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BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte NAOMI HADATSUKI and HIDEAKI TANIOKA

Appeal 2018-000669
Application 13/429,204
Technology Center 3600

Before DAVID M. KOHUT, JAMES W. DEJMEK, and
STEVEN M. AMUNDSON, *Administrative Patent Judges*.

AMUNDSON, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellants[1] seek our review under 35 U.S.C. § 134(a) from a final rejection of claims 1, 2, 4–10, 12–19, and 21–23, i.e., all pending claims. We have jurisdiction under 35 U.S.C. § 6(b).

We affirm.

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[1] Appellants identify the real party in interest as Fujitsu Limited. Br. 4.

STATEMENT OF THE CASE

The Invention

According to the Specification, the invention concerns "content filtering based on virtual and real-life activities." Spec. ¶ 1.[2] The Specification explains that a method for doing so includes (1) "receiving contextual data," i.e., data indicating "virtual activity associated with a user of a communication device and real-life activity associated with the user of the communication device"; (2) "identifying a pattern based on the virtual and real-life activity"; and (3) "filtering content based on the identified pattern to present on the communication device." *Id.* ¶ 4, Abstract. Virtual activity includes "online searching activity of the user," "online transaction(s) of the user," and "online browsing history of the user." *Id.* ¶¶ 24, 46.

Exemplary Claims

Independent claims 1 and 15 exemplify the claims at issue and read as follows (with formatting added for clarity):

> 1. A communication device comprising:
>
> one or more sensors configured to collect sensor data that indicates a first real-life activity and a second real-life activity associated with a user of the communication device;
>
> a data collection unit configured to receive first contextual data at the communication device, the first contextual data indicating:

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[2] This decision uses the following abbreviations: "Spec." for the Specification, filed March 23, 2012; "Final Act." for the Final Office Action, mailed July 8, 2015; "Br." for the Appeal Brief, filed December 8, 2015; and "Ans." for the Examiner's Answer, mailed August 14, 2017.

a virtual activity associated with the user of the communication device; and

the first real-life activity,

wherein the first contextual data indicating the first real-life activity associated with the user comprises data indicating an occurrence of a purchase by the user from a store at an identified time of day and indicating when the user is at the store; and

a processing device configured to:

identify a pattern based on the virtual activity and the first real-life activity, the identified pattern indicating the occurrence of the purchase that occurs at the identified time of day at the store;

filter content based on the identified pattern;

receive second contextual data indicating the second real-life activity that includes an engagement of the communication device by the user after a period of inactivity of the communication device; and

present the filtered content on the communication device at or near a time of day that is identical to the identified time of day in the identified pattern responsive to the engagement of the communication device after the period of inactivity.

15. A method of providing filtered content based on identifying a pattern, the method comprising operations performed by one or more processors, the operations comprising:

receiving sensor data collected by one or more sensors that indicates a first real-life activity and a second real-life activity associated with a user of a communication device;

receiving first contextual data indicating:

a virtual activity associated with the user of the communication device; and

the first real-life activity,

wherein the first contextual data indicating the first real-life activity associated with the user comprises data indicating an occurrence of a purchase by the user from a store at an identified time of day and indicating when the user is at the store;

identifying the pattern based on the virtual activity and the first real-life activity, the identified pattern indicating the occurrence of the purchase that occurs at the identified time of day at the store;

filtering content based on the identified pattern;

receiving second contextual data indicating the second real-life activity that includes an engagement of the communication device by the user after a period of inactivity of the communication device; and

providing the filtered content to present on the communication device at or near a time of day that is identical to the identified time of day in the identified pattern responsive to the engagement of the communication device after the period of inactivity.

Br. 16–17, 22–23 (Claims App.).

The Prior Art Supporting the Rejections on Appeal

As evidence of unpatentability under 35 U.S.C. § 103(a), the Examiner relies on the following prior art:

Evans et al. ("Evans")	US 2008/0133366 A1	June 5, 2008
Mital et al. ("Mital")	US 2012/0030227 A1	Feb. 2, 2012
Plut	US 2013/0226710 A1	Aug. 29, 2013 (filed Feb. 28, 2012)

The Rejections on Appeal

Claims 1, 2, 4–10, 12–19, and 21–23 stand rejected under 35 U.S.C. § 101 as directed to patent-ineligible subject matter. Final Act. 8–11.

Claims 1, 2, 4–10, 12–19, and 21 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Mital and Plut. Final Act. 12–22, 26.

Claims 22 and 23 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Mital, Plut, and Evans. Final Act. 22–26.

ANALYSIS

We have reviewed the rejections in light of Appellants' arguments that the Examiner erred. For the reasons explained below, we agree with the Examiner's conclusions concerning ineligibility under § 101 and unpatentability under § 103(a). Except as noted below, we adopt the Examiner's findings and reasoning in the Final Office Action and Answer. *See* Final Act. 5–27; Ans. 3–7. We provide the following to address and emphasize specific findings and arguments.

The § 101 Rejection of Claims 1, 2, 4–10, 12–19, and 21–23

INTRODUCTION

The Patent Act defines patent-eligible subject matter broadly: "Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title." 35 U.S.C. § 101. In *Mayo* and *Alice*, the Supreme Court explained that § 101 "contains an important implicit exception" for laws of nature, natural phenomena, and abstract ideas. *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 70 (2012); *Alice Corp. v. CLS Bank Int'l*, 573 U.S. 208, 216 (2014); *see Diamond v. Diehr*, 450 U.S. 175, 185 (1981). In *Mayo* and *Alice*, the Court set forth a two-step analytical framework for evaluating patent-eligible subject matter. *Mayo*, 566 U.S. at 77–80; *Alice*, 573 U.S. at 217–18.

Under *Mayo/Alice* step one, we "determine whether the claims at issue are directed to" a judicial exception, i.e., an abstract idea, a law of nature, or a natural phenomenon. *Alice*, 573 U.S. at 217. Step one involves looking at the "focus" of the claims at issue and their "character as a whole." *SAP Am., Inc. v. InvestPic, LLC*, 898 F.3d 1161, 1167 (Fed. Cir. 2018).

In January 2019, the PTO issued revised guidance for determining whether claims are directed to a judicial exception. *See 2019 Revised Patent Subject Matter Eligibility Guidance*, 84 Fed. Reg. 50 (Jan. 7, 2019) ("2019 Guidance"). The 2019 Guidance applies to the Board. *Id.* at 50–51, 57 n.42; *see* 35 U.S.C. § 3(a)(2)(A) (investing the Director with responsibility "for providing policy direction" for the PTO). Neither the Examiner nor Appellants had the benefit of the 2019 Guidance when advocating their respective positions concerning subject-matter eligibility.

The 2019 Guidance specifies two prongs for the analysis under *Mayo/Alice* step one (PTO step 2A). 84 Fed. Reg. at 54–55. The first prong requires evaluating "whether the claim recites a judicial exception, *i.e.*, an abstract idea, a law of nature, or a natural phenomenon." *Id.* at 54. "If the claim does not recite a judicial exception, it is not directed to a judicial exception," and it satisfies § 101. *Id.* "If the claim does recite a judicial exception, then it requires further analysis" under prong two. *Id.* Prong two requires evaluating "whether the claim as a whole integrates the recited judicial exception into a practical application of the exception." *Id.* "When the exception is so integrated, then the claim is not directed to a judicial exception," and it satisfies § 101. *Id.* "If the additional elements do not integrate the exception into a practical application, then the claim is directed

to the judicial exception," and it "requires further analysis" under *Mayo/Alice* step two (PTO step 2B). *Id.*

Under *Mayo/Alice* step two, we "consider the elements of each claim both individually and 'as an ordered combination' to determine whether the additional elements" add enough to transform the "nature of the claim" into "significantly more" than the judicial exception. *Alice*, 573 U.S. at 217–18, 221–22 (quoting *Mayo*, 566 U.S. at 78–79). Step two involves the search for an "inventive concept." *Alice*, 573 U.S. at 217–18, 221; *Univ. of Fla. Research Found., Inc. v. Gen. Elec. Co.*, 916 F.3d 1363, 1366 (Fed. Cir. 2019). "[A]n inventive concept must be evident in the claims." *RecogniCorp, LLC v. Nintendo Co.*, 855 F.3d 1322, 1327 (Fed. Cir. 2017).

MAYO/ALICE STEP ONE: PTO STEP 2A PRONG ONE

For *Mayo/Alice* step one, the Federal Circuit has noted 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). Here, the Examiner determines that the claims are directed to the "abstract idea of identifying a pattern between an activity and occurrence of a purchase that occurs at an identified time." Ans. 4. The Examiner explains that (1) "identify[ing] a pattern is an abstract idea exemplified by [a] mathematical relationship or formula" and (2) "[t]he output of the mathematical relationship or formula is content filtered on a communication device." Final Act. 5, 9 (emphasis omitted); Ans. 3 (emphasis omitted).

Appellants dispute that the claims are directed to an abstract idea. *See* Br. 9–12. Specifically, Appellants assert that the Examiner made "a piecemeal rejection based on only a portion of the claims" and failed to "satisfy the first prong of the *Alice* test" by failing to "determine whether the

claim, as a whole, is directed to at least one of several judicial exceptions." *Id.* at 10.

We disagree. In determining that the claims are directed to an abstract idea, the Examiner accurately assesses the "focus" of the claims and their "character as a whole." *See* Final Act. 5, 9; Ans. 3; *see also SAP Am.*, 898 F.3d at 1167.

In addition, we determine that the claims recite abstract ideas. This appeal involves three independent claims, i.e., claims 1, 9, and 15. Each independent claim recites an abstract idea in its pattern-identifying limitation and its content-filtering limitation. *See* Br. 16, 20, 22 (Claims App.). Further, the recited abstract ideas fall within the three groupings of abstract ideas specified in the 2019 Guidance: mathematical concepts, certain methods of organizing human activity, and mental processes. *See* 84 Fed. Reg. at 51–52. As relevant here, the Guidance identifies the following as mental processes: "concepts performed in the human mind," such as "an observation, evaluation, judgment, [or] opinion." *Id.* at 52 (footnote omitted).

The independent claims include similar pattern-identifying limitations. *See* Br. 16, 20, 22 (Claims App.). For example, claim 15's pattern-identifying limitation requires "identifying the pattern based on the virtual activity and the first real-life activity" where "the identified pattern indicat[es] the occurrence of the purchase that occurs at the identified time of day at the store." *Id.* at 22. The claimed identifying encompasses an observation the human mind may perform, e.g., noting that someone visits a store periodically, such as successive weekdays or the same day every week, and noting an associated purchase time. The 2019 Guidance identifies an

observation the human mind may perform as a mental process, and thus an abstract idea. 84 Fed. Reg. at 52.

The independent claims include similar content-filtering limitations. *See* Br. 16, 20, 22 (Claims App.). For example, claim 15's content-filtering limitation requires "filtering content based on the identified pattern." *Id.* at 22. The claimed filtering encompasses an evaluation the human mind may perform, e.g., screening information based on a mentally discerned pattern. The 2019 Guidance identifies an evaluation the human mind may perform as a mental process, and thus an abstract idea. 84 Fed. Reg. at 52.

Appellants quote the following statement from the *July 2015 Update: Subject Matter Eligibility* ("2015 Guidance"): "This discussion is meant to guide examiners and 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." Br. 11 (emphasis omitted). Appellants then contend that "the claimed subject matter is patent eligible for at least the reason that the claimed subject matter is not similar to any concepts that the courts have identified as an abstract idea." *Id.*

We disagree. The claims broadly cover data collection, manipulation, and display. Br. 16–25 (Claims App.); *see* Ans. 4. The Federal Circuit has ruled that claims broadly covering data collection, manipulation, and display were directed to abstract ideas. *See, e.g., Univ. of Fla. Research Found.*, 916 F.3d at 1366–68; *SAP Am.*, 898 F.3d at 1164–67; *Secured Mail Sols. LLC v. Universal Wilde, Inc.*, 873 F.3d 905, 907–08, 910–11 (Fed. Cir. 2017); *RecogniCorp*, 855 F.3d at 1324, 1326–27; *Intellectual Ventures I LLC v. Capital One Fin. Corp.*, 850 F.3d 1332, 1339–41 (Fed. Cir. 2017); *Elec. Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350, 1351–54 (Fed. Cir.

2016); *OIP Techs., Inc. v. Amazon.com, Inc.*, 788 F.3d 1359, 1361–63 (Fed. Cir. 2015).

MAYO/ALICE STEP ONE: PTO STEP 2A PRONG TWO

Because we determine that each independent claim recites abstract ideas, we consider whether each claim as a whole integrates the recited abstract ideas into a practical application. *See* 84 Fed. Reg. at 54–55. "Only when a claim recites a judicial exception and fails to integrate the exception into a practical application, is the claim 'directed to' a judicial exception . . . ." *Id.* at 51.

As additional elements, the independent claims recite similar generic computer components that perform generic computer functions. *See* Br. 16–17, 19–20, 22–23 (Claims App.); Final Act. 10; Ans. 4; *see also* Spec. ¶¶ 18, 27, 43, 45, 47, 53, 68–71. In particular, device claim 1 requires "one or more sensors," "a data collection unit," and "a processing device"; system claim 9 requires "one or more sensors," "one or more processors," and "a memory"; and method claim 15 requires "one or more sensors" and "one or more processors." Br. 16, 19, 22.

As additional elements, the independent claims also recite similar data-collecting and data-display limitations. *See* Br. 16–17, 19–20, 22–23 (Claims App.). For instance, claim 15 includes the following illustrative data-collecting limitations: "receiving sensor data," "receiving first contextual data," and "receiving second contextual data." *Id.* at 22–23. Further, claim 15 includes the following illustrative data-display limitation: "providing the filtered content to present on the communication device." *Id.* at 23.

We determine that each independent claim as a whole does not integrate the recited abstract ideas into a practical application because the additional elements do not impose meaningful limits on the abstract ideas. *See* 84 Fed. Reg. at 53–55 & n.29 (citing MPEP § 2106.05(e)). For instance, the additional elements do not reflect an improvement in the functioning of a computer itself or an improvement to another technology or technical field. In addition, the data-collecting and data-display limitations constitute insignificant extra-solution activity. *See, e.g.*, *Mayo*, 566 U.S. at 79; *Bilski v. Kappos*, 561 U.S. 593, 611–12 (2010); *Apple*, 842 F.3d at 1241–42; *OIP Techs.*, 788 F.3d at 1363–64; *Ultramercial, Inc. v. Hulu, LLC*, 772 F.3d 709, 715 (Fed. Cir. 2014); *CyberSource Corp. v. Retail Decisions, Inc.*, 654 F.3d 1366, 1370, 1375 (Fed. Cir. 2011); *In re Grams*, 888 F.2d 835, 839–40 (Fed. Cir. 1989).

For example, the Federal Circuit has held that mere data-gathering steps "cannot make an otherwise nonstatutory claim statutory." *CyberSource*, 654 F.3d at 1370 (quoting *Grams*, 888 F.2d at 840). The Federal Circuit has also held that (1) presenting offers to potential customers and (2) gathering statistics concerning customer responses were "data-gathering activities that d[id] not make the claims patent eligible." *OIP Techs.*, 788 F.3d at 1363–64. Here, the data-collecting limitations amount to mere data-gathering steps and require nothing unconventional or significant. *See Classen Immunotherapies, Inc. v. Biogen IDEC*, 659 F.3d 1057, 1067 (Fed. Cir. 2011) (analogizing "data gathering" to "insignificant extra-solution activity").

Further, in *Flook* the Supreme Court decided that adjusting an alarm limit according to a mathematical formula was "post-solution activity" and

insufficient to satisfy § 101. *Parker v. Flook*, 437 U.S. 584, 590, 596–98 (1978). Consistent with that decision, the Federal Circuit has held that printing information constituted insignificant post-solution activity. *Apple*, 842 F.3d at 1241–42. Just as printing information in *Apple* constituted insignificant post-solution activity, displaying information here constitutes insignificant post-solution activity. The data-display limitations recite some nonspecific "filtered content" presented in some nonspecific way "at or near" an identified time. *See* Br. 17, 20, 23 (Claims App.). They require no particular presentation tool and nothing unconventional or significant.

For the reasons discussed above, we determine that each independent claim as a whole does not integrate the recited abstract ideas into a practical application. Thus, each claim is directed to a judicial exception and does not satisfy § 101 under *Mayo/Alice* step one.

MAYO/ALICE STEP TWO: PTO STEP 2B

Because we determine that each independent claim is directed to a judicial exception, we "consider the elements of each claim both individually and 'as an ordered combination' to determine whether the additional elements" add enough to transform the "nature of the claim" into "significantly more" than the judicial exception. *See Alice*, 573 U.S. at 217–18, 221–22 (quoting *Mayo*, 566 U.S. at 78–79). Under *Mayo/Alice* step two, we "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 of Tex., LLC v. DIRECTV, LLC*, 838 F.3d 1253, 1258 (Fed. Cir. 2016) (quoting *Elec. Power Grp.*, 830 F.3d at 1353). An "inventive concept" requires more than "well-understood, routine,

conventional activity already engaged in" by the relevant community. *Rapid Litig. Mgmt. Ltd. v. CellzDirect, Inc.*, 827 F.3d 1042, 1047 (Fed. Cir. 2016) (quoting *Mayo*, 566 U.S. at 79–80). But a "non-conventional and non-generic arrangement of known, conventional pieces" may provide an "inventive concept" satisfying step two. *BASCOM Global Internet Servs., Inc. v. AT&T Mobility LLC*, 827 F.3d 1341, 1350 (Fed. Cir. 2016).

Here, the Examiner finds that "the additional elements of the claims" constitute "generic computer components claimed to perform their basic functions of storing, retrieving, processing and/or displaying data." Ans. 4; *see* Final Act. 9–10. The Examiner determines that the "claims as a whole amount[] to nothing more than generic computer components merely used to implement generic computer functions to implement said abstract idea of identifying a pattern between an activity and occurrence of a purchase that occurs at an identified time." Ans. 4.

We agree with the Examiner. For the reasons provided in the following paragraphs, we conclude that each independent claim lacks an "inventive concept" that transforms the abstract ideas concerning data collection, manipulation, and display into a patent-eligible invention.

As discussed above, the additional elements in the independent claims include "one or more sensors," "a data collection unit," "a processing device," "one or more processors," and "a memory." Br. 16–17, 19–20, 22–23 (Claims App.). The Specification describes those elements generically and evidences their conventional nature.

For example, the Specification discloses "sensors including, but not limited to: a photovoltaic sensor; an auditory sensor; a location sensor; a proximity sensor; an accelerometer; a tactile sensor; or a clock." Spec. ¶ 18;

see id. ¶¶ 27, 43, 47, 53. But the Specification does not describe any improvements in sensor technology. *See, e.g., id.* ¶¶ 18, 27, 43, 46–47, 52–53. Instead, conventional sensors perform conventional functions. *See, e.g., id.* ¶¶ 18, 24, 27, 32, 43, 46–47, 52–53, 63; *see also* Ans. 4.

Further, the Specification explains that "processor 404 may be of any type including but not limited to a microprocessor (μP), a micro-controller (μC), a digital signal processor (DSP), or any combination thereof." Spec. ¶ 68. The Specification also explains that "memory 406 may be of any type including but not limited to volatile memory (such as RAM), non-volatile memory (such as ROM, flash memory, etc.) or any combination thereof." *Id.* ¶ 69. The Specification identifies the following as suitable memory devices: "flexible disk drives and hard-disk drives (HDD), optical disk drives such as compact disk (CD) drives or digital versatile disk (DVD) drives, solid state drives (SSD), and tape drives"; and "RAM, ROM, EEPROM, flash memory or other memory technology, CD-ROM, digital versatile disks (DVD) or other optical storage, magnetic cassettes, magnetic tape, magnetic disk storage or other magnetic storage devices." *Id.* ¶¶ 70–71. In addition, Specification notes that a "system memory device" may include "a data collection unit." *Id.* ¶ 45.

Based on the Specification, the claimed sensors, processors, and memory constitute generic computer components that perform generic computer functions. *See* Final Act. 10; Ans. 4; *see also* Spec. ¶¶ 18, 24, 27, 32, 43, 46–47, 52–53, 68–71.

In addition, court decisions have recognized that generic computer components operating to collect, manipulate, and display data are well understood, routine, and conventional to a skilled artisan. *See, e.g., Alice,*

573 U.S. at 226–27; *SAP Am.*, 898 F.3d at 1164–65 & n.1, 1170; *Apple*, 842 F.3d at 1234, 1241–42; *Intellectual Ventures I LLC v. Symantec Corp.*, 838 F.3d 1307, 1318–20 (Fed. Cir. 2016); *Versata Dev. Grp., Inc. v. SAP Am., Inc.*, 793 F.3d 1306, 1334 (Fed. Cir. 2015); *Ultramercial*, 772 F.3d at 715–16; *buySAFE, Inc. v. Google, Inc.*, 765 F.3d 1350, 1355 (Fed. Cir. 2014); *Cyberfone Sys., LLC v. CNN Interactive Grp., Inc.*, 558 F. App'x 988, 993 (Fed. Cir. 2014).

For example, the system claims in *Alice* recited a "data processing system" with a "communications controller" and a "data storage unit," i.e., a "memory." *Alice*, 573 U.S. at 226. The Supreme Court decided that the system claims failed to satisfy § 101 because "[n]early every computer" includes those generic components for performing "basic calculation, storage, and transmission functions" and the system claims simply implemented the same abstract idea as the method claims. *Id.* at 226–27. The Supreme Court reasoned that (1) "the system claims are no different from the method claims in substance"; (2) "[t]he method claims recite the abstract idea implemented on a generic computer"; and (3) "the system claims recite a handful of generic computer components configured to implement the same idea." *Id.* at 226.

Here, the claimed sensors, processors, and memory perform "basic" functions that nearly every computer performs. *See* Br. 16–17, 19–20, 22–23 (Claims App.); *see also* Ans. 4; Spec. ¶¶ 18, 24, 27, 32, 43, 46–47, 52–53, 68–71. For instance, nearly every computer includes a clock for timing, a processor for manipulating data, and a memory for storing data. Hence, those generic computer components do not satisfy the "inventive concept" requirement. *See, e.g.*, *Mortg. Grader Inc. v. First Choice Loan*

Servs., Inc., 811 F.3d 1314, 1324–25 (Fed. Cir. 2016) (holding that "generic computer components such as an 'interface,' 'network,' and 'database'" did not satisfy the "inventive concept" requirement); *see also* Ans. 4.

We reach a similar conclusion concerning the data-collecting and data-display limitations, e.g., "receiving sensor data," "receiving first contextual data," "receiving second contextual data," and "providing the filtered content to present on the communication device." As discussed above, the data-collecting limitations amount to mere data-gathering steps and require nothing unconventional or significant. Consistent with that discussion, in *Mayo* the Supreme Court decided that determining metabolite levels for later analysis constituted purely "conventional or obvious" pre-solution activity, i.e., insignificant extra-solution activity insufficient to satisfy the "inventive concept" requirement. *Mayo*, 566 U.S. at 79.

As also discussed above, the data-display limitations recite some nonspecific "filtered content" presented in some nonspecific way "at or near" an identified time. They require no particular presentation tool and nothing unconventional or significant. Consequently, the claimed insignificant extra-solution activity does not satisfy the "inventive concept" requirement. *See*, *e.g.*, *Mayo*, 566 U.S. at 79–80; *Flook*, 437 U.S. at 590; *OIP Techs.*, 788 F.3d at 1363–64; *CyberSource*, 654 F.3d at 1370.

"Whether a combination of claim limitations supplies an inventive concept that renders a claim 'significantly more' than an abstract idea to which it is directed is a question of law." *BSG Tech LLC v. BuySeasons, Inc.*, 899 F.3d 1281, 1290 (Fed. Cir. 2018). Given the claimed generic computer components that perform generic computer functions and the claimed insignificant extra-solution activity, we conclude that the

combination of limitations in each independent claim does not supply an "inventive concept" that renders the claim "significantly more" than an abstract idea. Thus, each claim does not satisfy § 101 under *Mayo/Alice* step two.

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 the independent claims. We also sustain the § 101 rejection of the dependent claims because Appellants do not argue eligibility separately for them. *See* 37 C.F.R. § 41.37(c)(1)(iv).

The § 103(a) Rejection of Claims 1, 2, 4–10, 12–19, and 21

INDEPENDENT CLAIMS 1, 9, AND 15

As noted above, the § 103(a) rejection of independent claims 1, 9, and 15 rests on Mital and Plut. *See* Final Act. 12–16, 26. Appellants argue that the Examiner erred in rejecting each claim because Mital and Plut do not teach or suggest the following limitation in each claim: "wherein the first contextual data indicating the first real-life activity associated with the user comprises data indicating an occurrence of a purchase by the user from a store at an identified time of day and indicating when the user is at the store." *See* Br. 13–15.

Although Appellants concede that Mital discloses "suggesting a purchase to a user based on the user's context," Appellants contend that "the context itself does not include the suggested purchase, much less occurrence of the purchase, nor has the purchase occurred." Br. 13–14. Appellants then assert that Mital "does not teach or suggest 'wherein the first contextual data

indicating the first real-life activity associated with the user comprises data indicating an occurrence of a purchase by the user,'" as recited in the independent claims. *Id.* at 14.

Appellants also contend that Plut discloses "an ad creation interface" that allows an ad suggester to send an ad recipient "an advertisement for a likely future purchase of the ad recipient," i.e., sending an advertisement before a purchase occurs. Br. 14. Appellants then assert that Plut does not teach or suggest first contextual data "indicating an occurrence of a purchase by the user from a store at an identified time of day and indicating when the user is at the store," as recited in the independent claims. *Id.* (emphasis omitted).

Appellants' arguments do not persuade us of Examiner error because they attack the references individually, whereas the Examiner relies on the combined disclosures in the references to teach or suggest the disputed limitation. *See* Final Act. 12–16, 26; Ans. 5–7. Where a rejection rests on the combined disclosures in the references, an appellant cannot establish nonobviousness by attacking the references individually. *See In re Merck & Co.*, 800 F.2d 1091, 1097 (Fed. Cir. 1986). For the reasons explained below, we agree with the Examiner that the combined disclosures in the references teach or suggest the disputed limitation.

The Examiner correctly finds that Mital teaches or suggests first contextual data indicating both "real-life activity associated with the user" and "an occurrence of a purchase by the user," as required by the independent claims. *See* Final Act. 13–14; Ans. 5–7. Specifically, Mital discloses "offering suggestions to a user of a mobile computing device based on information relevant to the user," including contextual data relevant to

the user. Mital, [57]; *see id.* ¶¶ 4–7, 24–25, 28–33, 54, 67, 74, 96–98, Fig. 8; Final Act. 6–7, 13–14; Ans. 5–7. The mobile computing device may access "information previously obtained about a user," such as "lists of items" relevant to the user, e.g., "items that the user has recently purchased." Mital ¶¶ 4–5, 25, 28, 97; *see* Final Act. 6–7, 13–14; Ans. 5–6.

In one of several examples, Mital explains that the device may access "lists of book information," including "books that the user already owns" and "books that the user does not own, but is interested in either purchasing or reading." Mital ¶¶ 30, 32, 42, 77; *see* Final Act. 6; Ans. 6. When the user "enters into a book store" where "the user has previously purchased books," the "device may detect books that are available in the book store for the user to peruse and potentially purchase." Mital ¶¶ 30, 32; *see* Final Act. 6; Ans. 6. Further, "if the user owns five of six books in a volume set and the device senses that the sixth book is available in the user's current context for purchase, the device may offer to the user a suggestion to purchase the currently available sixth book." Mital ¶ 28; *see* Final Act. 13–14; Ans. 6.

As the Examiner properly reasons, Mital's disclosure of "books that the user already owns" and owning "books one through five" of a six-volume set teaches or suggests first contextual data indicating both "real-life activity associated with the user" and "an occurrence of a purchase by the user," as required by the independent claims. Ans. 6–7; *see* Final Act. 13–14.

In addition, the Examiner correctly finds that Plut teaches or suggests first contextual data indicating both "a purchase by the user from a store at an identified time of day" and "when the user is at the store," as required by the independent claims. *See* Final Act. 16; Ans. 7. Specifically, Plut

discloses an "interpersonal electronic advertising system" that allows an ad suggester to send an ad recipient a "timely and relevant" custom advertisement. Plut ¶¶ 1, 27, 29–31, 57, 74, [57], Fig. 1; *see* Final Act. 16; Ans. 7. Before sending the custom advertisement, the ad suggester receives "consumer information" associated with the ad recipient and uses "the consumer information as a basis for creating or selecting and sending suggested ads" to the ad recipient. Plut ¶¶ 30–31, 57; *see* Final Act. 16; Ans. 7. The consumer information may include (1) "price information," e.g., "suitable price range"; (2) "location information" for the ad recipient or "a store offering a product or service of potential worth" to the ad recipient; (3) "specific or approximate or general product and/or service information"; and (4) "personal information related to a purchase such as a time or place of purchase," e.g., information about "previous purchases made by the ad recipient." Plut ¶¶ 30–31, 57–58, 62, 74; *see* Final Act. 16; Ans. 7.

In one of several examples, Plut explains that the ad suggester "has knowledge that a friend recently purchased a house and wants to purchase a garage door opener that fits a garage door in the house." Plut ¶ 57; *see* Ans. 7. In that example, the consumer information includes "the knowledge of the friends [sic] recent house acquisition, their desire to purchase a garage door opener for his garage door, and maybe specifics on the garage door or when the recipient intends to purchase the garage door opener." Plut ¶ 57; *see* Ans. 7.

Plut's consumer information corresponds to the claimed "first contextual data." Further, Plut instructs that the consumer information may include "location information" and "personal information related to a purchase such as a time or place of purchase." Plut ¶ 57; *see* Final Act. 16;

Ans. 7. Thus, Plut teaches or suggests first contextual data indicating both "a purchase by the user from a store at an identified time of day" and "when the user is at the store," as required by the independent claims. *See* Final Act. 16; Ans. 7.

For the reasons discussed above, Appellants' arguments have not persuaded us that the Examiner erred in rejecting claims 1, 9, and 15 for obviousness based on Mital and Plut. Thus, we sustain the § 103(a) rejection of claims 1, 9, and 15.

DEPENDENT CLAIMS 2, 4–8, 10, 12–14, 16–19, AND 21

Claims 2 and 4–8 depend directly or indirectly from claim 1, claims 10 and 12–14 depend directly or indirectly from claim 9, and claims 16–19 and 21 depend directly from claim 15. Appellants do not argue patentability separately for these dependent claims. *See* Br. 13–15. Thus, we sustain the § 103(a) rejection of these dependent claims for the same reasons as claims 1, 9, and 15. *See* 37 C.F.R. § 41.37(c)(1)(iv) (2015).

The § 103(a) Rejection of Claims 22 and 23

Claims 22 and 23 depend directly from claim 15. Appellants do not argue patentability separately for these dependent claims. *See* Br. 13–15. Thus, we sustain the § 103(a) rejection of these dependent claims for the same reasons as claim 15. *See* 37 C.F.R. § 41.37(c)(1)(iv).

DECISION

We affirm the Examiner's decision to reject claims 1, 2, 4–10, 12–19, and 21–23.

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