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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte SAMUEL LESSIN and JUSTIN ALEXANDER SHAFFER

Appeal 2016-004717¹
Application 13/681,161²
Technology Center 3600

Before NINA L. MEDLOCK, TARA L. HUTCHINGS, and
AMEE A. SHAH, *Administrative Patent Judges*.

MEDLOCK, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellants appeal under 35 U.S.C. § 134(a) from the Examiner’s final rejection of claims 1–5, 11, 19, and 21–25. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

¹ Our decision references Appellants’ Appeal Brief (“App. Br.,” filed June 29, 2015) and Reply Brief (“Reply Br.,” filed April 4, 2016), and the Examiner’s Answer (“Ans.,” mailed February 2, 2016) and Final Office Action (“Final Act.,” mailed December 29, 2014).

² Appellants identify Facebook, Inc. as the real party in interest. App. Br. 2.

CLAIMED INVENTION

Appellants' claimed invention "relates generally to social networking, and in particular to advertising based on user trends in an online system" (Spec. ¶ 1).

Claims 1 and 21 are the independent claims on appeal. Claim 1, reproduced below, is illustrative of the claimed subject matter:

1. A method comprising:
 - maintaining profiles for a plurality of users of a social networking system;
 - maintaining a social graph of nodes representing objects in the social networking system connected by edges;
 - receiving a request from an advertiser to target a subset of the plurality of users of the social networking system, the request comprising at least one profile attribute for the subset of users and a query for a trend corresponding to a first action type;
 - retrieving social graph information for the targeted subset of users of the social networking system for an edge corresponding to the first action type;
 - determining, by a processor, a user trend for the targeted subset of users based on the social graph information for the targeted subset of users, the user trend comprising the first action type being followed by a second action type by the subset of users;
 - generating an advertisement offer based on the determined user trend for the advertiser for the targeted subset of users, the advertisement offer corresponding to the second action type; and
 - providing the generated advertisement offer to the advertiser responsive to the request.

REJECTIONS

Claims 1–5, 11, 19, and 21–25 are rejected under 35 U.S.C. § 101 as directed to non-statutory subject matter.

Claims 1–5, 11, 19, and 21–25 are rejected under 35 U.S.C. § 103(a) as unpatentable over Kramer et al. (US 2011/0093340 A1,

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pub. Apr. 21, 2011) (hereinafter “Kramer”), Saldanha et al. (US 2013/0238425 A1, pub. Sept. 12, 2013) (hereinafter “Saldanha”), and Goeldi (US 7,974,983 B2, iss. July 5, 2011).

ANALYSIS

Non-Statutory Subject Matter

Under 35 U.S.C. § 101, an invention is patent-eligible if it claims a “new and useful process, machine, manufacture, or composition of matter.” 35 U.S.C. § 101. The Supreme Court, however, has long interpreted § 101 to include an implicit exception: “[l]aws of nature, natural phenomena, and abstract ideas” are not patentable. *See, e.g., Alice Corp. Pty. Ltd. v. CLS Bank Int’l*, 134 S. Ct. 2347, 2354 (2014).

The Supreme Court, in *Alice*, reiterated the two-step framework previously set forth in *Mayo Collaborative Services v. Prometheus Laboratories, Inc.*, 566 U.S. 66 (2012), “for distinguishing patents that claim laws of nature, natural phenomena, and abstract ideas from those that claim patent-eligible applications of those concepts.” *Alice Corp.*, 134 S. Ct. at 2355. The first step in that analysis is to “determine whether the claims at issue are directed to one of those patent-ineligible concepts.” *Id.* If the claims are not directed to a patent-ineligible concept, e.g., an abstract idea, the inquiry ends. Otherwise, the inquiry proceeds to the second step where the elements of the claims are considered “individually and ‘as an ordered combination’” to determine whether there are additional elements that “‘transform the nature of the claim’ into a patent-eligible application.” *Id.* (quoting *Mayo*, 566 U.S. at 79, 78).

The Court acknowledged in *Mayo*, that “all inventions at some level embody, use, reflect, rest upon, or apply laws of nature, natural phenomena,

or abstract ideas.” *Mayo*, 566 U.S. at 71. We, therefore, look to whether the claims focus on a specific means or method that improves the relevant technology or are instead directed to a result or effect that itself is the abstract idea and merely invoke generic processes and machinery.

See Enfish, LLC v. Microsoft Corp., 822 F.3d 1327, 1336 (Fed. Cir. 2016).

Addressing the first step of the *Mayo/Alice* framework, Appellants argue, and we agree, that the appropriate inquiry is not whether the claims include a patent-ineligible abstract idea (App. Br. 5–6). “Rather, the ‘directed to’ inquiry applies a stage-one filter to claims, considered in light of the specification, based on whether ‘their character as a whole is directed to excluded subject matter.’” *Enfish*, 822 F.3d at 1335 (quoting *Internet Patents Corp. v. Active Network, Inc.*, 790 F.3d 1343, 1346 (Fed. Cir. 2015)).

Appellants criticize the Examiner’s indication that the method steps in claim 1 “include” an abstract idea and fundamental economic practices (App. Br. 5–6) when the question is more appropriately whether the claims at issue are “directed to” an abstract idea. *See Alice Corp.*, 134 S. Ct. at 2355. But, Appellants cannot reasonably deny that the claims are directed to targeted advertising (*see, e.g.*, Spec. ¶¶ 1, 5), i.e., to a fundamental, long-standing, and well-known economic practice and, therefore, to an abstract idea. *See Tuxis Techs., LLC v. Amazon.com, Inc.*, No. CV 13-1771-RGA, 2014 WL 4382446, at *5 (D. Del. Sept. 3, 2014) (Matching consumers with a given product or service “has been practiced as long as markets have been in operation.”).

We also are not persuaded of Examiner error by Appellants’ argument that the pending claims do not preempt or otherwise tie up the alleged abstract idea such that others cannot use the idea (App. Br. 6–7 (noting that

the various methods of targeted advertising described in the references cited by the Examiner during prosecution would not be preempted by the pending claims)). There is no dispute that the Supreme Court has described “the concern that drives [the exclusion of abstract ideas from patent eligible subject matter] as one of pre-emption.” *Alice Corp.*, 134 S. Ct. at 2354. Yet, characterizing preemption as a driving concern for patent eligibility is not the same as characterizing preemption as the sole test for patent eligibility. “The Supreme Court has made clear that the principle of preemption is the basis for the judicial exceptions to patentability” and “[f]or this reason, questions on preemption are inherent in and resolved by the § 101 analysis.” *Ariosa Diagnostics, Inc. v. Sequenom, Inc.*, 788 F.3d 1371, 1379 (Fed. Cir. 2015) (citing *Alice*, 134 S. Ct. at 2354). “[P]reemption may signal patent ineligible subject matter, [but] the absence of complete preemption does not demonstrate patent eligibility.” *Id.*

Appellants further charge that the rejection is improper because the Examiner focused on one portion of the claims, and ignored various other claim elements (App. Br. 7–8). But, even accepting Appellants’ argument, Appellants do not explain how these “various other elements relating to the analysis of social networking system user data, analysis of an advertiser request, and the generation of an advertisement offer” render the claims patent-eligible. For example, we find nothing in the Specification, nor do Appellants point us to anything in the Specification, to indicate that any specialized computer hardware or inventive computer components or programming is required, or that the claimed invention is implemented using other than generic computer components. Although the claims call for “generating an advertisement offer,” the claims recite a result without

meaningfully limiting how the claimed method achieves that result. “[T]he mere recitation of a generic computer cannot transform a patent-ineligible abstract idea into a patent-eligible invention.” *Alice Corp.*, 134 S. Ct. at 2358.

Appellants point to the “U.S. Patent Office Examples of Abstract Ideas,”³ and, more particularly to Example 2, and argue that the pending claims are analogous to the claim in Example 2, which is described as patent-eligible (App. Br. 8–9). Yet, we find no parallel between the present claims and the claim in Example 2 nor any parallel between the pending claims and those in *DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245 (Fed. Cir. 2014) from which the claim in Example 2 was taken.

The claims at issue in *DDR Holdings* were directed to retaining website visitors, and, in particular, to a system that modified the conventional web browsing experience by directing a user of a host website, who clicks an advertisement, to a “store within a store” on the host website, rather than to the advertiser’s third-party website. *DDR Holdings*, 773 F.3d at 1257–58. The court determined that “the claims address a business challenge (retaining website visitors) [that] is a challenge particular to the Internet.” *Id.* at 1257. The court also determined that the invention was “necessarily rooted in computer technology in order to overcome a problem specifically arising in the realm of computer networks,” and that the claimed invention did not simply use computers to serve a conventional business purpose. *Id.* Rather, there was a change to the routine, conventional functioning of Internet hyperlink protocol. *Id.*

³ Available at https://www.uspto.gov/sites/default/files/documents/abstract_idea_examples.pdf.

Appellants maintain here that the pending claims, like Example 2, i.e., the claim in *DDR Holdings*, are directed to a business challenge particular to the Internet, i.e., “determining user trends and identifying user actions within a social networking system, which can be used to optimize revenue for an advertiser” (App. Br. 9). Yet, unlike the situation in *DDR Holdings*, we fail to see how, and Appellants do not adequately explain how, using user trends to target advertisements is “a challenge particular to the Internet.”

Appellants ostensibly do not dispute that targeted advertising existed before and still exists outside of computer technology and computer networks. And, unlike the situation in *DDR Holdings*, there is no indication here that a computer network, or the Internet, in particular, is used other than in its normal, expected, and routine manner, e.g., for receiving and transmitting information.

Appellants maintain that rather than merely reciting the performance of a business practice known in the pre-Internet world, the claimed invention “addresses problems with providing advertisements in an *online environment*” and “provides a solution specifically customized to address this *online* social networking environment in which advertisements can be conveniently selected and served to users based on user trends” (App. Br. 9). However, as the court cautioned in *DDR Holdings*, “not all claims purporting to address Internet-centric challenges are eligible for patent.” *DDR Holdings*, 773 F.3d at 1258. Thus, in *Ultramercial, Inc. v. Hulu, LLC*, 772 F.3d 709 (Fed. Cir. 2014), although the patentee argued that its claims were “directed to a specific method of advertising and content distribution that was previously unknown and never employed on the Internet before,” 772 F.3d at 714, the court found that this alone could not render the claims

patent-eligible where the claims merely recited the abstract idea of “offering media content in exchange for viewing an advertisement,” along with “routine additional steps such as updating an activity log, requiring a request from the consumer to view the ad, restrictions on public access, and use of the Internet.” *Id.* at 715–16.

Similarly here, we find that the invocation of the Internet is not sufficient to transform Appellants’ otherwise patent-ineligible abstract idea into patent-eligible subject matter. We determine, as did the Examiner, that the claims are directed to the abstract idea of targeting advertisements based on observed user trends. Narrowing that abstract idea to an online social networking system merely limits the use of the abstract idea to a particular technological environment, which the Court made clear in *Alice* is insufficient to transform an otherwise patent-ineligible abstract idea into a patent-eligible subject matter. *See Alice Corp.*, 134 S. Ct. at 2358.

Turning to the second step of the *Mayo/Alice* framework, Appellants further argue, with continued reference to Example 2 and *DDR Holdings*, that even if the pending claims are directed to an abstract idea, the claims are nonetheless patent-eligible because they recite “significantly more” than the abstract idea itself (App. Br. 9–12). Appellants assert that the claimed invention addresses problems that are specific to the online environment with a solution that only makes sense within an online environment (*id.* at 11). But Appellants do not identify any problems “specific to the online environment” that the pending claims allegedly overcome. And, as described above, merely limiting the abstract idea of presenting advertisements based on observed user trends to an online environment is not enough for patent-eligibility.

Appellants also assert that, similar to *DDR Holdings*, the present claims solve a problem that has no traditional business analog (*id.* at 11–12). But, the court did not conclude in *DDR Holdings* that the claims were patent-eligible merely because the claims did not recite the performance of a business practice known from the pre-Internet world along with the requirement to perform it on the Internet. Instead, the Federal Circuit held that the claims were directed to statutory subject matter because they claimed a solution “necessarily rooted in computer technology in order to overcome a problem specifically arising in the realm of computer networks,” and effected a change to the routine, conventional functioning of Internet hyperlink protocol. *DDR Holdings*, 773 F.3d at 1257. As described above, there is no indication here that a computer network, or the Internet, in particular, is used other than in its normal, expected, and routine manner.

We also are not persuaded that the claimed invention has no traditional business analog. For example, we fail to see why the Examiner’s proposed scenario (where a shopkeeper receives and tracks user queries and interactions and observes user actions, and then suggests, e.g., advertises, an item or service based on that information (*see* Ans. 8)) would not constitute a traditional business analog.

Appellants further maintain here that the § 101 rejection cannot be sustained, because the “Office Action fails to provide ‘substantial evidence’” in support of the rejection, and fails to establish a *prima facie* case of patent-ineligibility (App. Br. 12–13). More particularly, Appellants argue that the Office Action provides “no factual support” for the conclusion that the claims recite an abstract idea or a fundamental economic principle, and “[no] supporting reasoning to satisfy the requirements of the MPEP” (*id.* at 13).

Appellants note that the Supreme Court, in *Bilski v. Kappos*, 561 U.S. 593 (2010), and also in *Alice*, cited specific references to support its finding that the alleged abstract idea was long prevalent in the field (App. Br. 13–14). And Appellants ostensibly maintain that the Examiner is likewise required to provide factual evidence here in order to establish a prima facie case of patent-ineligibility (*id.*). We disagree.

As an initial matter, we find nothing in *Bilski* or *Alice* that requires an examiner to provide evidentiary support in every case before a conclusion can be made that a claim is directed to an abstract idea. Nor have Appellants articulated sufficiently their assertion (*id.* at 12–13) that the Administrative Procedure Act imposes such a requirement. Contrary to Appellants’ assertion (*id.* at 14), this Board also did not hold in *PNC Bank N.A. v. Secure Access, LLC*, CBM2014-00100, 2014 WL 4537440 (PTAB Sept. 9, 2014) that there is any such requirement.⁴ Although evidence may be helpful, e.g., where facts are in dispute, it is not always needed. *See Mortgage Grader, Inc. v. First Choice Loan Servs. Inc.*, 811 F.3d 1314, 1325–26 (Fed. Cir. 2016) (“[I]t is also possible, as numerous cases have recognized, that a § 101 analysis may sometimes be undertaken without resolving fact issues.”). Appellants’ bare assertion that evidence is needed here, without any supporting reasoning as to why, is insufficient to require the Examiner to provide evidentiary support.⁵

⁴ We would not be bound, in any event, by a non-precedential decision of a different panel of the Board.

⁵ We note that the Appellants have put forward no rebuttal evidence showing the claims are not directed to an abstract idea.

Moreover, the Federal Circuit has repeatedly observed that “the prima facie case is merely a procedural device that enables an appropriate shift of the burden of production.” *Hyatt v. Dudas*, 492 F.3d 1365, 1369 (Fed. Cir. 2007) (citing *In re Oetiker*, 977 F.2d 1443, 1445 (Fed. Cir. 1992)).

The court has, thus, held that the USPTO carries its procedural burden of establishing a prima facie case when its rejection satisfies the requirements of 35 U.S.C. § 132 by notifying the applicant of the reasons for the rejection, “together with such information and references as may be useful in judging of the propriety of continuing the prosecution of [the] application.”

See In re Jung, 637 F.3d 1356, 1362 (Fed. Cir. 2011) (alteration in original).

Thus, all that is required of the Office is that it sets forth the statutory basis of the rejection in a sufficiently articulate and informative manner as to meet the notice requirement of § 132. *Id.*; *see also Chester v. Miller*, 906 F.2d 1574, 1578 (Fed. Cir. 1990) (“Section 132 is violated when a rejection is so uninformative that it prevents the applicant from recognizing and seeking to counter the grounds for rejection.”).

In rejecting the pending claims under § 101, the Examiner analyzed the claims using the *Mayo/Alice* two-step framework, in accordance with the guidance set forth in the USPTO’s “2014 Interim Guidance on Patent Subject Matter Eligibility,” 79 Fed. Reg. 74618 (Dec. 16, 2014), in effect at the time the Final Office Action was mailed (Final Act. 2–6). Specifically, the Examiner notified Appellants that the claims are directed to “classifying an individual user such as a consumer of information by analyzing said user’s general behavioral characteristics, doing so by agglomerating user behavior as embodied in the profile of said user, and selecting services of benefit and corresponding to said user’s profile,” which the Examiner

determined is a fundamental economic practice and, therefore, an abstract idea; and that there are no meaningful limitations in the claims that transform the abstract idea into a patent-eligible application of the abstract idea (*id.* at 5–6). The Examiner, thus, notified Appellants of the reasons for the rejection in a sufficiently articulate and informative manner as to meet the notice requirement of § 132. And we find that the Examiner, in doing so, set forth a *prima facie* case of patent-ineligibility such that the burden shifted to Appellants to demonstrate that the claims are patent-eligible.

Appellants do not contend that the § 101 rejection was not understood or that the rejection otherwise fails to meet the notice requirements of 35 U.S.C. § 132. Instead, Appellants’ understanding of the rejection is clearly manifested by Appellants’ response as set forth in the briefs.

Responding to the Examiner’s Answer, and referencing the USPTO’s “July 2015 Update: Subject Matter Eligibility,”⁶ Appellants argue that the Examiner has failed to identify the abstract idea, i.e., providing advertisements to users of a social network, “by way of comparison to concepts **already** found to be abstract” and that “[t]his lack of comparison to any analysis by the courts is not sufficient to provide a *prima facie* case for subject matter ineligibility” (Reply Br. 2–3 (quoting July 2015 Update: Subject Matter Eligibility, p. 3)).⁷ Yet, providing advertisements is a

⁶ Available at <https://www.uspto.gov/sites/default/files/documents/ieg-july-2015-update.pdf>.

⁷ The July 2015 Update instructs examiners to refer to the body of case law precedent in order to identify abstract ideas by way of comparison to concepts already found to be abstract (*id.* at 3), and explains that “[t]his discussion is meant to . . . ensure that a claimed concept is not identified as an abstract idea unless it is similar to at least one concept that the courts have identified as an abstract idea” (*id.*). Examiners also are instructed to

fundamental economic practice — a concept identified by the Examiner and recognized by the courts as an abstract idea. *See* Final Act. 5. To the extent that Appellants argue that the Guidelines require something more, that argument is not persuasive at least because an Examiner’s failure to follow the Director’s guidance is appealable only to the extent that the Examiner has failed to follow the relevant statutes or case law. To the extent the Director’s guidance goes beyond the case law and is more restrictive on the Examiner than the case law, the failure of the Examiner to follow those added restrictions is a matter for petition to the Director.

Further responding to the Examiner’s Answer, and specifically addressing step two of the *Mayo/Alice* framework, Appellants reproduce the method steps of claim 1 (but for the step of “providing the generated advertisement offer to the advertiser responsive to the request”) and argue that these steps amount to “significantly more” than the abstract idea (Reply Br. 3–5). Appellants maintain that “receiving a request from an advertiser to target a subset of the plurality of users of the social networking system” and “determining . . . a user trend for the targeted subset of users based on the social graph information for the targeted subset of users” add unconventional steps that confine the claim to a particular application and that “generating an advertisement offer based on the determined user trend for the advertiser for the targeted subset of users” effects a transformation or reduction of a particular article to a different state or thing (*id.* at 3–4).

clearly articulate “the reason(s) why the claimed invention is not eligible, for example, by providing a reasoned rationale that identifies the judicial exception recited in the claim and why it is considered an exception, and that identifies the additional elements in the claim (if any) and explains why they do not amount to significantly more than the exception” (*id.* at 6).

However, the mere recitation of a practical application for an abstract idea is insufficient to transform the abstract idea into a patent-eligible invention.

Cf. CyberSource Corp. v. Retail Decisions, Inc., 654 F.3d 1366, 1371 (Fed. Cir. 2011) (“The Court [in *Parker v. Flook*, 437 U.S. 584 (1978)] rejected the notion that the recitation of a practical application for the calculation could alone make the invention patentable.”). And we fail to see how, and Appellants do not explain how, generating an advertisement offer “effects a transformation or reduction of a particular article to a different state or thing.”

We are not persuaded for the foregoing reasons that the Examiner erred in rejecting claims 1–5, 11, 19, and 21–25 under 35 U.S.C. § 101. Therefore, we affirm the Examiner’s rejection.

Obviousness

We are persuaded by Appellants’ argument that the Examiner erred in rejecting independent claims 1 and 21 under 35 U.S.C. § 103(a) at least because none of Kramer, Saldanha, and Goeldi discloses or suggests “receiving a request from an advertiser to target a subset of the plurality of users of the social networking system . . . comprising . . . a query for a trend corresponding to a first action type,” as recited in claim 1, and similarly recited in claim 21 (App. Br. 15–18; *see also* Reply Br. 6–9). The Examiner cites Saldanha as disclosing the argued feature (*see* Final Act. 8 (citing Saldanha ¶¶ 5–8); *see also* Ans. 10). But we find nothing in the cited portions of Saldanha that discloses or suggests receiving a request comprising a query for a trend corresponding to a particular action type, as called for in claim 1, and similarly called for in claim 21.

Saldanha is directed to an advertising system that identifies behaviors from user activity (e.g., from the webpages the user is accessing, the user's search queries, purchases, and/or other online transactions) and maintains information about these behaviors in a user profile (*see* Saldanha ¶ 5, Abstract). Advertisers provide the advertising system with information on conversion rates of users associated with user profiles, and the user profiles and conversion information are used to calculate the effect that specific behaviors have on conversion for individual advertisers relative to the average user (*id.*).

The ratio of a specific behavior's conversion rate or the conversion rate of a set of co-occurring behaviors ("behavior tuples") relative to the average conversion is termed the "lift" of that behavior or behavior tuple (*id.* ¶¶ 5–6). Saldanha's lift is, thus, a measure of the impact of a single behavior or behavior tuple on the conversion rate, i.e., the success of a particular advertising campaign.

Saldanha discloses that a behavior model can be developed for each of the advertisers in the system (*id.* ¶ 7), and further discloses that when the system receives a request for an advertisement from a particular user, the behaviors indicated by the user profile are accessed (*id.*). The user's behaviors are then compared to the behavioral models for each advertiser to identify the lift provided by this user's behavior for an advertisement shown by the advertiser (*id.*). Saldanha, thus, discloses that each advertiser can determine the value of bidding to place an advertisement to this particular user (*id.*).

In addressing the argued limitation in the Final Office Action, the Examiner acknowledges that Kramer does not explicitly disclose "receiving

a request from an advertiser . . . comprising . . . a query for a trend corresponding to a first action type” (Final Act. 8). And the Examiner cites Saldanha as disclosing “having advertiser needs associated with a [sic] behavior tuples and user profiles” (*id.* (emphasis omitted) (citing Saldanha ¶¶ 5–8)). But, we agree with Appellants that the fact that an advertiser can identify the value of bidding to place an advertisement to a particular user based on the user’s behavior does not disclose or suggest a “query for a trend corresponding to a first action type,” as called for in claims 1 and 21 (Reply Br. 8).

Further responding, in the Answer, to Appellants’ argument that Saldanha does not disclose or suggest “a trend corresponding to a first action type,” the Examiner notes that Saldanha discloses that user behaviors can be derived from the webpages a user is accessing and from users’ search queries, and points to Saldanha’s disclosure that a model for consumer conversion is built, using behaviors and conversion rates, to calculate the cumulative lift of behaviors relative to a norm (Ans. 10). The Examiner states, “[t]his lift is used ‘iteratively’ to ‘determine the next behavior tuple providing the highest lift’; in other words, user query and ‘co-occurring behaviors (behavior tuples)’ are used to predict a next action and associated advertisement” (*id.*).

Saldanha discloses, in paragraph 6 to which the Examiner ostensibly refers, that in calculating a model for consumer conversions, the lift of each behavior (or set of co-occurring behaviors) is calculated with respect to a population of users; the behavior tuple with the highest lift is identified, and users identified with that behavior tuple are removed from the user

population (Saldanha ¶ 6).⁸ The lift for the remaining behaviors is recalculated on the new population pool to determine the next behavior tuple providing the highest lift for the remaining population; in this way, the lift values for all behavior tuples are iteratively computed to identify a model indicating the lift provided by behavior tuples relative to the incremental population reached by the behavior tuples (*id.*).

The Examiner ostensibly relies on Saldanha’s use of behavior tuples to predict “a next action” as disclosing the claimed trend. However, as described above, and as Appellants also point out, Saldanha merely discloses iteratively computing the lift provided by behavior tuples relative to an incremental population (Reply Br. 7). “Lift” is defined as the ratio of a specific behavior’s conversion rate relative to the average conversion (Saldanha ¶ 5). In other words, “lift” is a measure of the impact of a particular behavior or behavior tuple on the success of an advertising campaign, and is specific to that behavior or behavior tuple. We agree with Appellants that Saldanha’s lift cannot reasonably be considered a “trend,”⁹ let alone a “trend corresponding to a first action type,” as called for in claims 1 and 21 (Reply Br. 7–8).

⁸ By removing users, Saldanha ensures that lift of each behavior is independent of other behaviors. For example, if behavior 1 is selected before behavior 2, users who exhibit both behavior 1 and behavior 2 are excluded from consideration in the lift for behavior 2. In other words, each user is counted only once. *See* Saldanha ¶ 55.

⁹ I.e., “[a] pattern of user behavior that may be predicted by [a] social networking system [] after a particular action is performed by a user based on a past history of actions performed after the particular action is performed by the user” (Spec. ¶ 46).

In view of the foregoing, we do not sustain the Examiner's rejection of claims 1 and 21 under 35 U.S.C. § 103(a). For the same reasons, we also do not sustain the Examiner's rejection of dependent claims 2–5, 11, 19, and 22–25. *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”).

DECISION

The Examiner's rejection of claims 1–5, 11, 19, and 21–25 under 35 U.S.C. § 101 is affirmed.

The Examiner's rejection of claims 1–5, 11, 19, and 21–25 under 35 U.S.C. § 103(a) is reversed.

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