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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte JUNG OOK HONG, ANDREW COLE AXLEY, and
SHELTEN GEE JAO YUEN¹

Appeal 2018-000661
Application 14/250,256
Technology Center 3700

Before FRANCISCO C. PRATS, JOHN E. SCHNEIDER, and
TIMOTHY G. MAJORS, *Administrative Patent Judges*.

Opinion for the Board filed by *Administrative Patent Judge* SCHNEIDER

Opinion Concurring-in-part and Dissenting-in-part filed by *Administrative
Patent Judge* MAJORS

SCHNEIDER, *Administrative Patent Judge*.

DECISION ON APPEAL

This is an appeal under 35 U.S.C. § 134 involving claims to methods for tracking a person's physiological activity, which have been rejected as being directed to non-statutory subject matter and as obvious. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

¹ Appellants identify Fitbit, Inc. as the real party in interest. Appeal Br. 3.

STATEMENT OF THE CASE

“Sensor devices can infer biometrics of interest from sensor data that are associated with activities of a user. In many implementations of sensor devices, [] the high accuracy of biometric estimates is achieved by limiting activity types and/or activity intensities that the sensor devices can monitor.” Spec. ¶ 2. “Recent advances in sensor, electronics, and power source miniaturization have allowed the size of personal health monitoring devices, also referred to herein as ‘biometric tracking’ or ‘biometric monitoring’ devices, to be offered in small sizes.” Spec. ¶ 4. “However, the miniature size of the product limits the electric it supplies.” *Id.* The Specification discloses a method that enables “sensor devices to use one or more modes to achieve computation speed and accuracy while maintaining energy efficiency.” *Id.* ¶ 5.

Claims 1–5, 7–19, 23–26, 31, and 34–37 are on appeal. Claim 1 is illustrative below and reads as follows:

1. A method of tracking a user’s physiological activity using a wearable biometric monitoring device, wherein the wearable biometric monitoring device comprises one or more processors, one or more sensors providing sensor output data indicative of a physiological activity, and a display device configured to present physiological metrics, the method comprising:
 - operating the one or more sensors when the wearable biometric monitoring device is worn by the user;
 - generating, by the one or more sensors, a set of sensor output data indicative of the physiological activity of the user;
 - applying, by the one or more processors, a frequency domain analysis to the set of sensor output data to obtain a first measure of a periodic component of the set of sensor output data;

applying, by the one or more processors, a time domain analysis to the set of sensor output data to obtain a second measure of the periodic component of the set of sensor output data;

determining, by the one or more processors, that a signal power of the set of sensor output data is lower than a threshold;

selecting, by the one or more processors and based on determining that the signal power is lower than the threshold, the first measure of the periodic component over the second measure of the periodic component;

updating, by the one or more processors, a physiological metric of the user using the first measure of the periodic component; and

controlling the display device of the wearable biometric monitoring device to display the updated physiological metric.

The claims stand rejected as follows:

Claims 1–5, 7–19, 23–26, 31, and 34–37 have been rejected under 35 U.S.C. § 101 as being directed to non-statutory subject matter.

Claims 1–4, 7–9, 15, 16, 23–26, 31, and 34–37 have been rejected under 3 U.S.C. § 103 as unpatentable over Weast² in view of Meger.³

Claims 5, 10, 11, and 17–19 have been rejected under 35 U.S.C. § 103(a) as unpatentable over Weast in view of Meger in further view of Najarian.⁴

Claim 12 has been rejected under 35 U.S.C. § 103 as unpatentable over Weast in view of Meger in further view of Stephan.⁵

² Weast et al., US 2013/0191034 A1; published July 25, 2013 (“Weast”).

³ Meger et al., US 2011/0112442 A1; published May 12, 2011 (“Meger”).

⁴ Najarian et al., US 2012/0123232 A1; published May 17, 2012 (“Najarian”).

⁵ Stephan et al., US 6,131,076; issued Oct. 10, 2000 (“Stephan”).

Claims 13 and 14 have been rejected under 35 U.S.C. § 103 as unpatentable over Weast in view of Meger in further view of Seale.⁶

NON-STATUTORY SUBJECT MATTER

Issue

The issue with respect to this rejection is whether the Examiner properly concluded that the claims are directed to non-statutory subject matter.

The Examiner finds that the claims are directed to an abstract idea. Non-Final Act. 3. The Examiner finds that each of the steps recited in the claims are processes that can be performed in the human mind. *Id.* Applying the second step of the *Mayo* analysis, the Examiner finds that the claims do not recited something significantly more. *Id.* at 4. The Examiner finds that while the claims recite structures such as sensors and processors, the claims embrace generic and well known structures and do not represent something significantly more. *Id.* at 4–5.

Appellants contend that the invention is not directed to an abstract idea but is a method that improves the accuracy and performance of tracking physiological metrics. Appeal Br. 8. Appellants argue that the claims are specific enough so that they do not preclude other approaches to analyzing biometric data. Appeal Br. 13. Appellants contend that the method recited in the claims represents a specific solution to a technological problem. Appeal Br. 14 and 19. Appellants also contend that the claimed method employs unconventional steps to track physiological metrics. Appeal Br.

⁶ Seale, US 4,771,792; issued Sept. 20, 1988 (“Seale”).

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14–16. Appellants go on to argue that the claims are tied to a specific machine – a biometric monitoring device, and not a generic computer.

Appeal Br. 16–18

Analysis

As stated in *In re Oetiker*, 977 F.2d 1443, 1445 (Fed. Cir. 1992):

[T]he examiner bears the initial burden . . . of presenting a *prima facie* case of unpatentability

....

After evidence or argument is submitted by the applicant in response, patentability is determined on the totality of the record, by a preponderance of evidence with due consideration to persuasiveness of argument.

Appellants do not persuade us that a preponderance of the evidence fails to support the Examiner’s conclusion that the rejected claims recite subject matter ineligible for patenting under 35 U.S.C. § 101.

Section 101 states that “[w]hoever 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.

The Supreme Court has “long held that this provision contains an important implicit exception: Laws of nature, natural phenomena, and abstract ideas are not patentable.” *Alice Corp. Pty. Ltd. v. CLS Bank Intern.*, 134 S.Ct. 2347, 2354 (2014).

The Federal Circuit has summarized the Supreme Court’s two-part test for distinguishing between claims to patent-ineligible exceptions, and claims to patent-eligible applications of those exceptions, as follows:

Step one asks whether the claim is “directed to one of [the] patent-ineligible concepts.” [*Alice*, 134 S.Ct. at 2354]. If the answer is no, the inquiry is over: the claim falls within the ambit of § 101. If the answer is yes, the inquiry moves to step two, which asks whether, considered both individually and as an ordered combination, “the additional elements ‘transform the nature of the claim’ into a patent-eligible application.” *Id.* (quoting *Mayo* [*Collaborative Services v. Prometheus Labs, Inc.*, 132 S.Ct. 1289, 1297 (2012)]).

Step two is described “as a search for an ‘inventive concept.’” *Id.* (quoting *Mayo*, 132 S.Ct. at 1294). At step two, more is required than “well-understood, routine, conventional activity already engaged in by the scientific community,” which fails to transform the claim into “significantly more than a patent upon the” ineligible concept itself. *Mayo*, 132 S.Ct. at 1298, 1294.

Rapid Litigation Mgmt. Ltd. v. CellzDirect, Inc., 827 F.3d 1042, 1047 (Fed. Cir. 2016) (paragraphing added).

In applying step one of the test recited above, it is important to not only see if there is a patent-ineligible concept within the claim but we must determine if the patent eligible concept is what the claim is directed to.

Vanda Pharm. Inc. v. West Ward Pharm. Int’l Ltd., 887 F.3d 1117, 1134 (Fed. Cir. 2018). If we find that the claims are not directed to a patent ineligible concept, we need not proceed to step two. *Id.*

Turning to the first step in the *Alice/Mayo* analysis, we agree with the Examiner that the claims are directed to an abstract idea. Non-Final Act. 4. The claims recite a method for tracking a user’s physiological activity.

Appeal Br. 28 (Claims App.). The core steps recited in the method of applying, determining, selecting and the quantifying are steps that can be performed in one's mind or with pencil and paper. Non-Final Act. 4. Thus the claim, viewed as a whole, is directed to an abstract idea and is not patent eligible.

Appellants argue that the claimed method is not directed to an abstract idea but rather is directed to improving a physiological metric obtained by a wearable biometric device. Appeal Br. 10. In addition, Appellants contend that the claimed method is analogous to the method claimed in *McRO, Inc. v. Bandai Namco Games Amer., Inc.*, 837 F.3d 1299 (Fed. Cir. 2016) in that the present method incorporates a specific set of rules to analyze the data. Appeal Br. 11.

We have considered Appellants' arguments and find them unpersuasive. While the claims refer to a wearable biometric device, as discussed below, the main thrust of the claimed method relates to how the device processes the physiological data, not the structural elements of the device. Data processing concepts are abstract ideas and are not patent eligible. *Cybersource Corp. v. Retail Decisions, Inc.*, 654 F.3d 1366, 1370 (Fed. Cir. 2011).

Appellants' reliance on *McRO* is misplaced. In *McRO* a specific set of rules were applied to a data set to produce an enhanced lip synchronization. *McRO*, 837 F.3d at 1314. In the present case, the claim only refer to manipulation of data and displaying the results of the manipulation. There is no enhancement of the result nor is there any evidence that the method improves the operation of the device.

Appellants argue that the method is directed to improving the physiologic metric obtained by the biometric device and this improves the operation of the device. Appeal Br. 10, 19. We are not persuaded. Appellants do not point to any data in the record to show how the claimed method improves the physiological metric or improves the operation of the biometric device. Appellants have only presented attorney argument which is insufficient to show patentability. Appeal Br. 10, 19. “Attorneys’ argument is no substitute for evidence.” *Johnston v. IVAC Corp.*, 885 F.2d 1574, 1581 (Fed. Cir. 1989).

Having found that the claims are directed to an abstract idea, we now turn to the second part of the *Alice/Mayo* test – are there additional claim elements that represent something more than the abstract idea? Again, we agree with the Examiner that the additional elements do not present something significantly more than the abstract idea. Non-Final Act. 4–5.

Appellants argue that the claimed method involves unconventional steps that represent something more than an abstract idea. Appeal Br. 15–16. Appellants also argue that the method is tied to a specific machine which also supports patentability. Appeal Br. 16–17.

Appellants’ argument are not persuasive. As discussed more fully below, the analytical techniques recited in the claims, frequency domain analysis and time domain analysis are known in the art and have been applied to physiological data such as respiratory rates or heart rates. Meger ¶ 358. Threshold values have also been used to determine which techniques should be used. *Id.* The recited steps individually or in combination are not unconventional.

As to the claim being tied to a specific device, as shown by Weast, such devices are known in the art. *See* Weast ¶ 39 (Wearable heart rate monitor.). Appellants do not point to any evidence in the record that shown that the biometric device recited in the claims differs from that known in the art.

Appellants argue that the present claims do not preclude one skilled in the art from developing biometric devices that operate in a different manner than the claimed method. Appeal Br. 13. Appellants acknowledge that lack or preemption alone is not determinative, but argue that it is a factor that has been considered in determining if an invention is patent eligible. *Id.*

We have considered Appellants' argument and find it unpersuasive. Our reviewing court has expressly rejected similar contentions regarding preemption, stating that a patentee's "attempt to limit the breadth of the claims by showing alternative uses . . . outside of the scope of the claims does not change the conclusion that the claims are directed to patent ineligible subject matter." *Ariosa Diagnostics, Inc. v. Sequenom, Inc.*, 788 F.3d 1371, 1379 (Fed. Cir. 2015). The court explained that, "[w]hile preemption may signal patent ineligible subject matter, the absence of complete preemption does not demonstrate patent eligibility. . . . Where a patent's claims are deemed only to disclose patent ineligible subject matter under the Mayo framework . . . preemption concerns are fully addressed and made moot." *Id.*

In the present case, as discussed above, Appellants' claim 1 is limited to patent ineligible subject matter under the *Alice/Mayo* framework. Thus, that alternatives outside the claims are not preempted does not demonstrate patent eligibility.

In sum, for the reasons discussed, Appellants do not persuade us that a preponderance of the evidence fails to support the Examiner's conclusion that Appellants' claim 1 is patent-ineligible under section 101. Accordingly, we affirm the Examiner's rejection of claim 1 on that ground. Because they were not argued separately, the remaining claims fall with claim 1. *See* 37 C.F.R. § 41.37(c)(1)(iv).

OBVIOUSNESS

Issue

All of the rejections for obviousness are based, at least in part, on the combined teachings of Weast and Meger. Appellants have only presented substantive arguments addressing that combination of references arguing that the additional references do not address the deficiencies of the combined teachings of Weast and Meger. *See* Appeal Br. 22–26. We therefore elect to consider all the rejections for obviousness together.

The issue with respect to these rejections is whether a preponderance of the evidence supports the Examiner's conclusion that the subject matter of the claims would have been obvious over Weast combined with Meger.

The Examiner finds that Weast discloses a method for tracking a user's physiological activity using a wearable biometric device. Non-Final Act. 7. The Examiner finds that the biometric device of Weast comprises one or core processors, one or more sensors which provide output data indicative of a user's physiological activity and a display device. *Id.* The Examiner finds that the method of Weast comprises

operating the one or more sensors when the wearable biometric monitoring device is worn by the user (400) (Fig. 4A);

generating, by the one or more sensors, a set of sensor output data (the set of sensors output data including both current and previous data) indicative of the physiological activity of the user (402) (Fig. 4A) (para [0063]);

applying, by the one or more processors, a frequency domain analysis to the set of sensor output data to obtain a first measure of a periodic component of the set of sensor output data (412f) (Fig. 4B) (para [0091] and [0095], which teach the use of FFT);

determining, by the one or more processors, that a signal power of the set of sensor output data is lower than a threshold (410, "NO" decision) (Fig. 4A);

updating, by the one or more processors, a physiological metric of the user using the first measure of the periodic component (412g) (Fig. 4B) (para [0095]); and

controlling the display device of the wearable biometric monitoring device to display the updated physiological metric (i.e., via 136) (Fig. 1 A) (para [0033]) (also see para [0092] and claim 5, 13, 15, and 17).

Id. at 7–8.

The Examiner finds that while Weast does not teach applying a time domain analysis when certain conditions are met, this element is taught by Meger. Non-Final Act. 8. The Examiner concludes:

It would have been obvious to a skilled artisan to modify Weast to include applying, by the one or more processors, a time domain analysis to the set of sensor output data to obtain a second measure of the periodic component of the set of sensor output data; selecting, by the one or more processors and based on determining that the signal power is lower than the threshold, the first measure of the periodic component over the second measure of the periodic component, in view of the teachings of Meger, for the obvious advantage of improving battery life by performing less Fourier transform frequency analyses since the transform(s) will only be performed on a portion or portions of the data, instead of the entire data set (see para [0061] of Weast, which teaches that less analysis, and

specifically Fourier transform frequency analysis, improves battery life).

Id. at 8–9.

Appellants argue that Weast teaches away from the combination proposed by the Examiner in that Weast teaches use of this threshold value to determine whether to process the data or ignore the data supplied by the sensor. Appeal Br. 24. Appellants argue that this teaches away from using a threshold to determine whether to use a frequency domain analysis or a time domain analysis. *Id.*

Appellants also contend that Meger is non-analogous art in that Meger is directed to measuring physiological parameters of a patient in bed whereas the present invention and Weast are directed to measuring parameters for an active user. Appeal Br. 24.

Principles of Law

A reference may be said to teach away when a person of ordinary skill, upon reading the reference, would be discouraged from following the path set out in the reference, or would be led in a direction divergent from the path that was taken by the applicant. The degree of teaching away will of course depend on the particular facts; in general, a reference will teach away if it suggests that the line of development

flowing from the reference's disclosure is unlikely to be productive of the result sought by the applicant.

In re Gurley, 27 F.3d 551, 553 (Fed. Cir. 1994).

Analysis

We adopt the Examiner's findings of fact, reasoning on scope and content of the prior art, and conclusions set out in the Non-Final Action and Answer regarding this rejection. We find the Examiner has established that the subject matter of the claims would have been obvious to one of ordinary skill in the art at the time the invention was made over Weast combined with Meger. Appellants have not produced evidence showing, or persuasively argued, that the Examiner's determinations on obviousness are incorrect. Only those arguments made by Appellants in the Briefs have been considered in this Decision. Arguments not presented in the Briefs are waived. *See* 37 C.F.R. § 41.37(c)(1)(iv) (2015). We have identified claim 1 as representative; therefore, all claims fall with claim 1. We address Appellants' arguments below.

Appellants contend that Weast teaches away from the proposed combination. Appeal Br. 23–24. Appellants contend that Weast teaches using a threshold to determine whether to analyze data using a frequency domain analysis or discard the data. *Id.* Appellants argue that Weast teaches away from using a time domain analysis when the data is below a threshold. *Id.* at 24. Appellants argue that this would discourage one skilled in the art from making the proposed combination. *Id.*

We have considered Appellants' arguments and find them unpersuasive. As the Examiner points out, the threshold in Weast and the

threshold in Meger are two different thresholds. Ans. 27. The threshold in Weast is directed to determining whether to analyze the data. *Id.* The threshold in Meger is used after a determination is made to analyze the data to select the method for the analysis. *Id.* We agree with the Examiner that there is nothing in Weast that would discourage one skilled in the art from using a second threshold to determine whether to apply a frequency domain analysis or a time domain analysis. *Id.*

Appellants also contend that Meger is non-analogous art and would not lead one skilled in the art to the claimed invention. Appeal Br. 24–25. Appellants argue that Meger is directed to a system that can monitor large body movements of a patient in bed whereas Weast is directed to walking or running movements of an ambulatory user. *Id.* at 25.

Again, we find Appellants’ arguments unpersuasive. While we agree with Appellants that Weast teaches using biometric devices to monitor walking and running, Weast also teaches using the device to monitor periods of inactivity, such as sleep, as well as periods of activity. Weast ¶ 141. Weast teaches that the non-activity can be measured using heart rate. *Id.* This is similar to Meger where respiratory rates and heart rates for low activity levels and high activity levels are monitored. Thus the references both teach monitoring physiological parameters to determine levels of activity. As such they are both directed to a common field and/or problem, they are also reasonably pertinent to the problem of providing more accurate physiological measurements depending on a user’s activity, and, therefore, are analogous.

Conclusion of Law

We conclude that a preponderance of the evidence supports the Examiner's conclusion that claim 1 would have been obvious.

Claims 2–4, 7–9, 15, 16, 23–26, 31 and 34–37 have not been argued separately and therefore fall with claim 1. 37 C.F.R. § 41.37(c)(1)(iv).

As discussed above, Appellants only argument for the remaining claims is that the additional references do not remedy the deficiencies of the Weast and Meger. Appeal Br. 26. As discussed above, the teachings of Weast and Meger are not deficient. We therefore affirm these remaining rejections under 3 U.S.C. § 103(a)

SUMMARY

We affirm the rejection under 35 U.S.C. § 101.

We affirm the rejections under 35 U.S.C. § 103(a).

TIME PERIOD FOR RESPONSE

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

AFFIRMED

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte JUNG OOK HONG, ANDREW COLE AXLEY, and
SHELTEN GEE JAO YUEN

Appeal 2018-000661
Application 14/250,256
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Before FRANCISCO C. PRATS, JOHN E. SCHNEIDER, and
TIMOTHY G. MAJORS, *Administrative Patent Judges*.

MAJORS, *Administrative Patent Judge*, concurring-in-part and dissenting-
in-part

DECISION ON APPEAL

Although I join the majority's analysis and decision regarding the rejection for obviousness, I write separately on the rejection under § 101 for lack of patent-eligible subject matter. Non-Final Act. 3–6. The majority has summarized the law and general two-part test for determining whether claimed subject matter is patent eligible under the *Alice/Mayo* framework, which I do not repeat here. As for the application of that test to the facts and rejection here, however, I see things differently and conclude that the claims on appeal are not patent ineligible under § 101.

Is claim 1, which recites a method of tracking a user’s physiological activity using a wearable biometric monitoring device according to certain steps, directed to a patent ineligible abstract idea?¹ On my review of the record, it is not. I explain further below.

In addressing whether the claim is directed to an abstract idea, we must heed several cautions. All inventions, at some level, embody or apply patent ineligible subject matter such as abstract ideas, and so “we tread carefully in construing this exclusionary principle lest it swallow all of patent law.” *Alice Corp. Pty. Ltd. v. CLS Bank Intern.*, 134 S.Ct. 2347, 2354 (2014). And we must “ensure at step one that we articulate what the claims are directed to with enough specificity to ensure the step one inquiry is meaningful.” *Thales Visionix Inc. v. U.S.*, 850 F.3d 1343, 1347 (Fed. Cir. 2017). Moreover, as the Federal Circuit has confirmed, “[a]t step one, . . . it is not enough to merely identify a patent-ineligible concept underlying the claim; [we] must determine whether . . . [the] patent-ineligible concept is what the claim is ‘directed to.’” *Rapid Litig. Mgmt. Ltd. v. CellzDirect, Inc.*, 827 F.3d 1042, 1050 (Fed. Cir. 2016).

The Examiner, in effect, distills claim 1 down to applying time and frequency domain analyses to data, and making selections based on the

¹ Determining whether a particular claim is directed to an abstract idea is not, at present, a question that is easily answered. *Cf. Interval Licensing LLC v. AOL, Inc.*, No. 2016-2502, slip op. at 5, 11 (Fed. Cir. July 20, 2018) (Plager, J. concurring-in-part and dissenting-in-part) (describing a “definitional morass” related to the abstract idea inquiry and noting that “when two of our leading judges who have devoted their careers to the practice and explication of patent law publicly proclaim that there is a real problem, there is a real problem.”).

analyzed data — analyses that the Examiner asserts can be done with a pen and paper or in the mind. Non-Final Act. 3–4. But to my eyes, this is an overgeneralization of claim 1, and not what the claim is directed to.

Even if the data analysis and selection could be characterized as an “abstract idea,” reading the full claim in light of the Specification, I conclude claim 1 is directed to a sufficiently non-abstract method that uses a wearable biometric device in a more specific and practical way. That is, claim 1 is directed to using a wearable biometric monitoring device² to collect user data indicating a user’s physiological activity, process and select the data according to certain rules (i.e., selecting sensor output data analyzed in the frequency domain versus the time domain when signal power is lower), and updating and displaying the user’s physiologic metrics on the wearable device’s display. That the method may include and rely upon abstract ideas (e.g., frequency domain analysis of data) is not decisive.

² The claim also indicates that the wearable biometric device includes tangible, physical structures (sensors, processor, and a display), which are configured in a specific way to carry out the particular steps claimed. In a related appeal, the Board recently held that claims to a biometric monitoring *device* were non-abstract and patent eligible under § 101. Appeal No. 2017-006708 slip op. 6–9 (PTAB Sept. 14, 2018) (Appl. No. 14/481,020). These non-abstract device claims were configured to perform similar if not substantially the same operations that are recited in the steps of present method claim 1. *Id.* at 2–3 (claim 20). For my part, I am unable to reconcile a conclusion that the present method claims are ineligible under § 101 while the related device claims are not. Of course, a “process” and a “machine” are classes of invention that are both eligible for patenting under § 101, so whether one claim is a method and another a device cannot, in my view, be the sole distinction for reaching a different result. Moreover, to the extent such a method/device distinction is justified, it breaks down here with the wearable biometric monitoring *device* of claim 23 presented in this appeal.

Thales, 850 F.3d at 1349 (“That a mathematical equation is required to complete the claimed method and system does not doom the claims to abstraction.”). And the Specification repeatedly explains that using a wearable biometric monitoring device in the manner claimed provides practical and real-world applications and benefits. *See, e.g.*, Spec. ¶ 7 (describing the device’s ability to discriminate between frequency and time domain analysis depending on signal strength as “contribut[ing] to improved accuracy and speed of biometric data.”); ¶ 94 (describing preferential frequency domain analysis when the user engages in certain physiological activities like bicycling or driving in a car; “the frequency domain analysis helps us avoid counting steps when the user moves due to vibration of the ride such as when the car runs over a bump.”).

Appellants and the Examiner also disagree whether claims are directed to a technological “improvement.” *Compare* App. Br. 19 *with* Ans. 20–21. According to the Examiner, Appellants’ argument fails without an “assessment of the conventional devices.” Ans. 20. Also, the Examiner asserts, the claimed subject matter “is not an improvement” because the prior art (Meger) already recognized that switching between the time and frequency domain was “*more effective*” for calculating certain physiological parameters depending on the user’s activity. *Id.* at 20–21. But the Examiner’s analysis misses the mark.³ The issue is not whether, in fact, the

³ The majority rejects Appellants’ contentions that the claims are directed to an improvement obtained with the wearable biometric device because Appellants have “only presented attorney argument” and “do not point to any data in the record to show how the claimed method improves the physiological metric or improve the operation of the biometric device.” Appellants, however, cite several disclosures in the Specification itself

Appellants' invention is better or "improved" versus the prior art. Someone else may have been first to recognize the technological improvement. But this, if anything, is an issue more properly considered under § 102 or § 103. The question for purposes of § 101 is whether, on balance, the claim is *directed to a technological improvement or an abstraction*. *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1335 (Fed. Cir. 2016) (holding it is "relevant to ask whether the claims are directed to an improvement to computer functionality versus being directed to an abstract idea, even at the first step of the *Alice* analysis."). In other words, that the Specification (or other evidence) describing the claimed invention as a technological improvement may ultimately be proven wrong when compared to the prior art does not necessarily mean that the invention is an abstract idea. And, whether the invention is improved versus the prior art says little about whether the invention is, in fact, a patent eligible practical application of an abstract idea.

For the reasons above, I conclude the claims are not directed to an abstract idea and, therefore, I would reverse the Examiner's rejection under § 101. If the claims are not directed to an abstract idea, the inquiry ends and proceeding to step two of the *Alice/Mayo* framework is unnecessary. *Thales*, 850 F.3d at 1349.

describing the alleged improvement and benefits of the invention. *See, e.g.*, App. Br. 8–9 (citing Spec. ¶¶ 2, 6, 7, 59, 60, 124). Hence, Appellants do not rely only on attorney argument and it is unclear what "data" the majority is requiring beyond the un rebutted description of the practical and real-world benefits of the claimed wearable biometric monitoring device and method of using it cited in the Specification.