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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte RONIT AVIV, PETER DIETRICH, and SHIMON SCHWARTZ

Appeal 2018-003785
Application 14/244,491
Technology Center 3600

Before JOSEPH L. DIXON, ST. JOHN COURTENAY III, and
LARRY J. HUME, *Administrative Patent Judges*.

HUME, *Administrative Patent Judge*.

DECISION ON APPEAL

Pursuant to 35 U.S.C. § 134(a), Appellant,¹ DynamicLogic, LLC, appeals from the Examiner's decision rejecting claims 1–21, which are all claims pending in the application. We have jurisdiction under 35 U.S.C. § 6(b). An oral hearing was conducted on December 10, 2019.

We AFFIRM.

¹ We use the word “Appellant” to refer to “applicant” as defined in 37 C.F.R. § 1.42(a). Appellant identifies the real party in interest as Dynamic Logic, Inc. Appeal Br. 1.

STATEMENT OF THE CASE²

The claims are directed to a tracking on-line advertisement exposure via mobile wireless device browsers. *See* Spec. (Title). In particular:

The invention generally relates to systems and methods for gauging on-line advertisement campaign effectiveness. More particularly, the disclosure herein relates to effectively maintaining a record of user exposure to on-line advertisements via mobile wireless device browsers. Such information is used by integrated networked systems to selectively present on-line surveys to on-line users (both previously exposed to particular ads and “control” groups who have no previous exposure to particular ads relating to a survey).

Spec. ¶ 2.

Exemplary Claim

Claim 1, reproduced below, is representative of the subject matter on appeal (*emphasis* and labeling added to dispositive prior-art limitation):

1. A method for administering on-line advertisement campaigns on a network including a user device having a unique identification (UID), a survey participant server and an advertisement server, the method comprising:

[L1] *creating, on the survey participant server, a database element associated with the UID of the user device, the database element including information corresponding to on-line advertisements previously executed on the user device;*

² Our decision relies upon Appellant’s Appeal Brief (“Appeal Br.,” filed Nov. 13, 2017); Reply Brief (“Reply Br.,” filed Feb. 22, 2018); Examiner’s Answer (“Ans.,” mailed Dec. 22, 2017); Final Office Action (“Final Act.,” mailed May 10, 2017); and the original Specification (“Spec.,” filed Apr. 3, 2014) (claiming benefit of US 61/807,953 filed Apr. 3, 2013). An oral hearing was held on December 10, 2019, and the hearing transcript (“Tr.”) was made of record on January 6, 2020.

receiving, by the survey participant server, an on-line advertisement exposure notification from the user device, the on-line advertisement exposure notification including the UID and an on-line advertisement identifier corresponding to an on-line advertisement provided by the advertisement server, wherein the on-line advertisement is provided in an on-line advertisement block downloaded to the user device from the advertisement server, and wherein the advertisement block further includes a tracking tag that, when executed by the user device, causes the user device to issue the on-line advertisement exposure notification to the survey participant server; and

updating, by the survey participant server, the database element associated with the UID in accordance with advertisement exposure on the user device associated with the on-line advertisement identifier.

Prior Art

The Examiner relies upon the following prior art as evidence in rejecting the claims on appeal:

Walsh et al. (“Walsh”)	US 2003/0177364 A1	Sept. 18, 2003
Aviv	US 2005/0132267 A1	June 16, 2005
Banga et al. (“Banga”)	US 2006/0271690 A1	Nov. 30, 2006
Dierks et al. (“Dierks”)	US 2011/0239243 A1	Sept. 29, 2011

Rejections on Appeal

R1. Claims 1–21 stand rejected under 35 U.S.C. § 101 because the claimed invention is directed to a judicial exception (i.e., a law of nature, a natural phenomenon, or abstract idea) without significantly more. Final Act. 2.

R2. Claims 1, 4, 5, 8, 11, 12, 15, 18, and 19 stand rejected under 35 U.S.C. § 103 as being unpatentable over the combination of Aviv and Apple. Final Act. 4.

R3. Claims 2, 9, and 16 stand rejected under 35 U.S.C. § 103 as being unpatentable over the combination of Aviv, Apple, and Dierks. Final Act. 24.

R4. Claims 3, 10, and 17 stand rejected under 35 U.S.C. § 103 as being unpatentable over the combination of Aviv, Apple, and Walsh. Final Act. 26.

R5. Claims 6, 7, 13, 14, 20, and 21 stand rejected under 35 U.S.C. § 103 as being unpatentable over the combination of Aviv, Apple, and Banga. Final Act. 28.

ISSUES AND ANALYSIS

In reaching this decision, we consider all evidence presented and all arguments actually made by Appellant. To the extent Appellant has not advanced separate, substantive arguments for particular claims, or other issues, such arguments are waived. 37 C.F.R. § 41.37(c)(1)(iv).

For the reasons set forth below, we find particular arguments set forth by Appellant with respect to obviousness Rejections R2 through R5 of claims 1–21 are supported by a preponderance of the evidence, and we reverse these rejections over the cited prior art of record.

However, we disagree with Appellant’s arguments concerning subject matter eligibility Rejection R1 of claims 1–21 and, unless otherwise noted, we incorporate by reference herein and adopt as our own: (1) the findings and reasons set forth by the Examiner in the action from which this appeal is taken, and (2) the reasons and rebuttals set forth in the Examiner’s Answer in response to Appellant’s arguments. We highlight and address specific findings and arguments regarding claim 1 for emphasis as follows.

1. § 101 Rejection R1 of Claims 1–21

Issue 1

Appellant argues (Appeal Br. 6–7; Reply Br. 4–6) the Examiner’s rejection of claim 1 under 35 U.S.C. § 101 as being directed to patent-ineligible subject matter is in error. These contentions present us with the following issue:

Under the USPTO’s Revised Guidance, informed by our governing case law concerning 35 U.S.C. § 101, is claim 1 patent-ineligible under § 101?

Principles of Law

A. 35 U.S.C. § 101

An invention is patent-eligible if it is a “new and useful process, machine, manufacture, or composition of matter.” 35 U.S.C. § 101.³ However, the Supreme Court has long interpreted 35 U.S.C. § 101 to include implicit exceptions: “[l]aws of nature, natural phenomena, and abstract ideas” are not patentable. *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 70 (2012) (brackets in original) (citing *Diamond v. Diehr*, 450 U.S. 175, 185 (1981)).

In determining whether a claim falls within an excluded category, we are guided by the Supreme Court’s two-step framework, described in *Mayo* and *Alice*. *Alice Corp. v. CLS Bank Int’l*, 573 U.S. 208, 217–18 (2014)

³ This threshold analysis of whether a claim is directed to one of the four statutory categories of invention, i.e., a process, machine, manufacture, or composition of matter, is referred to as “*Step 1*” in the USPTO’s patent-eligibility analysis under § 101. MPEP § 2106.

(citing *Mayo*, 566 U.S. at 75–77). In accordance with that framework, we first determine what concept the claim is “directed to.” See *Alice*, 573 U.S. at 219 (“On their face, the claims before us are drawn to the concept of intermediated settlement, *i.e.*, the use of a third party to mitigate settlement risk.”); see also *Bilski v. Kappos*, 561 U.S. 593, 611 (2010) (“Claims 1 and 4 in petitioners’ application explain the basic concept of hedging, or protecting against risk . . .”).

Concepts determined to be abstract ideas, and thus patent ineligible, include certain methods of organizing human activity, such as fundamental economic practices (*Alice*, 573 U.S. at 219–20; *Bilski*, 561 U.S. at 611); mathematical formulas (*Parker v. Flook*, 437 U.S. 584, 594–95 (1978)); and mental processes (*Gottschalk v. Benson*, 409 U.S. 63, 67 (1972)). Concepts determined to be patent eligible include physical and chemical processes, such as “molding rubber products” (*Diehr*, 450 U.S. at 191); “tanning, dyeing, making water-proof cloth, vulcanizing India rubber, smelting ores” (*id.* at 182 n.7 (quoting *Corning v. Burden*, 56 U.S. 252, 267–68 (1853))); and manufacturing flour (*Benson*, 409 U.S. at 69 (citing *Cochrane v. Deener*, 94 U.S. 780, 785 (1876))).

In *Diehr*, the claim at issue recited a mathematical formula, but the Supreme Court held “[a] claim drawn to subject matter otherwise statutory does not become nonstatutory simply because it uses a mathematical formula.” *Diehr*, 450 U.S. at 187; see also *id.* at 191 (“We view respondents’ claims as nothing more than a process for molding rubber products and not as an attempt to patent a mathematical formula.”). Having said that, the Supreme Court also indicated that a claim “seeking patent protection for that formula in the abstract . . . is not accorded the protection

of our patent laws, and this principle cannot be circumvented by attempting to limit the use of the formula to a particular technological environment.” *Id.* (citation omitted) (citing *Benson* and *Flook*); *see, e.g., id.* at 187 (“It is now commonplace that an *application* of a law of nature or mathematical formula to a known structure or process may well be deserving of patent protection.”).

Abstract ideas may include, but are not limited to, fundamental economic practices, methods of organizing human activities, and mathematical formulas or relationships. *Alice*, 573 U.S. at 217–21. Under this guidance, we must therefore ensure at step one that we articulate what the claims are directed to with enough specificity to ensure the step one inquiry is meaningful. *Id.* at 217 (“[W]e tread carefully in construing this exclusionary principle lest it swallow all of patent law.”).

If the claim is “directed to” an abstract idea, we turn to the second step of the *Alice* and *Mayo* framework, where “we must examine the elements of the claim to determine whether it contains an “inventive concept”” sufficient to ‘transform’ the claimed abstract idea into a patent-eligible application.” *Alice*, 573 U.S. at 221 (citation omitted). “A claim that recites an abstract idea must include ‘additional features’ to ensure ‘that the [claim] is more than a drafting effort designed to monopolize the [abstract idea].’” *Id.* (alterations in original) (quoting *Mayo*, 566 U.S. at 77). “[M]erely requir[ing] generic computer implementation[] fail[s] to transform that abstract idea into a patent-eligible invention.” *Id.*

B. USPTO Revised Guidance

The PTO recently published revised guidance in the Federal Register concerning the application of § 101. *2019 Revised Patent Subject Matter Eligibility Guidance*, 84 Fed. Reg. 50 (January 7, 2019) (hereinafter “Revised Guidance”) (<https://www.govinfo.gov/content/pkg/FR-2019-01-07/pdf/2018-28282.pdf>).

Under the Revised Guidance, we first look to whether the claim recites:

(1) any judicial exceptions, including certain groupings of abstract ideas (i.e., mathematical concepts, certain methods of organizing human activity such as a fundamental economic practice, or mental processes);⁴ and

(2) additional elements that integrate the judicial exception into a practical application (*see* Manual for Patent Examining Procedure (“MPEP”) §§ 2106.05(a)–(c), (e)–(h)).⁵

See Revised Guidance 52–53.

Only if a claim (1) recites a judicial exception and (2) does not integrate that exception into a practical application, do we then look to whether the claim:

(3) adds a specific limitation beyond the judicial exception that is not “well-understood, routine, conventional” in the field (*see* MPEP § 2106.05(d)); or

⁴ Referred to as “*Revised Step 2A, Prong 1*” in the Revised Guidance (hereinafter “*Step 2A(i)*”).

⁵ Referred to as “*Revised Step 2A, Prong 2*” in the Revised Guidance (hereinafter “*Step 2A(ii)*”).

(4) simply appends well-understood, routine, conventional activities previously known to the industry, specified at a high level of generality, to the judicial exception.⁶

See Revised Guidance 56.

Step 2A(i) – Abstract Idea

Informed by our judicial precedent, the Revised Guidance extracts and synthesizes key concepts identified by the courts as abstract ideas to explain that the abstract idea exception includes the following groupings of subject matter, when recited as such in a claim limitation:

(a) Mathematical concepts—mathematical relationships, mathematical formulas or equations, mathematical calculations;

(b) Certain methods of organizing human activity — fundamental economic principles or practices (including hedging, insurance, mitigating risk); commercial or legal interactions (including agreements in the form of contracts; legal obligations; advertising, marketing or sales activities or behaviors; business relations); managing personal behavior or relationships or interactions between people (including social activities, teaching, and following rules or instructions); and

(c) Mental processes—concepts performed in the human mind (including an observation, evaluation, judgment, opinion).

Revised Guidance 52 (footnotes omitted).

Under the Revised Guidance, if the claim does not recite a judicial exception (a law of nature, natural phenomenon, or subject matter within the enumerated groupings of abstract ideas above), then the claim is patent-

⁶ Items (3) and (4) continue to be collectively referred to as “*Step 2B*” of the Supreme Court’s two-step framework, described in *Mayo* and *Alice*.

eligible at *Step 2A(i)*. This determination concludes the eligibility analysis, except in situations identified in the Revised Guidance.⁷

However, if the claim recites a judicial exception (i.e., an abstract idea enumerated above, a law of nature, or a natural phenomenon), the claim requires further analysis for a practical application of the judicial exception in *Step 2A(ii)*.

Step 2A(ii) – Practical Application

If a claim recites a judicial exception in *Step 2A(i)*, we determine whether the recited judicial exception is integrated into a practical application of that exception in *Step 2A(ii)* by: (a) identifying whether there are any additional elements recited in the claim beyond the judicial exception(s); and (b) evaluating those additional elements individually and in combination to determine whether they integrate the exception into a practical application.

The seven identified “practical application” sections of the MPEP,⁸ cited in the Revised Guidance under *Step 2A(ii)*, are:

⁷ In the rare circumstance in which an examiner believes a claim limitation that does not fall within the enumerated groupings of abstract ideas should nonetheless be treated as reciting an abstract idea, the procedure described in of the Guidance for analyzing the claim should be followed. *See* Revised Guidance, Section III.C.

⁸ *See* MPEP §§ 2106.05(a)–(c), (e)–(h). Citations to the MPEP herein refer to revision [R-08.2017]. Sections 2106.05(a), (b), (c), and (e) are indicative of integration into a practical application, while §§ 2106.05(f), (g), and (h) relate to limitations that are not indicative of integration into a practical application.

- (1) MPEP § 2106.05(a) Improvements to the Functioning of a Computer or To Any Other Technology or Technical Field
- (2) MPEP § 2106.05(b) Particular Machine
- (3) MPEP § 2106.05(c) Particular Transformation
- (4) MPEP § 2106.05(e) Other Meaningful Limitations
- (5) MPEP § 2106.05(f) Mere Instructions To Apply An Exception
- (6) MPEP § 2106.05(g) Insignificant Extra-Solution Activity
- (7) MPEP § 2106.05(h) Field of Use and Technological Environment

See Revised Guidance 55.

If the recited judicial exception is integrated into a practical application as determined under one or more of the MPEP sections cited above, then the claim is not directed to the judicial exception, and the patent-eligibility inquiry ends. *See Revised Guidance 54.* If not, then analysis proceeds to *Step 2B*.

Step 2B – “Inventive Concept” or “Significantly More”

Under our reviewing courts’ precedent, it is possible that a claim that does not “integrate” a recited judicial exception under *Step 2A(ii)* is nonetheless patent eligible. For example, the claim may recite additional elements that render the claim patent eligible even though one or more claim elements may recite a judicial exception.⁹ The Federal Circuit has held claims eligible at the second step of the *Alice/Mayo* test (USPTO *Step 2B*) because the additional elements recited in the claims provided “significantly more” than the recited judicial exception (e.g., because the additional

⁹ *See, e.g., Diehr*, 450 U.S. at 187.

elements were unconventional in combination).¹⁰ Therefore, if a claim has been determined to be directed to a judicial exception under *Revised Step 2A*, we must also evaluate the additional elements individually and in combination under *Step 2B* to determine whether they provide an inventive concept (i.e., whether the additional elements amount to significantly more than the exception itself).¹¹

Under the Revised Guidance, we must consider in *Step 2B* whether an additional element or combination of elements: (1) “Adds a specific limitation or combination of limitations that are not well-understood, routine, conventional activity in the field, which is indicative that an inventive concept may be present;” or (2) “simply appends well-understood, routine, conventional activities previously known to the industry, specified at a high level of generality, to the judicial exception, which is indicative that an inventive concept may not be present.” *See Revised Guidance, Section III.B.*¹²

¹⁰ *See, e.g., Amdocs (Israel), Ltd. v. Openet Telecom, Inc.*, 841 F.3d 1288, 1300, 1304 (Fed. Cir. 2016); *BASCOM Global Internet Services, Inc. v. AT&T Mobility LLC*, 827 F.3d 1341, 1349–52 (Fed. Cir. 2016); *DDR Holdings v. Hotels.com, L.P.*, 773 F.3d 1245, 1257–59 (Fed. Cir. 2014).

¹¹ The patent eligibility inquiry may contain underlying issues of fact. *Mortg. Grader, Inc. v. First Choice Loan Servs. Inc.*, 811 F.3d 1314, 1325 (Fed. Cir. 2016). In particular, “[t]he question of whether a claim element or combination of elements is well-understood, routine and conventional to a skilled artisan in the relevant field is a question of fact.” *Berkheimer v. HP Inc.*, 881 F.3d 1360, 1368 (Fed. Cir. 2018).

¹² In accordance with existing *Step 2B* guidance, an Examiner’s finding that an additional element (or combination of elements) is well understood, routine, conventional activity must be supported with at least one of the four specific types of evidence required by the USPTO *Berkheimer* Memorandum, as shown above. For more information concerning evaluation

In the *Step 2B* analysis, an additional element (or combination of elements) is not well-understood, routine or conventional unless the examiner finds an evidentiary basis, and expressly supports a rejection in writing with, one or more of the following:

1. A citation to an express statement in the specification or to a statement made by an applicant during prosecution that demonstrates the well-understood, routine, conventional nature of the additional element(s). . . .
2. A citation to one or more of the court decisions discussed in MPEP § 2106.05(d)(II) as noting the well-understood, routine, conventional nature of the additional element(s).
3. A citation to a publication that demonstrates the well-understood, routine, conventional nature of the additional element(s). . . .
4. A statement that the examiner is taking official notice of the well-understood, routine, conventional nature of the additional element(s). . . .

See Berkheimer Memo 3–4.

If the Examiner or the Board determines under *Step 2B* that the element (or combination of elements) amounts to significantly more than the exception itself, the claim is eligible, thereby concluding the eligibility analysis.

of well-understood, routine, conventional activity, *see* MPEP § 2106.05(d), as modified by the USPTO *Berkheimer* Memorandum (USPTO Commissioner for Patents Memorandum dated Apr. 19, 2018, “Changes in Examination Procedure Pertaining to Subject Matter Eligibility, Recent Subject Matter Eligibility Decision (*Berkheimer v. HP, Inc.*)” (hereinafter “*Berkheimer Memo*”).

However, if a determination is made that the element and combination of elements do not amount to significantly more than the exception itself, the claim is ineligible under *Step 2B*, and the claim should be rejected for lack of subject matter eligibility.

Analysis

Step 1 – Statutory Category

Claim 1, as a method (process) claim, recites one of the enumerated categories of eligible subject matter in 35 U.S.C. § 101. Therefore, the issue before us is whether it is directed to a judicial exception without significantly more.

Step 2A(i): Does the Claim Recite a Judicial Exception?

The Examiner determined that claim 1 is

directed to administering online advertisement campaigns by creating a survey based on a unique identification of a user and a notification of user being exposed to an advertisement, creating an element associated with a unique identification, receiving an advertisement exposure notification, updating the element based on the unique identifier of the user and the exposure notification, and designating survey for presentation based on the information in the element, which is considered an abstract idea.

Final Act. 2.

We conclude claim 1 does not recite the judicial exceptions of either natural phenomena or laws of nature. We evaluate, *de novo*, whether claim 1 recites an abstract idea based upon the Revised Guidance.

First, we look to the Specification to provide context as to what the claimed invention is directed to. In this case, the Specification discloses that

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the invention “generally relates to systems and methods for gauging on-line advertisement campaign effectiveness. More particularly, the disclosure herein relates to effectively maintaining a record of user exposure to on-line advertisements via mobile wireless device browsers. Such information is used by integrated networked systems to selectively present on-line surveys to on-line users (both previously exposed to particular ads and ‘control’ groups who have no previous exposure to particular ads relating to a survey).” Spec. ¶ 2.

Appellant's Abstract provides the following description of the invention:

A system and method are described for tracking on-line advertisement exposure information for particular user devices. Alternative approaches are proposed as alternatives to using cookies on user devices to maintain a summary of previous on-line advertisement exposure. A survey participant server maintains a database including elements containing the summary of previous on-line advertisement exposure, each element being associated with a unique identifier value assigned to a particular user device. Such information is subsequently used to administer on-line surveys presented to users via the user devices.

Spec. 19 (Abstract).

With respect to this step of the analysis, Appellant argues (Appeal Br. 6–7) that patent eligibility should be conferred based upon the Federal Circuit's holding in *Thales*.¹³ In *Thales*, the court held the claims survived the *Alice* Step 1 analysis because

the '159 patent claims at issue in this appeal are not directed to an abstract idea. The claims specify a particular configuration of inertial sensors and a particular method of using the raw data from the sensors in order to more accurately calculate the position and orientation of an object on a moving platform. The mathematical equations are a consequence of the arrangement of the sensors and the unconventional choice of reference frame in order to calculate position and orientation. Far from claiming the equations themselves, the claims seek to protect only the application of physics to the unconventional configuration of sensors as disclosed. As such, these claims are not directed to an abstract idea.

Thales, 850 F.3d at 1349.

¹³ *Thales Visionix Inc. v. United States*, 850 F.3d 1343 (Fed. Cir. 2017).

We conclude the claims on appeal, directed to gauging on-line advertisement campaign effectiveness, are not analogous to the claimed unconventional configuration of sensors in *Thales*.

In TABLE 1 below, we identify in *italics* the specific claim limitations in claim 1 that we conclude recite an abstract idea. We additionally identify in **bold** the additional (non-abstract) claim limitations that are generic computer components and techniques, and underline limitations representing extra or post-solution activity:

TABLE 1

Independent Claim 1	Revised Guidance
A method for administering on-line advertisement campaigns on a network including a user device having a unique identification (UID), a survey participant server and an advertisement server , the method comprising:	A process (method) is a statutory subject matter class. <i>See</i> 35 U.S.C. § 101.
[L1] <i>creating</i> , on the survey participant server , a database element associated with the UID of the user device, <i>the database element including information</i> corresponding to on-line advertisements previously executed on the user device;	Creating an element including information is an abstract idea, i.e., an “observation, evaluation, judgment, opinion” which, aside from the computer-related aspects, could be performed as a mental process. <i>See</i> Revised Guidance 52.
[L2] <u>receiving</u> , by the survey participant server , <u>an on-line advertisement exposure notification</u> from the user device, the on-line advertisement exposure notification including the UID and an	Data gathering is merely insignificant extra-solution activity that do not add significantly more to the abstract idea to render the claimed invention patent-eligible. <i>See In re Bilski</i> , 545 F.3d 943, 962

Independent Claim 1	Revised Guidance
<p>on-line advertisement identifier corresponding to an on-line advertisement provided by the advertisement server,</p> <p>wherein the on-line advertisement is provided in an on-line advertisement block downloaded to the user device from the advertisement server, and</p>	<p>(Fed. Cir. 2008) (<i>en banc</i>), <i>aff'd on other grounds</i>, 561 U.S. 593 (2010) (“[T]he involvement of the machine or transformation in the claimed process must not merely be insignificant extra-solution activity”); <i>see also</i> MPEP § 2106.05(g); <i>and see buySAFE, Inc. v. Google, Inc.</i>, 765 F.3d 1350, 1355 (Fed. Cir. 2014) (computer receives and sends information over a network).</p>
<p>[L3] wherein the advertisement block further includes a tracking tag that, when executed by the user device, causes the user device to issue the on-line advertisement exposure notification to the survey participant server; and</p>	<p>A “tracking tag” is merely data in the form of an identification or instructions to be executed, which we find to be well-understood, routine, and conventional computer activity, as described in the Specification (“the tracking tag 22 includes a unique identifier (UID) for the user device 8” (Spec. ¶ 22); “the tracking tag 22 is a JavaScript instruction containing a reference (e.g., a URL) to a file containing the instructions to be executed by the browser. Alternatively, the tracking tag 22 includes the instructions to be executed by the browser on the user device 10 (thereby avoiding a further call to a server maintaining the file containing the executable instructions).” Spec. ¶ 23.</p>

Independent Claim 1	Revised Guidance
[L4] <i>updating</i> , by the survey participant server , <i>the database element</i> associated with the UID in accordance with advertisement exposure on the user device associated with the on-line advertisement identifier.	Updating information, i.e., updating an information element is an abstract idea, i.e., an “observation, evaluation, judgment, opinion” which could be performed as a mental process. <i>See Revised Guidance 52.</i>

Claims App. 13.

Under the broadest reasonable interpretation standard,¹⁴ we conclude limitations L1 through L4 recite steps that would ordinarily occur when gauging on-line advertisement campaign effectiveness. *See Final Act. 2–4; Ans. 4–7.* For example, creating an element that includes information corresponding to on-line advertisements previously executed on the user device is an operation that would generally occur at least as an initial step in evaluating the effectiveness of an advertisement campaign. Further, updating information (e.g., “updating . . . the database element”) based upon subsequent exposure to the advertisement is similarly abstract, whether initiated person-to-person, on paper, or using a computer.

¹⁴ During prosecution, claims must be given their broadest reasonable interpretation when reading claim language in light of the specification as it would be interpreted by one of ordinary skill in the art. *In re Am. Acad. of Sci. Tech. Ctr.*, 367 F.3d 1359, 1364 (Fed. Cir. 2004). Under this standard, we interpret claim terms using “the broadest reasonable meaning of the words in their ordinary usage as they would be understood by one of ordinary skill in the art, taking into account whatever enlightenment by way of definitions or otherwise that may be afforded by the written description contained in the applicant’s specification.” *In re Morris*, 127 F.3d 1048, 1054 (Fed. Cir. 1997).

We determine that claim 1, overall, recites a mental process that may also be performed by pen and paper. This type of activity, i.e., gauging on-line advertisement campaign effectiveness, as recited in limitations L1 through L4, for example, and aside from any computer-related aspects, includes longstanding conduct that existed well before the advent of computers and the Internet, and could be carried out by a human with pen and paper. *See CyberSource Corp. v. Retail Decisions, Inc.*, 654 F.3d 1366, 1375 (Fed. Cir. 2011) (“That purely mental processes can be unpatentable, even when performed by a computer, was precisely the holding of the Supreme Court in *Gottschalk v. Benson.*”).¹⁵

Thus, under *Step 2A(i)*, we agree with the Examiner that claim 1’s “method for administering on-line advertisement campaigns on a network including a user device having a unique identification (UID), a survey participant server and an advertisement server” recites a judicial exception. We conclude claim 1, under our Revised Guidance, recites a judicial exception of gauging on-line advertisement campaign effectiveness, i.e., a mental process, and thus is an abstract idea.

¹⁵ Our reviewing court recognizes that “[a]n abstract idea can generally be described at different levels of abstraction.” *Apple, Inc. v. Ameranth, Inc.*, 842 F.3d 1229, 1240 (Fed. Cir. 2016). That need not and, in this case does not, “impact the patentability analysis.” *Id.* at 1241. Further, “[t]he Board’s slight revision of its abstract idea analysis does not impact the patentability analysis.” *Id.* Moreover, merely combining several abstract ideas does not render the combination any less abstract. *RecogniCorp, LLC v. Nintendo Co.*, 855 F.3d 1322, 1327 (Fed. Cir. 2017) (“Adding one abstract idea (math) to another abstract idea . . . does not render the claim non-abstract.”); *see also FairWarning IP, LLC v. Iatric Sys., Inc.*, 839 F.3d 1089, 1093–94 (Fed. Cir. 2016) (determining the pending claims were directed to a combination of abstract ideas).

Step 2A(ii): Judicial Exception Integrated into a Practical Application?

If the claims are directed to a judicial exception, as we conclude above, we proceed to the “practical application” *Step 2A(ii)* in which we determine whether the recited judicial exception is integrated into a practical application of that exception by: (a) identifying whether there are any additional elements recited in the claim beyond the judicial exception(s); and (b) evaluating those additional elements individually and in combination to determine whether they integrate the exception into a practical application.

With respect to this phase of the analysis, and responsive to the issuance of *Revised Guidance* after filing the Appeal Brief, Appellant argues:

Appellants’ currently appealed claims address a problem succinctly summarized in the background of the application. See Appellants’ Application, paragraphs [0004-6]. Appellants’ claims initially recite “administering on-line advertisement campaigns” *in the preamble*. However, each currently appealed independent claim recites *a particular/improved networked infrastructure for acquiring and preserving recorded on-line advertisement exposure information for a set of networked user devices*. Appellants’ currently appealed claims recite combinations of structural/functional elements of physical networked computer systems that define a *particular way* of preserving on-line advertisement exposure information for identified users. **Such particularization, of the mechanism for rendering the notification information rendered by user devices in association with processing of downloaded on-line advertisement Mocks containing tracking tags~ provides a specific solution to a technological problem of preserving on-line advertisement exposure for particular user devices—i.e. overcoming a tendency of user devices to either block or delete cookies from the user devices which prevents accurately identifying ‘exposed’ and ‘control’ group**

participants of an on-line survey relating to a particular on-line advertisement. The claimed invention defines a particular way to persist such information (by generating the exposure data at the user devices when on-line ad exposure occurs, generating an ad exposure message (identifying the ad and the exposed user by unique identifications), and storing the properly identified exposure data on a remote server's exposure database that is not subject to user devices' cookie/history clearing actions).

Thus, Appellants' claimed invention, when viewed as a whole (as opposed to individual elements in isolation) recites a particular technology-based solution, including specific recitation of computing and network/communication hardware, to a technological problem relating to a lack of persistence of online exposure information on individual users' devices due to browser cache cleaning and cookie blocking technologies.

Reply Br. 4–5.

We have reviewed the cited portions of the Specification cited by Appellant, and note paragraph 6, in particular.

[0006] Identifying devices that previously received and displayed particular on-line advertisements is facilitated, for example, by modifying a file on a user device (e.g., a cookie) when a particular on-line advertisement is played, the modified file includes one or more elements identifying information relating to previously executed/displayed online advertisements. Use of cookies is less desirable in certain environments where either cookie data is frequently deleted to maintain adequate memory space on a device where downloadable advertisements are potentially executed/displayed.

Spec. ¶ 6.

We do not find, nor does Appellant identify, that this statement of the relative undesirability of using cookie data in certain environments provides

an adequate nexus to any particular claim limitation or to the claim as a whole that would integrate the abstract idea into a practical application.

As to the specific limitations, we find limitations L1 (“creating”) and L4 (“updating”), as quoted in TABLE 1 above, recite abstract ideas, whereas limitation L2, i.e., “receiving . . . an on-line advertisement exposure notification,” recites insignificant data gathering. *See* MPEP § 2106.05(g). Data gathering, as performed by the steps or function in Appellant’s claims, is a classic example of insignificant extra-solution activity. *See, e.g., In re Bilski*, 545 F.3d 943, 963 (Fed. Cir. 2008) (en banc), *aff’d sub nom, Bilski v. Kappos*, 561 U.S. 593 (2010).

We also find limitation L3 (“tracking tag”) and recitations of a “network,” “user device,” “survey participant server,” “advertisement server” throughout claim 1 recite conventional components. On this record, we are of the view that Appellant’s claims do not operate the recited generic computer components in an unconventional manner to achieve an improvement in computer functionality. *See* MPEP § 2106.05(a).

We find each of the limitations of claim 1 recite either abstract ideas, extra-solution activity, or conventional components as identified in *Step 2A(i), supra*, and none of the limitations integrate the judicial exception of gauging on-line advertisement campaign effectiveness into a practical application as determined under one or more of the MPEP sections cited above. The claim as a whole merely uses instructions to implement the abstract idea on a computer or, alternatively, merely uses a computer as a tool to perform the abstract idea.

Under analogous circumstances, the Federal Circuit held “[t]his is a quintessential ‘do it on a computer’ patent: it acknowledges that [such] data . . . was previously collected, analyzed, manipulated, and displayed manually,^[16] and it simply proposes doing so with a computer. We have held such claims are directed to abstract ideas.” *Univ. of Fla. Research Found., Inc. v. Gen. Elec. Co.*, 916 F.3d 1363, 1367 (Fed. Cir. 2019); *see also Elec. Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350, 1351 (Fed. Cir. 2016) (“Though lengthy and numerous, the claims do not go beyond requiring the collection, analysis, and display of available information in a particular field, stating those functions in general terms, without limiting them to technical means for performing the functions that are arguably an advance over conventional computer and network technology.”).

Therefore, the claim as a whole merely uses instructions to implement the abstract idea on a computer or, alternatively, merely uses a computer as a tool to perform the abstract idea. Thus, on this record, Appellant has not shown an improvement or practical application under the guidance of MPEP section 2106.05(a) (“Improvements to the Functioning of a Computer or to Any Other Technology or Technical Field”) or section 2106.05(e) (“Other Meaningful Limitations”). Nor does Appellant advance any arguments in the Brief(s) that are directed to the *Bilski* machine-or-transformation test, which would only be applicable to the method (process) claims on appeal. *See* MPEP §§ 2106.05(b) (Particular Machine) and 2106.05(c) (Particular Transformation). Appellant’s representative argued during the Oral Hearing that “the claims are directed to [a] particular problem . . . of the frequent

¹⁶ *See* Spec. ¶¶ 4–8 (discussing prior art methods of gauging on-line advertisement campaign effectiveness).

purging of cache data and the loss of such data And what this claimed invention provides is an assurance that important information that was previously handled by the browser is accessible at a later time, and not subject to purging on a user computer.” Tr. 8, ll. 21–26. However, we are unable to identify, nor did Appellant’s representative clearly identify any specific claim limitation or limitations, or that the claim as a whole specifically addresses this purported improvement, such that an inference could be made of the integration of the abstract idea into a practical application under prong 2 of the analysis.

Accordingly, we conclude the abstract idea is not integrated into a practical application, and thus the claim is directed to the judicial exception.

Step 2B – “Inventive Concept” or “Significantly More”

If the claims are directed to a judicial exception, and not integrated into a practical application, as we conclude above, we proceed to the “inventive concept” step. For *Step 2B* we must “look with more specificity at what the claim elements add, in order to determine ‘whether they identify an “inventive concept” in the application of the ineligible subject matter’ to which the claim is directed.” *Affinity Labs*, 838 F.3d at 1258.

In applying step two of the *Alice* analysis, our reviewing court guides we must “determine whether the claims do significantly more than simply describe [the] abstract method” and thus transform the abstract idea into patentable subject matter. *Ultramercial, Inc. v. Hulu, LLC*, 772 F.3d 709, 715 (Fed. Cir. 2014). We look to see whether there are any “additional features” in the claims that constitute an “inventive concept,” thereby rendering the claims eligible for patenting even if they are directed to an

abstract idea. *Alice*, 573 U.S. at 221. Those “additional features” must be more than “well-understood, routine, conventional activity.” *Mayo*, 566 U.S. at 79.

Limitations referenced in *Alice* that are not enough to qualify as “significantly more” when recited in a claim with an abstract idea include, as non-limiting or non-exclusive examples: adding the words “apply it” (or an equivalent) with an abstract idea¹⁷; mere instructions to implement an abstract idea on a computer¹⁸; or requiring no more than a generic computer to perform generic computer functions that are well-understood, routine and conventional activities previously known to the industry.¹⁹

Evaluating representative claim 1 under step 2 of the *Alice* analysis, we conclude it lacks an inventive concept that transforms the abstract idea of gauging on-line advertisement campaign effectiveness into a patent-eligible application of that abstract idea.

The patent eligibility inquiry may contain underlying issues of fact. *Mortg. Grader*, 811 F.3d at 1325. In particular, “[t]he question of whether a claim element or combination of elements is well-understood, routine and conventional to a skilled artisan in the relevant field is a question of fact.” *Berkheimer*, 881 F.3d at 1368.

¹⁷ *Alice*, 573 U.S. at 221–23.

¹⁸ *Alice*, 573 U.S. at 222–23, *e.g.*, simply implementing a mathematical principle on a physical machine, namely a computer.

¹⁹ *Alice*, 573 U.S. at 225 (explaining using a computer to obtain data, adjust account balances, and issue automated instructions involves computer functions that are well-understood, routine, conventional activities).

As evidence of the conventional nature of the recited “network,” “user device,” “survey participant server,” “advertisement server,” and “database element” in method claim 1; and similarly for medium claim 8 and system claim 15,²⁰ the Specification discloses:

[0027] The described functionality of the survey participant server 15 is implemented, in executable software modules and hardware, in potentially many different ways in accordance with alternative embodiments. The survey participant server 15, while illustrated as a single entity in FIG. 1, can in fact be implemented as multiple distinct servers at distinct network addresses. There is no intention to limit the manner in which the functionality of the survey participant server 15 is carried out in server software and hardware. In another illustrative embodiment, the functionality of the survey participant server 15 is embodied in multiple distinct server applications that reside at a same network address.

[0028] A survey presentation server 16 is configured to carry out a variety of functions relating to administering completion of surveys by users, such as user 8 of user device 10. The survey presentation server 16 is configured to administer conducting actual surveys, reporting completions of such surveys, and maintaining survey results. The survey presentation server 16, while illustrated as a single entity in FIG. 1, can in fact be implemented as multiple distinct servers at distinct network addresses. There is no intention to limit the manner in which the functionality of the survey presentation server 16 is carried out in server software and hardware. In another illustrative embodiment, the functionality of the survey presentation server 16 is embodied in multiple distinct server applications that reside at a same network address.

[0029] Historically, the user device 10 is typically a computer (e.g., desktop, laptop, netbook) connecting to the Internet via a wired or local wireless connection. However, more recently, the

²⁰ Computer system claim 15 further recites “one or more programmed processors” and “computer-readable medium.”

user device 10 is often a mobile wireless device (e.g., smart phone, tablet computer) connecting to the Internet via a mobile wireless data network. Substantial differences between the operating systems and networking protocols used by mobile wireless devices on the one hand, and computers (e.g., desktop, laptop, netbook) on the other hand, lead to a need to develop multiple schemes for carrying out on-line advertisement campaigns, recording on-line advertisement exposure by users, and administering on-line surveys relating to the on-line advertisement campaigns. One particular example is the presence of browser application extensions typically found on computers that facilitate executing JavaScript associated with Web pages downloaded from the Web server 12 via a network 11 (e.g., the Internet). Such JavaScript extensions are often not supported/present on mobile wireless devices. As such, a multi-pronged multi-scheme approach to on-line advertisement administration is described herein.

Spec. ¶¶ 27–29.

Thus, because the Specification describes the additional elements in general terms, without describing the particulars, we conclude the claim limitations may be broadly but reasonably construed as reciting conventional computer components and techniques, particularly in light of Appellant's Specification, as quoted above.²¹

The MPEP, based upon our precedential guidance, provides additional considerations with respect to analysis of the well-understood, routine, and conventional nature of the recited computer-related components.

Another consideration when determining whether a claim recites significantly more than a judicial exception is whether

²¹ Claim terms are to be given their broadest reasonable interpretation, as understood by those of ordinary skill in the art and taking into account whatever enlightenment may be had from the Specification. *In re Morris*, 127 F.3d 1048, 1054 (Fed. Cir. 1997).

the additional elements amount to more than a recitation of the words “apply it” (or an equivalent) or are more than mere instructions to implement an abstract idea or other exception on a computer. As explained by the Supreme Court, in order to transform a judicial exception into a patent-eligible application, the additional element or combination of elements must do “more than simply stat[e] the [judicial exception] while adding the words ‘apply it’”. *Alice Corp. v. CLS Bank*, 573 U.S. ___, 134 S. Ct. 2347, 2357, 110 USPQ2d 1976, 1982-83 (2014) (quoting *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 72, 101 USPQ2d 1961, 1965). Thus, for example, claims that amount to nothing more than an instruction to apply the abstract idea using a generic computer do not render an abstract idea eligible. *Alice Corp.*, 134 S. Ct. at 2358, 110 USPQ2d at 1983. *See also* 134 S. Ct. at 2389, 110 USPQ2d at 1984 (warning against a § 101 analysis that turns on “the draftsman’s art”)

In *Alice Corp.*, the claim recited the concept of intermediated settlement as performed by a generic computer. The Court found that the recitation of the computer in the claim amounted to mere instructions to apply the abstract idea on a generic computer. 134 S. Ct. at 2359-60, 110 USPQ2d at 1984. The Supreme Court also discussed this concept in an earlier case, *Gottschalk v. Benson*, 409 U.S. 63, 70, 175 USPQ 673, 676 (1972), where the claim recited a process for converting binary-coded decimal (BCD) numerals into pure binary numbers. The Court found that the claimed process had no substantial practical application except in connection with a computer. *Benson*, 409 U.S. at 71-72, 175 USPQ at 676. The claim simply stated a judicial exception (e.g., law of nature or abstract idea) while effectively adding words that “apply it” in a computer. *Id.*

MPEP § 2106.05(f) (“Mere Instructions To Apply An Exception”).

With respect to the *Step 2B* analysis, we conclude, similar to *Alice*, the recitation of a “method for administering on-line advertisement campaigns on a network including a user device having a unique identification (UID), a

survey participant server and an advertisement server” is simply not enough to transform the patent-ineligible abstract idea here into a patent-eligible invention under *Step 2B*. See *Alice*, 573 U.S. at 221 (“[C]laims, which merely require generic computer implementation, fail to transform [an] abstract idea into a patent-eligible invention.”).²²

We conclude the claims fail the *Step 2B* analysis because claim 1, in essence, merely recites various computer-based elements along with no more than mere instructions to implement the identified abstract idea using the computer-based elements.

Therefore, in light of the foregoing, we conclude, under the Revised Guidance, that each of Appellant’s claims, considered as a whole, is directed to a patent-ineligible abstract idea that is not integrated into a practical application and does not include an inventive concept. Accordingly, we sustain the Examiner’s § 101 rejection of representative independent claim 1, and grouped claims 2–21 which fall therewith. See Claim Grouping, *supra*.

2. § 103 Rejection R2 of Claims 1, 4, 5, 8, 11, 12, 15, 18, and 19

Issue 2

Appellant argues (Appeal Br. 7–11; Reply Br. 6–9) the Examiner’s rejection of claim 1 under 35 U.S.C. § 103 as being obvious over the combination of Aviv and Apple is in error. These contentions present us with the following issue:

²² Independent system claim 15 additionally recites “one or more programmed processors” and “a computer-readable medium” which we also find are well-understood, routine, and conventional computer components.

Did the Examiner err in finding the cited prior art combination teaches or suggests “[a] method for administering on-line advertisement campaigns on a network including a user device having a unique identification (UID), a survey participant server and an advertisement server,” that includes, *inter alia*, the dispositive limitation of [L1] “creating, on the survey participant server, a database element associated with the UID of the user device,” as recited in claim 1?

Analysis

Limitation L1 – “creating . . . a database element”

The Examiner finds Aviv paragraph 23 teaches or suggests limitation L1, i.e., “[w]hen the ad server passes the IP address of the computer to the survey logic server, it is creating a database element on the survey participant server.” Final Act. 5. Aviv discloses:

The ad server 14 then contacts the survey logic server 16 to request that the survey logic server 16 determine whether to consider soliciting the user 8 to take an on-line survey (arrow D). In making the request, the ad server 14 passes the IP address of the computer 10 to the survey logic server 16. The survey logic server 16 contacts the computer 10 to request that the computer 10 send cookie data, if there is any, regarding previous on-line survey solicitations (arrow E).

Aviv ¶ 23.

Appellant argues, “[a]t no point does Aviv describe the survey logic server 16 creating/maintaining a database element that stores ‘information corresponding to on-line advertisements previously executed on the user device’ (per the creating and updating operations recited in each of Appellants’ independent claims).” Appeal Br. 9; *see also* Reply Br. 7.

We are persuaded by Appellant's arguments, and agree that there is no teaching or suggestion of a "database element" that is either created (limitation L1) or updated (limitation L4) in the Aviv reference. We are further persuaded by Appellant's representative's arguments during the oral hearing:

MR. JOY: Now, I want to flip and switch over to the obviousness aspect of this appeal. And, in that regard, I really have just a couple of real important points to make.

One, first of all, the Aviv 267 publication — and I'm very familiar with that because I prosecuted that application and patent — there is absolutely nothing in there whatsoever that suggests that the user exposure data to be stored on anything other than the user computer.

In fact, that's what that invention was all about. That disclosure was 100 % about that. In fact, Paragraph 23, that's referenced by the Final Office Action and the Answer, actually which relates to the survey solicitations, not the ad exposure.

But even in that instance, if you read Paragraph 23, you'll see that the survey server itself doesn't even have information about past solicitations. It actually has to go and access the user computer to even find out whether that survey solicitation had previously occurred Aviv is equivocal.

JUDGE HUME: So, which particular limitation are you saying, the creating limitation?

MR. JOY: Oh, absolutely, yes. Creating on the survey participant server a database element associated with the User ID of the user device. The database element including the information corresponding to online advertisements previously executed on the user device.

Okay, so that's my first point, is that I just want to make sure that everybody understands that the 267 Patent doesn't even have the most minute suggestion that you should put information that was generated by the user computer on a server.

It's just that is not the way it works, and that is actually the antithesis of the current invention.

Tr. 9:12–10:14. We are persuaded by Appellant's arguments.²³

Therefore, based upon the findings above, on this record, we are persuaded of at least one error in the Examiner's reliance on the cited prior art combination to teach or suggest the dispositive limitation of claim 1, such that we find error in the Examiner's resulting legal conclusion of obviousness. For the same reasons, we are persuaded of error in the Examiner's reliance on the cited prior art combination to teach or suggest the dispositive limitations of independent claims 8 and 15, which are essentially identical in scope to claim 1.

Accordingly, we do not sustain the Examiner's obviousness Rejection R2 of independent claims 1, 8, and 15, and claims 4, 5, 11, 12, 18, and 19 which variously depend therefrom.

3. § 103 Rejections R3–R5: Claims 2, 3, 6, 7, 9, 10, 13, 14, 16, 17, 20, and 21

In light of our reversal of the rejections of independent claims 1, 8, and 15, *supra*, we also reverse obviousness Rejections R3 through R5 under § 103 of claims 2, 3, 6, 7, 9, 10, 13, 14, 16, 17, 20, and 21, which variously and ultimately depend from claims 1, 8, and 15 and which contain the dispositive limitation in commensurate form. On this record, the Examiner has not shown how the additionally cited secondary Dierks, Walsh, and

²³ Because we agree with at least one of the dispositive arguments advanced by Appellant, we need not reach the merits of Appellant's other arguments. *See Beloit Corp. v. Valmet Oy*, 742 F.2d 1421, 1423 (Fed. Cir. 1984) (finding an administrative agency is at liberty to reach a decision based on “a single dispositive issue”).

Banga references overcome the aforementioned deficiencies with the combination of Aviv and Apple, as discussed above regarding claim 1.

REPLY BRIEF

To the extent Appellant *may* advance new arguments in the Reply Brief (Reply Br. 4–10) not in response to a shift in the Examiner’s position in the Answer, arguments raised in a Reply Brief that were not raised in the Appeal Brief or are not responsive to arguments raised in the Examiner’s Answer will not be considered except for good cause (*see* 37 C.F.R. § 41.41(b)(2)), which Appellant has not shown.

CONCLUSIONS

(1) Under our Revised Guidance, governed by relevant case law, claims 1–21 are patent-ineligible under 35 U.S.C. § 101, and we sustain the rejection.

(2) The Examiner erred with respect to obviousness Rejections R2 through R5 of claims 1–21 under 35 U.S.C. § 103(a) over the cited prior art combinations of record, and we do not sustain the rejections.

Because we have affirmed at least one ground of rejection with respect to each claim on appeal, we affirm the Examiner’s decision. *See* 37 C.F.R. § 41.50(a)(1).

DECISION SUMMARY

Claims Rejected	35 U.S.C. §	Basis / References	Affirmed	Reversed
1–21	101	Subject Matter Eligibility	1–21	
1, 4, 5, 8, 11, 12, 15, 18, 19	103	Obviousness Aviv, Apple		1, 4, 5, 8, 11, 12, 15, 18, 19
2, 9, 16	103	Obviousness Aviv, Apple, Dierks		2, 9, 16
3, 10, 17	103	Obviousness Aviv, Apple, Walsh		3, 10, 17
6, 7, 13, 14, 20, 21 Overall Outcome	103	Obviousness Aviv, Apple, Banga	1–21	6, 7, 13, 14, 20, 21

FINALITY AND RESPONSE

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). *See* 37 C.F.R. § 41.50(f).

AFFIRMED