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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* TREVOR H. PAULSEN, JESSICA L. LANGFORD,  
and JARED A. LEES

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Appeal 2017-008130  
Application 13/736,710  
Technology Center 3600

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Before MAHSHID D. SAADAT, JAMES W. DEJMEK, and  
JOHN D. HAMANN, *Administrative Patent Judges*.

SAADAT, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellants<sup>1</sup> appeal under 35 U.S.C. § 134(a) from the Final Rejection of claims 1–10, 12, and 29–37, which are all the claims pending in this application.<sup>2</sup> We have jurisdiction under 35 U.S.C. § 6(b).

We affirm.

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<sup>1</sup> According to Appellants, the real party in interest is Adobe Systems, Inc. App. Br. 2.

<sup>2</sup> Claims 11 and 13–28 have been canceled.

## STATEMENT OF THE CASE

### *Introduction*

Appellants' disclosure describes "a media mix modeling tool that is configured to enable a marketing budget to be analyzed for purposes of allocation across different marketing channels and campaigns." Spec. ¶ 3.

Exemplary claim 1 under appeal reads as follows:

1. A method implemented by a computing device to compute a distribution for marketing budget allocation using fitted curves that are based on web analytics data, revenue, and cost data, the method comprising:

receiving packaged information from a user device, the packaged information comprising information pertaining to a user's interaction on the user device with portions of a webpage associated with campaigns of online or Internet-based marketing channels, the information pertaining to the user's interaction with the portions of the webpage gathered and packaged by code executed on the user device;

processing the packaged information to generate web analytics data associated with an entity that utilizes the online or Internet-based marketing channels, the web analytics data including information relating to multiple individual marketing channels utilized by the entity including the online or Internet-based marketing channels, the entity being different than the computing device;

attributing revenue to each of the multiple individual marketing channels by utilizing a statistical attribution model that utilizes the web analytics data to provide an estimated revenue from each of one or more campaigns within each of the multiple individual marketing channels;

receiving cost data associated with the individual marketing channels;

creating, by the computing device, scatter plots of the one or more campaigns within each of the multiple individual

marketing channels based on the web analytics data, the revenue, and the cost data;

fitting a curve to data in each scatterplot for each channel using curve-fitting methodology by the computing device;

using fitted curves, by the computing device, to compute a distribution for marketing budget allocation for the one or more campaigns within each of the multiple individual marketing channels; and

causing display of the distribution for marketing budget allocation within a user interface on the user device.

App. Br. 26–27 (Claims App.).

*The References and Rejections*

Claims 1–10, 12, and 29–37 stand rejected under 35 U.S.C. § 101 as directed to patent-ineligible subject matter. Final Act. 9–10.

Claims 1, 4, 29, and 37 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Clayton (US 2008/0140688 A1, pub. June 12, 2008) and Aizen (US 2010/0005001 A1, pub. Jan. 7, 2010). Final Act. 12–21.

Claim 2 stands rejected under 35 U.S.C. § 103(a) as unpatentable over Clayton, Aizen, and Lang (US 2011/0055005 A1; pub. Mar. 3, 2011). Final Act. 21–22.

Claims 3, 5–8, and 30–34 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Clayton, Aizen, and Lakshminarayan (US 2010/0114794 A1; pub. May 6, 2010). Final Act. 22–31.

Claims 9, 10, 35, and 36 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Clayton, Aizen, and O’Brien (US 2012/0143641 A1; pub. June 7, 2012). Final Act. 31–34.

Claim 12 stands rejected under 35 U.S.C. § 103(a) as unpatentable over Clayton, Aizen, and Williams (US 2010/0211455 A1; pub. Aug. 19, 2010). Final Act. 34–35.<sup>3</sup>

## ANALYSIS

We have reviewed the Examiner’s rejections in light of Appellants’ arguments in the Briefs. For the reasons discussed below, we are not persuaded by Appellants’ arguments that the Examiner erred in rejecting claims 1–10, 12, and 29–37 under 35 U.S.C. § 101 and 35 U.S.C. § 103(a). Unless otherwise indicated, we incorporate by reference herein, and adopt as our own, the findings and reasons set forth by the Examiner in the Office Action from which this appeal is taken and in the Examiner’s Answer in response to Appellants’ Appeal Brief. *See* Final Act. 9–35, Ans. 3–10. We also concur with the conclusions reached by the Examiner. For emphasis, we consider and highlight specific arguments as presented in the Briefs.

### *REJECTION UNDER § 101*

#### *Principles of Law*

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.” The Supreme Court, however, has long interpreted § 101 to include an implicit exception: “[I]aws of nature, natural phenomena, and abstract ideas

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<sup>3</sup> The Examiner has withdrawn the rejection of claims 1, 29, and 37 under 35 U.S.C. § 112(a) or pre-AIA 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. *See* Ans. 3, Final Act. 10–11.

are not patentable.” *See, e.g., Alice Corp. Pty Ltd. v. CLS Bank Int’l*, 134 S. Ct. 2347, 2354 (2014) (internal quotation marks and citation omitted).

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, 75–77 (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*, 134 S. Ct. at 2355. The first step in the analysis is to “determine whether the claims at issue are directed to one of those patent-ineligible concepts.” *Id.* For example, abstract ideas include, but are not limited to, fundamental economic practices, methods of organizing human activities, an idea of itself, and mathematical formulas or relationships. *Id.* at 2355–57. The “directed to” inquiry asks not whether “the claims *involve* a patent-ineligible concept,” but instead whether, “considered in light of the specification, . . . ‘their character as a whole is directed to excluded subject matter.’” *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1335 (Fed. Cir. 2016) (internal citations omitted). In that regard, we determine whether the claims “focus on a specific means or method that improves the relevant technology” or are “directed to a result or effect that itself is the abstract idea and merely invoke generic processes and machinery.” *McRO, Inc. v. Bandai Namco Games Am. Inc.*, 837 F.3d 1299, 1314 (Fed. Cir. 2016).

If, in applying the first step of the *Alice* analysis, we conclude that the claims are not directed to a patent-ineligible concept, they are considered patent eligible under § 101 and the inquiry ends. *Rapid Litig. Mgmt. Ltd. v. CellzDirect, Inc.*, 827 F.3d 1042, 1047 (Fed. Cir. 2016).

If the claims are directed to a patent-ineligible concept, the second step in the analysis is to consider the elements of the claims “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.” *Alice*, 134 S. Ct. at 2355 (quoting *Mayo*, 566 U.S. at 79, 78). In other words, the second step is to “search for an “‘inventive concept’”—*i.e.*, an element or combination of elements that is ‘sufficient to ensure that the patent in practice amounts to significantly more than a patent upon the [ineligible concept] itself.’” *Id.* (brackets in original) (quoting *Mayo*, 566 U.S. at 72–73). The prohibition against patenting an abstract idea “‘cannot be circumvented by attempting to limit the use of the formula to a particular technological environment’ or adding ‘insignificant post solution activity.’” *Bilski v. Kappos*, 561 U.S. 593, 610–11 (2010) (internal citation omitted).

*Mayo/Alice Step One*

The Examiner concludes the following:

Claims(s) 1–10, 12, and 29–37 are directed to a method for data acquisition (ref. claim 1; “receiving packaged information” and “receiving cost data”) and data manipulation (ref claim 1; “attributing revenue,” “creating . . . scatter plots,” and “fitting a curve”) to determine budget allocations (ref claim 1; “compute a distribution for marketing budget allocation”), an abstract idea. As indicated in the *Interim Guidance on Subject Matter Eligibility*, mathematical relationships and formulas are abstract ideas.

Final Act. 9.

Appellants contend the Examiner’s assessment that the claims are directed to an abstract idea is in error. App. Br. 8.<sup>4</sup> Appellants argue:

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<sup>4</sup> Independent claim 1 recites a method, independent claims 29 recites a computer program product, and independent claim 37 recites a system.

The subject matter of the claims pertains to gathering, with code executed on a user device, information pertaining to user interaction with a webpage, generating web analytics data based on the gathered information, and transforming the web analytics data into a format easily digestible when displayed on a user device. This subject matter is not, and does not pertain to a long-prevalent and fundamental practice in comparison to the abstract ideas of risk-hedging and intermediated settlement relied upon by the *Alice* Court, which have been in widespread use for many centuries throughout the world.

App. Br. 8–9. Appellants further argue “the claims, when taken as a whole, are more than merely ‘determining budget allocations,’” whereas “[t]he Office fails to analyze the entire claim and instead simply attempts to summarize the claimed subject matter as only ‘determining budget allocations.’” App. Br. 10. Additionally, Appellants assert their claims, similar to those in *DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245 (Fed. Cir. 2014), “are directed to solving a technological problem that specifically arises in the realm of computers” and is “rooted in computer technology.” App. Br. 13–14; Reply Br. 8–9.

Appellants’ arguments do not persuade us of Examiner error. Contrary to Appellants’ assertion that their claims are rooted in computer technology (*see* Reply Br. 8–9), the claims are not directed to improvements to computer-related technology, as in *DDR Holdings*. Rather, the claims are directed to collecting, filtering, and sorting information based on a user’s interaction with portions of a webpage. Appellants fail to point to any language in the claims directed to improving the technology of, for example,

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Appellants argues claims 1–10, 12, and 29–37 as a group. App. Br. 8–15. We select independent claim 1 as representative. The remaining claims stand or fall with claim 1. *See* 37 C.F.R. § 41.37(c)(1)(iv).

the packaged information pertaining to a user interaction. We agree with the Examiner's analysis on pages 4–5 of the Answer that the claims are not directed to a specific asserted improvement in computer capabilities and that the claims are directed to using a computer merely as a tool such that the recited steps could be also executed using pen and paper. Implementing an abstract idea using a “physical machine” does not impart patent eligibility. *See Mayo*, 566 U.S. at 84; *see also* Ans. 2–3. “[N]ot every claim that recites concrete, tangible components escapes the reach of the abstract-idea inquiry.” *In re TLI Commc’ns LLC Patent Litig.*, 823 F.3d 607, 611 (Fed. Cir. 2016). The inability of a human to accomplish each step “does not alone confer patentability.” *See FairWarning, IP, LLC v. Iatric Sys., Inc.*, 839 F.3d 1089, 1098 (Fed. Cir. 2016). In *Alice*, for example, “[a]ll of the claims [we]re implemented using a computer.” 134 S. Ct. at 2353, 2360.

Additionally, Appellants' argument that the Examiner did not analyze the entire claim (App. Br. 10) is not persuasive because the Examiner has considered all the recited steps of claim 1 in concluding that processing the “receiving packaged information” to generate “web analytics data” and a “statistical attribution model” to “compute a distribution for marketing budget allocation” are directed to an abstract idea for which computers are invoked merely as a tool. *See* Final Act. 9, Ans. 4–5. Therefore, we agree with the Examiner that claim 1 is directed to the abstract idea of “[g]athering data, generating more data based on the gathered data, and presenting the result on a display.

*Mayo/Alice Step Two*

The Examiner determines:

The claims require no more than a generic computer (as evidenced by claim 1; a “method implemented by a computing device”) to perform generic computer functions that are well-understood, routine and conventional activities previously known to the industry. The steps recited in the claims are recited at a high level of generality that is insufficient for patentability. It is unclear how to “attribut[e] revenue to individual marketing channels” how to “creat[e] scatter plots,” and how to “fit[] a curve.”

Final Act. 10; *see also* Ans. 6. The Examiner further determines that “these steps cannot add significantly more than the abstract idea of receiving data and manipulating data to determine a budget allocation.” Final Act. 10. According to the Examiner, the claimed process merely requires routine process of analyzing and displaying the results based on gathered and filtered information, which constitute “well-understood, long prevalent, and fundamental concept.” Ans. 7.

Appellants contend that “[e]ven if the claims are determined to be accurately directed to this purported abstract idea, the claims nevertheless amount to significantly more than this purported abstract idea.” App. Br. 10–11. Appellants argue “the rejection lacks any explanation of whether any element or combination of elements is sufficient to ensure that the claims amount to significantly more than the alleged abstract idea itself.”

App. Br. 11. Appellants assert:

The present claims do not comprise mental steps and cannot be done by humans without technology. Rather, the claims rely on technology, and recite more than merely “determine a budget allocation” as alleged by the Office. For example, “receiving packaged information from a user device, the packaged

information comprising information pertaining to a user's interaction on the user device with portions of a webpage associated with campaigns of online or Internet-based marketing channels, the information pertaining to the user's interaction with the portions of the webpage gathered and packaged by code executed on the user device" as recited by claim 1 requires that code executed on a user device gather and package information pertaining to user interaction with portions of a webpage that are associated with campaigns of online or Internet-based marketing channels; such an action could not be performed mentally or without technology. Accordingly, the claims are not directed to abstract ideas and are thus patent eligible.

App. Br. 11–12. Appellants further argue “[t]he claims address problems relating to user interaction with portions of a webpage associated with campaigns of online or Internet-based marketing channels, which is clearly a problem that specifically arises in the realm of computer networks, does not arise in the brick and mortar context, and is difficult to address due to the near ephemeral nature of the webpage” and “is not feasible without relying on a technical solution necessarily rooted in computer technology.”

App. Br. 14.

Appellants' assertions do not persuade us of Examiner error. As the Examiner explains, the claims are directed to determining budget allocations, which include using a generic computer system for performing the recited steps including gathering, analyzing, and reporting data. *See* Ans. 6. We also are not persuaded by Appellants' argument that claim 1 improves the functionality of a general-purpose computer. *See* App. Br. 14, Reply Br. 8. Appellants have not identified any portion of the Specification, nor provided any evidence or technical reasoning, persuasively demonstrating claim 1 is directed to a technical advance or improvement to

computer functionality. However, the Examiner correctly explains that “using a computer to gather data is well-understood. The claims do not provide a technical solution to a technical problem. Allocating budgets based on revenue is a well-understood, long prevalent, and fundamental concept.” Ans. 7. Additionally, the claims’ invocation of computers does not transform the claimed subject matter into patent-eligible applications. *Elec. Power Grp. LLC v. Alstom S.A.*, 830 F.3d 1350, 1355 (Fed. Cir. 2016). As in *Electric Power Group*, the claims at issue do not require any nonconventional computer, network, or smart meters, or even a “non-conventional and non-generic arrangement of known, conventional pieces,” but merely call for performance of the claimed exception processing functions “on a set of generic computer components.” *Id.* at 1355.

In view of Appellants’ Specification, and consistent with the Examiner’s determinations, the claims do not recite: (i) an improvement to the functioning of a computer; (ii) an improvement to another technology or technical field; (iii) an application of the abstract idea with, or by use of, a particular machine; (iv) a transformation or reduction of a particular article to a different state or thing; (v) a specific limitation other than what is well-understood, routine, conventional activity in the field or unconventional steps that confine the claim to a particular useful application; or (vi) other meaningful limitations beyond generally linking the use of the abstract idea to a particular technological environment. *See* Manual of Patent Examining Procedure (“MPEP”) § 2106.05 (9th ed. Rev. 08.2017, Jan. 2018). Thus, the claims are not directed to something significantly more than the abstract idea.

*Preemption*

Appellants argue, similar to the claims at issue in *McRO, Inc. v. Bandai Namco Games Am. Inc.*, 837 F.3d 1299, 1314 (Fed. Cir. 2016), claim 1 does not preempt a patent ineligible concept. *See* App. Br. 14. We are not persuaded by Appellants’ arguments. “While preemption may signal patent ineligible subject matter, the absence of complete preemption does not demonstrate patent eligibility. . . . Where a patent’s claims are deemed only to disclose patent ineligible subject matter under the *Mayo* framework, as they are in this case, preemption concerns are fully addressed and made moot.” *Ariosa Diagnostics, Inc. v. Sequenom, Inc.*, 788 F.3d 1371, 1379 (Fed. Cir. 2015); *see also OIP Techs. Inc. v. Amazon.com, Inc.*, 788 F.3d 1359, 1362–63 (Fed. Cir. 2015) (finding “that the claims do not preempt all price optimization or may be limited to price optimization in the e-commerce setting do not make them any less abstract”).

*Summary*

For the reasons discussed above, Appellants’ arguments have not persuaded us of any error in the Examiner’s findings or conclusions under *Mayo/Alice* step one or step two. Hence, we sustain the § 101 rejection of claims 1–10, 12, and 29–37.

*REJECTIONS UNDER 35 U.S.C. § 103(a)*

*Independent Claim 1*

In rejecting claim 1, the Examiner relies on Clayton as disclosing the recited method steps, and specifically on paragraphs 56 and 64 of Clayton as disclosing receiving information pertaining to the user activity and the browsing history using media channels. Final Act. 12–13. Additionally, the

Examiner relies on Aizen as disclosing the steps of receiving and processing packaged information from a user device. *See* Final Act. 13. The Examiner finds Aizen discloses “a method for advertising that uses targeted advertising based on browsing history to balance budgets and get a great ROI.” *See* Final Act. 13 (citing Aizen ¶ 4). Additionally, the Examiner finds Clayton discloses the recited “web analytics data” and “attribution model” as the marketing and budget allocation models disclosed in paragraphs 64, 377–378, and 29–31. *See* Final Act. 13–14.

Appellants contend the proposed combination is improper because the relied on portions in Aizen disclose analyzing the received simple feed or webpage to extract words for categorization rather than “receiving packaged information . . . pertaining to a user’s interaction on the user device.” App. Br. 20. Appellants argue:

Further, as noted in the passages cited by the Office, Aizen describes a “behavioral advertising takes into account other aspects of the user (e.g. browsing history, location, time-of-day) and attempts to serve ads that take into account all those factors when selecting an appropriate ad to serve to a particular user, on a particular site at a particular time.” The concept that advertisements may be served based on browsing history, location, or time-of-day simply does not suggest receiving information pertaining to a user's interaction with portions of a webpage that are associated with campaigns of online or Internet-based marketing channels.

*Id.*, *see also* Reply Br. 10–11. Additionally, Appellants contend Clayton’s discussion of revenue analysis in paragraph 377 “does no more than mention the word ‘revenue’ and fails to describe an estimated revenue or revenues specific to campaigns within marketing channels” which “may in some unspecified way relate to ‘revenue, cost, margin, profit,’ etc.” App. Br. 22–

23, *see also* Reply Br. 11–12. Appellants assert such disclosure “does not suggest ‘attributing revenue to each of the multiple individual marketing channels . . . to provide an estimated revenue from each of one or more campaigns within each of the multiple individual marketing channels’ as claimed.” App. Br. 23.

In response, the Examiner finds the cited portions of Aizen teach the recited “packaged information” by disclosing targeted advertising based on the content of the viewed pages and other information such as the browsing history, location, or time-of-day. Ans. 8–9 (citing Aizen ¶ 9). The Examiner further explains

The data from Aizen is associated with a marketing campaign because it is *gathered as a result of a user’s interaction* with an advertisement. The presence of an advertisement implies the presence of a marketing campaign. Thus, the data is implicitly and inherently *associated with a marketing campaign*. Clearly, Aizen and Clayton describe methods that use software which is “packaged code” on a “user device.” (*emphasis added*).

Ans. 9. The Examiner also finds Clayton discloses using marketing attributes and channels to determine decision variables such as revenue, which are based on regression models. *Id.* (citing Clayton ¶¶ 377–378, 29–31, 100).

We are unpersuaded by Appellants’ contentions and agree with the Examiner that Clayton relates to a system using an intelligent decision engine for aggregating decision objects and using historical data and other statistical models to make decisions in areas such as business advertising. *See* Clayton ¶¶ 29–31. As the Examiner finds (*see above*), Clayton teaches receiving information regarding marketing attributes and channels related to advertising business and making revenue analysis using statistical models.

*See id.* ¶¶ 377–378, 464. We further agree with the Examiner that, to the extent the claims recite the terms “statistical attribution model” in a broad and generic way, Clayton’s discussion of regression models for revenue based on marketing attributes and channels meet the recited subject matter. *See* Ans. 9–10. That is, Appellants’ contention that “a generic description of ‘mathematics . . . or any other tools or models useful in analyzing decisions’ simply does not describe a statistical attribution model,” as claimed (*see* App. Br. 23–24), is focused on features that are not recited or disclosed in the other applied prior art.

We also disagree with Appellants’ contention that “a generic description of ‘mathematics . . . or any other tools or models useful in analyzing decisions’ simply does not describe a statistical attribution model,” as claimed (*see* App. Br. 23–24). This argument is focused on features that are not recited in the claims or are disclosed in the other applied prior art. The test for obviousness is whether the combination of references, taken as a whole, would have suggested the patentee’s invention to a person having ordinary skill in the art. *In re Keller*, 642 F.2d 413, 425 (CCPA 1981). The Examiner relied on Clayton’s decision engine for making decisions on business advertising based on statistical models, whereas Aizen was relied on for its disclosure of using data sets from the user interaction with advertisers’ web pages. *See* Final Act. 12–21, *see also* Ans. 8–10.

In view of our discussion above, we are unpersuaded of Examiner error in rejecting claim 1 and other independent claims 29 and 37 and dependent claim 4, which are argued together with claim 1. *See* App. Br. 24.

*Remaining Claims*

Appellants argue the patentability of claims 2, 3, 5–10, 12, and 30–36 based on the same reasoning presented for claim 1. App. Br. 24. In view of our discussion above, we are unpersuaded of Examiner error in rejecting claims 2, 3, 5–10, 12, and 30–36.

CONCLUSION

As discussed herein, Appellants' arguments have not persuaded us the Examiner erred in finding the claims are directed to patent-ineligible subject matter. Accordingly, we sustain the Examiner's rejection of claims 1–10, 12, and 29–37 under 35 U.S.C. § 101.

Similarly, Appellants' arguments have not persuaded us that the Examiner erred in finding the combination of Clayton with Aizen, alone or in combination with other cited prior art, teaches or suggests the disputed limitations of claims 1–10, 12, and 29–37. Accordingly, we sustain the 35 U.S.C. § 103(a) rejections of claims 1–10, 12, and 29–37.

DECISION

The decision of the Examiner rejecting claims 1–10, 12, and 29–37 is 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)(iv).

AFFIRMED