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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* STEPHEN MILTON and DUNCAN MCCALL

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Appeal 2016-004328  
Application 14/311,264<sup>1</sup>  
Technology Center 3600

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Before MURRIEL E. CRAWFORD, AMEE A. SHAH, and  
ROBERT J. SILVERMAN, *Administrative Patent Judges*.

SILVERMAN, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

The Appellants appeal under 35 U.S.C. § 134(a) from the Examiner's decision rejecting claims 21, 22, 24–28, 30–32, 34–38, and 40–46. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

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<sup>1</sup> The Appellants identify PlaceIQ, Inc. as the real party in interest. Appeal Br. 2.

ILLUSTRATIVE CLAIM

21. A method of measuring an amount of persons that have physically visited a retail store over one or more periods of time, the method comprising:

obtaining location histories of a plurality of users,

each location history corresponding to a respective one of the plurality of users and being indicative of geographic locations visited by the respective one of the plurality of users,

each location history including one or more time-stamped geographic locations sensed by a respective mobile user device of the respective one of the plurality of users,

obtaining a plurality of geographic areas corresponding to a plurality of retail stores,

each of the geographic areas being data describing the geographic area occupied by a respective one of a plurality of retail stores;

obtaining a plurality of periods of time,

for each geographic area among the plurality of geographic areas, determining, with one or more processors, an amount of persons who visited the respective geographic area during one or more corresponding periods of time among the plurality of periods of time by determining whether the one or more time-stamped geographic locations are inside the respective geographic area during the one or more corresponding periods of time, wherein determining the amount of persons who visited the respective geographic area during one or more corresponding periods of time comprises:

estimating an amount of undetected persons who visited the respective geographic area;

reducing undercounting of undetected persons by increasing the resulting determined amount based on the estimated amount of undetected persons;

identifying a subset of users among the plurality of users who were sent an advertisement while in a given geographic region,

the respective geographic area corresponding to a respective one of the plurality of retail stores, and

the given geographic region being a geographic region over which advertisement effectiveness is to be measured; and

determining an effectiveness of the advertisement in the geographic region based on the identified subset of users and the increased resulting determined amount of persons who visited the respective geographic area during the one or more corresponding periods of time; and

storing the determined effectiveness of the advertisement in the given geographic region in memory.

#### CITED REFERENCES

The Examiner relies upon the following references:

- |   |                    |               |
|---|--------------------|---------------|
| Horvitz et al.<br>(hereinafter "Horvitz")   | US 2007/0005419 A1 | Jan. 4, 2007  |
| Liang et al.<br>(hereinafter "Liang")       | US 2010/0153216 A1 | June 17, 2010 |
| Kramer et al.<br>(hereinafter "Kramer")     | US 2011/0093340 A1 | Apr. 21, 2011 |
| Busch                                       | US 2012/0290383 A1 | Nov. 15, 2012 |
| Kjelsbak et al.<br>(hereinafter "Kjelsbak") | US 2013/0054335 A1 | Feb. 28, 2013 |
- Erick Schonfeld, *Study: Mobile Ad-Tracking Systems Are "Blind" to 80 Percent of Apple iOS Devices*, techcrunch.com, Mar. 15 2011 (<http://techcrunch.com/2011/03/15/mobile-ad-blind-80-percent-apple-ios/>) ("Schonfeld")

REJECTIONS<sup>2</sup>

I. Claims 21, 22, 24–28, 30–32, 34–38, and 40–46 are rejected under 35 U.S.C. § 101 as ineligible subject matter.

II. Claims 21, 22, 24–28, 30–32, 34–38, and 40–46 are rejected under 35 U.S.C. § 112(b) (AIA) for failing to particularly point out and distinctly claim the subject matter that the Appellants regard as the invention.<sup>3</sup>

III. Claims 21, 24–26, 28, 30, 31, 34–36, 38, 40, 42, 43, 45, and 46 are rejected under 35 U.S.C. § 103(a) as unpatentable over Kramer, Horvitz, and Kjelsbak.

IV. Claims 22 and 32 are rejected under 35 U.S.C. § 103(a) as unpatentable over Kramer, Horvitz, Kjelsbak, and Liang.

V. Claims 27 and 37 are rejected under 35 U.S.C. § 103(a) as unpatentable over Kramer, Horvitz, Kjelsbak, and Schonfeld.

VI. Claims 41 and 44 are rejected under 35 U.S.C. § 103(a) as unpatentable over Kramer, Horvitz, Kjelsbak, and Busch.

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<sup>2</sup> In addition to the enumerated rejections, the Final Office Action (page 2) includes a rejection under either 35 U.S.C. § 112(a) (AIA) or 35 U.S.C. § 112, ¶ 1 (pre-AIA). This rejection is withdrawn. *See* Advisory Action (Mar. 31, 2015); *see also* Appeal Br. 15.

<sup>3</sup> Although the identified claims stand rejected under either 35 U.S.C. § 112(b) (AIA) or 35 U.S.C. § 112, ¶ 2 (pre-AIA) (*see* Final Action 2–3), this Decision applies the AIA version of 35 U.S.C. § 112, because the filing date of the Application under review is after the effective date of Section 4(c) of the Leahy-Smith America Invents Act (AIA) (September 16, 2012) (re-designating 35 U.S.C. § 112, ¶ 2, as 35 U.S.C. § 112(b)). Unlike the AIA versions of certain other statutory sections, the effective date for the AIA version of 35 U.S.C. § 112 is based upon the application filing date, rather than the priority date for claimed subject matter.

## FINDINGS OF FACT

The findings of fact relied upon, which are supported by a preponderance of the evidence, appear in the following Analysis.

### ANALYSIS

#### *Rejection Under 35 U.S.C. § 101*

Issues of subject-matter eligibility are analyzed according to the framework delineated by the Supreme Court in *Alice Corp. Pty. Ltd. v. CLS Bank International*, 134 S. Ct. 2347, 2355 (2014) — first, determining whether the claim is directed to judicially excepted subject matter (such as a so-called “abstract idea”) and, if so, second, determining whether there are any “additional elements” recited in the claim that (either individually or as an “ordered combination”) amount to “significantly more” than the identified judicially excepted subject matter.

As to the first *Alice* step, the rejection maintains that the claims in the Appeal are directed to an ineligible abstract idea, characterized variously as “market segmentation and advertising,” “market segmentation using customer geolocation.” *See* Final Action 3; *see also* Answer 4.

The Appellants argue that this characterization does not fit the claim language and that it is not similar to concepts that courts have regarded as abstract. Appeal Br. 8–13.

However, the Examiner’s description of the identified abstract idea fits into the category of fundamental economic practices, which has been recognized in various court decisions. Indeed, the Examiner’s description is similar to the concept of targeted advertising, which courts have regarded as such an abstract idea. *See Affinity Labs of Tex., LLC v. Amazon.com, Inc.*, 838 F.3d 1266, 1271 (Fed. Cir. 2016) (“tailoring of content based on

information about the user—such as where the user lives or what time of day the user views the content—is an abstract idea that is as old as providing different newspaper inserts for different neighborhoods”) (citing *Intellectual Ventures I LLC v. Capital One Bank (USA)*, 792 F.3d 1363, 1369 (Fed. Cir. 2015)).

As to the second *Alice* step, the Appellants argue that the claimed feature of “determining an effectiveness of the advertisement in the geographic region based on [enumerated factors]” amounts to “significantly more” than the abstract idea. Appeal Br. 13–15. Further, the Appellants contend that certain dependent claims add details constituting significant additions to the abstract idea—claims 25 and 35 recite “obtaining an estimated amount of undercounting based on an identifier of an application executed by a mobile device of the at least one user” and claims 27 and 37 recite adjusting the undercount of users “based on an amount of persons having mobile devices with the operating system that are not detectable.” Appeal Br. 15.

Yet, we agree with the Examiner (*see* Answer 14), that the “determining” step—even if regarded as something distinct from the identified abstract idea itself—is a form post-solution activity that does not confer eligibility. *See Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 79 (2012). Similarly, we agree with the Examiner’s position (*see* Answer 14–15) that the features of the dependent claims, identified by the Appellants, amount to data-gathering operations, which also do not give rise to patent-eligibility. *See OIP Techs., Inc. v. Amazon.com, Inc.*, 788 F.3d 1359, 1363 (Fed. Cir. 2015).

Accordingly, we are not persuaded of reversible error and therefore sustain the rejection of claims 21, 22, 24–28, 30–32, 34–38, and 40–46 under 35 U.S.C. § 101.

*Rejection Under 35 U.S.C. § 112(b)*

The rejection raises two issues of indefiniteness under 35 U.S.C. § 112(b), which are addressed separately, below. Because we agree that the first of these issues (concerning claim language reciting “a plurality of retail stores”) renders the claims indefinite, we sustain the rejection of claims 21, 22, 24–28, 30–32, 34–38, and 40–46 under 35 U.S.C. § 112(b).

1. *“a plurality of retail stores”*

In the first indefiniteness issue, both of independent claims 21 and 31 are rejected, based upon the use of phrases referring to “a plurality of retail stores.” *See* Final Action 3. Claim 21, for example, recites:

21. A method of measuring an amount of persons that have physically visited a retail store over one or more periods of time, the method comprising: . . .

obtaining a plurality of geographic areas corresponding to *a plurality of retail stores*,

each of the geographic areas being data describing the geographic area occupied by *a respective one of a plurality of retail stores*; . . . [and]

identifying a subset of users among the plurality of users who were sent an advertisement while in a given geographic region,

the respective geographic area  
corresponding to *a respective one of the plurality  
of retail stores*

(Emphasis added). According to the Examiner, “the dual recitation of ‘a plurality of retail stores’ makes it unclear if said independent claims seek coverage for a respective one of the same plurality of retail stores antecedently recited in the said limitation, or to a totally different plurality of retail stores.” Advisory Action (Mar. 31, 2015).

The Appellants contend that “[t]he concern here appears to be that the claims do not limit the stores to a particular type of relationship” and that “[t]his concern is merely with breadth, not indefiniteness.” Reply Br. 3.

To the contrary, in regard to the claimed “plurality of retail stores,” the recitation of two instances involving the indefinite article “a” (“a plurality of retail stores” and “a respective one of a plurality of retail stores”), followed by an instance involving the definite article “the” (“a respective one of the plurality of retail stores”) results in ambiguity as to which “plurality of retail stores” is being referenced and/or whether there is only one such “plurality of retail stores” at issue in the claims.

Accordingly, we sustain the rejection of claims 21, 22, 24–28, 30–32, 34–38, and 40–46 under 35 U.S.C. § 112(b), on the basis of the claim language relating to “a plurality of retail stores.”

2. “*an amount of persons*”

With regard to the second indefiniteness issue, independent claims 21 and 31 are rejected on account of their use of the expression “an amount of persons.” *See* Answer 17. Specifically, the preamble (of claim 21, for example) recites “an amount of persons that have physically visited a retail

store” and the body of the claim recites “an amount of persons who visited the respective geographic area,” followed, later in the claim body, by “the amount of persons who visited the respective geographic area”:

21. A method of measuring *an amount of persons that have physically visited a retail store* over one or more periods of time, the method comprising: . . .

for each geographic area among the plurality of geographic areas, determining, with one or more processors, *an amount of persons who visited the respective geographic area* during one or more corresponding periods of time among the plurality of periods of time by determining whether the one or more time-stamped geographic locations are inside the respective geographic area during the one or more corresponding periods of time, wherein determining *the amount of persons who visited the respective geographic area* during one or more corresponding periods of time comprises: . . .

(Emphasis added).

The Appellants argue:

The claims are clear. The body of the claim does not look to the preamble for antecedent basis, and as such, there is no ambiguity regarding whether if or how “an amount of persons” in the body of the claim refers back to the “amount of persons” in the preamble. It does not. This is plainly indicated by the article “an” being used in the body of the claim, rather than the article “the,” which would indicate reference back to the preamble. Because “an” prefaces the phrase in the body of the claim, rather than “the,” the language in the body of the claim does not look to the preamble for antecedent basis.

Reply Br. 2–3.

We agree with the Appellants. Leaving aside the interpretational principle that claim preambles are not necessarily limiting (but often simply recite a goal or potential use of the claimed invention), here the preamble

uses a different phrase from what is set forth in the body of the claim, thus foreclosing concerns about ambiguity that animated the rejection.

Specifically, the preamble of claim 21 recites “an amount of persons *that have physically visited a retail store*,” whereas the body of the claim recites “an amount of persons *who visited the respective geographic area*.”

(Emphasis added). The meaning of the claim is not rendered unclear or ambiguous, simply because the identified expression (“an amount of persons”) is also used (in regard to a different phrase) in the preamble.

Accordingly, we do not sustain the rejection of claims 21, 22, 24–28, 30–32, 34–38, and 40–46 under 35 U.S.C. § 112(b), on the basis of the claim language relating to “an amount of persons.”

#### *Rejections Under 35 U.S.C. § 103(a)*

The Appellants argue all claims in the Appeal as a group. Appeal Br. 16–21. Independent claim 21 is selected for analysis herein. *See* 37 C.F.R. § 41.37(c)(1)(iv).

The Appellants argue (Appeal Br. 17–21) that the prior art does not teach or suggest the following features of independent claim 21:

determining an effectiveness of the advertisement in the geographic region based on the identified subset of users and the increased resulting determined amount of persons who visited the respective geographic area during the one or more corresponding periods of time.

Note that the “identified subset of users,” in the above quotation, refers to claim 21’s prior limitation of “identifying a subset of users among the plurality of users who were sent an advertisement while in a given geographic region.” Note, further, that the feature of the “increased

resulting determined amount of persons who visited . . .” refers to a technique for determining the undercounting of visitors, by (per claim 21) “estimating an amount of undetected persons who visited the respective geographic area.”

The Examiner’s position is that teachings of the cited references may be combined in various ways to accomplish the identified subject matter. For example, the claimed “determining an effectiveness of the advertisement in the geographic region” is taught by Kramer’s ¶ 229 (which discloses that venues may tracking users’ acceptance of particular promotional advertising). *See* Answer 21. In addition, Kjelsbak, at ¶¶ 44–45, discloses monitoring the mobile devices of users to which a voucher for a particular promotional deal has been distributed, including whether the deal has been purchased — thus teaching both “determining an effectiveness of the advertisement in the geographic region,” as well as making such determinations “based on the identified subset of users” (i.e., the users who were sent an advertisement while in a given geographic region, as set forth in claim 21). *See* Answer 21–23.

The Appellants argue that Kjelsbak is deficient, because the reference “measures redemptions of offers, not visits to stores.” Appeal Br. 19 (citing Kjelsbak ¶ 44). In this regard, the Appellants are mistaken, because Kjelsbak ¶ 13 states that a user may “receive a voucher for the product or service on his mobile device, and be able to walk into a store with the voucher on his mobile phone to redeem the voucher for the offered product or service.” *See also* Kjelsbak ¶ 37 (“When a user desires to redeem the voucher for the offered product or service, the user may travel to the location

of the seller (e.g., a store) and present the voucher to the seller for redemption.”)

The Appellants also argue (Appeal Br. 19) that Kjelsbak does not account for effectiveness of ads in driving visits in a way that accounts for undetected people, as reflected in the claim language reciting the “increased resulting determined amount.” Yet, Kramer teaches this feature. Specifically, claim 21’s feature of the “increased resulting determined amount of persons who visited the respective geographic area during the one or more corresponding periods of time” (i.e., estimating and compensating for the undercounting of patrons) is taught by Kramer ¶ 62 (which discloses calculating and applying a ratio that reflects the degree of undercounting). The Appellants contend that Kramer does not teach this feature of claim 21 (*see* Reply Br. 3–4), however the Appellants do not address, let alone criticize, the disclosure of Kramer’s ¶ 62 or the Examiner’s discussion of such disclosure.

Accordingly, the Appellants have not persuasively argued that claim 21 was rejected erroneously. Therefore, we sustain the rejection of claims 21, 22, 24–28, 30–32, 34–38, and 40–46 under 35 U.S.C. § 103(a).

## DECISION

We AFFIRM the Examiner’s decision rejecting claims 21, 22, 24–28, 30–32, 34–38, and 40–46 under 35 U.S.C. § 101.

We AFFIRM the Examiner’s decision rejecting claims 21, 22, 24–28, 30–32, 34–38, and 40–46 under 35 U.S.C. § 112(b) (AIA).

We AFFIRM the Examiner’s decision rejecting claims 21, 22, 24–28, 30–32, 34–38, and 40–46 under 35 U.S.C. § 103(a).

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No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a).

AFFIRMED