Step 2, Appellant contends:

the pending claims include recitations that amount to significantly more than the basic idea itself. The claims provide a specific, concrete and meaningful application that represents an improvement in the field of internet marketing by providing a technical solution to finding the most relevant content to present to an online shopper. Determining the relevance and using the relevancy results to select the most relevant content to provide a user provides meaningful limitations beyond generally linking the use of an abstract idea to a particular technological environment.

Br. 12.

We particularly note the Appellant does not contest the Examiner’s finding that the claim limitations are “merely instructions to implement the abstract idea on a computer and require no more than a generic computer to perform generic computer functions that are *well-understood, routine and conventional activities previously known to the industry.*” Final Act. 2 (italics emphasis added).

The Examiner makes similar findings in the Examiner’s Answer:

The computer system and processor are generically recited and can merely be general purpose computers that perform basic computer functions of retrieving, storing, manipulating, and processing data, which are all *well-understood, routine and conventional*. The database and memory are generically recited and are merely used to store and retrieve data in a *well-understood, routine, and conventional way*. The limitations amount to mere instructions to implement the abstract idea on a computer. Taking these computer limitations as an ordered combination adds nothing that is not already present when the

elements are taken individually. Therefore, the claim does not amount to significantly more than the recited abstract idea and the additional limitations add no inventive concept.

Ans. 3 (emphases added).

Nor does Appellant file a Reply Brief in further response to the Examiner findings. *See* Final Act. 2; Ans. 3. Arguments not made are waived. *See* 37 C.F.R. § 41.37(c)(1)(iv).

We note Appellant’s claimed system is implemented on “a computer system comprising at least one processor and memory,” i.e., a generic computer system, which performs the recited “weighting” and “selection” operations (functions) in accordance with the program code instructions. *See* Claim 18.

Our reviewing court provides guidance regarding the use of such *generic computers* and/or computer/network components. *See Elec. Power Grp. LLC*, 830 F.3d at 1355 (“We have repeatedly held that such invocations of computers and networks that are not even arguably inventive are ‘insufficient to pass the test of an inventive concept in the application’ of an abstract idea.”) (quoting *buySAFE, Inc. v. Google, Inc.*, 765 F.3d 1350, 1353, 1355 (Fed. Cir. 2014)); *Intellectual Ventures I v. Capital One Financial Corp.*, 850 F.3d 1332, 1341 (Fed. Cir. 2017) (“Rather, the claims recite both a generic computer element—a processor—and a series of generic computer ‘components’ that merely restate their individual functions. . . . That is to say, they merely describe the functions of the abstract idea itself, without particularity. This is simply not enough under step two.”).

Appellant’s arguments do not persuade us the Examiner erred, because Appellant does not substantively explain *how* the recited

functionality of claims 18–20 improves the functioning of the generically recited computer, processor, or memory. To the extent that Appellant’s recited functions may be performed faster or more efficiently using a computer, our reviewing court provides applicable guidance:

While the claimed system and method certainly purport to accelerate the process of analyzing audit log data, *the speed increase comes from the capabilities of a general-purpose computer, rather than the patented method itself. See Bancorp Servs., L.L.C. v. Sun Life Assurance Co. of Can. (U.S.)*, 687 F.3d 1266, 1278 (Fed. Cir. 2012) (“[T]he fact that the required calculations could be performed *more efficiently* via a computer does not materially alter the patent eligibility of the claimed subject matter.”).

FairWarning IP, LLC v. Iatric Sys., Inc., 839 F.3d 1089, 1095 (Fed. Cir. 2016) (emphases added).

Although independent claim 18 includes “a subscriber profile database . . . and records of subscriber online behavior related to the number of times a subscriber engaged with a first group and a second group,” we conclude Appellant’s claims 18–20 are not directed to a specific improvement in the way computers operate as embodied in the claimed database, as was found by the Federal Circuit in *Enfish*, 822 F.3d at 1336.

In particular, the court found *Enfish*’s invention was an “improvement of an existing technology” that, unlike conventional relational and object-oriented databases, did not require a programmer to predefine a structure to which subsequent data entry must conform. *Enfish*, , 822 F.3d at 1337; *see also id.* at 1339 (“[T]he self-referential table recited in the claims on appeal is a specific type of data structure designed to improve the way a computer stores and retrieves data in memory.”). In contrast, we find Appellant’s

claims merely include a conventional database that contains records of subscriber online behavior.

Nor do we find Appellant's claims similar to the claimed solution the court held to be patent-eligible in *DDR Holdings*. Here, we conclude Appellant's claimed solution is not rooted in computer technology, such that the invention on appeal overcomes a problem specifically arising in the realm of computers, including computer networks, as was the case with the type of claim the court concluded was patent-eligible in *DDR Holdings*. *DDR Holdings*, 773 F.3d at 1257.

Moreover, we find claims 18–20 are *silent* regarding specific limitations directed to an *improved* computer system, processor, memory, network, database, or Internet. Because none of Appellant's claims are directed to an *improvement* in a processor, database, or other computer/network component, we conclude that none of the claim limitations, viewed both individually and as an ordered combination, amount to significantly more than the judicial exception in order to sufficiently transform the nature of the claims into patent-eligible subject matter.

In light of the foregoing, we conclude, under the *Mayo/Alice* analyses, that each of Appellant's claims 18–20, considered as a whole, is directed to a *patent-ineligible abstract idea* (under *step one*), and under *step two*, does not recite something “*significantly more*” to transform the nature of the claim into a patent-eligible application.

Therefore, we conclude the additional elements recited in the claims of a database, computer system, processor, and memory *without more*, and the inclusion of the weighting and selecting functions that may be performed without a computer as mental steps (although more slowly than a computer

using pen and paper), *do not provide an inventive concept*. Accordingly, for the reasons discussed above, we sustain the Examiner's rejection A under 35 U.S.C. § 101 of claims 18–20, as being directed to patent-ineligible subject matter.⁴

Rejection B of Independent Claim 18 under § 102(a)

Issue: Under pre-AIA 35 U.S.C. § 102(a), did the Examiner err in finding AAPA expressly or inherently discloses the contested *weighting operation* limitation:

a weighting operation based on at least one of a plurality of variables related to the subscriber behavior related to the number of times the subscriber engaged with the first group and the second group, the weighting operation determining a first group relevance and a second group relevance for the subscribers[.]

as recited in independent claim 18? ⁵

Appellant contends, inter alia:

Simply put, the Applicant Admitted Prior Art (AAPA) fails to teach the weighting operation based on subscriber behavior as recited in claim 18. More specifically, there is no teaching in the AAPA of “. . . perform[ing] a weighting operation based on the subscriber behavior related to the number of times the subscriber engaged with the first group and the second group.

Br. 14 (emphasis omitted).

⁴ To the extent Appellant has not advanced separate, substantive arguments for particular claims, or other issues, such arguments are waived. *See* 37 C.F.R. § 41.37(c)(1)(iv).

⁵ We give the contested claim limitation the broadest reasonable interpretation consistent with the Specification. *See In re Morris*, 127 F.3d 1048, 1054 (Fed. Cir. 1997).

In response, the Examiner further explains the basis for the rejection:

AAPA teaches that email is an effective marketing tool. Among other things, online marketers use email to acquire new customers and to retain and communicate with current customers. When used with web analytics, an eMarketing system can give the online marketer a tremendous amount of insight into who is visiting and buying the marketer's product (paragraph [004]). Each email sent out on a marketing campaign is trackable and can provide an enormous amount of valuable, actionable data that can be used to further refine the marketer's targeting efforts and messages including improving the targeting and relevance of outgoing messages (paragraph [006]). A marketer may distribute an email newsletters with several links (these links are well-known in the art as hyperlinks to websites). If a customer interacts with a link (understood as an interaction or visit to a website), the eMarketing system puts the customer into the group related to that link. AAPA teaches that a subscriber clicks on 25 links related to men's shoes and 1 click on a link related to women's shoes. It is apparent to one of ordinary skill in the art that the subscriber that has clicked on 25 links related to a certain topic (men's shoes) is more interested in that topic and the relevancy of those links is higher than the link that has received only 1 click (paragraphs [007-008]).

Ans. 4–5.

We find the Examiner's rejection does not provide a specific mapping of the contested *weighting operation* of claim 18 to a specific corresponding feature found in AAPA. *See* Spec. ¶¶ 6–8. We particularly note, in the Final Action, the Examiner maps the *entirety* of claim 18 to “(Applicant's Background see at least paragraphs [0006-0008])” and does not point to any passage in AAPA that discloses the claimed weighting operation or otherwise explain how AAPA discloses the claimed weighting operation.⁶

⁶ *See* 37 C.F.R. § 1.104(c)(2) (“When a reference is complex or shows or describes inventions other than that claimed by the applicant, *the particular*

Final Act. 5–6. Nor do we find the cited paragraphs 6–8 of AAPA expressly or inherently describe a “weighting operation,” within the meaning of independent claim 18.

In the Answer, the Examiner further states: “[i]t is *apparent to one of ordinary skill in the art* that the subscriber that has clicked on 25 links related to a certain topic (men’s shoes) is more interested in that topic and the relevancy of those links is higher than the link that has received only 1 click.” Ans. 5 (emphasis added).

The Examiner’s conclusory assertion is insufficient to show that AAPA discloses the claimed weighting operation. Under § 102, what is apparent or suggested to an artisan having ordinary *knowledge in the art* is insufficient to establish express or inherent anticipation. Our reviewing court guides: “Inherency . . . may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient.” *In re Robertson*, 169 F.3d 743, 745, (Fed. Cir. 1999) (internal citations omitted).

Accordingly, for essentially the same reasons argued by Appellant (Br. 13–14), we are constrained on this record to reverse the Examiner’s anticipation Rejection B of independent claim 18.

Rejection C of Claims 19 and 20 under § 103(a)

Based upon our review of the record, we find the Examiner has not established how the additionally cited Schadt reference overcomes the aforementioned deficiencies of AAPA. *See* Final Act. 6–7. Accordingly,

part relied on must be designated as nearly as practicable. The pertinence of each reference, if not apparent, must be clearly explained and each rejected claim specified.”), emphases added.

we are constrained on this record to reverse the Examiner's § 103 Rejection C of dependent claims 19 and 20.

CONCLUSIONS

The Examiner did not err in rejecting claims 18–20, under 35 U.S.C. § 101, as being directed to patent-ineligible subject matter.

The Examiner erred in rejecting claim 18, under pre-AIA 35 U.S.C. § 102(a), as being anticipated by AAPA.

The Examiner erred in rejecting claims 19 and 20, under pre-AIA 35 U.S.C. § 103(a), as being obvious over the combined teachings and suggestions of AAPA and Schadt.

DECISION

We affirm the Examiner's decision rejecting claims 18–20 under 35 U.S.C. § 101.

We reverse the Examiner's decision rejecting claim 18 under pre-AIA 35 U.S.C. § 102(a).

We reverse the Examiner's decision rejecting claims 19 and 20 under pre-AIA 35 U.S.C. § 103(a).

Because we have affirmed at least one ground of rejection with respect to each claim on appeal, the Examiner's decision is affirmed. *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)(iv). *See* 37 C.F.R. § 41.50(f).

AFFIRMED