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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte RANA EL KALIOUBY, MELISSA SUE BURKE, ANDREW EDWIN DREISCH, PANU JAMES TURCOT and EVAN KODRA

Appeal 2018-001658
Application 14/068,919
Technology Center 3600

Before CARL W. WHITEHEAD JR, JEFFREY S. SMITH and JAMES B. ARPIN, *Administrative Patent Judges.*

WHITEHEAD JR., *Administrative Patent Judge.*

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellants[1] are appealing the final rejection of claims 1, 5–8, 10, 12, 18–21, 23, 24, 28, 30, 34, 42–44, 46, 48, 53–60, 62 and 63 under 35 U.S.C. § 134(a), all of the pending claims. Appeal Brief 5. We have jurisdiction under 35 U.S.C. § 6(b) (2012).

We affirm.

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[1] Appellants identify Affectiva, Inc. as the real party in interest. Appeal Brief 3.

Introduction

The invention is directed to "analysis of mental states and more particularly to optimizing media based on mental states." Specification ¶ 2.

Illustrative Claim

1. A computer-implemented method for media analysis comprising:

collecting mental state data from a plurality of people as they view a media presentation;

analyzing the mental state data to produce mental state information; and

optimizing the media presentation based on the mental state information, wherein the media presentation includes an advertisement and wherein optimizing includes optimizing the media presentation for a mobile platform and further comprising:

collecting the mental state data from the plurality of people for multiple viewings of the media presentation and optimizing the media presentation based on the multiple viewings;

determining duration for the media presentation as part of the optimizing;

determining brand reveal time for the media presentation;

developing norms based on a plurality of media presentations and where the norms are used in the optimizing of the media presentation; and

calculating an expressiveness score for the media presentation which is based on total movement for faces of the plurality of people and using the expressiveness score in the optimizing of the media presentation.

Rejections on Appeal

Claims 1, 5–8, 10, 12, 18–21, 23, 24, 28, 30, 34, 42–44, 46, 48, 53–60, 62 and 63 stand rejected under 35 U.S.C. § 101 because the claimed invention is directed to nonstatutory subject matter. Final Action 8–12.

Claims 1, 5–8, 10, 12, 18–21, 23, 24, 34, 43, 44, 46, 48, 53–58, 60, 62 and 63 stand rejected under pre-AIA 35 U.S.C. § 103(a) as being unpatentable over Elliott (U.S. Patent Application Publication 2009/0210290 A1; published August 20, 2009) and Marci (U.S. Patent Application Publication 2008/0091512 A1; published April 17, 2008). Final Action 13–30.

Claims 28 and 30 stand rejected under pre-AIA 35 U.S.C. § 103(a) as being unpatentable over Elliott, Marci, and Odom (U.S. Patent 6,606,102 B1; published August 12, 2003). Final Action 30–32.

Claim 42 stands rejected under pre-AIA 35 U.S.C. § 103(a) as being unpatentable over Elliott, Marci, and Landress (U.S. Patent Application Publication 2003/0191816 A1; published October 9, 2003). Final Action 32–35.

Claim 59 stands rejected under pre-AIA 35 U.S.C. § 103(a) as being unpatentable over Elliott, Marci, and Edwards (U.S. Patent 7,881,493 B1; issued February 1, 2011). Final Action 35–37.

ANALYSIS

Rather than reiterate the arguments of Appellants and the Examiner, we refer to the Appeal Brief (filed June 1, 2017), the Reply Brief (filed December 5, 2017), the Final Action (mailed December 1, 2016) and the Answer (mailed October 5, 2017) for the respective details.

35 U.S.C. §101 rejection

The Examiner determines the claims are patent ineligible under 35 U.S.C. § 101 because the claims are directed to an abstract idea comprising a fundamental economic practice or organizing human activity, and do not include additional elements that are sufficient to amount to significantly more than the abstract idea. Final Action 8–12, Answer 2–6; *see also Alice Corp. Pty. Ltd. v. CLS Bank Int'l*, 573 U.S. 208, 217 (2014) (describing the two-step framework "for distinguishing patents that claim laws of nature, natural phenomena, and abstract ideas from those that claim patent-eligible applications of those concepts").

After the mailing of the Answer and the filing of the Briefs in this case, the USPTO published revised guidance on the application of § 101. 2019 Revised Patent Subject Matter Eligibility Guidance, 84 Fed. Reg. 50 (Jan. 7, 2019) (hereinafter "Memorandum"). Under the Memorandum, the Office first looks 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, does the Office then look to whether the claim:

> (3) adds a specific limitation beyond the judicial exception that are 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.

We are not persuaded the Examiner's rejection is in error. We adopt the Examiner's findings and conclusions as our own, and we add the following for emphasis and clarification with respect to the Memorandum.

Appellants argue the pending claims are not directed to an abstract idea:

> Instead, the pending claims are directed to, *inter alia,* methods, a computer program product, and a computer system capable of collecting and analyzing mental state data, and then optimizing a media presentation as a function of mental state information derived from the mental state data, wherein the optimizing includes optimizing the media presentation for a mobile platform as well as several explicitly recited operations such as developing norms and calculating an expressiveness score that is used to optimized the media presentation.

Reply Brief 6.

We agree with the Examiner's determination that the claims are directed to an abstract idea. *See* Final Action 8–9; Answer 2–4. Claim 1 recites a method of "collecting mental state data from a plurality of people as they view a media presentation" and then "analyzing the mental state data to produce mental state information." The claim recites the abstract idea of concepts performed in the human mind including observation, evaluation, judgement, and opinion. *See* Memorandum, Section I (Groupings of Abstract Ideas); *see also* Specification ¶¶ 22, 23, 30 and 37–39.[2]

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[2] *See also Elec. Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350, 1353 (Fed. Cir. 2016) (holding that "collecting information, analyzing it, and displaying

Appellants argue:

> In Appellant's Specification, Appellant provides additional details that should be treated as an indication that the pending claims are directed to an improvement in computer-related technology in view of *McRO, Inc. v. Bandai Namco Games Am. Inc., i.e.*, that: (1) "the valence quotient ranges from -1 to +1—using such a scale, a negative valence quotient represents negative feelings toward the media presentation and a positive valence quotient represents positive feelings toward the media presentation;" (2) the "media presentation may be optimized to keep the valence quotient away from zero and to minimize indifference toward the media presentation;" (3) "the valence quotient [can be computed by] calculating an area-under-the-curve (AUC) value for the valence quotient and/or calculating error bars on the valence quotient;" and (4) the "aggregation, AUC, and/or error bars may be used to guide the optimization and to help understand the validity of the calculated valence quotient" (Appellant's Specification, [0028], callout numbers omitted). Computer-implemented steps executed as a function of mathematical calculations provide for the actual transformation of a media presentation *into a different media presentation.* These steps are outside the capability of human mental function.

Reply Brief 9.

We do not find Appellants' argument persuasive. Claim 1 does not recite an additional element or elements that reflect an improvement in the functioning of a computer, or an improvement to other technology or technical field. *See* Final Action 10 ("The claims address a business challenge (collecting viewer feedback to optimize media) that is not particular to the internet. In addition, this business challenge is not a

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certain results of the collection and analysis" are "a familiar class of claims 'directed to' a patent-ineligible concept"); *see also In re TLI Commc'ns LLC Patent Litig.*, 823 F.3d 607, 611 (Fed. Cir. 2016); *FairWarning IP, LLC v. Iatric Sys., Inc.*, 839 F.3d 1089, 1093–94 (Fed. Cir. 2016).

problem specifically arising in the realm of computer networks."); *Alice*, 573 U.S. at 222 ("In holding that the process was patent ineligible, we rejected the argument that 'implement[ing] a principle in some specific fashion' will 'automatically fal[l] within the patentable subject matter of § 101.'" (alterations in original) (quoting *Parker v. Flook*, 437 U.S. 584, 593 (1978))).

Accordingly, we determine the claim does not integrate the judicial exception into a practical application. *See* Memorandum, Section III(A)(2) (Prong Two: If the Claim Recites a Judicial Exception, Evaluate Whether the Judicial Exception Is Integrated Into a Practical Application). Nor do we find the claim includes a specific limitation or a combination of elements that amounts to significantly more than the judicial exception itself. *See* Memorandum, Section III(B) (Step 2B: If the Claim Is Directed to a Judicial Exception, Evaluate Whether the Claim Provides an Inventive Concept); *see also Aatrix Software, Inc. v. Green Shades Software, Inc.*, 890 F.3d 1354, 1359 (Fed. Cir. 2018) (Moore, J., concurring) ("the 'inventive concept' cannot be the abstract idea itself").

Appellants argue, "the examiner alleges that optimizing a media presentation is 'a fundamental, well-known process' that 'includes basic fundamental and well-known methods' (Office Action, page 9). These erroneous allegations are not supported with facts or references and do not sustain or support a § 101 rejection." Appeal Brief 17. Appellants further argue:

> In contrast, the claims at issue in the Appeal, *when considered as a whole,* are very clearly not directed *exclusively* to "routine," "long prevalent," and "conventional" ideas or to an ordered combination of steps reciting an abstraction having no concrete

> or tangible form. Rather, the present claims describe a specific way (see independent claims and corresponding discussion in Appellant's Specification) to solve a specific problem (see Appellant's Specification, *e.g.*, paragraphs [0017-0021]), rather than merely claiming the idea of a solution or outcome, and thus are not directed to an abstract idea *(see McRO, Inc. v. Bandai Namco Games Am. Inc.*, 120 U.S.P.Q.2d 1091 (Fed. Cir. 2016)).

Reply Brief 4.

The Examiner finds:

> As an example, the Edwards reference (cited in the § 103 rejection section) was filed in 2004 and has a passage that states that "a movie plot can be modified based on reactions from the audience viewing the movie" (Edwards: Column 12, Lines 63-65). This idea of optimizing media based on observed audience reaction is such a fundamental and well-known process that nearly every producer of media has long been collecting and analyzing data on the reactions of their audience and using this data to guide their media alterations.

Answer 30.

We do not find Appellants' argument persuasive. Other than the abstract idea itself, the remaining claim elements only recite generic computer components that are well-understood, routine, and conventional. *See Alice*, 573 U.S. at 226. Accordingly, we agree with the Examiner that claims 1, 5–8, 10, 12, 18–21, 23, 24, 28, 30, 34, 42–44, 46, 48, 53–60, 62 and 63, not argued separately, are not patent eligible. *See* Appeal Brief 17 ("The claims all meet 35 USC § 101 requirements. The examiner's rejections under 35 U.S.C. § 101 are improper and should be reversed.").

35 U.S.C. §103 rejections

Claims 1, 5–8, 10, 12, 18–21, 23, 24, 34, 43, 44, 46, 48, 53–58, 60, 62 and 63

Appellants contend "[n]ever in the cited Elliott art, and particularly, never in the 11 paragraphs and two figures cited by the examiner . . . , does the cited art even potentially mention 'analyzing the mental state data to produce mental state information' (Independent claim 1)," and, therefore, "[t]his is clearly an erroneous rejection, because monitoring a response action is unrelated to actively analyzing mental state data to produce mental state information." Appeal Brief 18. Appellants further contend, "[a]dditionally, because this claim element is in the base claims, and because the examiner never cites any other art disclosing this claim element, Elliott in view of Marci, alone or in combination, cannot support or sustain the examiner's § 103 rejection." Appeal Brief 18. Marci discloses: "The present invention is directed to a method and system for measuring the biologically based responses of an audience to a presentation that provides sensory stimulating experience and determining a measure of the level and pattern of engagement of that audience to the presentation." Marci, Abstract. The Examiner finds, and we agree, "[t]he claims contain no further limitations to the scope of 'mental state information' or further limitations to the scope of the 'analyzing' utilized to produce mental state information," and "[b]ased on the claim limitations and broadest reasonable interpretation, mental state data is any data that indicates mental state." Answer 31. The Examiner finds Marci "teaches calculating an expressiveness score for the media presentation which is based on total movement for faces of the plurality of people and using the expressiveness

score in the optimizing of the media presentation." Final Action 15; Answer 8. We agree Marci's biological based responses are indicative of the vast encompassing mental state limitations recited in the claims. Accordingly, we sustain the obviousness rejection of claims 1, 5–8, 10, 12, 18–21, 23, 24, 34, 43, 44, 46, 48, 53–58, 60, 62 and 63, not argued separately. Appeal Brief 18.

Claims 28 and 30

Appellants argue "[t]he examiner errs in trying to tie the valence claimed by the appellant in dependent claims 28 and 30 to the valence described in the cited Odom art" because "Odom describes the 'encapsulation of user interest and disinterest (valence) based upon **selection or absence of selection of content**,'" however, "explicit user action is turned into a valence, which is fundamentally different from collected and analyzed mental state data determining a valence quotient." Appeal Brief 18–19 (citations omitted). Support for the claimed valance limitation is found in the Specification: "Other physiological data may also be useful in determining valance and/or determining mental states, the data including gestures, eye movement, sweating, galvanic skin response (GSR), heart rate, and blood pressure, among others." Specification ¶ 20. The Specification does not clearly define valance nor does the Specification limit the scope of valence to the narrow interpretation argued by Appellants. Accordingly, we do not find Appellants' arguments persuasive because they are not commensurate with the scope of the claims. *See* Answer 34 ("There are no claim limitations that indicate that mental state data cannot include explicit user action.").

Claim 42

Claim 42 is reproduced below:

> 42. The method of claim 1 wherein the optimizing selects one preamble for the media presentation from multiple possible preambles.

Appellants argue: "It must be noted that this content is distinct and separate from the media presentation and *not a preamble* of a media presentation. Furthermore, the cited Landress art never mentions 'analyzing the mental state data to produce mental state information' (Independent claim 1)." Appeal Brief 19. The Examiner relied upon Elliott to disclose the claimed mental state as discussed above. Support for the claimed preamble limitation is found in the Specification: "In some embodiments, the optimizing separates a preamble from a remainder of the media presentation. In some embodiments, the optimizing selects one preamble for the media presentation from multiple possible preambles." Specification ¶ 29. Landress discloses "optimizing the placement of a dynamic range of media content to be assembled on demand and delivered in real-time," wherein the content may contain promotional leaders and trailers that may be customized based upon the users preference. Landress ¶¶ 3, 73 and 127. Accordingly, we agree with the Examiner's findings that Landress in combination with Elliott and Marci discloses optimizing/customizing media content by selecting a preamble/leader. *See* Final Action 33.

Claim 59

Appellants argue in regard to Edwards that "[i]t is critical to note that modifying content to be less complex is different from 'removing portions'" and "[r]emoving portions of content can, and often does, increase confusion

instead of reducing it." Appeal Brief 20. Appellants further argue that "there is nothing in the cited Edwards art that ties *modification* of the media to *removal* of a portion of the media," and Edwards "never mentions 'analyzing the mental state data to produce mental state information' (Independent claim 1)." Appeal Brief 20. As noted above, the Examiner relies on Elliott to disclose the mental state aspect of the claimed invention. Edwards discloses that "a movie plot can be modified based on reactions from the audience viewing the movie" and an application can modify the interface or layout based upon a group's behavior or response to the interface or layout. Edwards, column 12, lines 63–67; column 13, line 1. Edwards further discloses that the visual components viewed by the audience "can be maintained or enhanced while the other components can be removed or minimized." Edwards, column 13, lines 5–7. Accordingly, we agree with the Examiner's findings that Edwards in combination with Elliott and Marci discloses optimizing/customizing media presentation by removing confusion portions. *See* Final Action 35–37.

DECISION

The Examiner's nonstatutory subject matter rejection of claims 1, 5–8, 10, 12, 18–21, 23, 24, 28, 30, 34, 42–44, 46, 48, 53–60, 62 and 63 is affirmed.

The Examiner's obviousness rejections of claims 1, 5–8, 10, 12, 18–21, 23, 24, 28, 30, 34, 42–44, 46, 48, 53–60, 62 and 63 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). *See* 37 C.F.R. § 1.136(a)(1)(v).

AFFIRMED