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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 2018-003376
Application 14/216,743
Technology Center 3700

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

Opinion of 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 step count metric, 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).

¹ Appellants identify the Real Party in Interest as Fitbit, Inc. Appeal Br. 3.

We AFFIRM-IN-PART.

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 power 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.” Spec. ¶ 5.

Claims 39–46, 48–50, 52–58, 60–62, 71, and 76 are on appeal. Claim 39 is illustrative and reads as follows:

39. A method of tracking a step count metric of a user using a wearable biometric monitoring device, wherein the wearable biometric monitoring device comprises one or more processors, one or more motion sensors, and a display device configured to present the step count metric of the user, the method comprising:

- (a) operating the one or more motion sensors when the wearable biometric monitoring device is in motion;
- (b) generating, by the one or more motion sensors, a first set of motion sensor output data indicative of the motion of the wearable biometric monitoring device;
- (c) determining, by the one or more processors, that a first signal strength of the first set of motion sensor output data is larger than a threshold value;

- (d) selecting, by the one or more processors and based on determining that the first signal strength of the first set of motion sensor output data is larger than the threshold value, a time domain analysis of the first set of motion sensor output data over a frequency domain analysis of the first set of motion sensor output data;
- (e) quantifying, by the one or more processors, a step count using the time domain analysis of the first set of motion sensor output data, and updating the step count metric using the step count quantified using the time domain analysis of the first set of motion sensor output data;
- (f) generating, by the one or more motion sensors, a second set of motion sensor output data indicative of the motion of the wearable biometric monitoring device;
- (g) determining, by the one or more processors, that a second signal strength of the second set of motion sensor output data is smaller than the threshold value;
- (h) selecting, by the one or more processors and based on determining that the second signal strength of the second set of motion sensor output data is smaller than the threshold value, the frequency domain analysis of the second set of motion sensor output data over the time domain analysis of the second set of motion sensor output data; and
- (i) quantifying, by the one or more processors, a step count using the frequency domain analysis of the second set of motion sensor output data, and updating the step count metric using the step count quantified using the frequency domain analysis of the second set of motion sensor output data;
- (j) controlling the display device of the wearable biometric monitoring device to display the step count metric.

The claims stand rejected as follows:

Claims 39, 40, 42–46, 48–50, 52, 58, 71, and 76 have been rejected under 35 U.S.C. § 101 as being directed to non-statutory subject matter.

Claims 39, 40, 42–45, 48, 52, 58, 71, and 76 have been rejected under 35 U.S.C. § 103(a) as unpatentable over Modi² in view of Meger³ and Rayner.⁴

Claim 46 has been rejected under 35 U.S.C. § 103(a) as unpatentable over Modi in view of Meger and Rayner in further view of Weast.⁵

Claims 49 and 50 have been rejected under 35 U.S.C. § 103(a) as unpatentable over Modi in view of Meger and Rayner in further view of Najarian.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 *Alice/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

² Modi, US 2014/0074431 A1, published Mar. 13, 2014 (“Modi”)

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

⁴ Rayner et al. US 2014/0228649 A1, published Aug. 14, 2014 (“Rayner”).

⁵ Weast et al., US 2013/0191034 A1, published July 25, 2013 (“Weast”).

⁶ Najarian et al., US 2012/0123232 A1, published May 17, 2012 (“Najarian”).

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 step count tracking. Appeal Br. 7. Appellants contend that the method recited in the claims represents a specific solution to a technological problem. Appeal Br. 9–14 and 21. Appellants contend that the claims are directed to specific step count process and do not preempt alternate approaches to step count analysis. Appeal Br. 15–16. Appellants also contend that the claimed method employs unconventional steps to track physiological metrics. Appeal Br. 16–17. 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. 18–20.

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.”

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 recited a method for tracking a user's steps. Response⁷ 2. 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 step count metric obtained by a wearable biometric device. Appeal Br. 7–10. 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. 11–12.

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 motion data is processed, not the structural elements of the device. Data processing concepts are abstract ideas and are not patent eligible.

⁷ Response to Non-Compliant Brief, filed Sept. 12, 2017 (“Response”).

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 refers 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 the in improves the operation of the device. Appeal Br. 10 and 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 improve the operation of the biometric device. Appellants have only presented attorney argument which is insufficient to show patentability. Appeal Br. 10 and 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. 16–

21. Appellants also argue that the method is tied to a specific machine which also supports patentability. Appeal Br. 18–17.

Appellants’ argument is not persuasive. The analytical techniques recited in the claims, frequency domain analysis and time domain analysis are known in the art. 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 Modi, such devices are known in the art. *See* Modi Abstract (wearable pedometer). Appellants do not point to any evidence in the record that has 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. 15–16. 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 39 is limited to patented 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 39 is patent-ineligible under § 101. Accordingly, we affirm the Examiner's rejection of claim 39 on that ground. Because they were not argued separately, claims 40, 42–46, 48–50, 52, 58, 71, and 76 fall with claim 39. *See* 37 C.F.R. § 41.37(c)(1)(iv).

OBVIOUSNESS

Issue

All of the rejection are based, at least in part, on the combined teachings of Modi and Meger. As discussed below, the propriety of this combination is dispositive of all of the rejections under 35 U.S.C. § 103(a). We therefore elect to consider all of 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 Modi combined with Meger.

The Examiner finds that Modi teaches a method for monitoring a user's step count using a wearable biometric device. Non-Final Act. 11. The Examiner finds that the biometric device in Modi comprises one or

more processors, and one or more motion sensors. *Id.* The Examiner finds that the method disclosed in Modi comprises the steps of

(a) operating the one or more motion sensors when the wearable biometric monitoring device is in motion (" ... detected by the motion sensor as the user is walking or running," para [0014]);

(b) generating, by the one or more motion sensors, a first set of motion sensor output data (i.e., 320, 322 of Fig. 3) indicative of the motion of the wearable biometric monitoring device (para [0019]);

(c) quantifying, by the one or more processors, a step count using the time domain analysis of the first set of motion sensor output data (para [0014], [0037], [0040], and/or [0041]), and updating the step count metric using the step count quantified using the time domain analysis of the first set of motion sensor output data (para [0014], [0037], [0040], and/or [0041]); and

(d) generating, by the one or more motion sensors, a second set of motion sensor output data (i.e., 306, 308 of Fig. 3) indicative of the motion of the wearable biometric monitoring device (para [0019]).

Id.

The Examiner finds that Modi does not teach the remaining steps of claim 39 but that Meger teaches those steps. Non-Final Act. 11–13. The Examiner concludes

It would have been obvious to a skilled artisan to modify Modi to include (c) determining, by the one or more processors, that a first signal strength of the first set of motion sensor output data is larger than a threshold value; (d) selecting, by the one or more processors and based on determining that the first signal strength of the first set of motion sensor output data is larger than the threshold value, a time domain analysis of the first set of motion sensor output data over a frequency domain analysis of the first set of motion sensor output data; (g)

determining, by the one or more processors, that a second signal strength of the second set of motion sensor output data is smaller than the threshold value; (h) selecting, by the one or more processors and based on determining that the second signal strength of the second set of motion sensor output data is smaller than the threshold value, the frequency domain analysis of the second set of motion sensor output data over the time domain analysis of the second set of motion sensor output data; and (i) quantifying, by the one or more processors, a step count using the frequency domain analysis of the second set of motion sensor output data, and updating the step count metric using the step count quantified using the frequency domain analysis of the second set of motion sensor output data, in view of the teachings of another embodiment of Modi and Meger, because "it is more effective to use a time domain algorithm" during relatively low activity levels (i.e., sleep or walking) and "a frequency domain algorithm" during relatively high activity levels (i.e., awake or running) (see para [0358] of Meger). Additionally, the Federal Circuit has recognized that "[c]ombining two embodiments disclosed adjacent to each other in a prior art patent does not require a leap of inventiveness." *Boston Scientific Scimed, Inc. v. Cordis Corp.*, 554 F.3d 982, 991 (Fed. Cir. 2009).

Non-Final Act. 13–14.

The Examiner finds that neither Modi nor Meger teach using a display device to show the user's step count, but that this is taught by Rayner. Non-Final Act. 14. The Examiner finds that it would have been obvious to modify the device of Modi to include a display. *Id.* at 15.

Appellants argue that Modi teaches away from making the combination proposed by the Examiner. Appeal Br. 25. Appellants contend that Modi teaches using a threshold to determine whether to analyze the data or ignore the data. *Id.* Appellants contend that this teaches away from using

a threshold to determine whether to use a time domain analysis or a frequency domain analysis. *Id.* at 25–26.

Appellants argue that one skilled in the art would not have a reasonable expectation of success in combining the teachings of the references. Non-Final Act. 26. Appellants argue that the combination of reference would result in erroneously counting noise in the motion data as steps. *Id.* This would lead to an inaccurate step count. *Id.*

Appellants go on to argue that Meger is a non-analogous reference and cannot be properly combined with Modi and Rayner. *Id.* Appellants argue that Meger is directed to monitoring large body movements of a patient in bed whereas Modi and Rayner are directed to an ambulatory user. *Id.* at 27. Appellants also argue that the data analyzed in Modi are different than that analyzed in Meger. *Id.* Appellants argue that nothing in the references teach that switching between frequency domain analysis and time domain analysis for heart or respiratory rates as taught by Meger would be applicable to the motion data of Modi. *Id.*

Analysis

We conclude that Appellants have the better position. The method taught in Modi involves using frequency domain analysis of data derived from one or more motion sensors. Modi ¶¶ 14–16. Meger, on the other hand, teaches alternating between frequency domain analysis and time domain analysis to analyze respiratory or heart rates. Meger ¶ 358. The

Examiner has not shown why one skilled in the art would apply the split analytical technique of Meger to the motion data of Modi.

The Examiner contends that the combination is proper in that both Modi and Meger are in the same general field measuring physiological data using biometric devices. Ans. 29–30. While this may be true, as Appellants point out, Meger and Modi measure different types of physiological data, heart rate and respiration rate versus motion data. The Examiner has not shown adequately on this record that the analytical techniques used in Meger for heart rate or respiration rate analysis would be useful to analyze the motion data of Modi.

Conclusion of Law

We conclude that a preponderance of the evidence does not support the Examiner’s conclusion that subject matter of the claims

SUMMARY

We affirm the rejection of claims 39, 40, 42–46, 48–50, 52, 58, 71, and 76 under 35 U.S.C. § 101.

We reverse 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-IN-PART

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 14/250,356
Technology Center 3700

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. 3–7. 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 39, which recites a method of tracking a user's step count metric 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 39 down to applying time and frequency domain analyses to data, and making selections based on the analyzed data — analyses that the Examiner asserts can be done with a pen

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.”).

and paper or in the mind. Non-Final Act. 3–4. But to my eyes, this is an overgeneralization of claim 39, 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 39 is directed to a sufficiently non-abstract method that uses a wearable biometric device in a more specific and practical way. That is, claim 39 is directed to using a wearable biometric monitoring device² to collect user data indicating a user’s physiological activity, specifically a step count metric, process and select the data according to certain rules (e.g., 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 step count metric 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. *Thales*, 850 F.3d at 1349 (“That a mathematical equation is required to complete the claimed method and system does not

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 39. *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.

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. 7–8 with Ans. 21–22. According to the Examiner, Appellants’ argument fails without an “assessment of the conventional devices.” Ans. 21. 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 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

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.

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.