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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 2017-006907  
Application 13/965,805<sup>1</sup>  
Technology Center 3600

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Before TERRENCE W. McMILLIN, KARA L. SZPONDOWSKI, and  
SCOTT B. HOWARD, *Administrative Patent Judges*.

McMILLIN, *Administrative Patent Judge*.

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 134(a) of the final rejection of claims 1–24. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

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<sup>1</sup> According to Appellants, the real party in interest is The Nielsen Company (US) LLC. App. Br. 2.

### THE CLAIMED INVENTION

The present invention relates generally to a “stimulus and stimulus attribute resonance estimator.” Spec. ¶ 2. Independent claim 1 is directed to a method; independent claim 12 is directed to a system; and independent claim 17 is directed to a machine readable storage device. App. Br. 44, 48, 50.

Claim 1, reproduced below, is representative of the claimed subject matter:

1. A method, comprising:

measuring first neuro-response data from a subject exposed to a first stimulus prior to exposure to an advertisement or entertainment and second neuro-response data from the subject after re-exposure to the first stimulus, the re-exposure occurring after exposure to the advertisement or the entertainment;

calculating, by executing a first instruction with a processor, a first event related potential measurement and a second event related potential measurement based on the first neuro-response data and the second neuro-response data, respectively, the first event related potential representative of a first response of a brain of the subject to the first stimulus and the second event related potential representative of a second response of the brain of the subject to the first stimulus;

calculating, by executing a second instruction with the processor, a first differential event related potential measurement based on the first event related potential measurement and the second event related potential measurement; and

determining, by executing a third instruction with the processor, a subject resonance measurement to the advertisement or the entertainment based on the first differential event related potential measurement;

associating, by executing a fourth instruction with the processor, the subject resonance measurement with a first attribute of the advertisement or the entertainment;

automatically modifying, by executing a fifth instruction with the processor, the advertisement or the entertainment to include a second attribute based on the subject resonance measurement for the first attribute; and

outputting the modified advertisement or the modified entertainment for exposure to a person.

### REJECTIONS ON APPEAL

Claims 1–24 stand rejected under 35 U.S.C. § 101 because the claimed invention is directed to patent-ineligible subject matter. Ans. 3.

Claims 1–24 stand rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1–29 of U.S. Patent No. 8,533,042. Ans. 9.

### ANALYSIS

#### *35 U.S.C. § 101 Rejection*

*Alice Corp. Pty. Ltd. v. CLS Bank International*, 134 S. Ct. 2347 (2014) identifies a two-step framework for determining whether claimed subject matter is judicially-excepted from patent eligibility under 35 U.S.C. § 101. In the first step, “[w]e must first determine whether the claims at issue are directed to a patent-ineligible concept.” *Alice*, 134 S. Ct. at 2355.

The Examiner concludes the claimed invention is directed towards “a mathematical analysis of brainwave activity which is functionally the same thing as a mathematical formula,” which is an abstract idea. Ans. 5. The Examiner further determines the claimed invention is directed to measuring

human activity, which is similar to “[c]omparing information regarding a sample or test subject to a control or target data.” Ans. 9 (citing *In re BRCA1-and BRCA2-Based Hereditary Cancer Test Patent Litig.*, 774 F.3d 755 (Fed. Cir. 2014)).

Appellants contend the alleged abstract idea of using mathematical analysis of brain activity is “completely untethered from the language of the claim.” App. Br. 19; *see* App. Br. 20–22; *see* Reply Br. 4. According to Appellants, claim 1 determines subject resonance measurement to an advertisement or entertainment based on a differential event related potential measurement calculated from a first event related potential measurement and second event related potential measurement of first and second neuro-response data, and these determinations are applied to associate the subject resonance measurement with a first attribute, automatically modify the advertisement or entertainment, and output the modified advertisement or modified entertainment. App. Br. 22–23.

We are not persuaded by Appellants’ arguments. We agree with the Examiner that the claims are “directed to taking such measurements and then analyzing the changes in those measurements determine individual’s reactions to the stimulus,” which is “drawn to an abstract idea, that being, the collection of data and the comparison of that data.” Ans. 9.

Here, the claims are directed to receiving measuring neuro-response data for a subject exposed to a stimulus before and after exposure to an advertisement or entertainment, calculating and determining a subject resonance measurement to the advertisement or entertainment (based on a differential event related potential measurement which is calculated from first and second event related potential measurements, which are based on

first and second related potentials calculated from the neuro-response data), associating the calculated subject resonance measurement with an attribute of the advertisement or entertainment, automatically modifying the advertisement or entertainment to include an attribute, and outputting the modified advertisement or entertainment. The claims are directed to the abstract idea of organizing information (i.e., measuring neuro-response data) through mathematical calculations (i.e., calculating and determining a subject resonance measurement). *See Digitech Image Technologies, LLC v. Electronics for Imaging, Inc.*, 758 F.3d 1344, 1350 (Fed. Cir. 2014) (the “process of organizing information through mathematical correlations” is an abstract idea).

Moreover, the claims are directed to collecting information (i.e., measuring and collecting neuro-response data), analyzing the information (i.e., calculating and determining a subject resonance measurement to an advertisement or entertainment from the measured data, and associating the subject resonance measurement with an attribute of the advertisement or entertainment), and displaying certain results of the collection and analysis (i.e., modifying an advertisement or entertainment based on the calculated subject resonance measurement, and outputting the modified advertisement). *See Elec. Power Group, LLC v. Alstom S.A.*, 830 F.3d 1350, 1353–54 (Fed. Cir. 2016) (“[C]ollecting information, analyzing it, and displaying certain results of the collection and analysis” are “abstract-idea processes,” and the “advance they purport to make is a process of gathering and analyzing information of a specified content, then displaying the results, and not any particular assertedly inventive technology for performing those functions.”).

Appellants have not adequately shown the claims are not directed to an abstract idea.

In the second step of *Alice*, we “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.” *Alice*, 134 S. Ct. at 2355 (quoting *Mayo Collaborative Services v. Prometheus Laboratories, Inc.*, 566 U.S. 66, 78–79 (2012)). In other words, the second step is to “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.’” *Id.* (quoting *Mayo*, 566 U.S. at 73).

Appellants argue that the claimed elements add significantly more to the alleged abstract idea. *See* App. Br. 30. Specifically, Appellants argue that the claims provide a specific improvement to a technological process “for modifying an advertisement or entertainment to include an attribute and provides for a real-world, concrete output in the form of the modified advertisement or the modified entertainment for exposure to a person.” App. Br. 31. According to Appellants, the Specification describes that conventional computers are unable to accurately and repeatably measure resonance to a stimulus based on conventional survey methods, and that the present claims improve modification of advertisement or entertainment based on measurements conventional software arts are unable to determine. Reply Br. 5–7. Appellants contend the claimed invention is an inherently technical process, and the measurements required cannot be performed by a human mind but instead “the claimed method requires the use of specific computer technology that can analyze, for example, certain neuro-response

data such as electroencephalographic data that captures data representative of the response(s) of the subject’s brain to the first stimulus.” App. Br. 33.

We are not persuaded by Appellants’ argument and agree with the Examiner’s finding and conclusion that the claimed limitations add merely insignificant extra-solution activity to the judicial exception, e.g., using known data-collecting sources to collect data (e.g., measuring neuro-response data using known modalities, such as EEG) and using generic computers to perform generic computer functions (e.g., calculating and determining measurements and associating them with advertisements, modifying and outputting advertisements). Ans. 9–10 (citing Spec. ¶ 31). We further agree with the Examiner that the claimed invention does not provide unconventional steps that improve another technology or technical field, and does not perform a transformation or reduction of a particular article to a different state or thing. Ans. 7–8.

The present claims are similar to those in *Electric Power*, in which our reviewing court found the claims patent-ineligible because “[t]he claims at issue do not require any nonconventional computer, network, or display components, or even a ‘non-conventional and non-generic arrangement of known, conventional pieces,’ but merely call for performance of the claimed information collection, analysis, and display functions ‘on a set of generic computer components’ and display devices.” *Elec. Power*, 830 F.3d at 1355. Similarly, the claims in this case merely recite the use of known data-collecting modalities (i.e., “including EEG, GSR, EKG, pupillary dilation, EOG, eye tracking, facial emotion encoding, reaction time, etc.” (Spec. ¶ 31)) to gather data (i.e., measure neuro-response data), as well as the use of generic processors (i.e., “a processor may be connected to memory” (Spec.



¶ 15), and “the processor 801 is responsible for such tasks as pattern generation” (Spec. ¶ 88)) to analyze the data (i.e., calculate a measurement from the collected data, associate the calculated measurement with an advertisement) and display the data (i.e., modify the advertisement based on the calculated measurement, and output the modified advertisement). Nothing in the claim or Specification requires that the device must be able to perform any special functions. Instead, the claim merely requires the conventional functions of data-collecting to measure data, and performing calculations based on the data. *See* Spec. ¶¶ 15, 31, 88.

With regard to Appellants’ argument that the claims recite specific characteristics that do not preempt other approaches (*see* App. Br. 25–29; Reply Br. 8, 10–13), although the extent of preemption is a consideration, the absence of complete preemption is not dispositive. *See, e.g., Ariosa Diagnostics, Inc. v. Sequenom, Inc.*, 788 F.3d 1371, 1379 (Fed. Cir. 2015) (“While preemption may signal patent ineligible subject matter, the absence of complete preemption does not demonstrate patent eligibility.”); *Ultramercial, Inc. v. Hulu, LLC*, 722 F.3d 1335, 1346 (Fed. Cir. 2013) (“[T]he Supreme Court has stated that, even if a claim does not wholly preempt an abstract idea, it still will not be limited meaningfully if it contains only insignificant or token pre- or post-solution activity – such as identifying a relevant audience, a category of use, field of use, or technological environment.”) (citations omitted), *vacated and remanded, WildTangent, Inc. v. Ultramercial, LLC*, 134 S. Ct. 2870 (2014) (remanding for consideration in light of *Alice*, 134 S. Ct. 2347). Accordingly, even if the claims does not preempt the abstract idea, that alone is not enough to render the claims patent-eligible.

To the extent Appellants rely on a lack of prior art (*see* App. Br. 31–32; Reply Br. 13), Appellants misapprehend controlling precedent. Although the second step in the *Alice* framework is termed a search for an “inventive concept,” the analysis is not an evaluation of novelty or non-obviousness. *Alice*, 134 S. Ct. at 2355. A novel and nonobvious claim directed to a purely abstract idea is, nonetheless, patent-ineligible. *See Mayo*, 566 U.S. at 78–79. Further, “under 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 Techs. Ltd. v. Merial L.L.C.*, 818 F.3d 1369, 1376 (Fed. Cir. 2016).

The claims, when viewed as a whole, are nothing more than conventional processing functions that courts have routinely found insignificant to transform an abstract idea into a patent-eligible invention. As such, the claims amount to nothing significantly more than an instruction to implement the abstract idea on a generic computer – which is not enough to transform an abstract idea into a patent-eligible invention. *See Alice*, 134 S. Ct. at 2360.

Accordingly, we sustain the Examiner’s 35 U.S.C. § 101 rejection of independent claim 1, as well as commensurate independent claims 12 and 17, argued for the same reasons as claim 1, and dependent claims 2–11, 13–16, and 18–24.

#### *Double Patenting Rejection*

Appellants do not address the nonstatutory double patenting rejection. Accordingly, we summarily sustain the Examiner’s rejection of claims 1–24

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for nonstatutory double patenting. *See* MPEP § 1205.02 (2017) (“If a ground of rejection stated by the examiner is not addressed in the appellant’s brief, appellant has waived any challenge to that ground of rejection and the Board may summarily sustain it.”); *see also Ex parte Frye*, 94 USPQ2d 1072, 1075 (BPAI 2010) (precedential) (“If an appellant fails to present arguments on a particular issue – or more broadly, on a particular rejection – the Board will not, as a general matter, unilaterally review those uncontested aspects of the rejection.”).

#### DECISION

The Examiner’s rejection of claims 1–24 under 35 U.S.C. § 101 is affirmed.

The Examiner’s nonstatutory double patenting rejection of claims 1–24 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)(1)(iv).

AFFIRMED