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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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*Ex parte* PERUVEMBA V. SUBRAMANIAN,  
ZHIQIANG MICHAEL ZHANG, and LEX BAYER

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Appeal 2017-011567  
Application 13/278,043  
Technology Center 3600

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Before HUNG H. BUI, KARA L. SZPONDOWSKI, and  
PHILLIP A. BENNETT, *Administrative Patent Judges*.

SZPONDOWSKI, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellants appeal 35 U.S.C. § 134(a) from the Examiner's Final Rejection of claims 1, 3–9, 11, 13–19, and 21–40, constituting all claims pending in the current application. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

STATEMENT OF THE CASE

Appellants' invention is directed to generating a targeted subscription package to offer a user in a virtual environment. Spec. ¶ 5. Claim 1, reproduced below, is representative of the claimed subject matter:

1. A method comprising:

analyzing, by a computer apparatus, one or more user attributes of a user of one or more virtual environments, the one or more user attributes including frequency of access to the one or more virtual environments, existing virtual assets possessed by the user in a particular virtual environment, game data related to the user's participation in an online game, and social network information provided by a social network associated with the user, wherein the game data includes a character type, gender characteristics of the character type, and a character level in the online game;

determining, by the computer apparatus, a customized subscription package to be offered to the user for purchase based at least in part on the one or more user attributes of the user, comprising:

determining a term of access to the one or more virtual environments to be included in the customized subscription package based at least in part on the one or more user attributes; and

determining one or more virtual assets associated with the one or more virtual environments to be included in the customized subscription package, wherein the one or more virtual assets include at least one of a virtual currency usable in the virtual environment and a virtual good usable in the virtual environment, wherein at least one of the one or more virtual assets for the subscription package is determined based on at least one user attribute of the one or more user attributes, the virtual good and the virtual currency corresponding to the character type, the gender characteristics of the character type, and the character level in the online game;

offering the customized subscription package to the user;  
and

updating, by the computer apparatus, the virtual assets possessed by the user in the particular virtual environment based in part on input provided by the user accepting the customized subscription package and the game data.

App. Br. 33 (Claims App.).

### REJECTION

Claims 1, 3–9, 11, 13–19, and 21–40 stand rejected under 35 U.S.C. § 101 as directed to patent-ineligible subject matter.

### ANALYSIS

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)).

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 (quotation marks omitted). “A claim that recites an abstract idea must include ‘additional features’ to ensure ‘that the [claim] is more than a drafting effort designed to monopolize the [abstract idea].’” *Id.* (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.*

The PTO 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”). Under that guidance, we first look to whether the claim recites:

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

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

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, 84 Fed. Reg. at 52–57.

Furthermore, the Memorandum “extracts and synthesizes key concepts identified by the courts as abstract ideas to explain that the abstract idea exception includes the following groupings of subject matter, when recited as such in a claim limitation(s) (that is, when recited on their own or *per se*)”:

(a) Mathematical concepts—mathematical relationships, mathematical formulas or equations, mathematical calculations;

(b) Certain methods of organizing human activity—fundamental economic principles or practices (including hedging, insurance, mitigating risk); commercial or legal interactions (including agreements in the form of contracts; legal obligations; advertising, marketing or sales activities or behaviors; business relations); managing personal behavior or relationships or interactions between people (including social activities, teaching, and following rules or instructions); and

(c) Mental processes—concepts performed in the human mind (including an observation, evaluation, judgment, opinion).

*Id.* at 52 (footnotes omitted).

USPTO Memorandum, Step 2A, Prong 1

Under the first step in the *Alice/Mayo* framework, the Examiner determines the claims recite “determining and offering subscription packages for virtual environments including virtual assets based on user attributes,” which are directed to the abstract idea, i.e., certain methods of organizing human activity, specifically advertising, marketing, and sales activity. Final Act. 3; *see also* Ans. 2. The Examiner determines the claims are similar to those in *Gametek LLC v. Zynga Inc.*, 597 F. App’x 644 (Fed. Cir. 2015) and *Affinity Labs of Texas, LLC v. Amazon.com*, 838 F.3d 1266 (Fed. Cir. 2016) in that the claims define marketing information to communicate to a user and collect user information and target marketing materials to the user based on the collected information. Ans. 2–3.

Appellants argue “the present application is unrelated to any of the examples of ‘certain methods of organizing human activity’ listed in the *Interim Guidance* . . . found by the courts, or . . . in general.” App. Br. 11–12. Appellants argue the claims “include a computer apparatus using specific user attributes . . . to determine the virtual assets to include in a customized subscription package.” App. Br. 11. According to Appellants, “[t]he recited claims include steps and features that are not capable, or at least efficiently capable, of being performed by mere human mental activity.” App. Br. 11. Appellants argue “[t]he recited steps and features are not . . . advertising, marketing,” but “[i]nstead, the claims are directed at utilizing relevant data of a user or the user’s activities in virtual environment to determine a customized subscription package that is appropriate and useful for the user within the particular virtual environment.” App. Br. 11; *see also* App. Br. 14–15. Appellants further argue the Examiner has failed

to meet its initial burden of proof because the “Office has provided merely conclusory statements that the claimed subject matter is abstract.” App. Br. 13; *see also* Reply Br. 3–4.

We are not persuaded by Appellants’ arguments. The Office carries its procedural burden of establishing a *prima facie* case when its rejection satisfies the requirements of 35 U.S.C. § 132 by notifying the applicant of the reasons for rejection, “together with such information and references as may be useful in judging of the propriety of continuing the prosecution of [the] application.” *See In re Jung*, 637 F.3d 1356, 1362 (Fed. Cir. 2011). All that is required of the Office is that it set forth the statutory basis of the rejection in a sufficiently articulate and informative manner as to meet the notice requirement of § 132. *Id.*; *see also Chester v. Miller*, 906 F.2d 1574, 1578 (Fed. Cir. 1990) (noting that section 132 “is violated when a rejection is so uninformative that it prevents the applicant from recognizing and seeking to counter the grounds for rejection”). We conclude that the Examiner’s rejection is sufficient to place Appellants on notice as to the first step in the *Alice/Mayo* framework. Further, Appellants’ understanding of the Examiner’s rejection is manifested by their response to the rejection in the Appeal Brief. Appellants did not respond by asserting that they did not understand the Examiner’s rejection, but instead presented arguments as to why the claims are not directed to an abstract idea.

We agree with the Examiner that the claims recite an abstract idea. Appellants’ Specification states “[e]mbodiments of the present invention are directed to methods and systems associated with dynamically generating a customized subscription package to offer to a user of one or more virtual environments.” Spec. ¶ 5. Appellants’ claims generally recite (1) analyzing

one or more attributes of a user in a virtual environment; (2) determining a customized subscription package, including a term of access and one or more virtual assets, to be offered to the user for purchase based at least in part on the user attributes; (3) offering the customized subscription package to the user; and (4) updating the user’s virtual assets in the virtual environment based on the user accepting the offer.

We conclude that providing targeted marketing and advertising to a user based on certain user attributes is a certain method of organizing human activity, specifically, marketing, sales, and advertising, as set forth in the Memorandum. *See* Memorandum, 84 Fed. Reg. at 52; *see also Affinity Labs*, 838 F.3d at 1269 (“we hold that the concept of delivering user-selected media content to portable devices is an abstract idea”); *Intellectual Ventures I LLC v. Capital One Bank (USA)*, 792 F.3d 1363, 1369–70 (Fed. Cir. 2015) (the practice of tailoring advertising to individual customers is a “fundamental . . . practice long prevalent in our system”); *Ultramercial, Inc. v. Hulu, LLC*, 772 F.3d 709, 714–715 (Fed. Cir. 2014) (“showing an advertisement before delivering free content” is an abstract idea); *Morsa v. Facebook, Inc.*, 77 F. Supp. 3d 1007, 1013 (C.D. Cal. 2014), *aff’d*, 622 F. App’x 915 (Fed. Cir. 2015) (quoting *Tuxis Techs., LLC v. Amazon.com, Inc.*, No. CV 13-1771-RGA, 2014 WL 4382446, at \*5 (D. Del. Sept. 3, 2014)) (“[T]argeted advertising is [a well-known] concept, insofar as matching consumers with a given product or service ‘has been practiced as long as markets have been in operation.’”). Appellants have not sufficiently argued why the claims do not recite an abstract idea, specifically certain methods of organizing human activity.

USPTO Memorandum, Step 2A, Prong 2

In determining whether the claims are “directed to” the identified abstract idea, we next consider whether the claims recite additional elements that integrate the judicial exception into a practical application.<sup>1</sup> We discern no additional element (or combination of elements) recited in the claims that integrates the judicial exception into a practical application. *See* Memorandum, 84 Fed. Reg. at 54–55.

Appellants argue “the claimed solution is ‘necessarily rooted in computer technology in order to overcome a problem specifically arising in the realm of’ computer networks,” similar to the claims in *DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245, 1257 (Fed. Cir. 2014). App. Br. 15. Specifically, Appellants argue there is “no pre-computer analog” and the claimed subject matter “necessarily includes a user interacting with a computer and a computer network, to accept the package and utilize the package contents.” App. Br. 16.

We are not persuaded. We find no indication in the Specification, nor do Appellants direct us to any indication, that the operations recited by the claims invoke any inventive programming, require any specialized computer hardware or other inventive computer components, i.e., a particular machine, or that the claimed invention is implemented using other than generic

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<sup>1</sup> We acknowledge that some of the considerations at Step 2A, Prong Two, properly may be evaluated under Step 2 of *Alice* (Step 2B of the Office guidance). For purposes of maintaining consistent treatment within the Office, we evaluate them under Step 1 of *Alice* (Step 2A of the Office guidance). *See* Memorandum, 84 Fed. Reg. at 55 n.25, 27–32.

computer components (e.g., computer apparatus, server, processor, computer readable medium) to perform generic computer functions (analyzing and displaying information). *See DDR Holdings*, 773 F.3d at 1256 (“[A]fter *Alice*, there can remain no doubt: recitation of generic computer limitations does not make an otherwise ineligible claim patent-eligible.”); *see* Final Act. 3–4; Ans. 3–6. The claims merely add generic computer components (e.g., computer apparatus, server, processor, computer readable medium) to support the abstract idea, which is insufficient to integrate the judicial exception into a practical application. Moreover, we agree with the Examiner that the invention is directed to a business/marketing function; that it takes place in a virtual environment does not make it any less abstract. *See* Ans. 6; *Versata Development Group, Inc. v. SAP America, Inc.*, 793 F.3d 1306, 1332 (Fed. Cir. 2015) (citations omitted) (“[T]he prohibition on patenting an ineligible concept cannot be circumvented by limiting the use of an ineligible concept to a particular technological environment.”).

Appellants further argue the claims are similar to those in *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1339 (Fed. Cir. 2016) in that they “are instead directed to a specific improvement to the way computers receive and analyze user data including user attributes to determine a customized subscription package that includes virtual currency and goods usable in a particular virtual environment that is appropriate for the user.” App. Br. 18. Appellants direct us to the Specification that “discusses the problems with conventional systems for providing subscription packages.” App. Br. 18–19 (citing Spec. ¶¶ 1–2); *see also* Reply Br. 7–8. According to Appellants, “[u]nlike conventional methods which lack flexibility and are inefficient, the claims allow for providing a dynamic customized subscription package for a

user by analyzing user attributes of a user of a virtual environment to determine a customized subscription package to offer the user where the customized subscription package includes virtual assets associated with the virtual environment and include virtual currency and virtual good usable in the virtual environment.” App. Br. 19; *see also* App. Br. 28–29; Reply Br. 6–7. Appellants further argue “the claimed solution improves the obtaining and analyzing user data to determine appropriate customized subscription packages for use in virtual environments.” App. Br. 27.

Appellants have not sufficiently explained how the claims specifically improve “the way computers receive and analyze user data” or “the obtaining and analyzing user data” (App. Br. 18, 27). Although Appellants argue conventional methods for providing subscription packages lack flexibility and are inefficient, we agree with the Examiner that any improvements are directed to the underlying abstract idea as opposed to improvements to the functionality of the computer. Ans. 6. Rather, the claimed analyzing and determining only uses the computer as a tool.

Appellants further argue the Examiner has oversimplified the claim language and “ignores the ‘set of rules’ which the claims recite and which the *McRO*[, *Inc. v. Bandai Namco Games America Inc.*, 837 F.3d 1299 (Fed. Cir. 2016)] court found eligible.” App. Br. 20; *see also* Reply Br. 5. Appellants argue “there are several ‘meaningful requirements’ for at least ‘offering the customized subscription package to the user,’ which parallels similar analysis to the ‘first set of rules’ limitation in *McRO*.” App. Br. 20. According to Appellants, the “improvement in computer-related technology”

is provided with the “specific ‘set of rules’ recited in at least claim 1.” App. Br. 21.

We disagree the claims here are like those in *McRO*. In *McRO*, the Federal Circuit addressed claims directed to “[a] method for automatically animating lip synchronization and facial expression of three-dimensional characters.” *McRO*, 837 F.3d at 1307. The claimed improvement in *McRO* “allow[ed] computers to produce ‘accurate and realistic lip synchronization and facial expressions in animated characters’ that previously could only be produced by human animators . . . through ‘the use of rules, rather than artists, to set the morph weights and transitions between phonemes.’” 837 F.3d at 1313. The court reviewed the specification of the patent at issue and found that, rather than invoking the computer merely as a tool, “[c]laim 1 of the [asserted] patent is focused on a specific asserted improvement in computer animation.” *Id.* at 1314. The court found that the plain focus of the claim was on an improvement to computer functionality itself, not on economic or other tasks for which a computer is used in its ordinary capacity. *Id.* at 1315.

Unlike in *McRO*, the claims here do not recite specific rules that improve computer animation techniques or some other technology. Instead, the claims recite generic computer operations, in which a computer is used in its ordinary capacity, for determining and presenting customized offers to a customer. For example, instead of presenting any specific rules for determining a customized subscription package, the claims generally recite determining the customized subscription packages, term of access, and virtual assets “based at least in part on the one or more user attributes of the user.”

For these reasons, we are not persuaded of error in the Examiner's determination that the claims are directed to an abstract idea.

USPTO Memorandum, Step 2B

Turning to step 2 of the *Alice/Mayo* framework, we look to whether claim 1: (a) adds a specific limitation or combination of limitations that are not well-understood, routine, conventional activity in the field, or (b) simply appends well-understood, routine, conventional activities previously known to the industry, specified at a high level of generality, to the judicial exception. Memorandum, 84 Fed. Reg. at 56.

The Examiner determines the “claims do not include additional elements that are sufficient to amount to significantly more than the judicial exception because the claimed invention is directed towards the execution of the judicial exception by a generic computer system performing routine and conventional functions.” Final Act. 3 (citing Spec. ¶¶ 79–80). The Examiner determines the “steps are routine and conventional functions as the claimed invention is receiving and transmitting information over a network, and retrieving stored information.” Final Act. 3–4; Ans. 3, 7.

Appellants argue “the Office has provided no evidence or documentation indicating that the features recited in claim 1 are ‘well-understood, routine, and conventional activities previously known to the industry,’ or that they are ‘routine and conventional functions.’” App. Br. 27. Appellants argue the “claims include features which are not taught or suggested by any of the cited references provided during prosecution of the application,” so “[s]ince no references were found that disclose, teach, or suggest the features recited in claim 1, Appellant submits that the recitations of claim 1 cannot be ‘well-understood, routine, and conventional activities

previously known in the industry.” App. Br. 27. Appellants further argue “the limitations amount to significantly more than the alleged abstract idea when viewed as an ordered combination.” App. Br. 28. According to Appellants, “[t]his is evidenced by the fact that the limitations are not disclosed by the prior art . . . and relate to an improvement of computer functionality.” App. Br. 28. Appellants further argue the claims are similar to those in *Bascom Global Internet Servs., Inc. v. AT&T Mobility LLC*, 827 F.3d 1341, 1350 (Fed. Cir. 2016). App. Br. 30–31; *see also* Reply Br. 10.

Appellants’ arguments are not persuasive. Appellants’ claims do not recite specific limitations (or a combination of limitations) that are not well-understood, routine, and conventional. *See* Ans. 7. For example, the claimed “computer apparatus,” “server,” “processor,” and “computer readable medium” are described at a high level of generality and perform generic functions that are well-understood, routine, and conventional. *See* Spec. ¶ 33 (“term ‘computer’ as used herein refers to a system comprising a processor and a computer readable medium, such as computer memory or other data storage device, coupled to the processor”); ¶ 79 (“[a]ny of the elements in Figures [sic] 1, including any servers or databases, may use any suitable number of subsystems to facilitate the functions described herein”); ¶ 80, Fig. 1. Such generic disclosures do not amount to “significantly more” than the judicial exception. *See Elec. Power Grp., LLC v. Alstom SA*, 830 F.3d 1350, 1355 (Fed. Cir. 2016) (“Nothing in the claims, understood in light of the specification, requires anything other than off-the-shelf, conventional computer, network, and display technology for gathering, sending, and presenting the desired information”); *buySAFE, Inc. v. Google, Inc.*, 765 F.3d 1350, 1355 (Fed. Cir. 2014) (“That a computer receives and

sends the information over a network—with no further specification—is not even arguably inventive”); *Alice*, 573 U.S. at 224–26 (receiving, storing, sending information over networks insufficient to add an inventive concept); *In re Katz Interactive Call Processing Patent Litigation*, 639 F.3d 1303, 1316 (Fed. Cir. 2011) (“Absent a possible narrower construction of the terms ‘processing,’ ‘receiving,’ and ‘storing,’ . . . those functions can be achieved by any general purpose computer without special programming”).

Accordingly, Appellants have not adequately explained how the claims are performed such that they are not routine, conventional functions of a generic computer. The claims at issue do not require any nonconventional computer components, or even a “non-conventional and non-generic arrangement of known, conventional pieces,” but merely call for performance of the claimed information receiving, processing, and displaying “on a set of generic computer components.” *Bascom*, 827 F.3d at 1349–52.

To the extent Appellants argue the claims necessarily contain an “inventive concept” based on their alleged novelty or non-obviousness, Appellants misapprehend the controlling precedent. Although the second step in the *Alice/Mayo* framework is termed a search for an “inventive concept,” the analysis is not an evaluation of novelty or non-obviousness, but, rather, a search for “an element or combination of elements that is ‘sufficient to ensure that the patent in practice amounts to significantly more than a patent upon the [ineligible concept] itself.’” *Alice*, 573 U.S. at 217–

218. A novel and nonobvious claim directed to a purely abstract idea is, nonetheless, patent-ineligible. *See Mayo*, 566 U.S. at 90.

Appellants further argue “the claims clearly do not seek to tie up the alleged abstract idea such that others cannot practice it.” App. Br. 24; *see also* App. Br. 25–26; *see also* App. Br. 29, 31. This preemption argument is likewise unpersuasive of Examiner error. We find that this argument is adequately addressed by the *Alice/Mayo* analysis. *See Ariosa Diagnostics, Inc. v. Sequenom, Inc.*, 788 F.3d 1371, 1379 (Fed. Cir. 2015) (“Where a patent’s claims are deemed only to disclose patent ineligible subject matter under the *Mayo* framework, as they are in this case, preemption concerns are fully addressed and made moot.”); *see also OIP Techs., Inc. v. Amazon.com, Inc.*, 788 F.3d 1359, 1362–63 (Fed. Cir. 2015) (“[T]hat the claims do not preempt all price optimization or may be limited to price optimization in the e-commerce setting do not make them any less abstract.”).

Accordingly, for the foregoing reasons, we sustain the Examiner’s 35 U.S.C. § 101 rejection of claims 1, 3–9, 11, 13–19, and 21–40.

#### DECISION

We affirm Examiner’s 35 U.S.C. § 101 rejection of claims 1, 3–9, 11, 13–19, and 21–40.

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