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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte ANANTHA PRADEEP, ROBERT T. KNIGHT,
and RAMACHANDRAN GURUMOORTHY

Appeal 2016-000273
Application 12/113,870
Technology Center 3600

Before HUBERT C. LORIN, NINA L. MEDLOCK, and
BRADLEY B. BAYAT, *Administrative Patent Judges*.

LORIN, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellants[1] appeal under 35 U.S.C. § 134(a) from the Examiner's Rejection of claims 1, 3–16, 19, 20, 22–25, 27, 29, and 31–34. We have jurisdiction under 35 U.S.C. § 6(b).

SUMMARY OF THE DECISION

We REVERSE.

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[1] Appellants identify The Nielsen Company (US), LLC, as the real party in interest. App. Br. 2.

THE INVENTION

Claim 1, reproduced below with bracketed numerals added, is illustrative of the subject matter on appeal.

1. A system, comprising:

[1] a data collector to collect first neuro-response data with a first modality and second neuro-response data with a second modality from a subject exposed to an advertisement or entertainment;

[2] a cross-modality response synthesizer to:

[2a] align the first neuro-response data and the second neuro-response data by at least one of time shifting or phase shifting at least one of the first neuro-response data or the second neuro-response data; and

[2b] combine the first neuro-response data with the second neuro-response data to determine a neuro-feedback significance; and

[3] a compressor to associate the neuro-feedback significance with the advertisement or entertainment and to compress a portion of the advertisement or entertainment based on the neuro-feedback significance.

THE REJECTIONS

The Examiner relies upon the following as evidence of unpatentability:

Tanaka et al. ("Tanaka")	US 2003/0036955 A1	Feb. 20, 2003
Collura et al. ("Collura")	US 7,150,715 B2	Dec. 19, 2006
Barletta et al. ("Barletta")	US 7,698,238 B2	Apr. 13, 2010
King et al. ("King")	US 8,381,244 B2	Feb. 19, 2013

The following rejections are before us for review:

1. Claims 1, 3–16, 19, 20, 22–25, 27, 29, and 31–34 are rejected under 35 U.S.C. § 101 as being directed to judicially excepted subject matter.

2. Claim 29 is rejected under 35 U.S.C. § 101 as being directed to non-statutory subject matter.

3. Claims 1, 3–12, 14–16, 19–20, 22, 27, and 31–34 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Barletta and King.[2]

4. Claim 13 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Barletta, King, and Tanaka.

5. Claims 23 and 29 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Barletta.

6. Claims 24 and 25 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Barletta, King, and Collura.

ANALYSIS

Non-Statutory Subject Matter

The rejection of claims 1, 3–16, 19, 20, 22–25, 27, 29, and 31–34 as being directed to judicially excepted subject matter.

As a preliminary matter, we do not consider the analysis put forward by the Examiner in the first instance as placing the Board in a position to perform a meaningful review of the rejection.

[2] Claims 28 and 29 are listed in the heading of Rejection 3 (Final Act. 5). Claim 28 was canceled by amendment entered by the Examiner (Advisory Action mailed Oct. 9, 2014). Regarding claim 29, the Examiner only made findings in Barletta (Final Act. 10–11).

The Examiner's Answer, wherein the § 101 rejection was first presented, was mailed on July 30, 2015. At that time, Examiners were instructed to formulate a rejection pursuant to the "2014 Interim Guidance on Patent Subject Matter Eligibility (Interim Eligibility Guidance)," 79 FR 241 (Dec. 16, 2014) 74618-74633 and the "July 2015 Update: Subject Matter Eligibility" to the 2014 Interim Eligibility Guidance. Said guidance "emphasized that performing a thorough analysis and writing a clear rejection is a critical part of satisfying the examiner's burden." The analysis put forward by the Examiner in the first instance does not follow said guidance.

Here, although the scope of independent claims 1, 19, 23, and 29 varies significantly, the Examiner has provided a single omnibus analysis for all of the pending claims. This analysis is contrary to the guidance that "[e]very claim must be examined individually, based on the particular elements recited therein, and should not be judged to automatically stand or fall with similar claims in an application". *See* 2014 Interim Eligibility Guidance at 74624.

The Examiner's characterization that "[c]laims 1, 3–16, 19–20, 22–25, 27, 29 and 31–34 are directed to a method of providing an advertisement based on the collecting, aligning and combining neuroresponse data which is a method of organizing human activities" (Ans. 2), fails to determine what each claim as a whole is "directed to" as said guidance memo required Examiners to do under Step 2A. *See* 2014 Interim Eligibility Guidance at 74622 ("After determining what applicant has invented by reviewing the entire application disclosure and construing the claims in accordance with their broadest reasonable interpretation (MPEP 2103), determine whether the

claim as a whole is directed to a judicial exception."); *see also id.* ("To properly interpret the claim, it is important to understand what the applicant has invented and is seeking to patent."); *see also Bancorp Servs., L.L.C. v. Sun Life Assur. Co. of Canada (U.S.)*, 687 F.3d 1266, 1273–74 (Fed. Cir. 2012) ("[I]t will ordinarily be desirable—and often necessary—to resolve claim construction disputes prior to a § 101 analysis, for the determination of patent eligibility requires a full understanding of the basic character of the claimed subject matter.")

For example, claim 1 recites a system that comprises "a data collector," "a cross-modality response synthesizer," and "a compressor." There is no indication in the record before us that the Examiner has considered these limitations in light of the Specification in order to determine what claim 1 as a whole is "directed to."

Claim 23 recites three means-plus-function limitations: "means for aligning," "means for identifying," and "means for transmitting." Means-plus-function claim language must be construed in accordance with 35 U.S.C. § 112, paragraph 6, by "look[ing] to the specification and interpret[ing] that language in light of the corresponding structure, material, or acts described therein, and equivalents thereof, to the extent that the specification provides such disclosure." *In re Donaldson Co.*, 16 F.3d 1189, 1193 (Fed. Cir. 1994) (en banc). *See also* MPEP § 2181, subsection I ("If a claim limitation recites a term and associated functional language, the examiner should determine whether the claim limitation invokes 35 U.S.C. 112(f) or pre-AIA 35 U.S.C. 112, sixth paragraph."). There is no indication in the record that the required analysis was performed.

The Examiner's analysis under Step 2B is inadequate for similar reasons. "A claim directed to a judicial exception must be analyzed to determine whether the elements of the claim, considered both individually and as an ordered combination, are sufficient to ensure that the claim as a whole amounts to significantly more than the exception itself — this has been termed a search for an 'inventive concept.'" 2014 Interim Eligibility Guidance at 74624 (quoting *Alice Corp. Pty. Ltd. v. CLS Bank Int'l*, 134 S. Ct. 2347, 2357 (2014)). According to the Examiner, "[t]he claim requires the additional limitations of a computer" (Ans. 3). The problem here is that none of the claims recites "a computer." As noted above, claim 1, for example, recites "a data collector," "a cross-modality response synthesizer," and "a compressor." The Examiner has not provided any explanation why, in light of the Specification, these limitations amount to "generic computer components" (*id.*). Various limitations in the other independent claims have also been ignored in the Examiner's omnibus analysis.

Accordingly, we are compelled not to sustain the Examiner's determination that claims 1, 3–16, 19, 20, 22–25, 27, 29, and 31–34 are directed to judicially-excepted patent-ineligible subject matter.

The rejection of claim 29 as encompassing transitory propagating signals per se

The Examiner determines that "claim 29 is directed to a computer readable medium which typically covers forms of non-transitory tangible media and transitory propagating signals *per se*" (Ans. 3).

The Appellants contend that "[c]laim 29 does not recite 'a computer readable medium'" (Reply Br. 33).

We agree with the Appellants. Claim 29 recites "[a] tangible storage device or storage disc" (App. Br. 28, Claims Appendix). As made clear in paragraph 70 of the Appellants' Specification, the terms "storage device" and "storage disc" are specific examples of "machine readable media," and thus claim 29 is narrower than the Examiner's characterization.

Accordingly, we do not sustain the Examiner's rejection of claim 29 as encompassing transitory propagating signals per se.

Obviousness

Claims 1, 3–16, 19, 20, 22–25, 27, and 31–34

Independent claim 1 requires "[1] a data collector to collect first neuro-response data with a first modality and second neuro-response data with a second modality" and "[2] a cross-modality response synthesizer to: [2a] align the first neuro-response data and the second neuro-response data by at least one of time shifting or phase shifting at least one of the first neuro-response data or the second neuro-response data." App. Br. 23, Claims Appendix.

As explained in the Specification, alignment is useful because response times vary across different modalities. For example, "an EEG response will often occur hundreds of milliseconds before a facial emotion measurement changes" (Spec. para. 58). The invention solves this problem using "a cross-modality synthesis mechanism" that "performs time and phase shifting of data to allow data from different modalities to align" (*id.*).

The Examiner finds the claimed "cross-modality response synthesizer" is the processing means disclosed in Barletta at col. 1, l. 54 – col. 3, l. 55 (Final Act. 6). Regarding the claimed alignment, the "Examiner

interprets Barletta's disclosure of an actual emotional state of the user to be based on (i.e. combining or aligning) every emotional state of the user (i.e. first neuro-response data and second neuro-response data)" (*id.* at 3) (citing Barletta at col. 3, ll. 8–16). The Examiner also finds that King discloses aligning data by time shifting at col. 7, ll. 4–16 (*id.*). As set forth in the Answer:

> Examiner notes that the step of aligning is a precursor to the step of combining. So, in order to successfully combine two sets of data, the data must be properly aligned. Thus, if the prior art discloses the step of combining a data, it is clear that the step of aligning is obviously present prior to the combining step.

Ans. 5.

The Appellants argue that the cited prior art does not disclose "a cross-modality response synthesizer to: align the first neuro-response data and the second neuro-response data by at least one of time shifting or phase shifting at least one of the first neuro-response data or the second neuro-response data" (App. Br. 9–12). According to the Appellants, "[c]ombining data does not necessarily include aligning the data" (Reply Br. 35).

We have carefully reviewed Barletta and find that the Appellants have the stronger position.

Barletta discloses an acquisition system that measures physiological reactions using various modalities (Barletta col. 2, ll. 56–67). The reaction data are then submitted to a processing means that calculates average values and a transformation means that comprises algorithms for detecting the emotional state of the user (*id.* at col. 2, l. 63 – col. 3, l. 5). An algorithm assigns values to each emotional state descriptor and compares measured physical values to the assigned values in order to determine the

corresponding emotional state. For example, physical values of high heart beat rate or high blood pressure can correspond to an emotional state of "fear" (*id.* at col. 3, ll. 6–16).

We see no disclosure in Barletta of aligning data from two measurement modalities. Although processing means 3 may calculate an average value for a single modality, it does not align data from two modalities. Transformation means 4 compares values and assigns emotional states, based on data from multiple modalities (e.g., heart beat and blood pressure). But there is no suggestion that data from two modalities may be misaligned or that the transformation means aligns data from two modalities. We also do not agree with the Examiner's contention that combining data necessarily includes a "precursor" aligning step. We agree with Appellants that two sets of data can be combined without alignment, such as by simply ignoring any misalignment.

The cited disclosure in King does not cure the above deficiency. King at col. 7, ll. 4–16 discloses "continuous time-shift buffering" a source broadcast stream in order to provide "seamless-continuity reception." In other words, King discloses buffering a single stream of data. There is no disclosure of time-shifting at least one of two data streams so that they will be in alignment with each other.

Independent claims 19 and 23[3] contain a similar limitation as claim 1, and the Examiner relies on the same deficient findings discussed above in rejecting these claims under 35 U.S.C. § 103(a). *See* Ans. 4–6.

A prima facie case of obviousness has not been made out in the first instance by a preponderance of the evidence. Accordingly, we reverse the rejection of independent claims 19 and 23 for the same reasons. For the same reasons, we also do not sustain the rejection of dependent claims 3–16, 20, 22, 24, 25, 27, and 31–34. *Cf. In re Fritch*, 972 F.2d 1260, 1266 (Fed. Cir. 1992) ("dependent claims are nonobvious if the independent claims from which they depend are nonobvious").

Independent Claim 29

Claim 29 contains the limitation "lengthen the first portion or a third portion of the advertisement or entertainment" (App. Br. 28, Claims Appendix).

The Examiner finds the above limitation in the longer synthesis of the video disclosed in Barletta at col. 4, l. 58 – col. 5, l. 3 (Final Act. 11).

The Appellants argue that the cited prior art does not disclose the above limitation (App. Br. 20–21). According to the Appellants, "[t]his vague mention of . . . 'a longer synthesis of the video' only relates to the production of videos of different duration" (App. Br. 21).

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[3] As noted above, claim 23 recites "means for aligning," "means for identifying," and "means for transmitting" (App. Br. 27, Claims Appendix). There is no indication that the Examiner has construed these means-plus-function limitations in accordance with 35 U.S.C. § 112, paragraph 6. The necessary claim construction analysis has not been done and as a result there is insufficient groundwork to meet the initial burden of establishing a prima facie case of obviousness for the subject matter of claim 23.

We agree with the Appellants. The cited disclosure in Barletta relates to generating a digital video digest or synthesis having a variable length. Although the digest may be "short" or "longer," Barletta does not disclose that generating a digest of variable length involves lengthening any particular portion of the content therein.

A prima facie case of obviousness has not been made out in the first instance by a preponderance of the evidence.

CONCLUSION

The Appellant has shown that the Examiner erred in rejecting claims 1, 3–16, 19, 20, 22–25, 27, 29, and 31–34 under 35 U.S.C. § 101.

The Appellant has shown that the Examiner erred in rejecting claims 1, 3–16, 19, 20, 22–25, 27, 29, and 31–34 under 35 U.S.C. § 103(a).

DECISION

The Examiner's rejections under 35 U.S.C. § 101 are reversed.

The Examiner's rejections under 35 U.S.C. § 103(a) are reversed.

REVERSED