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Please find below and/or attached an Office communication concerning this application or proceeding.

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte PHILLIP GEORGE AMMAR, RONALD CHARLES KROSKY,
and BRENDAN EDWARD CLARK

Appeal 2018-005331
Application 13/037,400
Technology Center 3600

Before ROBERT E. NAPPI, JOHN A. JEFFERY, and
CATHERINE SHIANG, *Administrative Patent Judges*.

JEFFERY, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellants[1] appeal under 35 U.S.C. § 134(a) from the Examiner's
decision to reject claims 29, 31, and 40–57. We have jurisdiction under
35 U.S.C. § 6(b).

We affirm.

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[1] Appellants identify the real parties in interest as Brendan E. Clark and
Ronald C. Krosky. App. Br. 2.

STATEMENT OF THE CASE

Appellants' invention enables collaborative decisions to be made by, for example, a business to determine what products should be carried in a store. *See* Spec. 5. To this end, a text message can be sent to registered members to vote on this product-based question. *Id.* A "selection component" then analyzes the vote and selects a collaborative decision based on that vote. *Id.* Claim 29 is illustrative:

> 29.   A non-transitory computer-readable medium storing processor executable instructions that when executed by a computer cause the computer to perform a method, the method comprising:
>
>   obtaining a first member choice from a first member selecting at least one service among one or more services offerable by an establishment;
>
>   obtaining at least a second member choice from at least second member selecting at least one service among the one or more services offerable by the establishment, services of the one or more services offerable by the establishment are classified into two or more categories;
>
>   aggregating the first member choice and at least the second member choice into a decision result identifying a highest gaining category among the two or more categories based on the decision result, the highest gaining category is identified by aggregating the first member choice and at least the second member choice for the one or more services offerable by the establishment according to the two or more categories; and
>
>   proactively determining a service selection for at least one of the one or more services based, at least in part, on the highest gaining category of the decision result after the first member choice and at least the second member choice are aggregated into the decision result.

THE REJECTIONS

The Examiner rejected claims 29, 31, and 40–57 under 35 U.S.C. § 101 as directed to ineligible subject matter. Ans. 3–5.[2]

The Examiner rejected claims 29, 31, and 40–57 under 35 U.S.C. § 112, second paragraph as indefinite. Ans. 5–6.

The Examiner rejected claims 29, 31, and 57 under 35 U.S.C. § 102(b) as anticipated by Storey (US 2008/0046307 A1; published Feb. 21, 2008). Ans. 6–8.

The Examiner rejected claims 52–54 under 35 U.S.C. § 103 as unpatentable over Storey and Haas (US 2008/0135632 A1; published June 12, 2008). Ans. 8–9.

The Examiner rejected claim 55 under 35 U.S.C. § 103 as unpatentable over Storey, Haas, and Maggio (US 2007/0233552 A1; published Oct. 4, 2007). Ans. 10.

The Examiner rejected claim 56 under 35 U.S.C. § 103 as unpatentable over Storey and Yoshida (US 2008/0281610 A1; published Nov. 13, 2008). Ans. 11.

The Examiner rejected claims 40, 42–45, and 51 under 35 U.S.C. § 103 as unpatentable over Yoshida and Babbitt (US 2007/0061563 A1; published Mar. 15, 2007). Ans. 12–16.

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[2] Throughout this opinion, we refer to (1) the Appeal Brief filed November 28, 2017 (supplemented December 24, 2017) ("App. Br."); (2) the Examiner's Answer mailed March 26, 2018 ("Ans."); and (3) the Reply Brief filed April 28, 2018 ("Reply Br.").

The Examiner rejected claim 41 under 35 U.S.C. § 103 as
unpatentable over Yoshida, Babbitt, and So (US 2007/0112637 A1;
published May 17, 2007). Ans. 16–17.

The Examiner rejected claims 46, 49, and 50 under 35 U.S.C. § 103 as
unpatentable over Yoshida, Babbitt, and Storey. Ans. 17–18.

Claims 47 and 48 are rejected under 35 U.S.C. § 103(a) as being
unpatentable over Yoshida, Babbitt, Storey, and Koide (US 2007/0150328
A1; published June 28, 2007). Ans. 18–19.

THE INELIGIBILITY REJECTION

The Examiner determines that the claims are directed to an abstract
idea that includes organizing human activities and, in particular, managing
human behavior. *See* Ans. 3–4. The Examiner adds that the claims do not
include elements that add significantly more than the abstract idea, but
merely recite, among other things, generic computer components. *Id.* at 4–5.

Appellants argue that the claimed invention is not directed to an
abstract idea. App. Br. 18–20; Reply Br. 2–7. According to Appellants, not
only did the Examiner fail to establish a prima facie case of ineligibility by,
among other things, failing to analyze the claim language, the claimed
invention is also said to yield a technological improvement. *See id.*
Appellants add that the claimed invention adds significantly more to the
purported abstract idea by reciting an inventive concept that (1) obtains and
aggregates member choices; (2) identifies a highest gaining category among
those choices; (3) proactively determines a service selection based on that
category. App. Br. 20–21. According to Appellants, not only do the
dependent claims add more to the ordered combination's eligibility, but the

Examiner failed to provide evidence that the clamed elements are nothing more than an abstract idea and/or well-understood, routine, and conventional. App. Br. 21–22; Reply Br. 7–10.

ISSUE

Under § 101, has the Examiner erred in rejecting claims 29, 31, and 40–57 as directed to ineligible subject matter? This issue turns on whether the claims are directed to an abstract idea and, if so, whether recited elements—considered individually and as an ordered combination—transform the nature of the claims into a patent-eligible application of that abstract idea.

PRINCIPLES OF LAW

An invention is patent-eligible if it claims a "new and useful process, machine, manufacture, or composition of matter." 35 U.S.C. § 101. 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. *See, e.g., Alice Corp. v. CLS Bank Int'l*, 573 U.S. 208, 216 (2014).

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*. *Id.* at 217–18 (citing *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 75–77 (2012)). 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, 69 (1972)). Concepts determined to be patent eligible include physical and chemical processes, such as "molding rubber products" (*Diamond v. Diehr*, 450 U.S. 175, 191 (1981)); "tanning, dyeing, making water-proof cloth, vulcanizing India rubber, smelting ores" (*id.* at 183 n.7 (quoting *Corning v. Burden*, 56 U.S. (15 How.) 252, 267–68 (1854))); 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 that "[a] claim drawn to subject matter otherwise statutory does not become nonstatutory simply because it uses a mathematical formula." *Diehr*, 450 U.S. at 176; *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."). That said, 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.* (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.").

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 (quotation marks and 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.* (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.*

In January 2019, the USPTO published revised guidance on the application of § 101. *See* USPTO, *2019 Revised Patent Subject Matter Eligibility Guidance*, 84 Fed. Reg. 50 (Jan. 7, 2019) ("Guidance"). Under that 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); and
>
> (2) additional elements that integrate the judicial exception into a
> practical application (*see* MANUAL OF PATENT EXAMINING PROCEDURE
> ("MPEP") §§ 2106.05(a)–(c), (e)–(h) (9th ed., Rev. 08.2017, Jan.
> 2018)).

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, and conventional in the field (*see* MPEP § 2106.05(d)); or
>
> (4) simply appends well-understood, routine, and conventional activities previously known to the industry, specified at a high level of generality, to the judicial exception.

See Guidance, 84 Fed. Reg. at 56.

ANALYSIS

Claims 29, 40, and 57: Alice/Mayo Step One

Representative independent claim 29 recites

> *[a] non-transitory computer-readable medium storing processor executable instructions that when executed by a computer cause the computer to perform a method, the method comprising:*
>
> *obtaining a first member choice from a first member selecting at least one services among one or more services offerable by an establishment;*
>
> *obtaining at least a second member choice from at least second member selecting at least one service among the one or more services offerable by the establishment, services of the one or more services offerable by the establishment are classified into two or more categories;*
>
> *aggregating the first member choice and at least the second member choice into a decision result identifying a highest gaining category among the two or more categories based on the decision result, the highest gaining category is*

*identified by aggregating the first member choice and at least
the second member choice for the one or more services
offerable by the establishment according to the two or more
categories; and*

*proactively determining a service selection for at least
one of the one or more services based, at least in part, on the
highest gaining category of the decision result after the first
member choice and at least the second member choice are
aggregated into the decision result.*[3]

As the disclosure explains, Appellants' invention enables
collaborative decisions to be made by, for example, a business to determine
what products should be carried in a store. *See* Spec. 5. To this end, a text
message can be sent to registered members to vote on this product-based
question. *Id.* A "selection component" then analyzes the vote and selects a
collaborative decision based on that vote. *Id.*

For example, a couple can ask guests whether chicken or fish should
be served at their wedding, and if the highest number of guests selected fish,
then fish can be proactively selected. *Id.* at 6. Choices, however, can be
open-ended when, for example, the couple asks guests more generally what
they would like to eat. *Id.* If, in this scenario, 50 guests respond with
"beef," 40 guests respond with "chicken," and 15 guests respond with
"pork," "chicken" would be proactively selected because it is the highest
gaining white meat. *Id.*

Turning to claim 29, we first note that the claim recites a computer-
readable medium and, therefore, falls within the manufacture category of

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[3] Unless otherwise indicated, we italicize or quote text associated with
various recited limitations for emphasis and clarity.

§ 101. But despite falling within this statutory category, we must still determine whether the claim is directed to a judicial exception, namely an abstract idea. *See Alice*, 573 U.S. at 217. To this end, we must determine whether the claim (1) recites a judicial exception, and (2) fails to integrate the exception into a practical application. *See* Guidance, 84 Fed. Reg. at 52–55. If both elements are satisfied, the claim is directed to a judicial exception under the first step of the *Alice/Mayo* test. *See id.*

In the rejection, the Examiner determines that claim 29 is directed to an abstract idea, that includes organizing human activities and, in particular, managing human behavior. *See* Ans. 3–4; Ans. 20–21. To determine whether a claim recites an abstract idea, we (1) identify the claim's specific limitations that recite an abstract idea, and (2) determine whether the identified limitations fall within certain subject matter groupings, namely (a) mathematical concepts[4]; (b) certain methods of organizing human activity[5]; or (c) mental processes.[6]

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[4] Mathematical concepts include mathematical relationships, mathematical formulas or equations, and mathematical calculations. *See* Guidance, 84 Fed. Reg. at 52.

[5] Certain methods of organizing human activity include 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). *See* Guidance, 84 Fed. Reg. at 52.

[6] Mental processes are concepts performed in the human mind including an observation, evaluation, judgment, or opinion. *See* Guidance, 84 Fed. Reg. at 52.

Here, apart from the recited computer-readable medium storing processor executable instructions that when executed by a computer cause the computer to perform the recited method, all of claim 29's recited limitations, which collectively are directed to selecting a service based on popularity of others' choices and their associated classifications, fit squarely within at least one of the above categories of the USPTO's guidelines.

First, *obtaining choices from first and second members selecting at least one service offerable by an establishment, where the services are classified into two or more categories* involves at least personal interactions, including following rules or instructions, at least to the extent that a person could obtain, store, associate, and classify this data either entirely mentally by merely reading pertinent records or other associated information, or alternatively receive that information via face-to-face or written communication with another person with such knowledge, such as a colleague. *Cf. BSG Tech LLC v. Buyseasons, Inc.*, 899 F.3d 1281, 1284–91 (Fed. Cir. 2018) (holding ineligible claims reciting database indexing method that (1) guided a user in selecting a specific item classification from plural classifications, (2) stored the item on the database; and (3) guided the user in selecting associated parameters and values by displaying relative historical usage information for parameters and values used previously by other users); *In re TLI Commc'n LLC Pat. Litig.*, 823 F.3d 607, 610–14 (Fed. Cir. 2016) (holding ineligible claims reciting recording and administering digital images including (1) recording images using a digital pick-up unit in a telephone unit; (2) storing the recorded images; (3) transmitting data including the images and classification information to a server; (4) extracting the received classification information; and (5) storing

the images in the server considering that information); *CyberSource Corp. v. Retail Decisions, Inc.*, 654 F.3d 1366, 1372 (Fed. Cir. 2011) (noting that limitation reciting obtaining information about transactions that have used an Internet address identified with a credit card transaction can be performed by a human who simply reads records of Internet credit card transactions from a pre-existing database); *In re Salwan*, 681 F. App'x 938, 939–41 (Fed. Cir. 2017) (unpublished) (holding ineligible claims reciting, among other things, receiving medical records information and transmitting reports where the claimed invention's objective was to enable electronic communication of tasks that were otherwise done manually using paper, phone, and facsimile machine); *Interval Licensing LLC v. AOL, Inc.*, 896 F.3d 1335, 1344 (Fed. Cir. 2018) (noting that a nontechnical human activity of passing a note to a person who is in a meeting or conversation as illustrating the invention's focus, namely providing information to a person without interfering with the person's primary activity); *LendingTree, LLC v. Zillow, Inc.*, 656 F. App'x 991, 993–94, 996 (Fed. Cir. 2016) (unpublished) (holding ineligible claims reciting, among other things, (1) receiving selection criteria from lending institutions and credit data from a computer user, and (2) forwarding the credit data to selected lending institutions as directed to an abstract idea). Therefore, the recited service choice obtaining and service classification functions fall squarely within the mental processes and methods of organizing human activity categories of the agency's guidelines and, therefore, recite an abstract idea. *See* Guidance, 84 Fed. Reg. at 52 (listing exemplary (1) mental processes including observation and evaluation, and (2) methods of organizing human activity, including personal interactions and following rules or instructions).

Second, *aggregating the first member choice and at least the second member choice into a decision result identifying a highest gaining category among the two or more categories based on the decision result, the highest gaining category is identified by aggregating the first member choice and at least the second member choice for the one or more services offerable by the establishment according to the two or more categories* can be performed entirely mentally by merely *thinking* about these choices and their associated categories (including the highest-gaining category) or writing them down—both involving mere observation and logical reasoning. *Cf. CyberSource*, 654 F.3d at 1372 (noting that a recited step that utilized a map of credit card numbers to determine the validity of a credit card transaction could be performed entirely mentally by merely using *logical reasoning* to identify a likely instance of fraud by merely *observing* that numerous transactions using different credit cards all originated from the same IP address). Therefore, the recited aggregation function falls squarely within the mental processes category of the USPTO's guidelines and, therefore, recites an abstract idea. *See* Guidance, 84 Fed. Reg. at 52 (listing exemplary mental processes including observation and evaluation).

Third, *proactively determining a service selection for at least one of the one or more services based, at least in part, on the highest gaining category of the decision result after the first member choice and at least the second member choice are aggregated into the decision result* can also be performed entirely mentally by merely *thinking* about this selection or writing it down—both involving mere observation and logical reasoning. *Cf. CyberSource*, 654 F.3d at 1372. This step also organizes human activity, at least to the extent that it involves personal interactions and following rules

or instructions. *See BSG*, 899 F.3d at 1284–91 (holding ineligible claims reciting database indexing method that guided a user in selecting (1) a specific item classification from plural classifications, and (2) associated parameters and values by displaying relative historical usage information for parameters and values used previously by other users); *see also* Guidance, 84 Fed. Reg. at 52 (listing exemplary (1) mental processes including observation and evaluation, and (2) methods of organizing human activity, including personal interactions and following rules or instructions).

Although the claim recites an abstract idea based on these methods of organizing human activity and mental processes, we nevertheless must still determine whether the abstract idea is integrated into a practical application, namely whether the claim applies, relies on, or uses the abstract idea in a manner that imposes a meaningful limit on the abstract idea, such that the claim is more than a drafting effort designed to monopolize the abstract idea. *See* Guidance, 84 Fed. Reg. at 54–55. To this end, we (1) identify whether there are any additional recited elements beyond the abstract idea, and (2) evaluate those elements individually and collectively to determine whether they integrate the exception into a practical application. *See id.*

Here, the the recited computer-readable medium storing processor executable instructions that when executed by a computer cause the computer to perform the recited method is the only recited element beyond the abstract idea, but these additional elements do not integrate the abstract idea into a practical application when reading claim 29 as a whole. First, we are not persuaded that the claimed invention improves the computer or its components' functionality or efficiency, or otherwise changes the way those devices function, at least in the sense contemplated by the Federal Circuit in

Enfish, LLC v. Microsoft Corporation, 822 F.3d 1327 (Fed. Cir. 2016), despite Appellants' arguments to the contrary (App. Br. 18–19). The claimed self-referential table in *Enfish* was a specific type of data structure designed to improve the way a computer stores and retrieves data in memory. *Enfish*, 822 F.3d at 1339. To the extent Appellants contend that the claimed invention uses such a data structure to improve a computer's functionality or efficiency, or otherwise change the way that device functions, there is no persuasive evidence on this record to substantiate such a contention.

To the extent Appellants contend that the claimed invention is rooted in technology because it is ostensibly directed to a technical solution (*see* App. Br. 18–25; Reply Br. 5–7), we disagree. Even assuming, without deciding, that the claimed invention can determine a service selection based on a highest-gaining category of member choices faster than doing so manually, any speed increase comes from the capabilities of the generic computer components—not the recited process itself. *See FairWarning IP, LLC v. Iatric Sys., Inc.*, 839 F.3d 1089, 1095 (Fed. Cir. 2016) (citing *Bancorp Servs., L.L.C. v. Sun Life Assurance Co.*, 687 F.3d 1266, 1278 (Fed. Cir. 2012) ("[T]he fact that the required calculations could be performed more efficiently via a computer does not materially alter the patent eligibility of the claimed subject matter.")); *see also Intellectual Ventures I LLC v. Erie Indemnity Co.*, 711 F. App'x 1012, 1017 (Fed. Cir. 2017) (unpublished) ("Though the claims purport to accelerate the process of finding errant files and to reduce error, we have held that speed and accuracy increases stemming from the ordinary capabilities of a general-purpose computer 'do[ ] not materially alter the patent eligibility of the

claimed subject matter.'"). Like the claims in *FairWarning*, the focus of claim 29 is not on an improvement in computer processors as tools, but on certain independently abstract ideas that use generic computing components as tools. *See FairWarning*, 839 F.3d at 1095 (citations and quotation marks omitted).

As with the ineligible claimed invention in *BSG*, the claimed invention does not improve a computer's functionality or that of its associated components, but rather the benefits flow from performing the abstract idea in conjunction with those generic computer components. *See BSG*, 899 F.3d at 1288 ("While the presentation of summary comparison usage information to users improves the quality of the information added to the database, an improvement to the information stored by a database is not equivalent to an improvement in the database's functionality.").

Nor is this a case involving eligible subject matter as in *DDR Holdings, LLC v. Hotels.Com, L.P.*, 773 F.3d 1245 (Fed. Cir. 2014) despite Appellants' arguments to the contrary (App. Br. 19–20). There, instead of a computer network operating in its normal, expected manner by sending a website visitor to a third-party website apparently connected with a clicked advertisement, the claimed invention in *DDR* generated and directed the visitor to a hybrid page that presented (1) product information from the third party, and (2) visual "look and feel" elements from the host website. *DDR*, 773 F.3d at 1258–59. Given this particular Internet-based solution, the court held that the claimed invention did not merely use the Internet to perform a business practice known from the pre-Internet world, but rather was necessarily rooted in computer technology to overcome a problem specifically arising in computer networks. *Id.* at 1257.

That is not the case here. As noted previously, Appellants' claimed invention, in essence, is directed to selecting a service based on popularity of others' choices and their associated classifications—albeit using computer-based components to achieve that end. The claimed invention here is not necessarily rooted in computer technology in the sense contemplated by *DDR* where the claimed invention solved a challenge particular to the Internet. Although Appellants' invention uses various computer-based components noted previously, the claimed invention does not solve a challenge particular to the computing components used to implement this functionality.

Nor is this invention analogous to that which the court held eligible in *McRO, Inc. v. Bandai Namco Games America Inc.,* 837 F.3d 1299 (Fed. Cir. 2016) despite Appellants' arguments to the contrary (App. Br. 22–23). There, the claimed process used a combined order of specific rules that rendered information in a specific format that was applied to create a sequence of synchronized, animated characters. *McRO,* 837 F.3d at 1315. Notably, the recited process *automatically animated characters* using particular information and techniques—an improvement over manual three-dimensional animation techniques that was not directed to an abstract idea. *Id.* at 1316.

Unlike the claimed invention in *McRO* that improved how the physical display operated to produce better quality images, the claimed invention here merely uses generic computing components to select a service based on popularity of others' choices and their associated classifications. This generic computer implementation is not only directed to fundamental human activity organization and mental processes, but also

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does not improve a display mechanism as was the case in *McRO*. *See SAP Am., Inc. v. InvestPic, LLC*, 898 F.3d 1161, 1167 (Fed. Cir. 2018) (distinguishing *McRO*).

We also find Appellants' reliance on *Visual Memory LLC v. NVIDIA Corp.*, 867 F.3d 1253 (Fed. Cir. 2017) (App. Br. 18–19) unpersuasive. There, the court held eligible claims directed to a computer memory system with a main memory connected to a bus with a cache connected thereto, where the system's programmable operational characteristics determined the type of data stored by the cache. *Visual Memory*, 867 F.3d at 1257–62. Notably, the court emphasized the recited improvement in computer capabilities in that case, namely by using programmable operational characteristics that were configurable based on the processor's type. *Id.* at 1259–60.

That is not the case here. To the extent that Appellants contend that the claimed invention is directed to such improvements in computer capabilities (*see* App. Br. 18–19), there is no persuasive evidence on this record to substantiate such a contention.

Appellants' reliance on *Finjan, Inc. v. Blue Coat Systems, Inc.*, 879 F.3d 1299 (2018) (Reply Br. 5) is likewise unavailing. There, the court held eligible claims directed to a behavior-based virus scanning system. In reaching this conclusion, the court noted that the claimed invention employed a new kind of file that enabled a computer security system to do that which could not be done previously, including accumulating and using newly-available, behavior-based information about potential threats. *Finjan*, 879 F.3d at 1305.

That is not the case here. To the extent that Appellants contend that the claimed invention is directed to such improvements in computer capabilities (*see* Reply Br. 5), there is no persuasive evidence on this record to substantiate such a contention.

We reach the same conclusion regarding Appellants' reliance on *Core Wireless Licensing S.A.R.L. v. LG Electronics, Inc.*, 880 F.3d 1356 (2018) (Reply Br. 6). There, the court held eligible claims reciting a computing device that could display an application summary window that was not only reachable directly from the main menu, but could also display a limited list of selectable functions while the application was in an un-launched state. *Core Wireless*, 880 F.3d at 1360–63. Upon selecting a function, the device would then launch the application and initiate the selected function. *Id.* at 1360. In reaching its eligibility conclusion, the court noted that the claimed invention was directed to an improved user interface for computing devices that used a particular manner of summarizing and presenting a limited set of information to the user, unlike conventional user interface methods that displayed a generic index on a computer. *Id.* at 1362–63.

That is not the case here. To the extent that Appellants contend that the claimed invention is directed to such improvements in computer capabilities (*see* Reply Br. 6), there is no persuasive evidence on this record to substantiate such a contention.

Appellants' reliance on *Thales Visionix Inc. v. United States*, 850 F.3d 1343 (Fed. Cir. 2017) (App. Br. 23–24) is likewise unavailing. There, the court held eligible claims reciting determining an orientation of an object relative to a moving reference frame based on signals from two inertial sensors mounted respectively on the object and on the moving reference

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frame. *Id.* at 1345–49. In reaching its eligibility conclusion, the court noted that the claimed invention used inertial sensors in an unconventional manner to reduce errors in measuring a moving object's relative position and orientation on a moving reference frame. *Id.* at 1348–49.

That is not the case here. To the extent that Appellants contend that the claimed invention is directed to such improvements in computer capabilities (*see* App. Br. 23–24), there is no persuasive evidence on this record to substantiate such a contention.

We also find unavailing Appellants' contention that the claimed invention does not preempt all ways of selecting services based on aggregated member choices. App. Br. 22–23. Where, as here, the claims cover a patent-ineligible concept, preemption concerns "are fully addressed and made moot" by an analysis under the *Alice/Mayo* framework. *See Ariosa Diagnostics, Inc. v. Sequenom, Inc.*, 788 F.3d 1371, 1379 (Fed. Cir. 2015).

We, therefore, agree with the Examiner that claim 29 is directed to an abstract idea.

Claims 29, 40, and 57: Alice/Mayo Step Two

Turning to *Alice/Mayo* step two, claim 29's additional recited elements, namely the recited computer-readable medium storing processor executable instructions that when executed by a computer cause the computer to perform the recited method—considered individually and as an ordered combination—do not provide an inventive concept such that these additional elements amount to significantly more than the abstract idea. *See Alice*, 573 U.S. at 221; *see also* Guidance, 84 Fed. Reg. at 56. As noted

above, the claimed invention merely uses generic computing components to implement the recited abstract idea.

To the extent Appellants contend that the recited limitations, including those detailed above in connection with *Alice* step one, add significantly more than the abstract idea to provide an inventive concept under *Alice/Mayo* step two (*see* App. Br. 20–22; Reply Br. 7–10), these limitations are not *additional* elements *beyond* the abstract idea, but rather are directed to the abstract idea as noted previously. *See* Guidance, 84 Fed. Reg. at 56 (instructing that *additional* recited elements should be evaluated in *Alice/Mayo* step two to determine whether they (1) *add* specific limitations that are not well-understood, routine, and conventional in the field, or (2) simply *append* well-understood, routine, and conventional activities previously known to the industry (citing MPEP § 2106.05(d)).

Rather, the recited computer-readable medium storing processor executable instructions that when executed by a computer cause the computer to perform the recited method is the only additional recited element whose generic computing functionality is well-understood, routine, and conventional. *See CyberSource*, 654 F.3d at 1374 (noting that the underlying invention for both the method and computer-readable medium claims was a *method* for detecting credit card fraud—not a manufacture for storing computer-readable information); *Intellectual Ventures*, 792 F.3d at 1368 (noting that a recited user profile (i.e., a profile keyed to a user identity), database, and communication medium are generic computer elements); *Mortgage Grader, Inc. v. First Choice Loan Servs. Inc.*, 811 F.3d 1314, 1324–25 (Fed. Cir. 2016) (noting that components such an "interface," "network," and "database" are generic computer components that do not

satisfy the inventive concept requirement); *buySAFE, Inc. v. Google, Inc.*,
765 F.3d 1350, 1355 (Fed. Cir. 2014) ("That a computer receives and sends
the information over a network—with no further specification—is not even
arguably inventive."). *Accord* Spec. 4–5 (describing generic computer
components used to implement the invention, including a computer-readable
medium); Ans. 4, 21–22 (concluding that the claims' generically recited
computer elements do not add significantly more than the abstract idea).

In conclusion, the additional recited elements—considered
individually and as an ordered combination—do not add significantly more
than the abstract idea to provide an inventive concept under *Alice/Mayo* step
two. *See Alice*, 573 U.S. at 221; *see also* Guidance, 84 Fed. Reg. at 56.

Therefore, we are not persuaded that the Examiner erred in rejecting
claim 29, and claims 40 and 57 not argued separately with particularity.

Dependent Claims

We also sustain the Examiner's ineligibility rejection of dependent
claims 31 and 41–56. Appellants' contention that the *claimed techniques*,
including those recited in various dependent claims, are not well-understood,
routine, or conventional (*see* App. Br. 19, 21–22; Reply Br. 7–10) is
unavailing. Notably, these limitations are not *additional* elements *beyond*
the abstract idea, but rather are directed to the abstract idea. *See* Guidance,
84 Fed. Reg. at 56 (instructing that *additional* recited elements should be
evaluated in *Alice/Mayo* step two to determine whether they (1) *add* specific
limitations that are not well-understood, routine, and conventional in the
field, or (2) simply *append* well-understood, routine, and conventional
activities previously known to the industry (citing MPEP § 2106.05(d)).

Accord Ans. 22 (determining that the dependent claims merely further detail the *abstract* elements recited in the independent claims). As noted above, the the recited computer-readable medium storing processor executable instructions that when executed by a computer cause the computer to perform the recited method is the only additional recited element whose *generic computing functionality* is well-understood, routine, and conventional. *Accord* Spec. 4–5 (describing generic computer components used to implement the invention, including a computer-readable medium); Ans. 4, 21–22 (concluding that the claims' generically recited computer elements do not add significantly more than the abstract idea).

Given these descriptions of generic computer components and their functionality in the Specification and case law noted previously, there is ample evidence on this record to show that the recited additional elements' *generic computing functionality* is well-understood, routine, and conventional.

Accordingly, we sustain the Examiner's ineligibility rejection of dependent claims 31 and 41–56.

THE INDEFINITENESS REJECTION

The Examiner finds that claim 29 is indefinite because it is unclear how the highest gaining category is identified when a "tie" exists, namely when the first member selects a first category service and a second member selects a second category service. Ans. 5–6, 27.

Appellants argue that not only does the Specification support tiebreaking, but there is no obligation to claim all possible variants or

outcomes so long as one or more outcomes can be understood in view of the Specification. App. Br. 25–26; Reply Br. 10.

ISSUE

Has the Examiner erred in rejecting claims 29, 31, and 40–57 under § 112, second paragraph by finding that the recited highest gaining category identification renders the claims indefinite?

ANALYSIS

Claim 29 recites, in pertinent part, obtaining (1) a first member choice from a first member selecting at least one service, and (2) *at least* a second member choice from *at least* a second member selecting at least one service. Our emphasis underscores that although the claim requires obtaining choices from the first and second members, it is not so limited: choices can also be obtained from other members as well (i.e., *at least* a second member), and aggregated with those from the first two members into a decision result to identify the highest gaining category.

Leaving aside the fact that pages 9 and 17 of Appellants' Specification discuss various tie-breaking remedies as Appellants indicate (App. Br. 25), the claim is not limited to *only* a scenario yielding a tie when the first member selects a first category service and a second member selects a second category service as the Examiner seems to suggest. *See* Ans. 5–6, 27. That the claims are broad in scope does not mean that they are indefinite. *See In re Gardner*, 427 F.2d 786, 788 (CCPA 1970) ("Breadth is not indefiniteness."). In short, claim 29 is sufficiently clear on this record.

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Therefore, we are persuaded that the Examiner erred in rejecting (1) independent claim 29; (2) independent claims 40 and 57 which recite commensurate limitations[7]; and (3) the dependent claims for similar reasons.

THE ANTICIPATION REJECTION

The Examiner finds that Storey discloses every recited element of claim 29 including, among other things, (1) classifying services offerable by an establishment into two or more categories; (2) aggregating first and second member choices into a decision result identifying the highest gaining category; and (3) proactively determining a service selection based at least partly on the highest gaining category. Ans. 6–8, 28–30.

Appellants argue that Storey does not disclose a highest gaining category as claimed, but rather selects options from different categories for a single product based on a majority vote. App. Br. 27–29; Reply Br. 10.

ISSUE

Under § 102, has the Examiner erred in rejecting claim 29 by finding that Storey (1) classifies services offerable by an establishment into two or more categories; (2) aggregates first and second member choices into a decision result identifying the highest gaining category; and (3) proactively determines a service selection based at least partly on the highest gaining category?

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[7] Although independent claim 40 does not recite the first and second member choices unlike independent claims 29 and 57, our analysis nevertheless applies for the limitations reciting obtaining a vote related to first and second products in respective categories in claim 40.

ANALYSIS

As noted above, a key aspect of the claimed invention is that a service is selected based on the highest gaining *category* of an establishment's services resulting from a category-based classification of those services.

Given this category-based selection, we find the Examiner's anticipation rejection problematic on this record. As noted in Storey's Abstract, a company uses feedback from respondents in developing and launching a new product. During product design, respondents can (1) view options under various categories including taste, color, texture, scent, dimensions, etc., and (2) vote for the option(s) *under each category* that they want the product or service to have. Storey ¶¶ 35–36, 38. The options receiving the most votes may be accepted by the vending entity into the product's design. *Id.* ¶ 39.

Our emphasis underscores by voting for options under each category in Storey, the highest-gaining *option* is determined for each category. But this does not mean that the highest gaining *category* is necessarily determined as the Examiner seems to suggest. *See* Ans. 6–8, 28–30.

An example using several of Storey's categories in paragraph 35 illustrates this point. Suppose, for example, a product's categories are "color" and "dimensions," and the options in the "color" category are "red" and "blue," and the options in the "dimensions" category are "large" and "small." For simplicity, suppose three respondents are asked to vote for these various options during product design.

If two respondents vote for (1) the "red" option in the "color" category and (2) the "large" option in the "dimensions" category, then "red" and "large" are the highest gaining *options* in their respective categories.

But because votes are received in both categories, there is no highest gaining *category*. That is, both categories each have an equal number of votes, namely three: two votes for one option, and one vote for the other option.

To be sure, if one respondent does not vote for an option in a particular category, one category would have more votes than another. That is, in the above example, if one of the three respondents voted only for the "red" option in the "color" category, but did not vote for any option in the "dimensions" category, the "color" category would have *three* total votes, but the "dimensions" category would have only *two* total votes. In this scenario, then, the highest gaining category is the "color" category.

Notwithstanding this hypothetical scenario premised on vote omission or abstention, we nevertheless agree with Appellants at least to the extent that Storey does not *necessarily* identify a highest gaining category, let alone select services based on that particular category. The Examiner's anticipation rejection is, therefore, problematic for that reason alone. We do, however, leave the question of whether such an identification would have been obvious over Storey in light of this hypothetical scenario (or similar scenarios) to the Examiner to consider after this opinion.

Therefore, we are persuaded that the Examiner erred in rejecting (1) independent claim 29; (2) independent claim 57 that recites commensurate limitations; and (3) dependent claim 31 for similar reasons.

THE OBVIOUSNESS REJECTIONS OF CLAIMS 52–56

Because the Examiner has not shown that the additional cited prior art cures the foregoing deficiencies regarding the rejection of independent claim

29, we will not sustain the obviousness rejections of dependent claims 52–56 (Ans. 8–11) for similar reasons.

THE OBVIOUSNESS REJECTION OVER YOSHIDA AND BABBITT

Regarding independent claim 40, the Examiner finds that Yoshida discloses, among other things, a collection component configured to obtain a vote related to two or more products, where first and second products are identified in respective categories, and a selection component configured to select a highest totaling product from the category with the higher total. Ans. 12–15, 32. Although the Examiner acknowledges that Yoshida lacks the recited security component, the Examiner cites Babbitt for teaching this feature in concluding that the claim would have been obvious. Ans. 15.

Appellants argue that although Yoshida's categories may guide users to ideas or articles in a related category, vote totals are not tabulated by category. App. Br. 31. Although Appellants acknowledge that Yoshida ranks ideas or articles by popularity, Appellants nonetheless contend that a highest totaling product is not selected from the category with the higher total as claimed. *Id.* Appellants add that the Examiner's reliance on Babbitt is misplaced because it is non-analogous art nor does it assist in identifying products or services likely to receive particular adoption or satisfaction levels. *Id.*

ISSUES

I. Under § 103, has the Examiner erred by finding that Yoshida and Babbitt collectively would have taught or suggested:

(1) a selection component configured to select a highest totaling product from the category with the higher total as recited in claim 40?

(2) the weight factor is based at least partly on the voter spending a credit on the vote as recited in claim 43?

II. Is the Examiner's proposed combination of the cited references supported by articulated reasoning with some rational underpinning to justify the Examiner's obviousness conclusion?

ANALYSIS

Claims 40 and 51

We sustain the Examiner's rejection of claim 40 reciting, in pertinent part, a selection component configured to select a highest totaling product from the category with the higher total—a limitation that is at least suggested by Yoshida as the Examiner indicates. *See* Ans. 14–15, 32.

Yoshida's system shares ideas in an online environment by, among other things, (1) sending a webpage to clients including sections that each include at least one idea related to improving a product, and (2) receiving votes for at least one of the sections. Yoshida, Abstract; ¶ 6. As shown in Yoshida's Figure 6, the view ideas function 602 brings users to a webpage where ideas are listed in a ranked order. *Id.* ¶ 103. The categories function 616 also allows the user to select one of a particular group of categories to obtain statistics about associated ideas, votes, and comments. *See id.* ¶¶ 103, 111.

As shown in Yoshida's Figure 9, after the user selects one of several categories in step 904, the user is presented with ideas from the selected category in step 906. Yoshida ¶ 126. Notably, upon returning to step 904,

web document 302 may still display the selected category. With the selected category displayed in step 904, the user can then select to view ideas that are ranked according to *popularity* in steps 916 or 918. *See id.* ¶¶ 130–131; Fig. 9.

Yoshida's functionality in Figure 9, then, enables users to view *each* category and its associated ideas—including those with the highest totals as indicated by their popularity ranking—by successively selecting each category in step 906 and viewing their most popular ideas in steps 916 and 918. By selecting each category and viewing the popularity of each category's respective ideas, the user could determine the category with the highest totals by merely comparing the respective popularities of each category's ideas. Although Yoshida does not state explicitly that particular categories are ranked according to popularity, this determination would have nonetheless been at least an obvious variation given Yoshida's functionality enabling successive category-based idea popularity determinations noted above. To the extent that Appellants contend that determining the category with the highest total based on this functionality would have been uniquely challenging or otherwise beyond the level of ordinarily skilled artisans, there is no persuasive evidence on this record to substantiate such a contention. *See Leapfrog Enters., Inc. v. Fisher-Price, Inc.*, 485 F.3d 1157, 1162 (Fed. Cir. 2007).

Not only does this functionality at least suggest selecting a highest totaling product from the category with the higher total, the fact that the particular ranking of ideas can also determine which idea is placed in the banner or margin of a webpage as noted in Yoshida's paragraph 186 also at least suggests selecting a highest totaling product, namely the most popular

product, in connection with this rearrangement. *See* Yoshida ¶¶ 126, 130–131, 186; *accord* Ans. 14 (noting this idea-based webpage rearrangement functionality). That Appellants do not acknowledge—let alone persuasively rebut—this particular finding based on Yoshida's idea-based webpage rearrangement (*see* App. Br. 30–31; Reply Br. 10) only weighs further in favor of the Examiner.

We are also not persuaded in the Examiner's reliance on Babbitt merely to show that using security components to determine that a vote is not subject to tampering is known in the art, and that providing such a security component in connection with Yoshida's idea-based voting system would have been obvious to ensure integrity of the election results. *See* Ans. 15 (citing Babbitt ¶¶ 3, 24, 28). Such an enhancement uses prior art elements predictably according to their established functions—an obvious improvement. *See KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 417 (2007). Moreover, Babbitt's voting system is reasonably pertinent to Appellants' problem, at least with respect to ensuring election integrity via security components and, therefore, constitutes analogous art. *See In re Bigio*, 381 F.3d 1320, 1325 (Fed. Cir. 2004) (noting that prior art is analogous if it is (1) from the same field of endeavor regardless of the problem addressed, or (2) reasonably pertinent to the particular problem with which the inventor is involved). The Examiner's proposed combination of the cited references is, therefore, supported by articulated reasoning with some rational underpinning to justify the Examiner's obviousness conclusion.

Accordingly, we are not persuaded that the Examiner erred in rejecting claim 40, and claim 51 not argued separately with particularity.[8]

Claim 43

We also sustain the Examiner's rejection of claim 43 reciting that the weight factor is based at least partly on the voter spending a credit on the vote. Despite Appellants' arguments to the contrary (App. Br. 32), we see no error in the Examiner's reliance on Yoshida's paragraphs 15 and 84 for at least suggesting the recited limitations. Ans. 15, 33–34. Even assuming, without deciding, that Yoshida's weighing votes more heavily where a premium subscription is present covers all votes as Appellants contend (App. Br. 32), nothing in the claim precludes the voter spending this subscription-based credit on the vote to affect its weight. Appellants' arguments are, therefore, unavailing and not commensurate with the scope of the claim.

Accordingly, we are not persuaded that the Examiner erred in rejecting claim 43.

THE REJECTION OVER YOSHIDA, BABBITT, AND SO

We also sustain the Examiner's rejection of claim 41 reciting obtaining the vote is initiated based on a question submitted by the voter associated with the vote. *See* Ans. 16–17, 33. Even assuming, without

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[8] Although Appellants nominally argue claim 51 separately (App. Br. 32), Appellants reiterate arguments made for claim 40. We, therefore, group these claims accordingly. We treat other nominally-argued claims similarly, and group those claims accordingly.

deciding, that So's questions are targeted to specific voters and not submitted by the voters themselves as Appellants contend (App. Br. 31–32), the Examiner's rejection is not based on So alone, but rather the collective teachings of Yoshida and So as the Examiner indicates. Ans. 33. Therefore, Appellants' arguments regarding So's individual shortcomings in this regard (App. Br. 31–32) do not show nonobviousness where, as here, the rejection is based on the cited references' collective teachings. *See In re Merck & Co.*, 800 F.2d 1091, 1097 (Fed. Cir. 1986).

Accordingly, we are not persuaded that the Examiner erred in rejecting claim 41.

THE REJECTION OVER YOSHIDA, BABBITT, SO, AND KOIDE

We also sustain the Examiner's rejection of claim 47 reciting a monitor component configured to observe an effectiveness level of the implementation of the selected product based at least partly on a subsequent sale history of the selected product. Despite Appellants' arguments to the contrary (App. Br. 32), we see no error in the Examiner's reliance on Koide for at least suggesting the recited limitations for the reasons noted above and by the Examiner. Ans. 18–19, 35 (citing Koide, Abstract; ¶ 45; Figs. 2–3). Therefore, we are not persuaded that the Examiner erred in rejecting claim 47, and claim 48 not argued separately with particularity.

CONCLUSION

The Examiner did not err in rejecting claims 29, 31, and 40–57 under § 101, but erred in rejecting those claims under § 112.

The Examiner erred in rejecting claims 29, 31, and 57 under § 102.

Under § 103, the Examiner erred in rejecting claims 52–56, but did not err in rejecting claims 40–51.

DECISION

We affirm the Examiner's decision to reject claims 29, 31, and 40–57. Because the rejection of each appealed claim is affirmed on at least one of the grounds specified in the Office Action from which the appeal was taken, the Examiner's decision to reject claims 29, 31, and 40–57 is affirmed. *See* 37 C.F.R. § 41.50(a)(1).

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED