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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* ANANTHA PRADEEP, ROBERT T. KNIGHT, and  
RAMACHANDRAN GURUMOORTHY

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Appeal 2018-002219  
Application 12/413,297  
Technology Center 3600

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Before MURRIEL E. CRAWFORD, JOSEPH A. FISCHETTI, and  
TARA L. HUTCHINGS, *Administrative Patent Judges*.

CRAWFORD, *Administrative Patent Judge*.

DECISION ON APPEAL  
STATEMENT OF THE CASE

Appellant<sup>1</sup> seeks our review under 35 U.S.C. § 134 of the Examiner's final rejection of claims 1–18 and 21–23. We have jurisdiction under 35 U.S.C. § 6(b).

SUMMARY OF DECISION

We AFFIRM.

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<sup>1</sup> We use the word “Appellant” to refer to “Applicant” as defined in 37 C.F.R. § 1.42(a). Appellant identifies the real party in interest as THE NIELSEN COMPANY (US). Appeal Br. 2.

## THE INVENTION

Appellant claims a system for placing stimulus material in video games. (Spec. ¶ 3, Title).

Claim 1 is representative of the subject matter on appeal.

1. A method for insertion of an advertisement or entertainment into a video game, comprising:
  - obtaining first neuro-response data from a player playing the video game prior to the insertion of the advertisement or entertainment;
  - identifying a plurality of candidate locations in the video game for insertion of the advertisement or entertainment based on the first neuro-response data;
  - selecting one of the locations based on one or more location characteristics and one or more attributes of the advertisement or entertainment;
  - inserting the advertisement or entertainment into the selected location;
  - obtaining second neuro-response data from a player playing the video game after the insertion of the advertisement or entertainment; and
  - determining an effectiveness of the advertisement or entertainment based on the second neuro-response data.

## THE REJECTION

Claims 1–18 and 21–24 are rejected under 35 U.S.C. § 101 as directed to a judicial exception without significantly more.

## ANALYSIS

### 35 U.S.C. § 101 REJECTION

We will sustain the rejection of claims 1–16, 18, 19, and 22 under 35 U.S.C. § 101.

#### The Supreme Court

set forth a framework for distinguishing patents that claim laws of nature, natural phenomena, and abstract ideas from those that claim patent-eligible applications of those concepts. First, . . . determine whether the claims at issue are directed to one of those patent-ineligible concepts. If so, . . . then ask, “[w]hat else is there in the claims before us?” To answer that question, . . . consider the elements of each claim both individually and “as an ordered combination” to determine whether the additional elements “transform the nature of the claim” into a patent-eligible application. [The Court] described step two of this analysis as a search for an “‘inventive concept’”—*i.e.*, 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 Corp. Pty. Ltd. v. CLS Bank Int’l*, 573 U.S. 208, 217–218 (2014) (citing *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 72–73 (2012)) (citations omitted).

To perform this test, we must first determine whether the claims at issue are directed to a patent-ineligible concept. The Federal Circuit has explained that “the ‘directed to’ inquiry applies a stage-one filter to claims, considered in light of the specification, based on whether ‘their character as a whole is directed to excluded subject matter.’” *See Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1335 (Fed. Cir. 2016) (quoting *Internet Patents Corp. v. Active Network, Inc.*, 790 F.3d 1343, 1346 (Fed. Cir. 2015)). It asks whether the focus of the claims is on a specific improvement in relevant technology or on a process that itself qualifies as an “abstract

idea” for which computers are invoked merely as a tool. *See id.* at 1335–36.

In so doing we apply a “directed to” two prong test: 1) evaluate whether the claim recites a judicial exception, and 2) if the claim recites a judicial exception, evaluate whether the judicial exception is integrated into a practical application. *2019 Revised Patent Subject Matter Eligibility Guidance*, 84 Fed. Reg. 50–57 (Jan. 7, 2019).

The Examiner determines that the steps of claim 1 of obtaining neuro-response data, identifying locations, and selecting one of the locations are abstract ideas similar to concepts identified by the courts. (Final Act. 2). The Examiner also determined that the claims are also directed to advertising, marketing and sales activities or behaviors that have been found to be abstract as it is a certain method of organizing humans. The Examiner finds that the additional elements claimed are generic computers performing generic computer functions, without an inventive concept and do not amount to significantly more than the abstract idea. (Final Act. 3).

The Specification discloses that conventional placement systems, such as for product placement, often rely on demographic information, statistical information, and survey-based response collection to determine optimal locations to place stimulus material, such as a new product, brand image, video clip, or sound files, etc. (Spec. ¶ 19). The present invention uses neuro-response measurements to select stimulus locations and stimulus personalization in video games. (Spec. ¶ 20). Many types of stimulus material may be placed into video games such as brand images, personalized messages, advertisements or a purchase offer. (Spec. ¶¶ 22–23). Therefore, the Specification supports the determinations of the Examiner that the claims are directed to obtaining neuro-response data, identifying locations, and

selecting one of the locations and that these steps are similar to concepts identified by the courts as abstract and that the claims are directed to advertising, marketing and sales activity.

The claims also support this determination by reciting “obtaining first neuro-response data,” “identifying a plurality of candidate locations . . . based on the first neuro-response data,” “selecting one of the locations,” “inserting the advertisement,” “obtaining second neuro-response data,” and “determining an effectiveness of the advertisement.” These recitations relate to obtaining data (first and second neuro-response data), processing data (identifying a plurality of locations, selecting one of the locations, and determining the effectiveness of advertisement), and displaying data (inserting the advertisement). These steps also relate to advertising, marketing and sales activities or behaviors.

We agree with the Examiner that Appellant’s claim 1 (and the other pending claims) are directed to patent-ineligible abstract ideas or concepts. In view of the *Guidance*, 84 Fed. Reg. 50–57, we clarify and expand the Examiner's reasoning as follows.

We agree with the Examiner’s findings that the claims recite a method of organizing human activity, i.e., a fundamental economic practice. It follows from prior Supreme Court cases, and *Gottschalk v. Benson*, 409 U.S. 63 (1972), in particular, that the claims at issue here are directed to a judicial exception. Controlling the behavior of persons concerning placement of advertisements in a video game is a method of organizing human behavior, which is not eligible subject matter. *See Alice*, 573 U.S. at 217–20. Certain methods of organizing human activity such as fundamental economic practices are judicial exceptions. A method, such as what is

recited in claim 1, which relate to advertising, marketing or sales activities or behaviors are related to a fundamental economic practice. *Guidance*, 84 Fed. Reg. 52.

Also, we find the steps of detailed above related to transmitting, receiving, processing, and displaying of data constitute “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.” *Elec. Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350, 1354 (Fed. Cir. 2016); *see also buySAFE, Inc. v. Google, Inc.*, 765 F.3d 1350, 1355 (Fed. Cir. 2014) (claims directed to certain arrangements involving contractual relations are directed to abstract ideas).

Thus, we find that the claims recite a judicial exception.

Turning to the second prong of the “directed to test,” claim 1 merely requires a “video game.” The recitation of the word “video game,” does not impose “a meaningful limit on the judicial exception, such that the claim is more than a drafting effort designed to monopolize the judicial exception.” *Guidance*, 84 Fed. Reg. 53. We find no indication in the Specification, nor do Appellant directs us to any indication, that the operations recited in independent claim 1 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 computer components to perform generic computer functions. *See DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245, 1256 (Fed. Cir. 2014) (“[A]fter *Alice*, there can remain no doubt: recitation of generic computer limitations does not make an otherwise ineligible claim patent-eligible.”). In fact, the Specification discloses that generic

components are used to play the video game. Spec. ¶26.

We also find no indication in the Specification that the claimed invention effects a transformation or reduction of a particular article to a different state or thing. Nor do we find anything of record, short of attorney argument, that attributes any improvement in computer technology and/or functionality to the claimed invention or that otherwise indicates that the claimed invention integrates the abstract idea into a “practical application,” as that phrase is used in the revised Guidance. *See Guidance*, 84 Fed. Reg. at 55.

In this regard, the recitation does not affect an improvement in the functioning of a video game or other technology, does not recite a particular machine or manufacture that is integral to the claims, and does not transform or reduce a particular article to a different state or thing. *Id.* Thus, claim 1 is directed to a judicial exception.

Turning to the second step of the *Alice* analysis, because we find that claim 1 is directed to judicial exceptions, the claims must include an “inventive concept” in order to be patent-eligible, i.e., there must be an element or combination of elements that is sufficient to ensure that the claim in practice amounts to significantly more than the abstract idea itself. *See Alice*, 573 U.S. at 217–18 (alteration in original) (quoting *Mayo*, 566 U.S. at 72–73).

The introduction of a computer (video game) into the claims does not alter the analysis at *Alice* step two.

[T]he mere recitation of a generic computer cannot transform a patent-ineligible abstract idea into a patent-eligible invention. Stating an abstract idea “while adding the words ‘apply it’” is not enough for patent eligibility. Nor is limiting the use of an

abstract idea “to a particular technological environment.” Stating an abstract idea while adding the words “apply it with a computer” simply combines those two steps, with the same deficient result. Thus, if a patent’s recitation of a computer amounts to a mere instruction to “implemen[t]” an abstract idea “on . . . a computer,” that addition cannot impart patent eligibility. This conclusion accords with the preemption concern that undergirds our § 101 jurisprudence. Given the ubiquity of computers, wholly generic computer implementation is not generally the sort of “additional featur[e]” that provides any “practical assurance that the process is more than a drafting effort designed to monopolize the [abstract idea] itself.”

*Alice*, 573 U.S. at 223 (alterations in original) (citations omitted).

Instead, “the relevant question is whether the claims here do more than simply instruct the practitioner to implement the abstract idea . . . on a generic computer.” *Id.* at 225. They do not.

Taking the claim elements separately, the function performed by the computer at each step of the process is purely conventional. Using a computer to retrieve, select, and apply decision criteria to data and modify the data as a result amounts to electronic data query and retrieval—one of the most basic functions of a computer. All of these computer functions are well-understood, routine, conventional activities previously known to the trading industry. *See Elec. Power Grp.*, 830 F.3d at 1354; *see also In re Katz Interactive Call Processing Patent Litig.*, 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”). In short, each step does no more than require a generic computer to perform generic computer functions.

Considered as an ordered combination, the computer components of Appellant's claims add nothing that is not already present when the steps are considered separately.

The claims do not, for example, purport to improve the functioning of the computer itself. As we stated above, the claims do not affect an improvement in any other technology or technical field. The Specification spells out different generic equipment and parameters that might be applied using this concept (*See, e.g.*, Spec. ¶¶ 26, 42). Thus, the claims at issue amount to nothing significantly more than instructions to apply the abstract idea of information access using some unspecified, generic computer. Under our precedents, that is not enough to transform an abstract idea into a patent-eligible invention. *See Alice*, 573 U.S. at 226.

We have reviewed all the arguments (Appeal Br. 13–33; Reply Br. 1–4) Appellant has submitted concerning the patent eligibility of the claims before us that stand rejected under 35 U.S.C. § 101. We find that our analysis above substantially covers the substance of all the arguments, which have been made. But, for purposes of completeness, we will address various arguments in order to make individual rebuttals of same.

We are not persuaded of error on the part of the Examiner by Appellant's argument that claim 1 is not similar to the claims in the cases cited by the Examiner. In particular, Appellant argues that the claims do not recite mere collection and comparison of known information like *Classen Immunotherapies, Inc. v. Biogen IDEC*, 659 F.3d 1057 (Fed. Cir. 2011); include inserting advertisement into selected locations which is not done in *CyberSource Corp. v. Retail Decisions, Inc.*, 654 F.3d 1366, 1373 (Fed. Cir. 2011); does not involve a well-known concept as in *Content Extraction &*

*Transmission LLC v. Wells Fargo Bank, N.A. Ass'n*, 776 F.3d 1343 (Fed. Cir. 2014); and does not involve the same type of data as the claims in *Ultramercial*. We agree with the Examiner's response to this argument found on pages 3–4 of the Answer where the Examiner details how the recitations in claim 1 correlate with the recitations in the claims in each of the cases cited above. In any case, even if the claims were not similar to the cases in the above referenced cases, the claims are clearly directed to advertisement which is a judicial exception and because this judicial exception is not integrated into a practical application the claims are directed to an abstract idea on this basis.

We disagree with the Appellant's contention that the claim is analogous to those of *Diamond v. Diehr*, 450 U.S. 175, 191 (1981). (Appeal Br. 16–20). The claims in *Diehr* were directed to a process for curing synthetic rubber, and recited a series of steps (e.g., installing rubber in a press, closing the mold, constantly determining the temperature of the mold, constantly recalculating the appropriate cure time through the use of the Arrhenius equation and a digital computer, and automatically opening the press at the proper time) that together provided a significant and novel practical application of the well-known Arrhenius equation and transformed uncured synthetic rubber into a new state or thing. *See Diehr*, 450 U.S. at 184–87. The Court determined that although the invention employed a well-known equation, it used that equation in a process designed to solve a technological problem in conventional industry practice. *Alice*, 573 U.S. at 223 (citing *Diehr*, 450 U.S. at 177). The claims in *Diehr* were, thus, patent-eligible because they improved an existing technological process. *Id.* The Appellant contends that the claim here improve a technical field (similar to

*Diehr*) specifically the technical field of advertisement insertion into video games and solves the problem of inserting more effective advertisement or entertainment into a video game. (Appeal Br. 17). However, merely taking a manual, mental, or computer-implemented action of insertion of an advertisement based on neuro-response data does not transform a product from one form to another, such as a molded product, and is not patent eligible, as the Supreme Court made clear in *Benson*, 409 U.S. at 71–72. In contrast to the situation in *Diehr*, inserting advertisements into a video game does not result in any analogous transformation of matter from one state (i.e., raw rubber) to another (i.e., a molded product). And the claim does not provide details on the technological processes for selecting locations for insertion or for the insertion process. Rather, any change or improvement lies in the abstract idea of using neuro-responsive data rather than the demographic information, statistical data, and survey data that was used in the past. (Spec. ¶ 2). But, at best, this improvement is an improvement to the abstract idea. And “[n]o matter how much of an advance in the . . . field of advertisement placement the claims recite, the advance lies entirely in the realm of abstract ideas, with no plausibly alleged innovation in the non-abstract application realm.” *SAP Am., Inc. v. InvestPic, LLC*, 898 F.3d 1161, 1163 (Fed. Cir. 2018).

Appellant’s argument that the Examiner did not address the combination of the additional elements is not persuasive because the Examiner did address the additional limitations and found that they were generic computers performing generic computer functions that do not amount to significantly more than the abstract idea (Final Act. 3; Ans. 4).

Appellant argues that the Examiner has overgeneralized the claims and describes the claim at a high level of abstraction ignoring the actual language of the claim. (Appeal Br. 20-23). Appellant's argument is not persuasive because there is no requirement that the Examiner's formulation of the abstract idea copy the claim language. The Examiner's characterization here, moreover, is fully consistent with the Specification and the claim limitations, as discussed above. That independent claim 1 includes more words than the phrase the Examiner used to articulate the abstract idea to which the claim is directed is an insufficient basis to persuasively argue that the claim language has been mischaracterized or that the Examiner has otherwise failed to consider all of the limitations of the claim. *See Apple, Inc. v. Ameranth, Inc.*, 842 F.3d 1229, 1240 (Fed. Cir. 2016). An abstract idea can generally be described at different levels of abstraction. The claimed abstract idea could be described as the Examiner has done or in other ways.

Appellant argues that the claimed concept does not give rise to preemption. (Appeal Br. 24). "While 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); *see also OIP Techs., Inc. v. Amazon.com, Inc.*, 788 F.3d 1359, 1362–63 (Fed. Cir. 2015), cert. denied, 136 S. Ct. 701 (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."). And, "[w]here 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.” *Ariosa*, 788 F.3d at 1379.

In view of the foregoing, we will sustain the Examiner’s rejection of claim 1. We will also sustain the rejection as it is directed to dependent claims 2–9, 23, and 24 because the Appellant has not argued the separate eligibility of these claims.

We will also sustain the rejection of claim 10 and dependent claims 11–18 because the Appellant make the same arguments we found unpersuasive in regard to the rejection of claim 1 in response to the rejection of claim 10.

We will also sustain the rejection of claims 21 and dependent claim 22. Appellant made similar arguments to those we found unpersuasive in regard to the rejection of claim 1 in response to the rejection of claim 21.

In addition, we are not persuaded of error on the part of the Examiner by Appellant’s argument that claim 21 includes an inventive concept because the recitations of claim 21 are not found in the prior art. To the extent Appellant maintains that the limitations of claim 1 necessarily amount to “significantly more” than an abstract idea because the claimed apparatus is allegedly patentable over the prior art, Appellant misapprehends 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. A novel and nonobvious claim directed to a purely abstract idea is, nonetheless, patent-

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ineligible. *See Mayo*, 566 U.S. at 90.

#### CONCLUSIONS OF LAW

We conclude the Examiner did not err in rejecting appealed claims under 35 U.S.C. § 101.

#### DECISION

The decision of the Examiner is 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). *See* 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED