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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte KEREN ZIMMERMAN and NOAM JAVITS

Appeal 2020-000967
Application 15/164,272
Technology Center 3600

Before JAMES P. CALVE, LISA M. GUIJT, and
LEE L. STEPINA, *Administrative Patent Judges*.

CALVE, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Pursuant to 35 U.S.C. § 134(a), Appellant¹ appeals from the decision of the Examiner to reject claims 1–6, 8–18, and 20–23, which are all the pending claims.² We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

¹ “Appellant” refers to “applicant” as defined in 37 C.F.R. § 1.42. Appellant identifies Personali Inc. as the real party in interest. Appeal Br. 3.

² Claims 7 and 19 are cancelled. See Appeal Br. 19, 21 (Claims App.).

CLAIMED SUBJECT MATTER

Claims 1, 12, and 13 are independent. Claim 1 is reproduced below.

1. A method for preventing electronic shopping cart abandonment in an electronic commerce (e-commerce) website, comprising:

receiving by an e-commerce server a message that at least one product is added to an electronic shopping cart of the e-commerce website displayed on a consumer device;

collecting by the e-commerce server at least one user-activity parameter related to a user of the consumer device;

identifying, using the at least one user-activity parameter, an attempt of a user of the consumer device not to complete a purchase transaction of the at least one product;

comparing each of the at least one user-activity parameter to a baseline;

generating a significant parameter for each user-activity parameter being deviate from the respective baseline by a predefined threshold, wherein the identification of an attempt not to complete a purchase is determined upon generation of at least one significant parameter;

selecting at least one motivational content item for display on the consumer device; and

causing a display of the selected at least one motivational content item on a display of the consumer device.

Appeal Br. 18 (Claims App.).

REJECTIONS

Claims 1–6, 8–18, and 20–23 are rejected as directed to a judicial exception to 35 U.S.C. § 101.

Claims 1, 2–4, 6, 12–16, and 18 are rejected under 35 U.S.C. § 102 as anticipated by Shafiee (US 6,771,766 B1, iss. Aug. 3, 2004).

Claims 5, 8–11, 17, and 20–23 are rejected under 35 U.S.C. § 103 as unpatentable over Shafiee and Rampell (US 2008/0091528 A1, pub. Apr. 17, 2008).

ANALYSIS

Patent Eligibility under 35 U.S.C. § 101

Appellant argues the claims as a group. *See* Appeal Br. 7–12. We select claim 1 as representative. *See* 37 C.F.R. § 41.37(c)(1)(iv).

Examiner’s Determination

The Examiner determines that the claims recite the abstract idea of providing incentives, offers, and discounts to complete a purchase. Final Act. 4. The Examiner determines the claims recite a method of organizing human activities by managing transactions, satisfying legal obligations, and tailoring content based on information about a user, and mental processes for collecting and comparing data. *Id.* at 4–6, 19, 21. The Examiner determines that the claims recite additional elements as generic computer elements that perform the abstract idea rather than improve technology. *Id.* at 11–12, 17–22. According to the Examiner, the claims recite the use of technology as a tool to perform the abstract idea without transforming the idea. *Id.* at 19, 25.

Appellant’s Contentions

Appellant argues there is a marketing and sales aspect of encouraging customer engagement and retaining sales, but the claims are tailored to a technologically advanced, personalized means of accomplishing that goal. Appeal Br. 9. Appellant asserts that the claims require technical elements of identifying a user-activity parameter and comparing it to a baseline, which is more than a commercial transaction or mental process. *Id.* at 10. Appellant also argues that the claims recite a specific improvement in how to display motivational content tailored to a specific consumer based on user-activity parameters compared to a baseline and timing, and these elements are not well understood, routine, or conventional. *Id.* at 10–12.

Principles of Law

Section 101 of the Patent Act states:

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. This provision contains an implicit exception: “Laws of nature, natural phenomena, and abstract ideas are not patentable.” *Alice Corp. Pty. v. CLS Bank Int’l*, 573 U.S. 208, 216 (2014).

To distinguish patents that claim laws of nature, natural phenomena, and abstract ideas from those that claim patent-eligible applications, we first determine whether the claims are directed to a patent-ineligible concept. *Id.* at 217. If they are, we consider the elements of each claim, individually and “as an ordered combination,” to determine if additional elements “‘transform the nature of the claim’ into a patent-eligible application” as an “inventive concept” sufficient to ensure the claims in practice amount to significantly more than a patent on the ineligible concept itself. *See id.* at 217–18.

The USPTO has issued guidance about this framework. 2019 Revised Patent Subject Matter Eligibility Guidance, 84 Fed. Reg. 50 (Jan. 7, 2019) (“Revised Guidance”). Under the Revised Guidance, to determine whether a claim is “directed to” an abstract idea, we evaluate whether the claim recites (1) any judicial exceptions, including certain groupings of abstract ideas listed in the Revised Guidance (i.e., mathematical concepts, certain methods of organizing human activities such as a fundamental economic practice, or mental processes); and (2) additional elements that integrate the judicial exception into a practical application (*see* MPEP §§ 2106.05(a)–(c), (e)–(h) (9th ed. rev. 08.2017 Jan. 2018) (“MPEP”)). *Id.* at 52–55.

Only if a claim (1) recites a judicial exception and also (2) does not integrate that exception into a practical application, do we then consider 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) simply appends well-understood, routine, conventional activities previously known to the industry, specified at a high level of generality, to the judicial exception. *Id.* at 56.

Step 1: Is Claim 1 Within a Statutory Category?

Claim 1 recites a “method” which is within a statutory category of 35 U.S.C. § 101, namely, a process. Final Act. 4. Thus, we next consider whether claim 1 recites a judicial exception.

Step 2A, Prong 1: Does Claim 1 Recite a Judicial Exception?

We agree with the Examiner that claim 1 recites certain methods of organizing human activity and mental processes. The Revised Guidance enumerates this concept as (1) certain methods of organizing human activity of commercial interactions for marketing and sales activities and (2) mental processes—concepts performed in the human mind. *See* Revised Guidance, 84 Fed. Reg. at 52.

The claims relate to a “method for preventing users from abandoning electronic shopping carts in e-commerce websites.” Spec. ¶2. The method motivates consumers to complete an online purchase that they have started by targeting motivational content at them to dissuade them from abandoning their electronic shopping cart. *Id.* ¶¶ 6, 9, 10, 16. The preamble of claim 1 recites this commercial activity as “[a] method for preventing electronic shopping cart abandonment in an electronic commerce (e-commerce) website.” Appeal Br. 18 (Claims App.).

The first two limitations of claim 1 recite steps of collecting data of a user's shopping activities that will be organized for sales and marketing in the subsequent steps. The first step "receiv[es] by an e-commerce server a message that at least one product is added to an electronic shopping cart of the e-commerce website displayed on a consumer device." The second step "collect[s] by the e-commerce server at least one user-activity parameter related to a user of the consumer device." Appeal Br. 18 (Claims App.).

The Specification describes the steps as tracking a user's shopping activity. Spec. ¶ 21. An e-commerce server 130 is configured to receive a message that a user is browsing an e-commerce website and a product was placed in an electronic shopping cart. *Id.* The message may be derived by a script or cookie saved locally in consumer device 110, or it may be provided by web source 150 that hosts the e-commerce website. *Id.* ¶¶ 21, 22.

Upon notification that the user added a product to a shopping cart, e-commerce server 130 collects parameters about the user's activity. *Id.* ¶ 23. User-activity parameters include the amount of time a user spends searching for a certain good or service, gestures received from the user (e.g., click, tap, swipe, keystroke), user queries/portions of queries, products and quantities in the shopping cart. *Id.* ¶ 24. User parameters also may include behavioral information, shopping history information, demographic information, the time spent searching for a certain product, gestures, queries submitted, and products added to a shopping cart and the time they were added. *Id.* ¶ 35.

The next step organizes the user's commercial activities for targeted marketing by "identifying, using the at least one user-activity parameter, an attempt of a user of the consumer device not to complete a purchase transaction of the at least one product." Appeal Br. 18 (Claims App.).

The next limitations recite this step in more detail as “comparing each of the at least one user-activity parameter to a baseline” and “generating a significant parameter for each user-activity parameter being deviate from the respective baseline by a predefined threshold, wherein the identification of an attempt not to complete a purchase is determined upon generation of at least one significant parameter.” Appeal Br. 18 (Claims App.).

The Specification describes this organizational, analytical step as one of comparing the user-activity parameters to baselines for each parameter to identify a “significant parameter.” Spec. ¶¶ 25–27, 37, 38.

The Specification describes “baselines” as predefined thresholds that are computed based on data collected from multiple users or a specific user, e.g., the amount of time an average user spends searching for a product. *See* Spec. ¶ 25. Baselines may represent normal behavior of a user or an average time to perform an activity such as to complete a transaction. *Id.* ¶ 37.

A “significant parameter” is a user-activity parameter that exceeds a “baseline” for that parameter, e.g., by deviating from the baseline’s value. *Id.* ¶¶ 25, 37. For example, if an average user spends two minutes searching for a particular product and the identified user spends five minutes searching for the product, the five-minute search exceeds the two-minute baseline and is considered a “significant parameter.” *Id.* ¶ 25. Similarly, if a threshold (baseline) time for completing a purchase of a coffee mug is two minutes and fifteen minutes have elapsed since a coffee mug was added to a cart, this elapsed time exceeds the baseline so a “significant parameter” is generated to indicate the user may abandon the transaction. *Id.* ¶¶ 27, 38. “Significant parameters” implicitly identify a user abandoning a transaction based on a comparison of collected user-activity parameters to baselines. *Id.* ¶¶ 26, 37.

These limitations, interpreted in light of the Specification, organize activities of users involved in commercial sales on an e-commerce web site. They collect information about those activities such as products added to an electronic shopping cart and parameters of a user's e-commerce activities. They compare the user-activity parameters to baseline values and generate a significant parameter if the user-activity parameter deviates from a baseline to identify a user's attempt to abandon a purchase. These limitations collect, analyze, and organize e-commerce sales activities for targeted marketing.

The final limitations recite targeted marketing steps applied as extra-resolution activity to the collection, analysis, and organization of the user's e-commerce activities. The steps involve "selecting at least one motivational content item for display on the consumer device; and causing a display of the selected at least one motivational content item on a display of the consumer device." Appeal Br. 18 (Claims App.).

A "motivational content item" includes a discounted price to buy a product, a discounted price for add-on products, additional services related to the product, other incentives to buy the product, a time limited discount coupon, an offer for free shipping, or an invitation to bid on the product. Spec. ¶¶ 29, 30, 40, 42. The motivational content item may be a message stating that the price of the product will increase after five minutes. *Id.* ¶ 30.

One or more selected motivational content items may be displayed on a display of consumer device 110. *Id.* ¶¶ 28, 44. An offer of a discount on a product if a purchase transaction is completed in the next five minutes may be displayed. *Id.* ¶ 30. A first content item may display a discount of 5%, and, if the user does not respond within five seconds, a second content item is displayed to offer a 5% discount and free shipping. *Id.* ¶ 44.

Claim 1 organizes commercial sales activities for targeted marketing. Claim 1 recites steps that provide customized content (motivational content item) to a user based on a user's activity adding a product(s) to an electronic shopping cart and other user-activity parameters indicating the user may not complete the purchase transaction. Appeal Br. 18; Spec. ¶¶ 21–29, 33–46.

Displaying a motivational content item(s) on a portion of a web site viewed by a user based on a user's web site navigation data and information about the user is an abstract idea. *See Intellectual Ventures I LLC v. Capital One Bank (USA)*, 792 F.3d 1363, 1369 (Fed. Cir. 2015) (holding “the claim relates to customizing information based on (1) information known about the user and (2) navigation data” and location, which is an abstract idea).

Here, claim 1 displays customized motivational content on a display of a consumer device based on information organized about users and their navigation data. This user information/navigation data includes a product added to an electronic shopping cart, the time spent searching for a good or service, gestures (click, tap, swipe, keystroke), queries, navigating away from the website, other products in a shopping cart, time elapsed after a product is added to a cart, and browsing different products. Spec. ¶¶ 24–27. The motivational content item is selected to incentivize the user to purchase a particular product through the e-commerce website and may include a time limited discount coupon for purchasing the product of interest, applying a discount on the product, or increasing the price after a certain period of time. *Id.* ¶ 40. “[S]election of content items may be based on parameters related to the user activity on an e-commerce website used to determine the user interest in the product.” *Id.* ¶ 41. Detecting a user navigating away from a website may elicit an offer of free shipping for the product. *Id.* ¶ 42.

“[M]otivational content items provide incentives to the user to avoid the abandonment of the shopping cart.” *Id.* ¶44. Multiple motivational content items can be displayed for different thresholds of a user’s activities to promote a purchase. *Id.* A first content item may display a 5% discount, and a second content item can offer a 5% discount and free shipping if the user does not respond to the first content item within five seconds. *Id.*

A claim to a similar method of providing customized content based on a user profile recited an abstract idea in *Bridge and Post, Bridge and Post, Inc. v. Verizon Commc’ns, Inc.*, 778 F. App’x 882, 887 (Fed. Cir. 2019) (“Targeted marketing is a form of ‘tailoring information based on [provided] data,’ which we have previously held is an abstract idea.”) (citation omitted).

The user profile included information about the user such as historic usage patterns and location-centric information. This information was used to place customized media in website content provided to the user. *See id.* at 886–87; *see also Affinity Labs of Texas, LLC v. Amazon.com, Inc.*, 838 F.3d 1266, 1271 (Fed. Cir. 2016) (holding that customizing a user interface to provide targeted advertising based on user information is an abstract idea).

Here, claim 1 places motivational content customized to a user in web pages provided to the user based on a user-activity profile of usage patterns (user-activity parameters) and location information (navigation data history). *See Spec.* ¶¶ 24–26, 37, 41, 42, 48, Fig. 3B (motivational item 350).

Many limitations of claim 1 also recite mental processes that can be performed in the human mind or by a person using pen and paper. A person can receive a message when a product is added to an electronic shopping cart and collect a parameter of a user’s activities. A person can organize and compare a user-activity parameter to a baseline (i.e., predefined threshold).

In *Intellectual Ventures I*, a method of tracking financial transactions to determine if they exceed a pre-set spending limit recited an abstract idea. *Intellectual Ventures I*, 792 F.3d at 1367 (finding a method of organizing human activity). The calculations also could be made using a pencil and paper with a simple notification device. *See id.* at 1368 (citing *CyberSource Corp. v. Retail Decisions, Inc.*, 654 F.3d 1366, 1371 (Fed. Cir. 2011)).

Here, a user-activity parameter can be compared to a pre-set baseline (threshold) as a mental process to determine if the parameter deviates from the baseline to be treated as a “significant parameter.” Spec. ¶¶ 37, 38. For example, a person can compare a five minute search time for a product to a two minute baseline search time for that product to identify a deviation and a significant parameter, as claimed, as a mental process. *See id.* ¶ 25.

These claimed steps are similar to method steps in *CyberSource* that “can be performed in the human mind, or by a human using pen and paper.” *CyberSource*, 654 F.3d at 1372. The first step collected user transaction data by using an Internet address identified with a credit card transaction. This step “can be performed by a human who simply reads records of Internet credit card transactions from a preexisting database.” *Id.* The second step built a map of credit card numbers and can be performed by a person writing down a list of credit card transactions made from an IP address. *Id.* (“There is no language in claim 3 or in the ’154 patent’s specification that requires the constructed ‘map’ to consist of anything more than a list of a few credit card transactions.”). The third step used the map to determine the validity of a credit card transaction and can be performed by observing transactions that used different credit cards, user names, and billing addresses at the same IP address. *Id.* at 1373.

Here, a person can collect and map user-activity parameters, which the Specification describes as time spent searching for a product, gestures and queries, and user navigation. A person can compare these parameters to baseline (threshold) values to determine if the parameters deviate from the baselines as a mental process or with pen and paper. *See id.* at 1371 (citing *Parker v. Flook*, 437 U.S. 584, 586 (1978) that calculating alarm limits that were threshold values could be performed using a pencil and paper).

Analyzing information by steps that people go through in their minds, without more, is a mental process within the abstract idea category. *Elec. Power Grp. LLC v. Alstom S.A.*, 830 F.3d 1350, 1354 (Fed. Cir. 2016).

For example, a method of filtering emails for spam by receiving a file content identifier and determining whether the content identifier matches a characteristic of other identifiers to indicate the characteristic of the data file recited an abstract idea because the list of relevant characteristics could be kept in a person's head and characterizing an email based on a known list of such identifiers is an abstract idea. *Intellectual Ventures I LLC v. Symantec Corp.*, 838 F.3d 1307, 1313–14 (Fed. Cir. 2016).

Here, a person could retain user-activity parameters and baselines in their head or written down with pen and paper and then compare a collected user-activity parameter to a baseline to determine a deviation and generate a “significant parameter.” Claim 1 thus recites certain methods of organizing human activity for commercial sales and targeted marketing activities using process steps that can be performed in the human mind as mental processes. *See RecogniCorp, LLC v. Nintendo Co.*, 855 F.3d 1322, 1327 (Fed. Cir. 2017) (“Adding one abstract idea . . . to another abstract idea . . . does not render the claim non-abstract.”).

Nor does reciting the method in the context of e-commerce shopping make the method any less abstract. In an analogous case involving a claim to shopping on an Internet website for a mortgage, the court held claims for applying/shopping for a loan on a third party website, calculating a credit grade for the shopper/borrower, and providing loan pricing information all recited limitations that can be performed by humans without a computer. *Mortgage Grader, Inc. v. First Choice Loan Svcs. Inc.*, 811 F.3d 1314, 1324 (Fed. Cir. 2016). The court reasoned that “computational methods which can be performed entirely in the human mind are the types of methods that embody the ‘basic tools of scientific and technological work’ that are free to all men and reserved exclusively to none.” *Id.* (citations omitted).

Similarly, claim 1 here recites a method of shopping at e-commerce websites for products or services, calculating a deviation and generating a significant parameter by comparing user activity to a baseline, and providing a motivational content item. As indicated by the foregoing decisions, steps that can be performed by humans as mental processes recite an abstract idea.

Performance of the steps on the Internet does not take them out of the abstract idea category. *See Ultramercial, Inc. v. Hulu, LLC*, 772 F.3d 709, 716 (Fed. Cir. 2014) (“Given the prevalence of the Internet, implementation of an abstract idea on the Internet in this case is not sufficient to provide any “practical assurance that the process is more than a drafting effort designed to monopolize the [abstract idea] itself.”) (citation omitted).

The motivational marketing content in claim 1 allows a user to receive a discount on a product. The advertisements in *Ultramercial* allowed users to access copyrighted media for free. The targeted motivational content and advertising are designed to encourage commercial sales and transactions.

“[M]erely selecting information, by content or source, for collection, analysis, and *display* does nothing significant to differentiate a process from ordinary mental processes, whose implicit exclusion from § 101 undergirds the information-based category of abstract ideas.” *Elec. Power*, 830 F.3d at 1355 (emphasis added); *see also In re Morsa*, Appeal 2019-1757, 2020 WL 181749, *3, *4 (Fed. Cir. Apr. 10, 2020) (*displaying* targeted advertising is a fundamental economic practice of organizing human activity, and the use of generic network PCs and cell phones does not make it patent eligible).

Collecting user-activity parameters and comparing them to baselines recites mental steps. *See Content Extraction and Transmission LLC v. Wells Fargo Bank, N.A.*, 776 F.3d 1343, 1347 (Fed. Cir. 2014) (holding steps of collecting data, recognizing certain data in the collected data set, and storing the recognized data in a memory recite functions that humans always have performed); *Classen Immunotherapies, Inc. v. Biogen IDEC*, 659 F.3d 1057, 1067 (Fed. Cir. 2011) (holding the idea of collecting and comparing known information recited a mental step). Similarly, analyzing received data based on “limits, sensitivities and rates of change for one or more measurements” recited mental steps in *Electric Power*. *Elec. Power*, 830 F.3d at 1351–52.

Appellant also argues that a human mind cannot, on its own or with the help of pen and paper, interact with an e-commerce device or cause a display change on a consumer device. Appeal Br. 10. However, “[t]hat purely mental processes can be unpatentable, even when performed by a computer, was precisely the holding of the Supreme Court in *Gottschalk v. Benson*. *CyberSource*, 654 F.3d at 1375; *id.* at 1372 (“even if some physical steps are required to obtain information from the database . . . such data-gathering steps cannot alone confer patentability.”).

The Revised Guidance provides the following guidance:

If a claim, under its broadest reasonable interpretation, covers performance in the mind but for the recitation of generic computer components, then it is still in the mental processes category unless the claim cannot practically be performed in the mind.

Revised Guidance, 84 Fed. Reg. at 52 n.14; *see also Intellectual Ventures I LLC v. Symantec*, 838 F.3d at 1318 (holding a claim to screening of email messages according to rules on a mail server was an abstract idea and “with the exception of generic computer implemented steps, there is nothing in the claims themselves that foreclose them from being performed by a human, mentally or with pen and paper.”).

Merely “selecting at least one motivational content item for display on the consumer device” recites a certain method of organizing human activity identified for targeted marketing and sales activities. It recites insignificant extra-solution activity by displaying the results of the mental processes and organized activity with no improvement to the display. *See Elec. Power*, 830 F.3d at 1354 (“And we have recognized that merely presenting the results of abstract processes of collecting and analyzing information, without more (such as identifying a particular tool for presentation), is abstract as an ancillary part of such collection and analysis.”); *SAP Am., Inc. v. Investpic, LLC*, 898 F.3d 1161, 1167 (Fed. Cir. 2018) (holding that merely presenting the results of abstract processes is an ancillary part of the collection and analysis).

Accordingly, and for the foregoing reasons, we determine that claim 1 recites the abstract idea of certain methods of organizing human activity and mental processes identified above.

Step 2A, Prong Two: Integration into a Practical Application

We next consider whether claim 1 as a whole integrates the recited judicial exception into a practical application of the exception. *See Revised Guidance*, 84 Fed. Reg. at 54 (Revised Step 2A, Prong Two). We determine that claim 1 lacks any additional elements that improve a computer or other technology. The additional elements do not implement the abstract idea in conjunction with a particular machine or manufacture that is integral to the claim. They do not transform or reduce a particular article to a different state or thing. They do not apply the abstract idea in a meaningful way beyond linking it to a particular environment. *See Revised Guidance*, 84 Fed. Reg. at 55 and MPEP sections cited therein).

Appellant argues that the claim includes

a specific improvement in how to display motivational content, e.g., personalized discounts, that is tailored not only to the specific consumer, based on user-activity parameters, but also on comparisons of such parameters to a baseline, as well as timing the display on the consumer device when such parameters deviate from the baseline above a predefined threshold, is a clear improvement in the technical field of displaying motivational offers directly on consumer device based on the electronic shopping cart of an e-commerce website.

Appeal Br. 11.

The Specification indicates that these features are not improvements to computers or other technology. User activity to include placing an item in a shopping cart is tracked by messages, scripts, cookies, and/or similar data structures. Spec. ¶¶ 21–23. These features are described generically without any indication that they are innovative features or used in an innovative way. Instead, they simply collect and generate data related to user activities.

Implementation on an e-commerce website and server does not take claim 1 out of the abstract realm. *See* Appeal Br. 9–10; *Versata Dev. Grp., Inc. v. SAP Am., Inc.*, 793 F.3d 1306, 1335 (Fed. Cir. 2015) (“Courts have examined claims that required the use of a computer and still found that the underlying, patent-ineligible invention could be performed via pen and paper or in a person’s mind.”).

Appellant admits “there is a marketing and sales aspect to the claimed subject matter, namely the method is directed to encouraging customer engagement and retaining sales” but asserts that “the claims are specifically tailored to a particular technologically advanced and personalized means of accomplishing that goal, rather than an attempt at claiming a generic incentive structure within a commercial area.” Appeal Br. 9–10.

In this regard, Appellant argues that claim 1 requires receiving a message that an item has been added to a shopping cart of an e-commerce website, identifying that a user who has added the item is attempting to not complete a purchase transaction, and selecting and displaying a motivational content item for display on that particular consumer device. The claims require technical elements, e.g., identifying a user-activity parameter and comparing it to a baseline, which raised the claims above mere commercial transactions.

Id. at 10.

We are not persuaded because these limitations are recited at a high level of generality as an abstract idea rather than as technical advances in computers, networks, or software. Appellant’s arguments merely repeat the claim limitations and do not describe what technical advance is provided by identifying a user-activity parameter and then comparing that parameter to a baseline beyond the abstract idea. The Specification’s description of these features is similarly abstract with no indication of a technical advance.

As our reviewing court recently held in a similar context:

In short, by dedicating a section of the computer’s memory to advertising data, the claimed invention ensures memory is available for at least some advertising data. This does not, however, improve the functionality of the computer itself. Even if we accept Customedia’s assertions, the claimed invention merely improves the abstract concept of delivering targeted advertising using a computer only as a tool. This is not what the Supreme Court meant by improving the functioning of the computer itself nor is it consistent with our precedent applying this concept.

Customedia Tech., LLC v. Dish Network Corp., 951 F.3d 1359, 1363 (Fed. Cir. 2020); *see id.* at 1362–63 (“The claims at issue here are directed to the abstract idea of using a computer to deliver targeted advertising to a user, not to an improvement in the functioning of a computer.”); *see also Ericsson Inc. v. TCL Commc’n Tech. Holdings Ltd.*, 955 F.3d 1317, 1327 (Fed. Cir. 2020) (“Controlling access to resources is exactly the sort of process that ‘can be performed in the human mind, or by a human using a pen and paper,’ which we have repeatedly found unpatentable. . . . [W]e have repeatedly found the concept of controlling access to resources via software to be an abstract idea.”) (citations omitted).

Software can make non-abstract improvements, but the claims must recite improvements to computer or network functionality. *See Customedia*, 951 F.3d at 1365. Here, claim 1 recites no such advances. *See Ericsson Inc. v. TCL Commc’n Tech. Holdings Ltd.*, 955 F.3d 1317, 1325 (Fed. Cir. 2020) (holding that the specification yields to the claim language when identifying the focus of a claim); *Two-Way Media Ltd. v. Comcast Cable Commc’ns, LLC*, 874 F.3d 1329, 1340 (Fed. Cir. 2017) (“As with claim 1 of the ’187 patent, the problem is that no inventive concept resides in the claims.”).

Motivational content items are selected based on a parameter(s) of a product such as price range, current inventory level, specific promotion, and the like. *Id.* ¶ 28. Again, there is no indication that Appellant invented such targeted steps or that claim 1 recites an innovative technology for displaying a selected motivational content item on a display as claimed.

If the features represent innovations to computers, networks, or other technology, the innovations are not claimed. The innovative features cited by Appellant to integrate claim 1 into a practical application are the abstract idea identified in Prong One. The description of the features used to track user activity and display motivational content in the Specification makes clear that these features do not represent technical advances in computers or other technology.

“It has been clear since *Alice* that a claimed invention’s use of the ineligible concept to which it is directed cannot supply the inventive concept that renders the invention ‘significantly more’ than that ineligible concept.” *BSG Tech LLC v. Buyseasons, Inc.*, 899 F.3d 1281, 1290 (Fed. Cir. 2018); *see id.* at 1291 (“As a matter of law, narrowing or reformulating an abstract idea does not add ‘significantly more’ to it.”); *see also RecogniCorp, LLC v. Nintendo Co.*, 855 F.3d at 1327 (“Adding one abstract idea (math) to another abstract idea (encoding and decoding) does not render the claim non-abstract.”); *Synopsys, Inc. v. Mentor Graphics Corp.*, 839 F.3d 1138, 1151 (Fed. Cir. 2016) (“But, a claim for a *new* abstract idea is still an abstract idea.”); *Versata Dev. Grp.*, 793 F.3d at 1335 (holding claims that improved an abstract idea but did not recite the alleged computer improvements were not patent eligible); Revised Guidance, 84 Fed. Reg. at 55 n.24 (“additional elements” are claim features beyond the identified judicial exception).

The claimed user-activity parameter, baseline comparison, and motivational content item are recited at a high level of generality as an abstract idea as discussed under Prong One. The features do not represent innovations of hardware or software technology beyond the abstract idea.

Even if the steps are groundbreaking, innovative, or brilliant, that is not enough for eligibility. *See Ass’n for Molecular Pathology v. Myriad Genetics, Inc.*, 569 U.S. 576, 591 (2013); *accord SAP Am.*, 898 F.3d at 1163 (“No matter how much of an advance in the finance field the claims recite, the advance lies entirely in the realm of abstract ideas, with no plausibly alleged innovation in the non-abstract application realm. An advance of that nature is ineligible for patenting.”).

Using an e-commerce server does not integrate the abstract idea into a practical application. *See Alice*, 573 U.S. at 223 (“[T]he mere recitation of a generic computer cannot transform a patent-ineligible abstract idea into a patent-eligible invention.”); *Elec. Power*, 830 F.3d at 1354 (holding that the focus of the claims is on certain abstract ideas that use computers as tools); *Bancorp Svcs., L.L.C. v. Sun Life Assur. Co. of Canada (U.S.)*, 687 F.3d 1266, 1278 (Fed. Cir. 2012) (“[T]he use of a computer in an otherwise patent-ineligible process for no more than its most basic function—making calculations or computations—fails to circumvent the prohibition against patenting abstract ideas and mental processes.”); *Ultramercial*, 772 F.3d at 716–17 (holding a general purpose computer used to execute an abstract idea is not a particular machine and any transformation from using computers to transfer content between computers is merely what computers do).

Accordingly, we determine that claim 1 does not include additional elements that integrate the abstract idea into a practical application.

Step 2B: Does Claim 1 Include an Inventive Concept?

We next consider whether claim 1 recites elements, individually, or as an ordered combination, that provide an inventive concept. *Alice*, 573 U.S. at 217–18. The second step of the *Alice* test is satisfied when the claim limitations involve more than performance of well-understood, routine, and conventional activities previously known to the industry. *Berkheimerv. HP Inc.*, 881 F.3d 1360, 1367 (Fed. Cir. 2018); *see* Revised Guidance, 84 Fed. Reg. at 56 (explaining that the second step of the *Alice* analysis considers whether a claim adds a specific limitation beyond a judicial exception that is not “well-understood, routine, conventional” activity in the field).

E-commerce server 130 includes processing system 132 and memory 134 with instructions executed by processing system 132. Software is any type of instruction, firmware, middleware, microcode, hardware description language, and/or code in source code, binary code, executable code, or any other suitable format of code. Spec. ¶ 19. Processing system 132 may be one or more processors in any combination of known general purpose microprocessors, multi-core processors, microcontrollers, digital signal processors, field programmable gate array, and the like. *Id.*

Individually, the limitations of claim 1 recite aspects of the abstract idea or insignificant extra-solution activity identified above. As an ordered combination, the limitations add nothing that is not the sum of the individual parts that implements the abstract idea. *See Alice*, 573 U.S. at 225.

Accordingly, we determine that claim 1 lacks an inventive concept sufficient to transform the abstract idea into patent eligible subject matter. Thus, we sustain the rejection of claim 1–6, 8–18, and 20–23 as directed to a judicial exception under 35 U.S.C. § 101.

Claims Rejected as Anticipated by Shafiee

Appellant argues the claims as a group. *See* Appeal Br. 13–15. We select claim 1 as representative. *See* 37 C.F.R. § 41.37(c)(1)(iv).

Regarding claim 1, the Examiner finds that Shafiee discloses a method for preventing electronic shopping cart abandonment by receiving a message that a product is added to an electronic shopping cart, collecting a user-activity parameter such as a user removes a product from the cart or the user is dwelling at certain page for a predetermined length of time, viewing certain content, or issuing a particular request or command, and comparing the parameter to a baseline to generate a significant parameter to identify an attempt not to complete a purchase. Final Act. 29–32, 41–42.

Appellant argues that Shafiee fails to teach or suggest comparing a user-activity parameter to a baseline as there is no mention of a baseline or a user-activity compared to an external baseline, and Shafiee only discusses monitoring if items have been removed from a shopping cart. Appeal Br. 14. Appellant asserts that Shafiee fails to generate a significant parameter when a user-activity parameter deviates from the respective baseline by a predefined threshold. *Id.*

The Specification describes user-activity parameters as including, but not limited to, the amount of time a user spends searching for a good or service, user gestures (e.g., a click, tap, swipe, keystroke), user queries, and products with quantities placed in an electronic shopping cart. Spec. ¶ 24.

Shafiee discloses collecting similar user-activity parameters including adding or removing an item from a shopping cart, viewing certain content, dwelling at a certain page for a predetermined time, and issuing a particular request or command. Shafiee, 3:10–18, 7:49–58.

Removing an item from a shopping cart in Shafiee corresponds to a user-activity of tracking products in a shopping cart. Dwelling at a page for a predetermined time in Shafiee corresponds to tracking the amount of time a user spends searching for a good or service. Issuing a particular request or command in Shafiee corresponds to a user-activity of a user gesture or user query as described in Appellant’s Specification. *See Spec.* ¶¶ 24, 26, 37.

We find that Shafiee collects user-activity parameters and identifies parameters related to an attempt not to complete a purchase transaction as claimed. Shafiee also teaches to compare these parameters to a baseline. Removing an item from a shopping cart is compared to a baseline of whether an item remains in the cart. *See Shafiee*, 3:10–18, 7:49–58. Dwelling at a page is measured against a “*predetermined* length of time” to determine whether a “triggering event” has occurred. *Id.* (emphasis added). A user issuing a request or command is compared to a baseline of a “*particular* request or command” to generate a triggering event. *Id.* (emphasis added). Shafiee compares such user-activity parameters to predefined thresholds (baselines) to determine if there is a deviation sufficient to trigger an event, which results in selection and display of a motivational content item in the form of a link for an audio/video conference call with a live agent.

We agree with the Examiner that a “triggering event” in Shafiee also corresponds to the claimed “significant parameter.” If a user-activity in Shafiee exceeds a predetermined threshold (baseline) value, the system initiates a “triggering event” that identifies an attempt not to complete a transaction so that an audio/video conference call can be established with a live agent to facilitate/complete the sales transaction. *Id.* The conference call is a motivational content item that facilitates the sales transaction.

To anticipate, a reference must disclose each and every element of the claimed invention, explicitly or inherently, with those elements “arranged or combined in the same ways as in the claim,” but “the reference does not have to satisfy an *ipsissimis verbis* test.” *In re Gleave*, 560 F.3d 1331, 1334 (Fed. Cir. 2009). We are not persuaded by Appellant’s arguments that the failure of Shafiee to discuss a “significant parameter” or a “baseline” is fatal to the Examiner’s anticipation rejection when the Examiner has identified disclosures in Shafiee of features that correspond to the claimed significant parameter and baseline interpreted in light of the Specification. Appellant has not apprised us of error in those findings of the Examiner.

Thus, we sustain the rejection of claim 1 and claims 2–4, 6, 12–16, and 18, which fall with claim 1.

*Claims 5, 8–11, 17, 21–23
Rejected as Unpatentable Over Shafiee and Rampell*

Appellant asserts that the claims rejected as unpatentable over Shafiee and Rampell depend from either claim 1 or claim 13 and are allowable for the same reasons as those independent claims, and Rampell does not cure the deficiencies of Shafiee as to claims 1 and 13. Appeal Br. 15–16.

Because we sustain the rejection of claims 1 and 13 as anticipated by Shafiee, there are no deficiencies for Rampell to cure in this regard, and we also sustain the rejection of claims 5, 8–11, 17, 21–23.

CONCLUSION

In summary:

Claims Rejected	35 U.S.C. §	Reference(s)/ Basis	Affirmed	Reversed
1-6, 8-18, 20-23	101	Eligibility	1-6, 8-18, 20-23	
1-4, 6, 12-16, 18	102	Shafiee	1-4, 6, 12-16, 18	
5, 8-11, 17, 21-23	103	Shafiee, Rampell	5, 8-11, 17, 21-23	
Overall Outcome			1-6, 8-18, 20-23	

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

AFFIRMED