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PATTERSON & SHERIDAN, L.L.P.
24 Greenway Plaza, Suite 1600
Houston, TX 77046

EXAMINER
PACK, CONRAD R

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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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Ex parte KIRK ROBERT CAMERON

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Appeal 2019-001278
Application 14/286,651
Technology Center 2100

———————

Before DONALD E. ADAMS, RICHARD M. LEBOVITZ, and
MICHAEL A. VALEK, *Administrative Patent Judges*.

LEBOVITZ, *Administrative Patent Judge*.

DECISION ON APPEAL

The Examiner rejected the claims under 35 U.S.C. § 101 as reciting patent ineligible subject matter and under 35 U.S.C. § 103 as obvious. Pursuant to 35 U.S.C. § 134(a), Appellant[1] appeals from the Examiner's decision to reject the claims. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

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[1] We use the word "Appellant" to refer to "applicant" as defined in 37 C.F.R. § 1.42. Appellant did not identify the real party in interest in the Appeal Brief ("Br.").

STATEMENT OF THE CASE

The claims stand finally rejected by the Examiner as follows:

1. Claims 1–4, 6–11, 13–18, and 20 under 35 U.S.C. § 101 because the claimed invention is directed to a judicial exception to patent eligibility. Final Act. 2.

2. Claims 1–3, 7–10, and 14–17 under 35 U.S.C. § 103 as obvious in view of Rogatinsky (US 2002/0069119 A1, published Jun. 6, 2002) ("Rogatinsky"), Hennum et al., US 2007/0277097 A1, published Nov. 29, 2007) ("Hennum"), and Ott et al. (US 2007/0078832 A1, published Apr. 5, 2007) ("Ott"). Final Act. 4.

3. Claims 4, 11, and 18 under 35 U.S.C. § 103 as obvious in view of Rogatinsky, Hennum, and Ott, and in further view of Amell et al. (US 2007/0298404 A1, published Dec. 27, 2007) ("Amell"). Final Act. 17.

4. Claims 6, 13, and 20 under 35 U.S.C. § 103 as obvious in view of Rogatinsky, Hennum, and Ott, and in further view of Halliday et al., (US 2007/0250791 A1, published Oct. 25, 2007) ("Halliday"). Final Act. 19.

Independent claim 1 is representative and is reproduced below (bracketed numbering is added for reference to the limitations in the claims; the numbered limitations are referenced throughout this decision):

> 1. A method for generating media based on input received from a client device, comprising:
>
> [1] receiving user profile information and a selection of a performance mode from a client device;
>
> [2] generating one or more prompts based on the selected performance mode and on the user profile information, [2a] wherein each of the one or more prompts corresponds to one of a plurality of media items stored in a data store, and [2b] wherein each media item is one of an image, a sound, a video, or text stored in a first data store, and [2c] wherein each media item is associated with at least one of a plurality of tags

describing properties and moods for the respective media item,
[2d] wherein the tags are stored in a second data store;
    [3] sending the one or more prompts to the client device;
    [4] receiving responses to each of the one or more
prompts from the client device, wherein each of the responses
correspond to one or more of the media items stored in the first
data store;
    [5] retrieving the plurality of tags from the second data
store;
    [6] determining a user state metric from the received
responses, wherein the user state metric indicates a degree
associated with each of a plurality of user psychological-state
traits;
    [7] identifying a correlation between the user state
metric, the plurality of tags, and the plurality of media items;
    [8] determining, based on the identified correlation, a
technique for generating a collage of multimedia including at
least one of the media items; and
    [9] generating the collage of multimedia based on the
determined technique.

§ 101 REJECTION

The Examiner rejected the claims as being directed to a judicially-
created exception to patent eligibility under 35 U.S.C. § 101.

Principles of Law

Under 35 U.S.C. § 101, an invention is patent-eligible if it claims a
"new and useful process, machine, manufacture, or composition of matter."
However, not every discovery is eligible for patent protection. *Diamond v.
Diehr*, 450 U.S. 175, 185 (1981). "Excluded from such patent protection are
laws of nature, natural phenomena, and abstract ideas." *Id.* The Supreme
Court articulated a two-step analysis to determine whether a claim falls
within an excluded category of invention. *Alice Corp. Pty. Ltd. v. CLS Bank*

Int'l, 573 U.S. 208, 216 (2014); *Mayo Collaborative Servs. v. Prometheus Labs, Inc.*, 566 U.S. 66, 75–77 (2012).

In the first step, it is determined "whether the claims at issue are directed to one of those patent-ineligible concepts." *Alice*, 573 U.S. at 217. If it is determined that the claims are directed to an ineligible concept, then the second step of the two-part analysis is applied in which it is asked "[w]hat else is there in the claims before us?" *Id.* The Court explained that this step involves

> a search for an 'inventive concept' — *i.e.,* an element or combination of elements that is 'sufficient to ensure that the patent in practice amounts to significantly more than a patent upon the [ineligible concept] itself.'

Alice, 573 U.S. at 217–18 (citing from *Mayo*, 566 U.S. at 75–77).

Alice, relying on the analysis in *Mayo* of a claim directed to a law of nature, stated that in the second part of the analysis, "the elements of each claim both individually and 'as an ordered combination'" must be considered "to determine whether the additional elements 'transform the nature of the claim' into a patent-eligible application." *Alice*, 573 U.S. at 217.

The PTO has published revised guidance on the application of 35 U.S.C. § 101. USPTO's January 7, 2019 Memorandum, *2019 Revised Patent Subject Matter Eligibility Guidance,* 84 Fed. Reg. 50, 51–57 (2019) ("Eligibility Guidance"). This guidance provides additional direction on how to implement the two-part analysis of *Mayo* and *Alice*.

Step 2A, Prong One, of the Eligibility Guidance, looks at the specific limitations in the claim to determine whether the claim recites a judicial exception to patent eligibility. In Step 2A, Prong Two, the claims are

examined to identify whether there are additional elements in the claims that integrate the exception in a practical application, namely, is there a "meaningful limit on the judicial exception, such that the claim is more than a drafting effort designed to monopolize the judicial exception." 84 Fed. Reg. 54 (2. Prong Two).

If the claim recites a judicial exception that is not integrated into a practical application, then as in the *Mayo/Alice* framework, Step 2B of the Eligibility Guidance instructs us to determine whether there is a claimed inventive concept to ensure that the claims define an invention that is significantly more than the ineligible concept, itself. 84 Fed. Reg. 56. In making this determination, we must consider whether there are specific limitations or elements recited in the claim "that are not well-understood, routine, conventional activity in the field, which is indicative that an inventive concept may be present" or whether the claim "simply appends well-understood, routine, conventional activities previously known to the industry, specified at a high level of generality, to the judicial exception, indicative that an inventive concept may not be present." 84 Fed. Reg. 56 (footnote omitted).

With these guiding principles in mind, we proceed to determine whether the claimed subject matter in this appeal is eligible for patent protection under 35 U.S.C. § 101.

Discussion

Claim 11 recites that it is a "method." Following the first step of the *Mayo* analysis, we find that the claim therefore falls into one of the broad

statutory categories of patent-eligible subject matter under 35 U.S.C. § 101.
We thus proceed to Step 2A, Prong One, of the 2019 Guidelines.

Step 2A, Prong One

In Step 2A, Prong One, of the Eligibility Guidance, the specific
limitations in the claim are examined to determine whether the claim recites
a judicial exception to patent eligibility, namely whether the claim recites an
abstract idea, law of nature, or natural phenomenon.

The Examiner found that the claims are directed to an abstract idea.
Final Act. 2. The Examiner found that the claims are similar to the concept
of "customizing media based on user feedback or characteristics in contexts
in which the activity may be viewed as performed by 'head and hand'
(*Gottschalk v. Benson*, 409 U.S. 63 [1972], at 65)." Final Act 3. "Head and
hand" indicates that the claim recite a mental process, namely, "concepts
performed in the human mind," which the 2019 Eligibility Guidance lists as
one of three groupings of abstract ideas. 84 Fed. Reg. 52.

Step [1] of the claim comprises a "receiving user profile information
and a selection of a performance mode from a client device." A
"performance mode" is not expressly defined in the Specification. However,
the Specification describes "platform modes," such as game, private,
companion, global, and replay modes which involve different objectives and
asking the user different types of questions. Spec. ¶¶ 33, 34, 44. For
example, the "game mode 301 foregoes the accuracy and integrity of the
data collected and required by modes that aid in personal growth or peer
communication to emphasize amusement and enjoyment of a given user
experience." Spec. ¶ 34. The Appeal Brief referenced paragraphs 33 and 44

of the Specification as support for the term "performance mode." Appeal Br. 4.

In step [2] of claim 1, "prompts" are generated "based on the selected performance mode and on the user profile information." The prompts are defined in the claim as [2a] media items, such as [2b] an image, a sound, a video, or text stored in a first data store. For example, the prompts can be questions asked the user and tailored to a specific performance mode. Spec. ¶¶ 26, 44. The Specification discloses that the questions "may be determined by the platform engine 106 or manually specified (e.g., by a platform administrator, guest authors invited by platform administrators, individual platform users, etc.)." Spec. ¶ 27. The media item is [2c] tagged with a description of "properties and moods for the respective media item." The Specification discloses that the tags can be assigned by users. Spec. ¶ 48 ("One example of such a form may be a game embedded in the platform in which the user is challenged to organize or tag groups of media as rapidly as possible."); Spec. ¶ 49 ("The interface 400 allows the item 405 to be tagged (e.g., by a platform administrator or outside service) with metadata 410."). Step [2] is therefore a mental process because it can be "performed in the human mind" by a user. 84 Fed. Reg. 52.

The prompts are subsequently sent to a client device (step [3]), received (step [4]), and the tags associated with the media item retrieved from a database (step [5]). Although these steps are performed on a computer and using a "client device," asking questions, receiving responses, and looking up the tags associated with each question are also mental processes because they could be performed manually and in the human mind.

Step [6] of the claim comprises "determining a user state metric from the received responses, wherein the user state metric indicates a degree associated with each of a plurality of user psychological-state traits." The Appeal Brief references paragraph 49 as support for this step. Appeal Br. 4. Paragraph 49 describes a configuration interface 401 shown in Figure 4 which provides "a sliding scale for each image attribute 415 (or state-trait), where the each extreme of the scale represents an opposing characteristic (e.g., 'attractive' with respect to 'repulsive,['] or 'happy' with respect to 'sad.'" The example provided is of a banana. Spec. ¶ 49. The Specification also discloses "psychological state-traits, such as mood polarities (e.g., anger and peace)." Spec ¶ 19 (referenced as support for step [6] on page 4 of the Appeal Brief). Thus, an image is presented to a user and the user can respond to the image by indicating that the image is attractive, repulsive, happy, or sad, or represents anger or peace, allowing the user's "user state metric" to be determined. We find that this step is a mental process that can be performed in the mind because a human can evaluate the user's response to the image and determine the user's psychological state from it. 84 Fed. Reg. 52 (a mental process can be "an observation, evaluation, judgment, opinion").

Step [7] comprises "identifying a correlation between the user state metric, the plurality of tags, and the plurality of media items." The Specification discloses that the correlations can be performed "for example, through mathematical algorithms, artificial intelligence, heuristics, and other data processing techniques or licensed (in part or in whole) from other sources." Spec. ¶ 28.

Step [8] comprises "determining, based on the identified correlation, a technique for generating a collage of multimedia including at least one of the media items." The Appeal Brief indicates that this step is described in paragraphs 29–30 of the Specification. Appeal Br. 4. These passages of the Specification describe a "collage generator" which makes the collage, and describe attributes of the collage (e.g., Spec. ¶ 30: "the collage generator component 215 also uses image blending techniques, such as additive, subtractive, multiply, divide, soft light, hard light, pin light, lighten, darken, hue, saturation and difference mixing and layering."). However, no specific technique is described for generating the collage. Instead, the disclosure cited by Appellant as supporting step [8] is about processing the images to be used in the collage. Because the images chosen for the collage can be determined based on the judgement and evaluation of a human (a mental process can be "an observation, evaluation, judgement, opinion" (84 Fed. Reg. 52)), we consider this step of generating the collage to be a mental process.

In the last step [9] of claim 1, a collage is generated. The step does not require that the collage is displayed to the user, but, based the disclosure in the Specification, we interpret the step broadly to include the display of the collage (Spec. ¶ 31: "One example of an output result is a presentation of a visible graphic display, an audible event, or both visible and audible event.").

We therefore conclude that the claim recites "Mental processes" (steps [2]–[6], and [8]), which is grouping (c) of the three categories of abstract ideas set forth in the Eligibility Guidelines. We therefore proceed to

Step 2A, Prong 2 of the analysis to determine whether the abstract ideas are integrated into a practical application.

Step 2A, Prong Two

Prong Two of Step 2A under the Eligibility Guidelines asks whether there are additional elements that integrate the exception into a practical application. As in the *Mayo/Alice* framework, we must look at the claim elements individually and "as an ordered combination" to determine whether the additional elements integrate the recited abstract idea into a practical application. As discussed in the Eligibility Guidelines, "[a] claim that integrates a judicial exception in a practical application will apply, rely on, or use the judicial exception in a manner that places a meaningful limit on the judicial exception, such that the claim is more than a drafting effort designed to monopolize the judicial exception. 84 Fed. Reg. 54.

Integration into a practical application is evaluated by identifying whether there are additional element individually, and in combination, which go beyond the judicial exception. *Id.* at 54–55. As explained in the October 2019 Update to Subject Matter Eligibility[2] "first the specification should be evaluated to determine if the disclosure provides sufficient details such that one of ordinary skill in the art would recognize the claimed invention as providing an improvement." Eligibility Update 12. According to the Eligibility Update, the "specification need not explicitly set forth the

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[2] Available at
https://www.uspto.gov/sites/default/files/documents/peg_oct_2019_update.pdf (last accessed Nov. 15, 2019) ("Eligibility Update.")

improvement, but it must describe the invention such that the improvement would be apparent to one of ordinary skill in the art." *Id.*

The Specification in the "Background" section describes the "need for personal self-expression." Spec. ¶ 1. The Specification identifies technologies exist which "allow individuals to find new avenues to express themselves with friends and strangers," but explains such technologies "have yet to fully exploit other potential means of self-expression." Spec. ¶ 2. The "Summary" describes methods for generating collages based on prompts, correlated responses, profile information, and media items, the same steps performed in claim 1. Spec. ¶ 3. The steps are performed on a computer (Spec. ¶¶ 4, 15, 20), but as explained above, the Specification does not describe specifically how the steps are implemented or an improvement in the way the steps are implemented. A judicial exception is not integrated into a practical application when the additional element "merely uses a computer as a tool to perform an abstract idea." 84 Fed. Reg. 55. "Steps that do nothing more than spell out what it means to 'apply it on a computer' cannot confer patent-eligibility. *Alice*, 134 S. Ct. at 2359." *Intellectual Ventures I LLC v. Capital One Bank (USA)*, 792 F.3d 1363, 1370–71 (Fed. Cir. 2015).

Appellant states that the method is "directed to non-abstract techniques in the field of communication, specifically using a computer-implemented system to generate multimedia collages using mood or emotion based information of users of the system" which "generates multimedia collages based on psychological states of the user at specific moment in time, the determination of the psychological states in tum based on responses of the user to provided prompts." Appeal Br. 10. Appellant

identifies steps [6]–[9] as the alleged improvement. Appeal Br. 11. Based on these steps, Appellant analogizes the claims to *McRO, Inc. v. Bandai Namco Games Am. Inc.*, 837 F.3d 1299 (Fed. Cir. 2016). Appeal Br. 8, 12.

This argument does not persuade us that the Examiner erred in rejecting the claims. In *McRO*, the court found that, while the *McRO* claims involved the manipulation of data, e.g., generating morph weight sets to animate lip and facial expressions of three dimensional characters, the claimed "automation goes beyond merely 'organizing [existing] information into a new form' or carrying out a fundamental economic practice." *McRO*, 837 F.3d at 1315 (citation omitted). Instead, the court found that the "claimed process uses a combined order of specific rules that renders information into a specific format that is then used and applied to create desired results: a sequence of synchronized, animated characters." *Id.* *McRO* found that the recited rules "are limiting in that they define morph weight sets as a function of the timing of phoneme sub-sequences." *McRO*, 837 F.3d at 1313. The claims were found to be directed to a "technological improvement over the existing, manual 3-D animation techniques," *McRO*, 837 F.3d at 1316.

In finding the claim patent-eligible, *McRO* noted that the "abstract idea exception has been applied to prevent patenting of claims that abstractly cover results where 'it matters not by what process or machinery the result is accomplished.' [*O'Reilly v. Morse*, 56 U.S. (15 How.) 62, 113,]; s*ee also Mayo*, 132 S.Ct. at 1301." *McRO*, 837 F.3d at 1314. *McRO* stated that therefore, a court must "look to whether the claims in these patents focus on a specific means or method that improves the relevant technology or are

instead directed to a result or effect that itself is the abstract idea and merely invoke generic processes and machinery." *McRO*, 837 F.3d at 1314.

Here, the claimed steps [6]–[8] for generating the collage are not limited to a specific rules of implementation as they were in *McRO*, but rather are stated in terms of the result or effect which is desired. For example, step [6] in which the user metric is determined, does not recite with any specificity how the result is achieved. Steps [7] and [8] of identifying the correlation and determining the collage, respectively, also only state the desired result and not the implementation of it, as did the claim in *McRO*.

The collage generated in step [9] is a display of existing information (text, pictures, audio) in a new form, e.g., a new arrangement of existing images. The computer simply automates the process of creating the collage. In contrast, in *McRO*, the improvement was not just automating a process that had previously been done manually, but, as explained in *SAP Am., Inc. v. Investpic, LLC*, 898 F.3d 1161, 1167 (Fed. Cir. 2018), an improvement in "how the physical display operated (to produce better quality images)."

Preemption is another issue that must be considered. In *McRO*, the court held that the "limitations in claim 1 prevent preemption of all processes for achieving automated lip-synchronization of 3–D characters." *McRO*, 837 F.3d at 1315. Furthermore, the court found that "[t]he specific structure of the claimed rules would prevent broad preemption of all rules-based means of automating lip synchronization." *Id.* Steps [6]–[8] are recited in such general terms – [6] determining a user metric from the received responses, [7] identifying a correlation between the metric, tags, and media item, and [8] determining the collage – that making a collage based on such steps poses a risk that the abstract idea embodied in at least

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steps [6] and [8] would be preempted. The technological improvement asserted by Appellant, comprising the steps of determining the user's psychological state based on responses to a media item which has been tagged with properties and moods, is recited in such broad terms that it is "itself is the abstract idea," differing only in being accomplished on a computer. The correlation of step [7] is not described by Appellant nor the Specification (at ¶ 28) as a technological improvement.

As a result of carrying out steps [6]–[8], a collage is generated. As discussed in Step 2A, Prong One, the claim is not limited to displaying the collage. Nonetheless, even if it were, Appellant has not established that this additional element is anything more than insignificant extra-solution activity. 84 Fed. Reg. 55. Unlike in *McRO* where a specific "technical effect" was achieved by carrying out the specific rules (*Solutran, Inc. v. Elavon, Inc.*, 931 F.3d 1161, 1167 (Fed. Cir. 2019)), as explained above, the collaged generated by the steps is just an output of media from an existing media library that is not limited by any particular rules or to any particular format. Spec. ¶ 31.

Appellant also asserts that the "challenge of creating multimedia collages is addressed by providing specific technical components" which it lists as steps [1]–[7] of claim 1. We have already addressed steps [6] and [7]. Given their broadest reasonable interpretation, steps [2]–[5] comprise [2] creating questions, [3] asking them, and [4] receiving the responses and [5] associated tags. These steps, like the others noted above, recite a processes that can be performed mentally. The improvement asserted by Appellant is therefore to the abstract idea, itself. "The Court in *Alice* made clear that a claim directed to an abstract idea does not move into section 101

eligibility territory by "merely requir[ing] generic computer implementation." *Alice*, 134 S. Ct. at 2357." *buySAFE, Inc. v. Google, Inc.*, 765 F.3d 1350. 1354 (Fed. Cir. 2014).

Moreover, these steps do not describe an improvement in a specific technology as they did in *McRO*, *Enfish, LLC v. Microsoft Corporation*, 822 F.3d 1327 (Fed. Cir. 2016) (a specific type of data structure designed to improve the way a computer stores and retrieves data in memory), *Core Wireless Licensing S.A.R.L v. LG Electronic*s, 880 F.3d 1356, 1362–63 (Fed. Cir. 2018) ("an improved interface for computing devices" requiring a "specific manner of displaying a limited set of information to the user, rather than using conventional user interface methods to display a generic index on a computer"), and *Finjan, Inc. v. Blue Coat Sys.*, 879 F.3d 1299, 1305 (Fed. Cir. 2018) ("behavior-based" approach to computer virus scanning was found eligible for a patent under 35 U.S.C. 101 because the claimed method employed "a new kind of file that enables a computer security system to do things it could not do before." The steps do not improve how a computer functions, do not describe an improved computer interface, and do enable something on a computer that improved the computer function.

Finjan specifically distinguished claims found to be patent ineligible when "there was nothing in the claim 'directed to how to implement [the idea]'" nor to "'a particular way of programming or designing the software.'" *Finjan,* 879 F.3d at 1305 (Fed. Cir. 2018). The rejected claims are deficient for the same reason because the steps in rejected claim 1 are claimed generically as a series of desired results without reciting any particular programming or implementation to achieve those results.

Appellant further argues that the claims are eligible for a patent for the same reason as in *Bascom Global Internet Services, Inc. v. AT&T Mobility LLC*, 827 F.3d 1341, 1350–51 (Fed. Cir. 2016). In *Bascom*, the court held the claims eligible for a patent because:

> The claims do not merely recite the abstract idea of filtering content along with the requirement to perform it on the Internet, or to perform it on a set of generic computer components. Such claims would not contain an inventive concept. . . . [Rather] the patent describes how its particular arrangement of elements is a technical improvement over prior art ways of filtering such content."

Id.

The rejected claims, as explained above, do not recite how the abstract ideas are accomplished. For example, step [6] determines a "user state metric" based "user psychological-state traits," but does not recite the programming as to how such step is accomplished. Likewise, step [7] recites "identifying a correlation," but does not describe how to perform the correlation. Thus, a technological improvement – as in *Bascom* – is not claimed.

The claim does not require a specialized machine or manufacture, and does not transform an article to a different state. 84 Fed. Reg. 55; *BASCOM Glob. Internet Servs., Inc. v. AT&T Mobility LLC*, 827 F.3d 1341, 1348 (Fed. Cir. 2016) ("An abstract idea on 'an Internet computer network' or on a generic computer is still an abstract idea"). The claim, as a whole, describes how to generally apply or execute the recited abstract ideas as a "computer-implemented method." In other words, the claim merely links the recited abstract idea generally to a computer environment, and thus does no more than represent a drafting effort to monopolize the abstract idea in a computer implementation. 84 Fed Reg. 55.

For the foregoing reason, we conclude that the identified judicial exceptions of claim 9 are not integrated into a practical application.

Step 2B

Because we determined that the judicial exception is not integrated into a practical application, we proceed to Step 2B of the 2019 Guidelines, which asks whether there is an inventive concept. In making this Step 2B determination, we must consider whether there are specific limitations or elements recited in the claim "that are not well-understood, routine, conventional activity in the field, which is indicative that an inventive concept may be present" or whether the claim "simply appends well-understood, routine, conventional activities previously known to the industry, specified at a high level of generality, to the judicial exception, indicative that an inventive concept may not be present." 84 Fed. Reg. 56 (footnote omitted). We must also consider whether the combination of steps perform "in an unconventional way and therefore include an 'inventive step,' rendering the claim eligible at Step 2B." *Id.*

Appellant states that the "claims recite technical elements including a client device, prompts, a data store of media items, a data store of media tags, responses to prompts, a user state metric and a correlation arranged in a particular manner to generate a collage of multimedia. The client device and the two data stores may represent physical computing devices or computing appliances connected via a network." Appeal Br. 14. Appellant argues that, like in *Bascom*, the claims "present components in a non-conventional and non-generic arrangement." Appeal Br. 15. Appellant contends:

> For example, receiving a response to a prompt associated with a tag taken from a data store from a client device and using that response to determine a user state metric and identifying a

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> correlation between the user state metric and a media item from
> a second data store is a non-conventional and non-generic
> arrangement of a user device, prompts, responses, data stores
> and user state metrics, despite the asserted generic nature of
> those pieces.

Id.

Appellant has not, however, identified how the data stores (limitations [2] and [4]) and the client device (limitations [1] and [3]) are arranged in such a way that they constitute a technical improvement in generating a collage. The claims do not recite a specific arrangement or connectivity of these elements that accomplish the step of [9] generating a collage.

The computer elements are described generically. Spec. ¶ 4. The Specification discloses that a device "may include mobile phones, tablets, wearable devices, desktop computers, laptop computers, and the like," which appear to be conventional and known device. Spec. ¶ 15. Appellant has not guided us to anything in the Specification that describes unconventional devices, architecture, or software programming that are employed in the claim to achieve the recited results. Automation of mental processes does not reflect "an improvement to other technology or technical field." 84 Fed Reg. 55; *see also Credit Acceptance Corp. v. Westlake Servs.*, 859 F.3d 1044, 1055 (Fed. Cir. 2017) (indicating "that mere automation of manual processes using generic computers does not constitute a patentable improvement in computer technology").

Consequently, we with the Examiner that the claims do not recite an inventive concept.

Summary

For the foregoing reasons, the rejection of claims 1–4, 6–11, 13–18, and 20 as ineligible for a patent under 35 U.S.C. § 101 is affirmed.

§ 103 REJECTIONS BASED ON ROGATINSKY, HENNUN, AND OTT

The Examiner found that Rogatinsky describes substantially all the steps of the claimed method, but not the performance mode recited in steps [1] and [2]. Final Act. 4–12. The Examiner found that Hennum describes a performance mode in the same field of endeavor as Rogatinsky and the claims, and that it would have been obvious to one of ordinary skill in the art to use Hennum's performance mode in Rogatinsky's method. Final Act. 12– 13. The Examiner further cited Ott for teaching retrieving tags from a second data store as in step [5] of claim 1. Final Act. 15.

Appellant contends that Rogatinsky "does not teach, show, or suggest '[6] determining a user state metric from the received responses, wherein the user state metric indicates a degree associated with each of a plurality of user psychological-state traits,' as recited in independent claim 1." Appeal Br. 19. Appellant argues that Rogatinsky discloses "consumer information" which "constitutes consumer traits that are immutable, or at least highly resistant to change, e.g., a 'type of personality,' demographic data, lifestyles, color preferences, etc." Appeal Br. 20. Appellant states that the "consumer information" of Rogatinsky "is distinct in comparison to the 'user psychological-state traits' of the claims." *Id.* Appellant argues that Rogatinsky "is limited to certain unchanging characteristics of a person, such as interest in activities" and does not disclose the claimed "user psychological-state traits." *Id.*

Discussion

Rogatinsky discloses receiving information from a consumer, such as responses to questions, and then analyzing the information to determine

what marketing information appeals to that individual. Rogatinsky ¶¶ 24–

27. These steps generally correspond to steps [2]–[6] of claim 1. Final Act.

8. The "collage" generated in Rogatinsky (step [9] of claim 1) is marketing

media. As explained by Rogatinsky:

> As a computer system, an embodiment of the invention
> generally includes a database of statistical consumer marketing
> data and a processor unit. The processor unit operates to
> **receive information from a consumer interacting with the
> system (preferably through a series of questions and
> answers** [*compare steps [2]–[4] of claim 1*] via a global
> communication network/Internet application or through
> analysis of the consumer's online activity, such as purchase
> transactions, click-stream history, and the like) and to analyze
> the received information in conjunction with the statistical
> information (e.g., consumer habits, marketing trends,
> predictions, styles, preferences) to generate marketing media
> with a customized "look and feel" which appeals to that
> individual [*compare steps [6]–[9] of claim 1*]. This customized
> "look and feel" is found in the chosen design elements, physical
> characteristics and manner of presentation of text and images of
> the media, including but not limited to fonts, colors,
> text/image/graphics and ratio thereof, paper type, illustrations,
> layout, and other visual/tactile characteristics of the media. The
> marketing media may include print or electronic media.

Rogatinsky ¶ 11 (emphasis added).

The Examiner cited paragraphs 27–32 of Rogatinsky as teaching "user

psychological-traits" as recited in step [6] of claim 1. The following

disclosure from Rogatinsky is pertinent:

> This raw data (consumer information) is analyzed and
> correlated with stored statistical information stored (e.g., in
> separate databases). The system preferably utilizes various
> algorithms, real-time learning and inference technology,
> **behavioral and personality profiling**, pattern recognition

> learning algorithms, neural networks, and the like in order to correlate statistical information with user responses.

Rogatinsky ¶ 27 (emphasis added).

> In addition to applying the information about the specifications that will be most effective for media, based on the answered questions, **the present invention will analyze and predict in real-time the behavior and what type of personality the consumer has** and, based on its conclusion, will recommend the type of images and above criteria to be utilized for the look and feel of the media.

Rogatinsky ¶ 30 (emphasis added).

> For example, for a financial or investment company, its web site(s) will gather information about its users. A certain user's answers will indicate that the user is, for example, willing to assume greater risk. Based on this information, the present invention determine's [sic, determines] the user's lifestyle by analyzing answers to specifically directed queries and online activity and processing this information in conjunction with stored statistical information based on predetermined algorithms. In this example, the invention determines that this type of user should receive a brochure which reflects his **fast-paced, risk taking, lifestyle**, i.e., the style, format and presentation of the brochure (images, font, colors, and the like) are manipulated to best appeal to that user's lifestyle. To achieve this, for example, **the images used in the brochure will be daring and exciting** as opposed to being boring and conservative.

Rogatinsky ¶ 32 (emphasis added).

> In a preferred embodiment, the image bank for a certain industry will have categories for its photos, for example, exciting, conservative, undecided, inexperienced investor.

Rogatinsky ¶ 33 (emphasis added).

Thus, Rogatinsky teaches performing "behavioral and personality profiling" on the received information (Rogatinsky ¶ 27), analyzing behavior

and personality type (Rogatinsky ¶ 30), and identifying "fast-paced, risk taking, lifestyle," and using images that are "daring and exciting as opposed to being boring and conservative" (Rogatinsky ¶¶ 32, 33). The issue raised by Appellant is whether this disclosure of behavioral and personality profiling to determine images to present to a user is a [6] "user state metric . . . associated with . . . user psychological-state traits."

We begin with claim interpretation. The Specification does not provide a definition of "user psychological-traits" as recited in step [6] of claim 1. During patent examination proceedings, claim terms are given "the broadest reasonable meaning . . . in their ordinary usage as they would be understood by one of ordinary skill in the art, taking into account whatever enlightenment by way of definitions or otherwise that may be afforded by the written description contained in the applicant's specification." *In re Morris,* 127 F.3d 1048, 1054 (Fed. Cir. 1997). Because there is no definition in the Specification, we turn to a general purpose dictionary for guidance. The term "psychological" is derived from "psychology" which means "the mental or behavioral characteristics of an individual."[3] Thus, we understand "user psychological-traits" to mean traits associated with the mental or behavioral characteristics of the user. This interpretation is consistent with the Examiner's finding that a psychological state or trait of a user "encompasses any aspect of a user related to a user's mind such as in the form of user's awareness, feeling, or motivation" and that such traits may be of any level of mutability/changeability and still be considered 'user psychological-state traits' under the present claim language." Ans. 13–14.

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[3] https://www.merriam-webster.com/dictionary/psychology (last accessed Dec. 6, 2019).

This interpretation is also consistent with the only example in the Specification of user state trait being a feeling of anger or peace (Spec. ¶ 19: "mood polarities (e.g., anger and peace)").

Because Rogatinsky utilizes the responses received from a user to perform "behavioral and personality profiling" and analyzes behavior and personality type (Rogatinsky ¶¶ 27, 30), which would result in discerning "the mental or behavioral characteristics of an individual," we find that the Examiner had a factual basis to determine that step [6] of the claim is met by Rogatinsky. Specifically, Rogatinsky's determinations of a user's preference for "risk taking," "exciting," "daring," "boring," and "conservative" (Rogatinsky ¶¶ 32, 33) are mental and behavioral characteristics and therefore correspond to the claimed user psychological-state traits. In other words, a user can have the psychological trait of looking for excitement or risks, or being a daring or conservative person.

Appellant's attempt to distinguish Rogatinsky is based on the argument that Rogatinsky's profiling is "limited to certain unchanging characteristics of a person." Appeal Br. 20. However, Appellant has not provided a definition of "user psychological-state traits" that would limit it to unchanging characteristics, rather than relating to mental or behavioral characteristics as the term "psychological-state traits" would be reasonably interpreted by one of ordinary skill in the art.

Appellant's reference to "unchanging" is apparently based on the disclosure in step [2] of tags for "moods," where mood would be understood to mean "a state or quality of feeling at a particular time."[4] However, the "mood" is tag for an item and while it may be categorized as "user

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[4] https://www.dictionary.com/browse/mood (last accessed Nov. 29, 2019).

psychological-state traits," the traits are not limited to a mood at a specific time. As the Examiner explained, "Appellant is improperly attempting to read limitations into the claim language." Ans. 13.

Moreover, Appellant has not provided a persuasive reason as to why characteristics such as being exciting, daring, boring, or conservative (Rogatinsky ¶¶ 32, 33) cannot be considered indicative of the user's *mood* at the time Rogatinsky elicited responses from the user (Rogatinsky ¶ 11) (i.e., the user is in a daring mood today).

With respect to the additionally cited publications – Hennum, Ott, Amell, Halliday – Appellant argues that they these publications do not describe the term "psychological-state traits" and remedy the deficiencies of Rogatinsky. Appeal Br. 20, 21, 23, and 25. However, the Examiner did not cite these publications to meet this limitation of the claims. Final Act. 14, 17–18, 20. Thus, we find this argument unavailing.

In sum, for the foregoing reasons, we affirm the obviousness rejection of claim 1. Dependent claims 2–4, 6–11, 13–18, and 20 were not separately argued and therefore fall with claim 1. 37 C.F.R. § 41.37(c)(1)(iv). Thus, all of the obviousness rejections are affirmed.

CONCLUSION

In summary:

Claims Rejected	35 U.S.C. §	Reference(s)/Basis	Affirmed	Reversed
1–4, 6–11, 13–18, 20	101	Eligibility	1–4, 6–11, 13–18, 20	
1–3, 7–10, 14–17	103	Rogatinsky, Hennum, Ott	1–3, 7–10, 14–17	
4, 11, 18	103	Rogatinsky, Hennum, Ott, Amell	4, 11, 18	
6, 13, 20	103	Rogatinsky, Hennum, Ott, Halliday	6, 13, 20	
Overall Outcome			1–4, 6–11, 13–18, 20	

TIME PERIOD

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