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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/705.625	12/05/2012	Brad Hopkins Smallwood	26295-20772	8527
87851	7590	02/20/2019	EXAMINER	
Facebook/Fenwick Silicon Valley Center 801 California Street Mountain View, CA 94041			REFAI, SAM M	
			ART UNIT	PAPER NUMBER
			3681	
			NOTIFICATION DATE	DELIVERY MODE
			02/20/2019	ELECTRONIC

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte BRAD HOPKINS SMALLWOOD
and SEAN BRUICH

Appeal 2017-011788
Application 13/705,625
Technology Center 3600

Before ALLEN R. MacDONALD, IRVIN E. BRANCH, and
NABEEL U. KHAN, *Administrative Patent Judges*.

MacDONALD, *Administrative Patent Judge*.

DECISION ON APPEAL¹

STATEMENT OF THE CASE

Appellants appeal under 35 U.S.C. § 134(a) from a final rejection of claims 1–10, 13–23, and 26–28. Appellants have cancelled claims 11, 12, 24, and 25. App. Br. 23, 26. We have jurisdiction under 35 U.S.C. § 6(b). We AFFIRM.

¹ Appellants indicate the real party in interest is Facebook, Inc. App. Br. 2.

Illustrative Claims

Illustrative claims 1 and 10 under appeal read as follows (emphasis, formatting, and bracketed material added):

1. A computer-implemented method comprising:

[A.] determining, by a processor, identities of a plurality of recipients of an advertisement, each of the identities associated with a recipient profile including market segment information associated with a recipient of the plurality of recipients describing the recipient individually, and the market segment information including at least one of[:]

[i] demographic information and

[ii] psychographic information

associated with the recipient;

[B.] determining, by the processor, a first market segment profile of the plurality of recipients using market segment information in the recipient profiles;

[C.] selecting, by the processor, a subset of recipients from the plurality of recipients, the subset having a second market segment profile, the second market segment profile being derived from the first market segment profile and being the same as the first market segment profile;

[D.] providing, by the processor, each of the recipients in the subset with a recall question, wherein the recall question comprises a request for information associated with each recipient's recollection of receiving the advertisement, the responses to the recall questions from the recipients in the subset representing responses of the plurality of recipients of the advertisement;

[E.] receiving, by the processor, a response to the recall question from at least one of the recipients in the subset;

[F.] determining, by the processor, a recollection rate that is ***a function of a number of received responses*** and ***an inverse function of a number of recipients*** in the plurality of recipients;

[G.] analyzing, by the processor, the response to the recall question to determine whether sub-market segments within the subset have different recollections of the advertisement based on the determined recollection rate associated with the sub-market segments within the subset;

[H.] receiving, by the processor, a target audience of a defined demographic for the advertisement from an advertiser, the target audience having profiles that include market segment information corresponding to one or more targeting criteria; and

[I.] refining, by the processor, the target audience for the advertisement based at least in part on the analysis of the responses to the recall question.

10. The method of claim 1, further comprising using a social networking system to provide the advertisement for display.

References²

Eldering	US 7,062,510 B1	June 13, 2006
D'Angelo et al.	US 2009/0070219 A1	Mar. 12, 2009
Mallon et al.	US 2013/0091019 A1	Apr. 11, 2013
Joseph et al.	US 2013/0091142 A1	Apr. 11, 2013

Rejections³

A.

The Examiner rejected claims 1–10, 13–23, and 26–28 under 35 U.S.C. § 101 “because the claimed invention is directed to a judicial

² All citations herein to these references are by reference to the first named inventor only.

³ All citations to the “Final Action” are to the Final Action mailed on November 23, 2016.

exception (i.e., a law of nature, a natural phenomenon, or an abstract idea) without significantly more,” i.e., because the claimed invention is directed to patent-ineligible subject matter. Final Act. 5–9.

We select claim 1 as representative. Appellants do not separately argue claims 2–10, 13–23, and 26–28. Except for our ultimate decision, we do not discuss the § 101 rejection of claims 2–10, 13–23, and 26–28 further herein.

B.

The Examiner rejected claims 1–6, 8, 9, 14–18, 20–23, 27, and 28 under 35 U.S.C. § 103 as being unpatentable over the combination of Mallon and Eldering. Final Act. 9–19.

We select claim 1 as representative. Appellants do not present separately arguments for claims 2–6, 8, 9, 14–18, 20–23, 27, and 28. Except for our ultimate decision, we do not discuss the § 103 rejection of claims 2–6, 8, 9, 14–18, 20–23, 27, and 28 further herein.

C.

The Examiner rejects claims 7 and 19 under 35 U.S.C. § 103 as being unpatentable over the combination of Mallon, Eldering, and Joseph. Final Act. 19–20.

Appellants do not present arguments for claims 7 and 19. Thus, the rejection of these claims turns on our decision as to claim 1. Except for our ultimate decision, we do not address the § 103 rejection of claims 7 and 19 further herein.

D.

The Examiner rejects claims 10, 13, and 26 under 35 U.S.C. § 103 as being unpatentable over the combination of Mallon, Eldering, and D'Angelo. Final Act. 20–21.

We select claim 10 as representative. Appellants' Appeal Brief does not present separate arguments for claims 13 and 26. Except for our ultimate decision, we do not address the § 103 rejection of claims 13 and 26 further herein.

Issues on Appeal

Did the Examiner err in rejecting claim 1 as being directed to patent-ineligible subject matter?

Did the Examiner err in rejecting claims 1 and 10 as being obvious?

ANALYSIS

We have reviewed the Examiner's rejections in light of Appellants' arguments (Appeal Brief and Reply Brief) that the Examiner has erred. We disagree with Appellants. Except as noted below, we adopt as our own (1) the findings and reasons set forth by the Examiner in the action from which this appeal is taken and (2) the reasons set forth by the Examiner in the Examiner's Answer in response to Appellants' Appeal Brief arguments. We concur with the conclusions reached by the Examiner. We highlight the following points.

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 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 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, 192 (1981)); “tanning, dyeing, making waterproof 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 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 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 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.* (citation omitted) (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 (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.* (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

The United States Patent and Trademark Office (USPTO) recently published revised guidance on the application of § 101. USPTO’s January 7, 2019 Memorandum, *2019 Revised Patent Subject Matter Eligibility*

Guidance, 84 Fed. Reg. 50 (“Memorandum” or “Office Guidance”). Under that guidance, we first look to whether the claim recites:

- (1) (*see* Memorandum Step 2A – Prong One) 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) (*see* Memorandum Step 2A – Prong Two) additional elements that integrate the judicial exception into a practical application (*see* MPEP § 2106.05(a)–(c), (e)–(h)).⁴

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

- (3) adds a specific limitation beyond the judicial exception that is not “well-understood, routine, conventional” in the field (*see* MPEP § 2106.05(d)); or
- (4) simply appends well-understood, routine, conventional activities previously known to the industry, specified at a high level of generality, to the judicial exception.

See Memorandum Step 2B.

⁴ We acknowledge that some of these considerations may be properly evaluated under Step 2 of *Alice* (Step 2B of Office Guidance). Solely for purposes of maintaining consistent treatment within the Office, we evaluate it under Step 1 of *Alice* (Step 2A of Office Guidance). *See* USPTO’s January 7, 2019 Memorandum, “2019 Revised Patent Subject Matter Eligibility Guidance.”

C. Examiner's §101 Rejection - Alice/Mayo - Steps 1 and 2

C.1. USPTO Memorandum Step 2A – Prong One

Applying step 1 of the *Alice/Mayo* analysis, the Examiner concludes claim 1 is directed to an abstract idea.

[C]laim(s) 1-10, 13-23 and 26-28 recite the abstract idea of [1] A method comprising:

[2] determining, identities of a plurality of recipients of an advertisement, each of the identities associated with a recipient profile including market segment information associated with a recipient of the plurality of recipients describing the recipient individually, and the market segment information including at least one of demographic information and psychographic information associated with the recipient;

[3] determining, a first market segment profile of the plurality of recipients using market segment information in the recipient profiles;

[4] selecting, a subset of recipients from the plurality of recipients, the subset having a second market segment profile, the second market segment profile being derived from the first market segment profile and being the same as the first market segment profile;

[5] providing, each of the recipients in the subset with a recall question, wherein the recall question comprises a request for information associated with each recipient's recollection of receiving the advertisement, the responses to the recall questions from the recipients in the subset representing responses of the plurality of recipients of the advertisement;

[6] receiving, a response to the recall question from at least one of the recipients in the subset;

[7] determining, a recollection rate that is a function of a number of received responses and an inverse function of a number of recipients in the plurality of recipients;

[8] analyzing, the responses to the recall question to determine whether sub-market segments within the subset have different

recollections of the advertisement based on the determined recollection rate associated with the sub-market segments within the subset;

[8] receiving, a target audience of a defined demographic for the advertisement from an advertiser, the target audience having profiles that include market segment information corresponding to one or more targeting criteria; and

[9] refining, the target audience for the advertisement based at least in part on the analysis of the responses to the recall question which is merely an idea ‘of itself’, a method of organizing human activity and mathematical relationships/formulas.

Final Act. 5–6 (emphasis modified and formatting added).

[S]uch as in *SmartGene*,^[5] the claimed invention ***compares the target audience of a defined demographic for an advertisement to sub-market segments and using rules to refine the target audience for the advertisement*** based at least in part on the analysis of the responses to the recall questions.

Final Act. 6 (emphasis added).

Also, the claimed invention is similar to *Affinity Labs of Texas LLC, v. Amazon.com Inc.*[, 838 F.3d 1266] (Fed. Cir. 2016) which is directed towards the abstract idea of ***targeting advertisements based on at least one piece of demographic information about the user***, the claimed invention uses demographic data to determine a target audience for an advertisement.

Final Act. 7 (emphasis modified).

C.2. USPTO Memorandum Step 2A – Prong Two

Applying step 2 of the *Alice/Mayo* analysis, the Examiner concludes:

This concept [(the claimed invention)] is ***not “necessarily rooted in computer technology*** in order to overcome a problem specifically arising in the realm of computer networks” (*see DDR*

⁵ *SmartGene, Inc. v. Advanced Biological Labs., SA*, 555 F. App’x 950 (Fed. Cir. 2014) (nonprecedential).

Holdings, LLC vs Hotels.com et al[, 773 F.3d 1245] (Fed. Cir. 2014)).

Final Act. 6 (emphasis modified).

Additionally, the claimed functions of the generic computer represent ***insignificant data-gathering steps*** and thus add nothing of practice significance to the abstract idea. The additional element limitations are simply a ***field of use*** that attempt to limit the abstract idea to a particular technological environment. The type of information being manipulated ***does not impose meaningful limitations*** or render the idea less abstract. Further the courts have found that simply limiting the use of the abstract idea to a particular environment does not add significant more.

Final Act. 8–9 (emphasis modified).

C.3. *USPTO Memorandum Step 2B*

Further applying step 2 of the *Alice/Mayo* analysis, the Examiner concludes:

When considered as an ordered combination, the claims are nothing more than a ***purely conventional*** computerized implementation of applicant’s formula. Therefore, the claim as a whole does ***not*** provide significantly ***more than a generic computer*** upon which the claimed formula is calculated.

Final Act. 7 (emphasis added).

The claim(s) does/do not include additional elements that are sufficient to amount to significantly more than the judicial exception because the additional elements when considered individually and in combination do not amount to significantly more than the abstract idea.

Claim(s) 1-10, 13-23 and 26-28 recite the additional elements of “***computer-implemented***”, “***by a processor***” [repeatedly]

The additional elements of the claim(s) do not add a meaningful limitation to the abstract idea because the additional elements or combination of elements in the claim(s) other than

the abstract idea per se amount(s) to no more than mere instructions to implement the abstract idea on a computer, and/or ***recitation of generic computer structure*** that serves to perform generic computer functions recited at a high level of generality These generic computer functions are similar to what the courts have recognized as well-understood, routine and conventional activities

Final Act. 8 (emphasis added).

D. *Appellants' § 101 Arguments*

D.1.

As to claim 1, Appellants contend the claim is “not ‘directed to’ an abstract idea.” App. Br. 9. Appellants particularly contend:

The Examiner states “in particular” what he considers to be the abstract idea, after which he then recites the ***entirety of claim 1*** and characterizes the claim elements as “merely an idea ‘of itself’, a method of organizing human activity and mathematical relationships/formulas.” [Office Action], p. 6.

This analysis is improper first because the examiner has ***merely recited the entire claim as the abstract idea***, and has ***provided no explanation*** of why this is abstract, other than to point to various cases, contending that the current claims are similar to those in *SmartGene*, *Affinity Labs* . . . and *Parker v. Flook*, 437 S.Ct. 584 (1978). *See id.* at pp. 6-7. Yet these cases do not recite the entire claim as the abstract idea, but ***instead focus on identifying within the claim a concept that might actually be abstract.***

App. Br. 9–10 (emphasis added).

Furthermore, ***the claim recites specific details that are simply not abstract***, including the ***determination of the recollection rate***, and the fact that this is a function of the number of received responses and is also an inverse function of a number of recipients, the analysis regarding whether the subset has different recollections of the ad based on the recollection rate, and the ***refining of the target audience*** based on this. For at least these

reasons, there is clear error in the determination of the alleged abstract idea.

App. Br. 10 (emphasis added).

[T]he Examiner’s *analysis* of *Affinity Labs* is *erroneous*. The Examiner states that this case is “directed towards the abstract idea of targeting advertisements based on at least one piece of demographic information about the user,” while the claimed invention “uses demographic data to determine a target audience for an advertisement.” Office Action, p. 7. But again the Examiner appears to misread the case. What the court actually says is “[*despite*] *the title of the patent and the description in the abstract, only three sentences in the specification and only one of the 20 claims deal with targeted advertising*.” The rest of the specification and claims are directed to media systems that deliver content to a handheld wireless electronic device. Stated more succinctly, claim 14 is directed to a network-based media system with a customized user interface, in which the system delivers streaming content from a network-based resource upon demand to a handheld wireless electronic device having a graphical user interface.” *Affinity Labs*, [838] F.3d at [1267–1268]. Thus, the court did not appear to find that the invention claimed was directed to what the Examiner now asserts it is directed, and this is also readily apparent from the claim that is reproduced in the opinion.

App. Br. 11–12 (emphasis added).

The claims herein . . . recite improvements to *advertisement technologies*. . . . This method of determining a recollection rate is itself is a non-conventional improvement on traditional advertising, and thereby provides significantly more than those computer functions which have been found to be abstract by the courts.

App. Br. 14–15 (emphasis added).

Appellants’ “entirety of claim 1” and “provided no explanation” arguments are not persuasive because the Examiner does not merely recite the entirety of claim 1. Rather, the Examiner specifically stated that the

claimed invention's abstract idea (or as Appellants call it, the claim's "concept"),

compares the target audience of a defined demographic for an advertisement to sub-market segments and using rules to refine the target audience for the advertisement based at least in part on the analysis of the responses to the recall questions.

Final Act. 6. The Examiner also specifically stated which claim limitations are part of that abstract idea. In this case, the Examiner determined that the functions performed in every step of claim 1 was part of the abstract idea. The Examiner further determined that the limitation of "computer-implemented" and "by a processor" were not part of the abstract idea. While Appellants may disagree with Examiner's explanation, contrary to Appellants' arguments, we conclude that the Examiner has provided a sufficient explanation of why the claimed invention is deemed abstract.

Also, Appellants' "specific details are simply not abstract" argument is not persuasive because we agree with the Examiner's determination that the argued limitations of:

determination of the recollection rate, and the fact that this is a function of the number of received responses and is also an inverse function of a number of recipients, the analysis regarding whether the subset has different recollections of the ad based on the recollection rate, and the refining of the target audience based on this

are each part of the abstract idea. Contrary to Appellants' argument, we do not find before us a non-abstract improvement to technology. The focus of claim 1 is not on an improvement in computer-functionality, as in *Enfish*,⁶ but on an abstract idea that uses a computer as a tool for "compar[ing] the

⁶ *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327 (Fed. Cir. 2016).

target audience of a defined demographic for an advertisement to sub-market segments and using rules to refine the target audience for the advertisement based at least in part on the analysis of the responses to the recall questions.”

Final Act. 6. In *Trading Technologies*, the Federal Circuit agreed with the district court explanation that

[t]he claims require a specific, structured graphical user interface paired with a prescribed functionality directly related to the graphical user interface’s structure that is addressed to and resolves a specifically identified problem in the prior state of the art.

Trading Techs. Int’l, Inc. v. CQG, INC., 675 F. App’x 1001, 1004 (Fed. Cir. 2017). In contrast, in Appellants’ claim 1, we find only abstract improvements to refining the target audience for the advertisement based at least in part on the analysis of the responses to the recall questions. A claim directed to a unique and advantageous method of targeting advertising is nonetheless directed to an abstract idea.⁷ “[U]nder the *Mayo/Alice* framework, a claim directed to a newly discovered law of nature (or natural phenomenon *or abstract idea*) cannot rely on the novelty of that discovery for the inventive concept necessary for patent eligibility” *Genetic*

⁷ See *Ultramercial, Inc. v. Hulu LLC*, 772 F.3d 709 (Fed. Cir. 2014). In that case, the patentee argued that its financial arrangement (a method of using advertising as an exchange or currency) was distinguishable from the “routine,” “long prevalent,” or “conventional” abstract idea in *Alice* because it was “directed to a specific method of advertising and content distribution that was previously unknown.” *Id.* at 714. The court rejected the patentee’s position that “abstract ideas remain patent-eligible under § 101 as long as they are new ideas, not previously well known, and not routine activity.” *Id.*

Techs. Ltd. v. Merial L.L.C., 818 F.3d 1369, 1376 (Fed. Cir. 2016) (emphasis added); see *Diehr*, 450 U.S. at 188–89.

Further, Appellants’ “*Affinity Labs*” and “advertisement technologies” arguments are not persuasive. While we agree with Appellants that the Examiner has read too much into the *Affinity Labs* decision, as the court did not explicitly speak to whether the one specific targeting advertising claim of *Affinity Labs* was a certain method of organizing human activity directed to an abstract idea, Appellants overlook that the court in *Affinity Labs* was explicit that

in *Ultramercial*, we found the process of allowing a consumer to receive copyrighted media in exchange for watching a selected advertisement was an abstract idea.

Affinity Labs, 838 F.3d at 1269 (citation omitted); *Ultramercial*, 772 F.3d 709. Contrary to Appellants’ argument that advertising is a technology, we conclude that the claimed targeting advertising is directed to an abstract idea.

We agree with the Examiner. We determine that the refining of a target advertising audience of claim 1 recites a judicial exception in the form of a method of organizing human activity comprising commercial or legal interactions (including advertising, marketing or sales activities or behaviors).

D.2.

Also as to claim 1, Appellants contend “[t]he claims herein . . . recite improvements to advertisement technologies.” App. Br. 14. Appellants particularly contend:

The Office Action alleges “the claims(s) do not include additional elements that are sufficient to amount to significantly more,” and points to the processor and the computer-

implemented language as being the additional elements. Office Action, p. 8. Because *the Examiner erroneously stated the entire claim as the abstract idea*, these are the only remaining elements to consider in the Examiner’s significantly more analysis. Yet, if the abstract idea were the first point that the Examiner raised of “analyzing, the response to the recall question to determine whether sub-market segments within the subset have different recollection of the advertisement,” then the steps of determining the identities of the recipients, determining the first market segment profile, selecting a subset, providing each with a recall question, receiving responses, determining the recollection rate, and receiving and refining the target audience *are all additional limitations*. Considered as a whole, these additional limitations recite much more than the alleged abstract idea.

App. Br. 13 (emphasis added).

Contrary to Appellants’ argument that all the above argued functions of claim 1 are “additional limitations” (i.e., technology limitations rather than part of the abstract idea), the Examiner correctly identifies that these functions are part of the abstract idea. Final Act. 5–6. As we discuss above, we do not find before us a non-abstract improvement to technology. Again, we conclude, the focus of claim 1 is not on an improvement in computer-functionality.

We agree with the Examiner that as to claim 1, “viewed individually and in combination, these additional claim element(s) do not provide meaningful limitation(s) to transform the abstract idea into a patent eligible application of the abstract idea.” Final Act. 9. In view of Appellants’ Specification (¶¶ 55–56), and consistent with the Examiner’s determinations, we conclude that claim 1 does not integrate the judicial exception into a practical application. We determine claim 1 does not recite:

- (i) an improvement to the functioning of a computer;

- (ii) an improvement to another technology or technical field;
- (iii) an application of the abstract idea with, or by use of, a particular machine;
- (iv) a transformation or reduction of a particular article to a different state or thing; or
- (v) other meaningful limitations beyond generally linking the use of the abstract idea to a particular technological environment.

See MPEP §§ 2106.05(a)–(c), (e)–(h). We agree with the Examiner that claim 1 is *directed to* a judicial exception.

D.3.

As noted above, the Examiner determined the additional elements of “computer-implemented” and “by a processor” are generic computer limitations similar to what the courts have recognized as well-understood, routine, and conventional.

Although claim 1 recites “more” under step two of the *Alice/Mayo* analysis, we conclude the “more” is not patentably significant. Rather, the case law shows this “more” to be the epitome of a well-understood, routine, conventional element/combination previously known in the industry. See *Alice*, 573 U.S. at 227 (“[P]etitioner’s . . . media claims add nothing of substance to the underlying abstract idea”); *Fairwarning IP, Inc. v. Iatric Sys., Inc.*, 839 F.3d 1089, 1096 (Fed. Cir. 2016) (“Claims 15–17 . . . add nothing more than similar nominal recitations of basic computer hardware, such as ‘a non-transitory computer-readable medium with computer-executable instructions’ and a microprocessor.”).

Because claim 1, in addition to the judicial exception, recites only a well-understood, routine, conventional element/combination previously known in the industry, we conclude the case law shows there is no genuine issue of material fact regarding step two of the Examiner's *Alice/Mayo* analysis. Therefore, in view of Appellants' Specification, and consistent with the Examiner's determinations, we determine the claims do not recite:

- (vi) a specific limitation other than what is well-understood, routine, conventional activity in the field or unconventional steps that confine the claim to a particular useful application.

See MPEP § 2106.05(d).

D.4.

As to claim 1, Appellants further contend:

[T]he court in *McRo Inc. v. Bandai Namco Games America*^[8] made clear that a key concern was one of **preemption**, which “arises when the claims are not directed to a specific invention and instead improperly monopolize ‘the basic tools of scientific and technological work.’ No. 15-1080 (Fed. Cir. 2016) at p. 23 (citing *Alice*, 134 S. Ct. at 2354 (quoting *Myriad*,^[9] 133 S. Ct. at 2116)), **But the claimed invention here is not preempting all advertising, nor is it even preempting use of recall questions for advertisements, or analyzing responses to recall questions, or even providing a refined target audience.** Instead, it recites a particular solution to a problem or a particular way to achieve a desired outcome, as opposed to merely claiming the idea of a solution or outcome. The claim describes a detailed set of steps including recall questions and responses, determining a

⁸ *McRO, Inc. v. Bandai Namco Games America Inc.*, 837 F.3d 1299 (Fed. Cir. 2016).

⁹ *Ass'n for Molecular Pathology v. Myriad Genetics, Inc.*, 569 U.S. 576 (2013).

recollection rate in a particular way, analyzing the result in a particular way, and ultimately refining a target audience. This is a particular way to achieve data on recall of users and to get at better target audience for the advertiser based on the data collected and analyzed.

App. Br. 15–16 (emphasis added).

Appellants’ “preemption” argument is not persuasive because although “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). We are instructed that “[w]here a patent’s claims are deemed only to disclose patent ineligible subject matter under the [*Alice/Mayo*] framework . . . , preemption concerns are fully addressed and made moot.” *Id.*

E. Appellants’ § 103 Arguments

E.1.

Appellants contend that the Examiner erred in rejecting claim 1 under 35 U.S.C. § 103(a) because:

[T]he suggested combination of Mallon and Eldering fails to disclose or suggest all of the limitations of the rejected claims, at least because these references do not describe methods for determining a recall rate that is a function of a number of received responses and an inverse function of a number of recipients in the plurality of recipients.

Mallon is generally about a computer implemented method that serves advertisements to audiences. *See* Mallon, Abstract. The method disclosed by Mallon includes identifying a first advertisement opportunity, and determining a threshold length of time for advertisement exposure, wherein the exposure length may be determined by *recall rates*. . . . That is, Mallon’s *recall rate* is a measure of how well a user remembers an advertisement as a function of how long the user was exposed to the advertisement.

App. Br. 16–17 (emphasis added).

In the Answer with regard to claim 1, the Examiner relies on Mallon on paragraphs [0106] and [0121]. . . . by the Examiner's own admission, *Mallon teaches a recall rate* that is simply dependent on the number of responses and reducing the initial sample size by subtracting outliers. Accordingly, *the recall rate of Mallon is a direct function of the number of responses rather than a recollection rate that is an inverse function of the number of responses.*

Reply Br. 9–10 (emphasis added).

As to Appellants' arguments, we disagree. First, we construe the critical term “rate” of claim 1. Reviewing the Specification, we find the Appellants describe a “recollection rate” as “a function of the number of responses and an inverse function of the number of recipients in the plurality of recipients.” Spec. ¶ 39. Alternatively, Appellants refer to this as a “recall rate.” Spec. ¶ 46. Appellants' use of the term “rate” is consistent with Dictionary.com,¹⁰ which states that the term “rate” means:

noun. a quantity or amount considered in relation to or measured against another quantity or amount.

We conclude that an artisan would understand the term “rate” to require a relationship in the form a/b where “a” is a first value as a direct function and “b” is a second value as an inverse function. As Appellants acknowledge, Mallon includes a recall rate and we conclude that implicitly includes a first value as a direct function and a second value as an inverse function.

¹⁰ Based on the Collins English Dictionary – Complete & Unabridged 2012 Digital Edition (© William Collins Sons & Co. Ltd. 1979, 1986 © HarperCollins Publishers 1998, 2000, 2003, 2005, 2006, 2007, 2009, 2012), <https://www.dictionary.com/browse/rate> (Accessed February 2, 2019).

Second, we determine whether an artisan would understand Mallon's first value as a direct function is to a number of responses. Appellants acknowledge Mallon includes a recall rate that is a direct function of the number of responses. Reply Br. 9. Also, we note Appellants argue the claimed recollection rate is "a recollection rate that is an *inverse* function of the number of responses." Reply Br. 9–10 (emphasis added). However, Appellants are mistaken. Claim 1 recites "a recollection rate that is a function of a number of received responses." Claim 1 does not require an *inverse* function of the number of the received responses.

Third, we determine whether an artisan would understand Mallon's second value as an inverse function is to a number of recipients. We conclude that an artisan reading Mallon at paragraph 121, cited by the Examiner, would understand the sample of participants to correspond to Appellants' claimed number of recipients. Further, an artisan would understand Mallon's figure 7, at the left axis, to show a recall rate as a function of the number of responses and an inverse function of the number of participants. We note that Appellants argue Mellon's recall rate includes exposure times as an additional factor. App. Br. 17. However, that Mallon includes another level of complexity (the Exposure Time axis) in addition to the basic recall rate, is immaterial. We find no limitation in Appellants' claim 1 that precludes such additional factors.

E.2.

Appellants contend that the Examiner erred in rejecting claim 10 under 35 U.S.C. § 103(a) because:

D'Angelo is generally about a social networking website that "uses information it obtains about its members' characteristics, actions and their connections to other members

of the social network. The social network allows advertisers to provide advertisements that are personalized to the individual interests or characteristics of various social network members.” D’Angelo, ¶ 6. However, *nowhere does D’Angelo recite* “determining . . . a recollection rate . . . ” as recited by claim 1. Therefore, D’Angelo in combination with Mallon and Eldering still fails to teach this element.

App. Br. 19 (emphasis added).

First, the Examiner does not cite D’Angelo for the argued “determining . . . a recollection rate” limitation. Rather, the Examiner cites Mallon. Final Act. 11.

Thus, Appellants do not address the actual reasoning of the Examiner’s rejection. Instead, Appellants attack the D’Angelo reference singly for lacking a teaching that the Examiner relied on a combination of references to show. It is well-established that one cannot show non-obviousness by attacking references individually where the rejections are based on combinations of references. *See In re Keller*, 642 F.2d 413, 425 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 1097 (Fed. Cir. 1986). References must be read, not in isolation, but for what they fairly teach in combination with the prior art as a whole. *Merck*, 800 F.2d at 1097.

E.3.

In the Reply Brief, Appellants contend that the Examiner erred in rejecting claims 13 and 26 under 35 U.S.C. § 103(a). We do not reproduce these contentions herein. These arguments were not previously argued in the Appeal Brief, or newly raised by the Examiner in the Answer. In the absence of a showing of good cause by Appellants, we decline to consider an argument raised for the first time in the Reply Brief, as the Examiner has not been provided a chance to respond. *See* 37 C.F.R. § 41.41(b)(2) (2012);

In re Hyatt, 211 F.3d 1367, 1373 (Fed. Cir. 2000) (noting that an argument not first raised in the brief to the Board is waived on appeal); *Ex parte Nakashima*, 93 USPQ2d 1834, 1837 (BPAI 2010) (explaining that arguments and evidence not timely presented in the principal brief will not be considered when filed in a reply brief, absent a showing of good cause explaining why the argument could not have been presented in the principal brief); *Ex parte Borden*, 93 USPQ2d 1473, 1477 (BPAI 2010) (informative) (“Properly interpreted, the Rules do not require the Board to take up a belated argument that has not been addressed by the Examiner, absent a showing of good cause.”). Appellants have provided no showing of good cause.¹¹

CONCLUSIONS

(1) The Examiner has not erred in rejecting claims 1–10, 13–23, and 26–28 under 35 U.S.C. § 101, as being directed to patent-ineligible subject matter.

(2) The Examiner has not erred in rejecting claims 1–10, 13–23, and 26–28 as being unpatentable under 35 U.S.C. § 103.

(3) Claims 1–10, 13–23, and 26–28 are not patentable.

¹¹ Further, even if we were to consider Appellants’ contentions, Appellants merely recite the particular language of claims 13 and 26, and assert the cited prior art references do not disclose (or teach or suggest) the claim limitations. Without more, this fails to constitute an argument on the merits. *See* 37 C.F.R. § 41.37(c)(1)(iv); *In re Lovin*, 652 F.3d 1349, 1357 (Fed. Cir. 2011). Appellants do not present arguments addressing the issue before us, i.e., whether claims 13 and 26 are “rendered obvious” by the references.

DECISION

The Examiner's rejection of claims 1–10, 13–23, and 26–28 under 35 U.S.C. § 101, as being directed to patent-ineligible subject matter, is **affirmed**.

The Examiner's rejections of claims 1–10, 13–23, and 26–28 as being unpatentable under 35 U.S.C. § 103 are **affirmed**.

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).

AFFIRMED