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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte SAURABH SHUKLA, VINAYAK AGARAWAL,
RAJAN BHARGAVA, and MOHIT GARG

Appeal 2017-008194
Application 14/087,558
Technology Center 2400

Before THU A. DANG, JOHN P. PINKERTON, and
JOYCE CRAIG, *Administrative Patent Judges*.

PINKERTON, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellants¹ file this appeal under 35 U.S.C. § 134(a) from the Final Rejection of claims 1–20, which constitute all of the claims pending in this application. We have jurisdiction under 35 U.S.C. § 6(b).

We affirm.

¹ Appellants identify Adobe Systems Inc. as the real party in interest. Br. 3.

STATEMENT OF THE CASE

Introduction

Appellants generally describe the disclosed and claimed invention as follows:

Trending data demographics are described. In one or more implementations, content posted on online content sources is analyzed to determine topics associated with the posted content. Analysis is then performed to ascertain which of those topics in the posted content are trending. A determination as to which of the topics are trending may be based on a number of times the posted content involves a topic. For the topics that are trending, demographic data of the users that posted about those topics is collected. In some cases, demographic data may be assigned to users that posted about the topics that are trending. Based on the collected and assigned demographic data, a prediction is made to predict segments of users that are likely to find the trending topics interesting. Targeted content may then be provided to the segments of users that are likely to find the trending topics interesting.

Abstract.²

Claim 1 is representative and reads as follows (with the disputed limitations *emphasized*):

1. A method comprising:
 - determining, by one or more computing devices, topics associated with content posted on online content sources;
 - ascertaining, by the one or more computing devices, which of the topics are trending based on a number of times the content involves a topic;

² Our Decision refers to the Final Office Action mailed Feb. 12, 2016 (“Final Act.”), Appellants’ Appeal Brief filed Aug. 30, 2016 (“Br.”), the Examiner’s Answer mailed Dec. 14, 2015 (“Ans.”), and the original Specification filed Nov. 22, 2013 (“Spec.”).

identifying, by the one or more computing devices, posting characteristics in the content involving a trending topic;

predicting, by the one or more computing devices, demographic data of posting users that posted the content involving the trending topic based on the identified posting characteristics, the predicted demographic data being predicted using a trained classifier that is trained using training content posted by users having known demographic data;

predicting, by the one or more computing devices, an audience that is likely to find the trending topic interesting based on the predicted demographic data, the audience including at least a first group of users having demographic data that matches the predicted demographic data of the posting users and at least a second group of users associated with the first group; and

providing, by the one or more computing devices, targeted content to the audience of users.

Br. 28 (Claims App'x).

Rejections on Appeal

Claims 1–4, 6–8, 10, and 12 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Pavlidis et al. (US 2014/0143405 A1; published May. 22, 2014) (“Pavlidis”), Dror et al. (US 2013/0103637 A1; published Apr. 25, 2013) (“Dror”), Pennacchiotti et al. (US 2013/0018968 A1; published Jan. 17, 2013) (“Pennacchiotti”), and Solomon (US 2010/0125502 A1; published May 20, 2010).

Claims 13 and 15–20 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Pavlidis, Dror, and Pennacchiotti.

Claim 11 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Pavlidis, Dror, Pennacchiotti, Soloman, and Drews et al. (US 2013/0325977 A1; published Dec. 5, 2013) (“Drews”).

Claim 9 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Pavlidis, Dror, Pennacchiotti, Soloman, and Liu et al. (US 2013/0159277 A1; published June 20, 2013).

Claim 14 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Pavlidis, Dror, Pennacchiotti, Soloman.

Appellants' Contentions

1. Appellants contend a prima facie case of obviousness has not been established with respect to claim 1 because the proposed combination of references fails to teach or suggest the limitations:

“identifying, by the one or more computing devices, posting characteristics in the content involving a trending topic” and

“predicting, by the one or more computing devices, demographic data of posting users that posted the content involving the trending topic based on the identified posting characteristics.”

Br. 13–16. Appellants also argue the Examiner has failed to provide articulated reasoning with some rational underpinning to support the conclusion of obviousness of claim 1 based on the combination of Pavlidis, Dror, and Penacchiotti.³ *Id.* at 16–18.

2. Appellants contend a prima facie case of obviousness has not been established with respect to claim 13 because the combination of Pavlidis, Dror, and Penacchiotti fails to teach or suggest using the trained classifier “to assign demographic data to posting users that posted the content involving the trending topic.” *Id.* at 20–22. Appellants also contend

³ Although Appellants refer to Solomon in the introduction and conclusion of their argument concerning this contention, Solomon is not otherwise mentioned. *See* Br. 13–16.

the Examiner “failed to provide ‘articulated reasoning with some rational underpinning’ to support the conclusion of obviousness” of claim 13 for the reasons discussed regarding claim 1. *Id.* at 22.

3. Appellants contend a prima facie case of obviousness has not been established with respect to claim 18 because the combination of Pavlidis, Dror, and Penacchiotti fails to teach or suggest assigning, “to at least one other user that posted about the trending topic and for which the demographic data is not collected,” the demographic data. *Id.* at 23–26. Appellants also contend the Examiner “failed to provide ‘articulated reasoning with some rational underpinning’ to support the conclusion of obviousness” of claim 18 for the reasons discussed regarding claim 1. *Id.* at 26.

ANALYSIS

We have reviewed the Examiner’s rejections in light of Appellants’ arguments in the Brief that the Examiner has erred. *See* Br. 13–26. We have also reviewed the Examiner’s response to Appellants’ arguments and the evidence of record. On the record before us, we find the preponderance of the evidence supports the Examiner’s (1) findings that the combined teachings of the references teaches or suggests the disputed limitations of claims 1, 13, and 18 and (2) conclusions that the combination of the cited references would have rendered the subject matter of claims 1, 13, and 18 obvious under 35 U.S.C. § 103(a).

We disagree with Appellants’ contentions that the Examiner erred. The Examiner has provided a detailed and comprehensive response, supported by evidence based on the teachings of the cited references, to each

of Appellants' contentions and arguments. Accordingly, we adopt as our own the findings and reasons set forth by the Examiner in the Office Action from which this appeal is taken (Final Act. 3–19) and in the Examiner's Answer in response to Appellants' Brief (Ans. 3–10). We concur with the conclusions reached by the Examiner. For emphasis, we consider and highlight specific arguments as presented in the Brief.

Regarding Appellants' contention 1, we are not persuaded by Appellants' argument that the cited references, including Solomon, do not teach or suggest “identifying . . . posting characteristics in the content involving a trending topic.” As noted by the Examiner, Solomon was not relied on to teach this limitation. Ans. 5. Instead, the Examiner finds, and we agree, that Pavlidis teaches or suggests this limitation because it describes identifying words and phrases in social media content “as characteristics to determine *intensity* and correlate that to a *trend*.” *Id.* 4–5 (citing Pavlidis ¶ 61). We also agree with the Examiner that Dror teaches or suggests the limitation “predicting . . . demographic data of posting users that posted the content involving the trending topic based on the identified posting characteristics,” as recited in claim 1. Appellants' Specification describes “age, gender, and location” as examples of “demographic data.” *See Spec.* ¶ 13. As the Examiner finds, and we agree, paragraph 37 of Dror teaches or suggests that demographic information, such as the user's age, gender, and home address, “can be derived from analysis of collected information,” which Dror describes as the “textual content related to a user from one or more data sources” and which we find teaches or suggests “identified posting characteristics.” Ans. 3–4.

We also are not persuaded by Appellants' arguments that the motivation to combine the cited references with respect to claim 1 is not supported sufficiently by articulated reasoning with some rational underpinning. Instead, we find the Examiner's stated rationales constitute articulated reasoning with some rational underpinning in accordance with *KSR*. See Final Act. 4–6, Ans. 4–6; *KSR International Co. v. Teleflex Co.*, 550 U.S. 398, 418 (2007). In addition, the Examiner finds “[o]ne of ordinary skill in the art would recognize that the results of the combination are predictable because each element in the combination is merely performing the same function it would perform separately.” Final Act. 6. As stated by the Supreme Court, the “combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results.” *KSR*, 550 U.S. at 416. Here, Appellants have not provided persuasive evidence or arguments that it would not have been possible for a person of skill in the art to combine any of the references relied on by the Examiner by known methods or that the results of the combinations would have been unpredictable. Absent such evidence or arguments, we agree with the Examiner that a skilled artisan would have been motivated to combine the references for the reasons found by the Examiner.

Thus, we sustain the Examiner's rejection of claim 1 under § 103(a). We also sustain the rejection of claims 2–8, 10, and 12, which are not separately, substantively argued. See Br. 19. With respect to claims 9 and 11, Appellants argue they are allowable as depending from an allowable base claim and for their “own recited features.” *Id.* Because we have determined their base claim—claim 1—is not allowable and because the

statement that the recited features of the claims are not shown or suggested in the references is not sufficient to constitute a separate argument for patentability of claims 9 and 11,⁴ we also sustain the rejection of claims 9 and 11 under § 103(a).

Regarding claim 13, we are not persuaded by Appellants' argument that Pennacchiotti does not teach or suggest using the trained classifier "to assign demographic data to posting users that posted the content involving the trending topic." Instead, we agree with the Examiner that paragraph 14 of Pennacchiotti teaches or suggests this limitation because it teaches "enabl[ing] users of a social network offering a social media service such as a microblogging service to be classified according to . . . "gender," which, as discussed above, is one of the Specification's examples of "demographic data." *See* Ans. 6–7. For the reasons stated *supra* regarding claim 1, we also are not persuaded by Appellants' argument that the Examiner fails to provide articulated reasoning with some rational underpinning to support the conclusion of obviousness of claim 13. *See also* Final Act. 12.

Regarding claim 18, we are not persuaded by Appellants' contention the cited references do not teach or suggest assigning, "to at least one other user that posted about the trending topic and for which the demographic data is not collected," the demographic data. The Examiner finds, and we agree, paragraph 35 of Pavlidis teaches "[s]ocial media activity with respect to the seed set may be evaluated to identify . . . second tier influencers." *Id.* at 8.

⁴ *See* 37 C.F.R. § 41.37(c)(1)(iv) ("A statement which merely points out what a claim recites will not be considered an argument for separate patentability of the claim."); *see also In re Lovin*, 652 F.3d 1349, 1357 (Fed. Cir. 2011).

Thus, the Examiner finds, and we agree, “[u]sing [the] broadest reasonable interpretation in light of the specification, Pavlidis teaches secondary users [or “at least one other user”] that posted about the topic for which demographic data is not collected via second tier influencers whose influence affects the affinity or trend of the topic that was posted.” *Id.* at 8–9 (emphasis added). Appellants did not file a reply brief and have not presented evidence or arguments to persuasively rebut these findings. Thus, we agree with the Examiner’s finding that Pavlidis teaches or suggests the disputed limitation of claim 18. For the reasons stated *supra* regarding claim 1, we also are not persuaded by Appellants’ argument that the Examiner fails to provide articulated reasoning with some rational underpinning to support the conclusion of obviousness of claim 18. *See also* Final Act. 15.

Thus, we sustain the Examiner’s rejection of claims 13 and 18 under § 103(a). We also sustain the rejection of claims 15–17, 19, and 20, which are not separately, substantively argued. *See* Br. 22, 26. With respect to claim 14, Appellants argue it is allowable as depending from an allowable base claim and for its “own recited features.” *Id.* at 22. Because we have determined claim 14’s base claim—claim 13—is not allowable and because the statement that the recited features of the claim are not shown or suggested in the references is not sufficient to constitute a separate argument for patentability of claim 14,⁵ we also sustain the rejection of claim 14 under § 103(a).

⁵ *See* 37 C.F.R. § 41.37(c)(1)(iv) (“A statement which merely points out what a claim recites will not be considered an argument for separate patentability of the claim.”); *see also In re Lovin*, 652 F.3d 1349, 1357 (Fed. Cir. 2011).

DECISION

We affirm the Examiner’s decision rejecting claims 1–20 under 35 U.S.C. § 103(a).⁶

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

⁶ In the event of further prosecution, we invite the Examiner to consider whether the claims implicate 35 U.S.C. § 101 as reciting non-statutory subject matter (an abstract idea). *See* “2014 Interim Guidance on Patent Subject Matter Eligibility,” 79 Fed. Reg. 74618 (Dec. 16, 2014); “July 2015 Update on Subject Matter Eligibility,” 80 Fed. Reg. 45429 (July 30, 2015); “May 2016 Subject Matter Eligibility Update,” 81 Fed. Reg. 27381 (May 6, 2016). Although the Board is authorized to reject claims under 37 C.F.R. § 41.50(b), no inference should be drawn when the Board elects not to do so. *See Manual of Patent Examining Procedure* (MPEP) § 1213.02.