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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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*Ex parte* ISAAC DAVID GUEDALIA,  
SARAH HARRIS-GLICKFIELD, and BRACHI LEDERMAN

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Appeal 2018-006819  
Application 13/652,811<sup>1</sup>  
Technology Center 3700

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Before MURRIEL E. CRAWFORD, PHILIP J. HOFFMANN, and  
BRADLEY B. BAYAT, *Administrative Patent Judges*.

HOFFMANN, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Pursuant to 35 U.S.C. § 134(a), Appellants appeal from the Examiner’s rejection of claims 1–5, 8, 9, 11–15, 18, 19, 21–25, 28, 29, 31–35, 38, 39, and 43–45.

We AFFIRM.

According to Appellants, their invention relates to “a system that can identify training routes best suited to the individual athlete based upon that

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<sup>1</sup> According to Appellants, the “QUALCOMM Incorporated” is the real party in interest. Appeal Br. 3.

athlete's past training routines, particularly when the individual athlete is out for an activity, such as a walk, run, or ride in an unfamiliar location.”

Spec. ¶ 3. Claims 1, 11, 21, 31, and 43–45 are the independent claims on appeal. Below, we reproduce claim 1 as illustrative of the appealed claims.

1. A method for supporting athletic training, comprising:

storing, in a server, completed training segment data including:

a first series of positions of an electronic training device associated with a completed training segment; and

a timing associated with a completion of the completed training segment;

determining, in the server and based on the first series of positions and the timing, segment preference data that includes a preferred distance associated with the electronic training device, a preferred grade associated with the electronic training device, a preferred pace associated with the electronic training device, or any combination thereof;

receiving, in a server, a second series of positions of the electronic training device, wherein the second series of positions includes a real-time position of the electronic training device;

identifying, in the server, a plurality of segments passing through the second series of positions;

comparing, in the server, each segment in the plurality of segments to the preferred distance, the preferred grade, the preferred pace, or any combination thereof;

identifying, in the server, an alternative training segment from the plurality of segments based on a closest comparison result of the comparing; and

transmitting to the electronic training device training information related to the alternative training segment for display by the electronic training device.

## REJECTIONS AND PRIOR ART

The Examiner rejects claims 1–5, 8, 9, 11–15, 18, 19, 21–25, 28, 29, 31–35, 38, 39, and 43–45 under 35 U.S.C. § 101 as claiming only patent-ineligible subject matter.

The Examiner rejects claims 1–5, 8, 9, 11–15, 18, 19, 21–25, 28, 29, 31–35, 38, 39, and 43–45 under 35 U.S.C. § 103(a) as unpatentable over Shaw et al. (US 2012/0253488 A1, pub. Oct. 4, 2012) (“Shaw”) and Hoffman et al. (US 2012/0283855 A1, pub. Nov. 8, 2012) (“Hoffman”).

## PRINCIPLES OF LAW CONCERNING 35 U.S.C. § 101

An invention is patent eligible if it claims a “new and useful process, machine, manufacture, or composition of matter.” 35 U.S.C. § 101. The Supreme Court has long interpreted 35 U.S.C. § 101 to include implicit exceptions, however: “[l]aws of nature, natural phenomena, and abstract ideas” are not patentable. *E.g.*, *Alice Corp. Pty. Ltd. v. CLS Bank Int’l*, 573 U.S. 208, 216 (2014).

In determining whether a claim falls within an excluded category, the Supreme Court’s two-step framework, described in *Mayo* and *Alice*, guides us. *See Alice*, 573 U.S. 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.” *Id.* 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 that the courts 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 that the courts 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 182 n.7 (quoting *Corning v. Burden*, 56 U.S. 252, 267–68 (1853))); and manufacturing flour (*Benson*, 409 U.S. at 69 (citing *Cochrane v. Deener*, 94 U.S. 780, 785 (1876))).

In *Diehr*, although the claim at issue recited a mathematical formula, 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.”). Nonetheless, 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 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.*

2019 Revised Patent Subject Matter Eligibility Guidance

The PTO recently published revised guidance on the application of § 101. *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 managing personal behavior or relationships or interactions between people (including social activities, teaching, and following rules or instructions), 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)).

*See generally* Guidance. A practical application “appl[ies], rel[ies] on, or use[s] the judicial exception in a manner that imposes a meaningful limit on the judicial exception, such that the claim is more than a drafting effort designed to monopolize the judicial exception.” *Id.* at 54.

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 either:

(3) adds a specific limitation beyond the judicial exception which is not “well-understood, routine, [or] 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 generally id.*

## ANALYSIS

### Rejection under 35 U.S.C. § 101

Initially, we note that Appellants argue against the Examiner’s § 101 rejection of the claims as a group. *See* Appeal Br. 8–12. We choose independent claim 1 for our analysis, and the remaining independent and dependent claims stand or fall with claim 1. *See* 37 C.F.R. § 41.37 (c)(1)(iv). For the following reasons, we sustain the Examiner’s rejection of the claims as patent ineligible.

We begin with Prong One of PTO Guidance Revised Step 2A to evaluate if the claims recite a judicial exception. *See* Guidance at 53–54. For the reasons set forth below, we determine that in accordance with point (1) of the Guidance referenced above, independent claim 1 recites at least one judicial exception, including an abstract idea. More specifically, as described in further detail, the abstract idea includes at least mental processes.

As reproduced above, claim 1 sets forth 1) “[a] method for supporting athletic training, comprising”: 2) “storing, in a server, completed training

segment data including”: 2a) “a first series of positions of an electronic training device associated with a completed training segment”; and 2b) “a timing associated with a completion of the completed training segment”; 3) “determining, in the server based on the first series of positions and the timing, segment preference data that includes a preferred distance associated with the electronic training device, a preferred grade associated with the electronic training device, a preferred pace associated with the electronic training device, or any combination thereof”; 4) “receiving, in the server, a second series of positions of the electronic training device, wherein the second series of positions includes a real-time position of the electronic training device”; 5) “identifying, in the server, a plurality of segments passing through the second series of positions”; 6) “comparing, in the server, each segment in the plurality of segments to the preferred distance, the preferred grade, the preferred pace, or any combination thereof”; 7) “identifying, in the server, an alternative training segment from the plurality of segments based on a closest comparison result of the comparing”; and 8) “transmitting to the electronic training device training information related to the alternative training segment for display by the electronic training device.”

Here, except for the recitation of generic computer hardware (as discussed in detail *infra*), claim 1’s recitations that we identify below may be done by a person using mental processes, in the mind, as well as with a pen and paper. More specifically, one may mentally, and with a pen and paper, 2) “stor[e] . . . , completed training segment data including”: 2b) “a timing associated with a completion of the completed training segment,” by remembering in their mind, or writing on paper, information regarding a

time it took to complete a segment of an exercise route. A person may also 3) “determin[e] . . . segment preference data [for an exercise route, which] includes a preferred distance . . . , a preferred grade [for the exercise route] . . . , a preferred pace [for the exercise route] . . . , or any combination thereof,” by thinking about and either remembering or writing down with a pen on paper, what they prefer in terms of exercise distance, route grade, or pace. A user may further 5) “identify[] . . . a plurality of [new route] segments . . . ,” such as by looking on a map, and 6) “compar[e] . . . each segment in the plurality of [new route] segments to the preferred distance, the preferred grade, the preferred pace, or any combination thereof,” such as by comparing, in their mind or on paper, the written-down or remembered preferred distance, grade, or pace, to a written-down or remembered distance, grade, or pace for the new route segments. The person may then 7) “identify[] . . . an alternative training segment[] from the plurality of segments based on a closest comparison result of the comparing,” by thinking about the new route segment information and the completed exercise route information, and then choosing the new route segment whose information best matches the segment preference data.

Mental steps, such as those identified above, have been recognized as abstract ideas. *See Elec. Power Grp. LLC v. Alstom*, 830 F.3d 1350, 1353–54 (Fed. Cir. 2016) (collecting information and “analyzing information by steps people go through in their minds, or by mathematical algorithms, without more, [are] essentially mental processes within the abstract-idea category.”); *see CyberSource Corp. v. Retail Decisions, Inc.*, 654 F.3d 1366, 1373 (Fed. Cir. 2011) (finding a claim that is directed to “a method that can be performed by human thought alone is merely an abstract idea and is not

patent-eligible under § 101”); *see In re Comiskey*, 554 F.3d 967, 979 (Fed. Cir. 2009) (“[M]ental processes—or processes of human thinking—standing alone are not patentable even if they have practical application.”); *see Gottschalk v. Benson*, 409 U.S. at 67 (“Phenomena of nature, . . . mental processes, and abstract intellectual concepts are not patentable, as they are the basic tools of scientific and technological work.”). Additionally, mental processes may remain unpatentable even when automated to reduce the burden on the user. *Cyber Source*, 654 F.3d at 1375 (“That purely mental processes can be unpatentable, even when performed by a computer, was precisely the holding of the Supreme Court in *Gottschalk v. Benson*.”). Accordingly, we conclude that claim 1 recites a judicial exception of mental processes.

We now turn to Prong Two of PTO Guidance Revised Step 2A to determine if the claim is integrated into a practical application of the abstract idea. *See* Guidance at 54–55. For the below reasons, we determine that in accordance with point (2) of the Guidance referenced above, claim 1 does not recite any additional element that integrates the judicial exception into a practical application—i.e., something that “appl[ies], rel[ies] on, or use[s] the judicial exception in a manner that imposes a meaningful limit on the judicial exception, such that the claim is more than a drafting effort designed to monopolize the judicial exception.” *Id.* at 54.

Specifically, we note that the claim only generically recites the use of certain hardware—a server and an electronic training device—and thus the hardware does not meaningfully limit the claim. Appellants do not describe the claimed hardware, in either the Specification or the claim itself, in such a way as to indicate that the hardware is anything other than generic. *See, e.g.,*

Spec. ¶ 74 (“The various embodiments may be implemented in any of a variety of electronic training devices, such as a sports watch.”); *see, e.g., id.* ¶ 76 (“The various embodiments may also be implemented on any of a variety of commercially available server devices.”).

Appellants argue that the Examiner errs because, according to Appellants, the claims are “directed to an improvement in computer functionality itself,” and “an improvement in the functionality of a particular device.” Appeal Br. 9–10. We disagree with Appellants, however. As discussed above, Appellants’ claim 1, unlike the claims in *McRO, Inc. v. Bandai Namco Games Am. Inc.*, 837 F.3d 1299 (Fed. Cir. 2016), uses only generic hardware. Further, Appellants do not persuade us that there is an improvement to the hardware—either to the server or the electronic training device. Rather, at most, there is arguably a different use of these devices, or a use of these devices with different data. Thus, Appellants’ claim does not recite an improvement to a particular computer technology. *See McRO*, 837 F.3d at 1314–15 (Finding claims not abstract because they “focused on a specific asserted improvement in computer animation.”); *see also Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1336 (Fed. Cir. 2016) (where the Court found a self-referential database was “an improvement to computer functionality itself.”). Restated, the claims “are not tied to any particular novel machine or apparatus,” and do not provide a technological improvement capable of rescuing them from the realm of abstraction. *See Ultramercial, Inc. v. Hulu, LLC*, 772 F.3d 709, 716 (Fed. Cir. 2014).

We now turn to our Revised Step 2B to determine if the claim recites a specific limitation beyond the judicial exception which is not well understood, routine, and conventional in the field. *See Guidance* at 56. As

discussed below, we determine that, in accordance with points (3) and (4) of the Guidance referenced above, claim 1 fails to recite a specific limitation beyond the judicial exception which is not well-understood, routine, and conventional in the field, but instead simply appends well-understood, routine, and conventional activities previously known to the industry, specified at a high level of generality, to the judicial exception.

Taking the claim elements separately, the functions performed by the claimed hardware are purely conventional. Specifically, the claim uses known, generic components to perform their known, basic functions. Restated, the claim recites only well-understood, routine, and conventional functions. *See Elec. Power Grp. v. Alstom S.A.*, 830 F.3d at 1353 (Fed. Cir. 2016); *see also In re Katz Interactive Call Processing Patent Litig.*, 639 F.3d 1303, 1316 (Fed. Cir. 2011) (“Absent a possible narrower construction of the terms ‘processing,’ ‘receiving,’ and ‘storing,’ . . . those functions can be achieved by any general purpose computer without special programming.”). There is no unconventional use of the claimed hardware, and the hardware does not produce any unexpected result. Considered as an ordered combination, claim 1’s hardware does not add anything that is not already present when we consider the steps separately.

Appellants argue that “the claims are directed to . . . an ordered combination of elements [which] provides a technical solution to the problem of identifying an alternative training segment.” Appeal Br. 11. We disagree, however. In *BASCOM Global Internet Servs. v. AT&T Mobility LLC*, 827 F.3d 1341 (Fed. Cir. 2016), the court determined that “an inventive concept can be found in the non-conventional and non-generic arrangement of known, conventional pieces.” *BASCOM*, 827 F.3d at 1350.

Specifically, “[t]he inventive concept described and claimed in the ’606 patent is the installation of a filtering tool at a specific location, remote from the end-users, with customizable filtering features specific to each end user.” *Id.* Unlike *BASCOM*’s claims, we do not agree that Appellants’ claim 1 provides a solution to a technological problem. For example, claim 1 does not recite any improvement in the server or electronic training device’s functioning. Nor does the claim effect an improvement in any other technology or technical field—instead, claim 1 recites a method of supporting athletic training, which is itself an abstract idea.

Thus, based on the foregoing, Appellants do not persuade us that the claims are eligible for patenting. We, therefore, sustain the Examiner’s § 101 rejection of claims 1–5, 8, 9, 11–15, 18, 19, 21–25, 28, 29, 31–35, 38, 39, and 43–45.

*Obviousness Rejection*

Appellants argue that the Examiner errs, because

[Shaw’s] paragraph [0138] discloses that “segments that fit one or more criteria are detected and recommended to the user,” and that according to one particular criteria, “segments that are determined to be similar (e.g., based on geographic, distance, elevation, and/or other criteria)” are recommended. However, the “segments that are determined to be similar” of Shaw (which allegedly constitute the recited ‘plurality of segments’) do not include a real-time position of the alleged ‘electronic training device’.

Appeal Br. 13. Appellants do not persuade us of error, however. The Examiner relies on Shaw’s paragraph 127 to disclose the claimed receiving of a real-time position of the electronic training device. Final Action 5. This portion of Shaw discloses that “segment matching server **1508** can determine that the *received GPS data matches a segment* based on a

determination that at least a portion of the GPS data received from device **1502** so far crosses at least a portion of the segment.” Shaw ¶ 127 (italics added). Appellants have not shown that the Examiner’s finding as to Shaw’s disclosure of GPS data is inadequate to support the claimed receiving real-time positions. Thus, Appellants do not show error in the Examiner’s reliance on this portion of Shaw to disclose receiving of a real-time position of the electronic training device, as claimed.

Therefore, based on the foregoing, Appellants do not persuade us that the Examiner errs. Accordingly, we sustain the Examiner’s obviousness rejection of claims 1–5, 8, 9, 11–15, 18, 19, 21–25, 28, 29, 31–35, 38, 39, and 43–45.

#### DECISION

We AFFIRM the Examiner’s § 101 rejection of claims 1–5, 8, 9, 11–15, 18, 19, 21–25, 28, 29, 31–35, 38, 39, and 43–45.

We AFFIRM the Examiner’s § 103 rejection of claims 1–5, 8, 9, 11–15, 18, 19, 21–25, 28, 29, 31–35, 38, 39, and 43–45.

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