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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/055,591	03/31/2011	Espen D. Kateraas	10805.0004-00000	6588
22852	7590	12/26/2019	EXAMINER	
FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER LLP 901 NEW YORK AVENUE, NW WASHINGTON, DC 20001-4413			DETWEILER, JAMES M	
			ART UNIT	PAPER NUMBER
			3621	
			NOTIFICATION DATE	DELIVERY MODE
			12/26/2019	ELECTRONIC

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte ESPEN D. KATERAAS and PEDRO J. MEDELIUS

Appeal 2018-001207
Application 13/055,591
Technology Center 3600

Before JOHN A. EVANS, JAMES W. DEJMEK, and
JASON M. REPKO, *Administrative Patent Judges*.

DEJMEK, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellant¹ appeals under 35 U.S.C. § 134(a) from a Non-Final Rejection of claims 17–26. Appellant has canceled claims 1–16. *See* Appeal Br. (Claims App’x 2). We have jurisdiction over the remaining pending claims under 35 U.S.C. § 6(b). *See Ex parte Lemoine*, 46 USPQ2d 1420, 1423 (BPAI 1994) (precedential).

We affirm.

¹ Throughout this Decision, we use the word “Appellant” to refer to “applicant” as defined in 37 C.F.R. § 1.42 (2016). Appellant identifies HEARTMILES, LLC as the real party in interest. Appeal Br. 2.

STATEMENT OF THE CASE

Introduction

Appellant's disclosed and claimed invention generally relates to a physical-activity tracking system. Spec. ¶ 7. In a disclosed embodiment, the physical activity system comprises a data collection portal that is configured to acquire data from data collection units. Spec. ¶ 7. In addition, the data collection units may contain an array of sensors to collect such information as body temperature, blood oxygen levels, and pulse rate of an individual using (i.e., wearing) the data collection unit. Spec. ¶ 12. According to the Specification, the data may be collected and analyzed to calculate various indicators of physical activity. *See, e.g.*, Spec. ¶¶ 38–42. As an incentive to encourage physical activity, the Specification also describes providing a reward to the user if the calculated physical activity exceeds a baseline level of activity. *See* Spec. ¶¶ 27–29, 50.

Claim 17 is representative of the subject matter on appeal and is reproduced with the disputed limitation emphasized in *italics*:

17. A physical activity tracking system for determining a physical activity level of a particular individual relative to a determined baseline fitness level unique to the individual, the system comprising:

at least one data collection portal configured to acquire data from a data collection unit associated with the particular individual, the data collection unit including a pulse sensor, a body temperature sensor, and a blood oxygenation level sensor, and the received data including an output from the pulse sensor, an output from the body temperature sensor, and an output from the blood oxygenation level sensor; and at least one server unit configured to:

communicate with the at least one data collection portal;

receive from the at least one data collection portal the acquired data, including the output from the pulse sensor, the output from the body temperature sensor, and the output from the blood oxygenation level sensor;

determine the baseline fitness level unique to the particular individual based on the output from the pulse sensor and at least one of the output from the body temperature sensor and the output from the blood oxygenation level sensor, wherein the baseline fitness level unique to the particular individual includes a baseline heart rate for the particular individual determined based on the output of the pulse sensor acquired during a resting condition for the particular individual and at least one of a baseline body temperature for the particular individual determined based on the output of the body temperature sensor acquired during the resting condition for the particular individual and a baseline blood oxygen level for the particular individual determined based on the output of the blood oxygenation level sensor acquired during the resting condition for the particular individual;

determine a physical activity score for the particular individual based on the determined baseline fitness level unique to the particular individual and based on a monitored pulse rate for the particular individual and at least one of a monitored body temperature for the particular individual and a monitored blood oxygen level for the particular individual;

compare the determined physical activity score to a predetermined threshold; and

determine and store an amount of time during which the determined physical activity score exceeds the predetermined threshold.

The Examiner's Rejections

1. Claims 17–26 stand rejected under the doctrine of obviousness-type double patenting over the claims of U.S. Patent No. 8,936,552 B2

(issued Jan. 20, 2015); Shimada et al. (US 2006/0094938 A1; May 4, 2006) (“Shimada”); Stubbs et al. (US 6,736,759 B1; May 18, 2004) (“Stubbs”); Amano et al. (US 6,030,342; Feb. 29, 2000) (“Amano”); Tchao et al. (US 2009/0149299 A1; June 11, 2009) (“Tchao”); and/or Ando et al. (US 2002/0013717 A1; Jan. 31, 2002) (“Ando”).² Non-Final Act. 4–5.

2. Claims 17–26 stand provisionally rejected under the doctrine of obviousness-type double patenting over the claims of Application No. 14/529,224 (filed Jan. 20, 2015); Shimada, Stubbs, Amano, Tchao, and/or Ando.³ Non-Final Act. 5–6.

3. Claims 17–26 stand rejected under 35 U.S.C. § 101 as being directed to patent ineligible subject matter. Non-Final Act. 6–14.

4. Claims 17, 18, 23, and 24 stand rejected under pre-AIA 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. Non-Final Act. 17–21.

5. Claim 17 stands rejected under pre-AIA 35 U.S.C. § 112, second paragraph, as being indefinite. Non-Final Act. 22.

² In the statement of rejection, the Examiner inadvertently identifies claims 14–26. Non-Final Act. 4. We note, as does Appellant (*see* Appeal Br. 9 n.9), that Appellant previously had canceled claims 14–16. Appellant does not otherwise assert prejudice as a result of the misidentification of claims. Accordingly, we treat the typographical error as harmless.

³ In the statement of rejection, the Examiner inadvertently identifies claims 14–26. Non-Final Act. 5. We note, as does Appellant (*see* Appeal Br. 9 n.9), that Appellant previously had canceled claims 14–16. Appellant does not otherwise assert prejudice as a result of the misidentification of claims. Accordingly, we treat the typographical error as harmless.

6. Claims 17–23 and 25 stand rejected under pre-AIA 35 U.S.C. § 103(a) as being unpatentable over Shimada, Stubbs, and Amano. Non-Final Act. 23–38.

7. Claim 24 stands rejected under pre-AIA 35 U.S.C. § 103(a) as being unpatentable over Shimada, Stubbs, Amano, and Ando. Non-Final Act. 38–40.

8. Claim 26 stands rejected under pre-AIA 35 U.S.C. § 103(a) as being unpatentable over Shimada, Stubbs, Amano, and Tchao. Non-Final Act. 40–41.

ANALYSIS⁴

Objection to Claim 17

In the Non-Final Office Action, the Examiner objected to claim 17, indicating that “to maintain consistency of terminology throughout the claims” that the word “particular” should precede “individual” in the preamble. Non-Final Act. 2. Appellant asserts that an amendment to add “particular” should not be required as there is only one individual referenced throughout the preamble and claims. Appeal Br. 4.

Objections are not appealable, but rather are petitionable matters. *See* MPEP § 706.01 (explaining “the Board will not hear or decide issues pertaining to objections and formal matters which are not properly before the Board”). Accordingly, we do not address the merits of Appellant’s

⁴ Throughout this Decision, we have considered the Appeal Brief, filed July 21, 2017 (“Appeal Br.”); the Reply Brief, filed November 15, 2017 (“Reply Br.”); the Examiner’s Answer, mailed September 15, 2017 (“Ans.”); and the Non-Final Office Action, mailed June 22, 2016 (“Non-Final Act.”), from which this Appeal is taken.

arguments concerning the Examiner's objection to the language in the preamble of claim 17.

Claim Interpretation

In the Non-Final Office Action, the Examiner states that the “baseline fitness level unique to the particular individual,” as recited in claim 17 is interpreted “to be any output or value associated with an output (and/or combination or set of outputs/values) that from the pulse sensor and at least one of the temperature or blood oxygenation level sensor acquired during a resting condition for the particular individual.” Non-Final Act. 3. The Examiner further states that the term is not understood to be a single value or metric, and does not necessarily involve a formula or other mathematical manipulation of sensor output data. Non-Final Act. 3; *see also* Ans. 5–6.

Appellant asserts that the Examiner's interpretation conflicts with the express language of claim 17 and is inconsistent with the Specification. Appeal Br. 4–9; Reply Br. 1–4. In particular, Appellant argues that rather than a set of two or more sensor outputs, claim 17 expressly recites the baseline fitness level includes a baseline heart rate and at least one of a baseline body temperature and baseline blood oxygen level. Appeal Br. 6–9. In addition, Appellant argues the Specification describes the baseline heart rate, baseline body temperature, and baseline blood oxygen level as a mathematical formula (e.g., integral over time) of readings from the appropriate sensor. Appeal Br. 6–9 (citing Spec. ¶¶ 38–40).

When construing claim terminology during prosecution before the Office, claims are to be given their broadest reasonable interpretation consistent with the Specification, reading claim language in light of the

Specification as it would be interpreted by one of ordinary skill in the art. *In re Am. Acad. of Sci. Tech Ctr.*, 367 F.3d 1359, 1364 (Fed. Cir. 2004). However, the broadest *reasonable* interpretation differs from the broadest *possible* interpretation. *In re Smith Int'l, Inc.*, 871 F.3d 1375, 1383 (Fed. Cir. 2017). The correct inquiry in giving a claim term its broadest reasonable interpretation in light of the specification is “an interpretation that corresponds with what and how the inventor describes his invention in the specification, *i.e.*, an interpretation that is ‘consistent with the specification.’” *Smith*, 871 F.3d at 1382–83 (quoting *In re Morris*, 127 F.3d 1048, 1054 (Fed. Cir. 1997)). Additionally, we are mindful that limitations are not to be read into the claims from the Specification. *In re Van Geuns*, 988 F.2d 1181, 1184 (Fed. Cir. 1993).

We agree with Appellant that the Examiner’s proposed construction improperly reads out the language of claim 17 that expressly recites:

wherein the baseline fitness level unique to the particular individual includes a baseline heart rate for the particular individual determined based on the output of the pulse sensor acquired during a resting condition for the particular individual and at least one of a baseline body temperature for the particular individual determined based on the output of the body temperature sensor acquired during the resting condition for the particular individual and a baseline blood oxygen level for the particular individual determined based on the output of the blood oxygenation level sensor acquired during the resting condition for the particular individual.

Further, when considered in light of the Specification, we agree with Appellant that the baseline heart rate, baseline body temperature, and baseline blood oxygen level are defined by a mathematical calculation performed on the output gathered from the appropriate sensors. *See Spec.* ¶¶ 38–40.

Provisional Obviousness-type Double Patenting Rejection

The Examiner provisionally had rejected claims 17–26 over the claims of Application No. 14/529,224 (“the ’224 application”), Shimada, Stubbs, Amano, Tchao, and/or Ando. Non-Final Act. 5–6. On March 28, 2019 (i.e., subsequent to the Examiner’s response in the instant matter), the ’224 application was abandoned. Accordingly, this rejection is moot.

Obviousness-type Double Patenting Rejection

Appellant argues the Examiner’s obviousness-type double patenting rejection is in error because U.S. Patent No. 8,936,552 (“the ’552 patent”) is directed to a completely different part of the system as compared to the instant claims. Appeal Br. 9–15. In particular, Appellant asserts the instant claims are directed to a data collection portal and a server unit in communication with the data collection portal to acquire data from a data collection unit, whereas the claims of the ’552 patent are directed to a data collection unit. Appeal Br. 14; Reply Br. 4. As such, Appellant argues the differences between the instant claims and those of the ’552 patent would not have been obvious. Appeal Br. 14–15.

In rejecting claims 17–26 under the doctrine of obviousness-type double patenting, the Examiner determines the pending claims “would have been obvious to one of ordinary skill in the art” in view of Shimada and/or Stubbs/and/or Amano and/or Tchao and/or Ando “for analogous reasons to those discussed . . . with regard to the rejections of the claims under 35 U.S.C. [§] 103.” Non-Final Act. 5; *see also* Ans. 6–7 (explaining it would have been obvious to modify the claims of the ’552 patent with the teachings of the various cited references).

“[D]ouble patenting is determined by analysis of the claims as a whole.” *Carman Indus., Inc. v. Wahl*, 724 F.2d 932, 940 (Fed. Cir. 1983) (quotation and citations omitted). In particular, “it is important to bear in mind that comparison can be made only with what invention is *claimed* in the earlier patent, paying careful attention to the rules of claim interpretation to determine what invention a claim *defines* and not looking to the claim for anything that happens to be mentioned in it as though it were a prior art reference.” *Gen. Foods Corp. v. Studiengesellschaft Kohle mbH*, 972 F.2d 1272, 1280 (Fed. Cir. 1992).

We agree with Appellants that the claims of the ’552 patent define a data collection unit, whereas the pending claims define a physical-activity tracking system that merely uses the data acquired from a data collection unit. These are patentably distinct inventions. In a double patenting analysis, patent claims of a reference application are examined only to determine what has been patented, not for “something one may find to be disclosed by reading them.” *In re Aldrich*, 398 F.2d 855, 859 (CCPA 1968); *see also In re Sutherland*, 347 F.2d 1009, 1015 (CCPA 1965) (cautioning against using the language of the claims as prior art). Rather than analyzing what the claims of the ’552 patent define, the Examiner appears to look to the claim language to determine what it may disclose to one of ordinary skill in the art, particularly when combined with the teachings of other cited references.

For the reasons discussed *supra*, we are persuaded of Examiner error. Accordingly, we do not sustain the Examiner’s rejection of claims 17–26 under the doctrine of obviousness-type double patenting.

Rejection under 35 U.S.C. § 101

Appellant disputes the Examiner’s conclusion that the pending claims are directed to patent-ineligible subject matter. Appeal Br. 15–19; Reply Br. 4–7. In particular, Appellant argues the claims are not directed to an abstract idea, but rather, are “directed to an improvement in technology that centers about collection . . . outputs” or an improvement “in rule-based determination of a physical activity level.” Appeal Br. 16; Reply Br. 7. Moreover, Appellant asserts that the additional limitations, considered as an ordered combination, provide significantly more than the alleged abstract idea. Appeal Br. 17–19.

The Supreme Court’s two-step framework guides our analysis of patent eligibility under 35 U.S.C. § 101. *Alice Corp. v. CLS Bank Int’l*, 573 U.S. 208, 217 (2014). In addition, the Office recently published revised guidance for evaluating subject matter eligibility under 35 U.S.C. § 101, specifically with respect to applying the *Alice* framework. USPTO, 2019 Revised Patent Subject Matter Eligibility Guidance, 84 Fed. Reg. 50 (Jan. 7, 2019) (“Office Guidance”). If a claim falls within one of the statutory categories of patent eligibility (i.e., a process, machine, manufacture, or composition of matter) then the first inquiry is whether the claim is directed to one of the judicially recognized exceptions (i.e., a law of nature, a natural phenomenon, or an abstract idea). *Alice*, 573 U.S. at 217. As part of this inquiry, we must “look at the ‘focus of the claimed advance over the prior art’ to determine if the claim’s ‘character as a whole’ is directed to excluded subject matter.” *Affinity Labs of Tex., LLC v. DirecTV, LLC*, 838 F.3d 1253, 1257–58 (Fed. Cir. 2016). Per Office Guidance, this first inquiry has two prongs of analysis (i) does the claim recite a judicial exception (e.g., an

abstract idea), and (ii) if so, is the judicial exception integrated into a practical application. 84 Fed. Reg. at 54. Under the Office Guidance, if the judicial exception is integrated into a practical application, *see infra*, the claim passes muster under § 101. 84 Fed. Reg. at 54–55. If the claim is directed to a judicial exception (i.e., recites a judicial exception and does not integrate the exception into a practical application), the next step is to determine whether any element, or combination of elements, amounts to significantly more than the judicial exception. *Alice*, 573 U.S. at 217; 84 Fed. Reg. at 56.

Here, we conclude Appellant’s claims recite an abstract idea. More particularly, Appellant’s claims are generally directed to tracking activity data associated with an individual and determining a physical activity level of the individual relative to a baseline fitness level unique to the individual. *See* Non-Final Act. 6–8; *see also* Ans. 9. This is consistent with how Appellants describe the claimed invention. *See* Appeal Br. 2 (“Claim 17 is directed to a physical activity tracking system for determining a physical activity level of a particular individual relative to a determined baseline fitness level unique to the individual.”); *see also* Spec. ¶ 2 (describing that the invention relates to “evaluating data relating to the physical activity level of an individual”); ¶ 7 (summarizing the claimed invention as a physical-activity tracking system to analyze data associated with the physical activity of an individual and indicate when the activity level exceeds a threshold). As described in the Specification, tracking activity data includes collecting data from “any suitable array of components” such as a sensor within a data collection unit worn by an individual. Spec. ¶¶ 10–11. As further described in the Specification, determine a physical activity level of the individual

relative to a baseline fitness level for the individual may be characterized using various mathematical relationships and formulas based on the collected data. Spec. ¶¶ 38–42.

Therefore, consistent with our Office Guidance and case law, we conclude that tracking activity data associated with an individual and determining a physical activity level of the individual relative to a baseline fitness level unique to the individual is a mathematical concept (e.g., mathematical relationship or mathematical calculation)—i.e., an abstract idea. *See* 84 Fed. Reg. at 52; *see also Digitech Image Techs., LLC v. Elec. for Imaging, Inc.*, 758 F.3d 1344, 1350 (Fed. Cir. 2014) (concluding that “a process of organizing information through mathematical correlations and is not tied to a specific structure or machine” to be abstract); *SAP Am., Inc. v. InvestPic, LLC*, 898 F.3d 1161, 1167 (Fed. Cir. 2018) (concluding claims for providing statistical analysis of investment data were directed to the abstract idea of “selecting certain information, analyzing it using mathematical techniques, and reporting or displaying the results of the analysis”).

Moreover, our reviewing court has noted that, in certain instances, there may be an overlap between an abstract idea within the mathematical concepts category and an abstract idea within the mental processes category. *See Elec. Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350, 1354 (Fed. Cir. 2016) (concluding that “analyzing information by steps people go through in their minds, or by mathematical algorithms, without more, as essentially mental processes within the abstract-idea category”). Thus, we further conclude tracking activity data associated with an individual and determining a physical activity level of the individual relative to a baseline fitness level unique to the individual is a mental process (i.e., a concept

performed in the human mind, such as, an observation, evaluation, judgment, and opinion)—i.e., an abstract idea. *See* 84 Fed. Reg. at 52; *see also Content Extraction & Transmission v. Wells Fargo Bank, N.A.*, 776 F.3d 1343, 1347 (Fed. Cir. 2014) (concluding the claimed method of processing information from various sources (i.e., hard copy documents) was directed to the abstract idea of “1) collecting data, 2) recognizing certain data within the collected data set, and 3) storing that recognized data in a memory”); *Univ. of Fla. Research Found., Inc. v. Gen. Elec. Co.*, 916 F.3d 1363, 1367 (Fed. Cir. 2019) (concluding claims to collecting physiologic data from disparate medical devices, converting the data to a common format, analyzing the data, and displaying the data were directed to an abstract idea); *HealthTrio LLC v. Aetna, Inc.*, 2017 WL 192962 (mem.) (Fed. Cir. 2017) (affirming district court decision holding “collection of data from various sources with the goal of compiling a single, comprehensive, patient health record” is patent ineligible); *EResearchTechnology, Inc. v. CRF, Inc.*, 2017 WL 1033672 (mem.) (Fed. Cir. 2017) (affirming district court ruling that “using an electronic device to obtain clinical trial data that would otherwise be collected by pen-and-paper diary, and analyzing the data to decide whether to prompt action” and “[c]lassifying clinical trial results by obtaining data using a portable electronic device and comparing same to a norm” are patent ineligible).

Further, merely combining several abstract ideas does not render the combination any less abstract. *RecogniCorp, LLC v. Nintendo Co., LTD.*, 855 F.3d 1322, 1327 (Fed. Cir. 2017) (“Adding one abstract idea . . . to another abstract idea . . . does not render the claim non-abstract.”); *see also FairWarning IP, LLC v. Iatric Sys., Inc.*, 839 F.3d 1089, 1094 (Fed. Cir.

2016) (determining the pending claims were directed to a combination of abstract ideas).

Claim 17 is reproduced below and includes the following claim limitations that recite tracking activity data associated with an individual and determining a physical activity level of the individual relative to a baseline fitness level unique to the individual, emphasized in *italics*:

17. A physical activity tracking system for determining a physical activity level of a particular individual relative to a determined baseline fitness level unique to the individual, the system comprising:

at least one data collection portal configured to *acquire data from a data collection unit associated with the particular individual*, the data collection unit including a pulse sensor, a body temperature sensor, and a blood oxygenation level sensor, and the received data including an output from the pulse sensor, an output from the body temperature sensor, and an output from the blood oxygenation level sensor; and at least one server unit configured to:

communicate with the at least one data collection portal;

receive from the at least one data collection portal the acquired data, including the output from the pulse sensor, the output from the body temperature sensor, and the output from the blood oxygenation level sensor;

determine the baseline fitness level unique to the particular individual based on the output from the pulse sensor and at least one of the output from the body temperature sensor and the output from the blood oxygenation level sensor, wherein the baseline fitness level unique to the particular individual includes a baseline heart rate for the particular individual determined based on the output of the pulse sensor acquired during a resting condition for the particular individual and at least one of a baseline body temperature for the particular individual

determined based on the output of the body temperature sensor acquired during the resting condition for the particular individual and a baseline blood oxygen level for the particular individual determined based on the output of the blood oxygenation level sensor acquired during the resting condition for the particular individual;

determine a physical activity score for the particular individual based on the determined baseline fitness level unique to the particular individual and based on a monitored pulse rate for the particular individual and at least one of a monitored body temperature for the particular individual and a monitored blood oxygen level for the particular individual;

compare the determined physical activity score to a predetermined threshold; and

determine and store an amount of time during which the determined physical activity score exceeds the predetermined threshold.

More particularly, the concept of tracking activity data associated with an individual and determining a physical activity level of the individual relative to a baseline fitness level unique to the individual comprises (i) gathering data indicative of physical activity and a baseline fitness for an individual (i.e., the claimed limitations of acquiring data from the data collection unit associated with the individual and receipt of the acquired data by a server unit); (ii) analyzing the received data to compute a baseline fitness level and physical activity score for the individual (i.e., the claimed limitations of determining a baseline fitness level and physical activity score); and (iii) comparing the determined physical activity score to a threshold (i.e., the claimed limitation of comparing the determined physical activity score to a predetermined activity threshold).

Because the claim recites a judicial exception, we next determine whether the claim integrates the judicial exception into a practical application. 84 Fed. Reg. at 54. To determine whether the judicial exception is integrated into a practical application, we identify whether there are “*any additional elements recited in the claim beyond the judicial exception(s)*” and evaluate those elements to determine whether they integrate the judicial exception into a recognized practical application. 84 Fed. Reg. at 54–55 (emphasis added); *see also* Manual of Patent Examining Procedure (“MPEP”) § 2106.05(a)–(c), (e)–(h) (9th ed. Rev. 08.2017, Jan. 2018).

Here, we find the additional limitation(s) do not integrate the judicial exception into a practical application. More particularly, the claims do not recite (i) an improvement to the functionality of a computer or other technology or technical field (*see* MPEP § 2106.05(a)); (ii) a “particular machine” to apply or use the judicial exception (*see* MPEP § 2106.05(b)); (iii) a particular transformation of an article to a different thing or state (*see* MPEP § 2106.05(c)); or (iv) any other meaningful limitation (*see* MPEP § 2106.05(e)). *See* 84 Fed. Reg. at 55.

Contrary to Appellant’s assertions, the claims do not set forth an improvement in technology related to the collection of sensor data (*see* Appeal Br. 16) or a rule-based determination of a physical activity level of an individual (*see* Reply Br. 7). The claims do not recite (nor does the Specification describe) an improvement to the performance of the sensors, the data collection portal, or the server unit. *See* Ans. 9. Moreover, we disagree that the claims recite a rule-based determination of a physical

activity level. Instead, the physical activity score is determined based on collected data.

Further, the additional elements in the limitations (e.g., identifying different sensors as the source of the data to be acquired/received, or identifying the data used in making the determinations) merely refine elements of the abstract idea and do not otherwise confer patent eligibility to the claims. Additionally, elements of communicating data or storing the results of the analysis are the type of extra-solution activities (i.e., in addition to the judicial exception) the courts have determined insufficient to transform judicially excepted subject matter into a patent-eligible application. *See* MPEP § 2106.05(g); *see also Bilski v. Kappos*, 561 U.S. 593, 612 (2010) (holding the use of well-known techniques to establish inputs to the abstract idea as extra-solution activity that fails to make the underlying concept patent eligible); *Elec. Power*, 830 F.3d at 1355 (explaining that “selecting information, by content or source, for collection analysis, and display does nothing significant to differentiate a process from ordinary mental processes”); *Elec. Power*, 830 F.3d at 1354 (recognizing “that merely presenting the results of abstract processes of collecting and analyzing information, without more (such as identifying a particular tool for presentation), is abstract as an ancillary part of such collection and analysis”); *Bancorp Servs., L.L.C. v. Sun Life Assur. Co. of Can.*, 771 F.Supp.2d 1054, 1065 (E.D. Mo. 2011) *aff’d*, 687 F.3d 1266 (Fed. Cir. 2012) (explaining that “storing, retrieving, and providing data . . . are inconsequential data gathering and insignificant post solution activity”).

For at least the foregoing reasons, the claims do not integrate the judicial exception into a practical application.

Because we determine the claims are directed to an abstract idea or combination of abstract ideas, we analyze the claims under step two of *Alice* to determine if there are additional limitations that individually, or as an ordered combination, ensure the claims amount to “significantly more” than the abstract idea. *Alice*, 573 U.S. at 217–18 (citing *Mayo*, 566 U.S. at 77–79). As stated in the Office Guidance, many of the considerations to determine whether the claims amount to “significantly more” under step two of the *Alice* framework are already considered as part of determining whether the judicial exception has been integrated into a practical application. 84 Fed. Reg. at 56. Thus, at this point of our analysis, we determine if the claims add a specific limitation, or combination of limitations, that is not well-understood, routine, conventional activity in the field, or simply appends well-understood, routine, conventional activities at a high level of generality. 84 Fed. Reg. at 56.

Here, Appellant’s claims do not recite specific limitations (or a combination of limitations) that are not well-understood, routine, and conventional. *See* Non-Final Act. 10–12; Ans. 12; *see also OIP Techs., Inc. v. Amazon.com, Inc.*, 788 F. 3d 1359, 1363 (Fed. Cir. 2015) (“relying on a computer to perform routine tasks more quickly or more accurately is insufficient to render a claim patent eligible”); *Content Extraction*, 776 F.3d at 1347 (“The concept of data collection, recognition, and storage is undisputedly well-known.”). Moreover, in the Specification, Appellant describes the system in high-level generic terms performing generic functions (e.g., collecting data from “any suitable array of components” and transmitting data “via any suitable scheme for transmission”). *See* Spec. ¶¶ 10–18, 24; *see also Mortgage Grader, Inc. v. First Choice Loan Servs.*

Inc., 811 F.3d 1314, 1324–25 (Fed. Cir. 2016) (generic computer components, such as an “interface,” “network,” and “database,” fail to satisfy the inventive concept requirement); *Alice*, 573 U.S. at 226 (“Nearly every computer will include a ‘communications controller’ and a ‘data storage unit’ capable of performing the basic calculation, storage, and transmission functions required by the method claims.”); *buySAFE, Inc. v. Google, Inc.*, 765 F.3d 1350, 1355 (Fed. Cir. 2014) (“That a computer receives and sends the information over a network—with no further specification—is not even arguably inventive.”).

For the reasons discussed *supra*, we are unpersuaded of Examiner error. Accordingly, we sustain the Examiner’s rejection of claims 17–26 under 35 U.S.C. § 101.

Rejection under pre-AIA 35 U.S.C. § 112, first paragraph

The Examiner finds three different claim elements lack adequate written description support in the Specification and, accordingly, fail under pre-AIA 35 U.S.C. § 112, first paragraph. Non-Final Act. 17–21. We address these claim elements *seriatim*.

a. “determine a physical activity score”

Claim 17 sets forth determining a physical activity score for an individual based on a determined baseline fitness level, a monitored pulse rate, and at least one of a monitored body temperature and a monitored blood oxygen level. The Examiner acknowledges that the Specification provides an equation to determine a physical activity score (*see* Spec. ¶ 42), but that the equation includes three unidentified constants and the

“disclosure fails to suggest what these constants represent, or how to go about choosing a value for these constants.” Non-Final Act. 18–19.

Appellant asserts the Specification “provides the requisite written description to demonstrate that the inventors possessed this invention as of the time of filing.” Appeal Br. 21. In support of this assertion, Appellant reproduces the equations recited in the Specification for determining an individual’s baseline heart rate, an individual’s baseline body temperature, an individual’s baseline blood oxygen level, and averaged sensed vital signs quantity, and a physical activity score. Appeal Br. 21–22. Appellant argues the constants are not “unidentified,” but are constant values (i.e., numeric values) and that “one skilled in the art would know how to program the disclosed computer to perform the steps described in the specification to achieve the claimed function, and, therefore, the written description requirement is satisfied per MPEP 2161.01.” Appeal Br. 23. Further, Appellant asserts that “the ability to select these numeric values would have been beyond those with ordinary skill in the art.” Reply Br. 8.

As set forth in the Specification, the equation for determining the physical activity score is:

$$PAS = (k_1 \times S_1)/IB_1 + (k_2 \times S_2)/IB_2 + (k_3 \times S_3)/IB_3,$$

where IB_1 represents an individual’s baseline heart rate and may be determined by the equation:

$$IB_1 = \frac{1}{T} \int_0^T r dt;$$

IB_2 represents an individual’s baseline body temperature and may be determined by the equation:

$$IB_2 = \frac{1}{T} \int_0^T f dt; \text{ and}$$

IB_3 represents an individual's baseline blood oxygen level and may be determined by the equation:

$$IB_3 = \frac{1}{T} \int_0^T b dt.$$

Spec. ¶¶ 38–42. Further, the Specification describes S_1 as the current heart rate; S_2 as the current body temperature; and S_3 as the current blood oxygen level. *See* Amend. Spec., ¶ 39 (filed March, 30, 2015). In addition, the Specification states “ k_1 , k_2 , and k_3 are constants.” Spec. ¶ 41.

To satisfy the written description requirement, the disclosure must reasonably convey to skilled artisans that Appellants possessed the claimed invention as of the filing date. *See Ariad Pharms., Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1351 (Fed. Cir. 2010) (en banc). Specifically, the description must “clearly allow persons of ordinary skill in the art to recognize that [the inventor] invented what is claimed” and

the test requires an objective inquiry into the four corners of the specification from the perspective of a person of ordinary skill in the art. Based on that inquiry, the specification must describe an invention understandable to that skilled artisan and show that the inventor actually invented the invention claimed.

Ariad Pharms., Inc., 598 F.3d at 1351 (quotations and citations omitted).

However, it is not enough to satisfy the written description requirement that the claimed subject matter would have been obvious to a person of ordinary skill in view of the written description. *See ICU Med., Inc. v. Alaris Med. Sys., Inc.*, 558 F.3d 1368, 1377 (Fed. Cir. 2009); *see also Regents of the Univ. of Cal. v. Eli Lilly & Co.*, 119 F.3d 1559, 1566–67 (Fed. Cir. 1997) (explaining that “an applicant complies with the written description requirement by describing the invention, with all its claimed limitations, not that which makes it obvious” (quotations omitted)). In other words, “it is

not a question of whether one skilled in the art might be able to construct the patentee's device from the teachings of the disclosure Rather, it is a question whether the application *necessarily discloses* that particular device A description which renders obvious the invention for which an earlier filing date is sought is not sufficient.” *Lockwood v. Am. Airlines, Inc.*, 107 F.3d 1565, 1572 (Fed. Cir. 1997) (quoting *Jepson v. Coleman*, 314 F.2d 533, 536 (CCPA 1963)) (emphasis added).

Although, as Appellant states, an ordinarily skilled artisan may know how to program a computer to calculate the physical activity score (and select values for constants k_1 , k_2 , and k_3), that is not the correct inquiry. *See Lockwood*, 107 F.3d at 1572. However, we note the Specification further describes “an individual's PAS may depend solely on heart rate, any other sensed value, or any combination (weighted or otherwise) of sensed values.” Spec. ¶ 42. In other words, a PAS based solely on heart rate would have constants k_2 and k_3 set to 0, and k_1 set to 1. Similarly, a non-weighted PAS would have the constants set at the same value. We find that based on “an objective inquiry into the four corners of the specification from the perspective of a person of ordinary skill in the art,” the ordinarily skilled artisan would understand that Appellant had possession of the claimed physical activity score. *See Ariad Pharms., Inc.*, 598 F.3d at 1351 (explaining the level of detail necessary to satisfy the written description requirement depends on the scope of the claims and the complexity of the technology).

For the reasons discussed *supra*, we are persuaded of Examiner error. Accordingly, we do not sustain the Examiner's rejection of claims 17 and 18 under pre-AIA 35 U.S.C. § 112, first paragraph.

b. “determine a bio signature”

Claim 23 depends from claim 17 and further recites “the at least one server unit is further configured to determine a bio signature for the particular individual based on historical values for one or more of the particular individual’s heart rate, body temperature, and blood oxygen level.” The Examiner finds the Specification merely mentions that a bio signature may be determined but does not provide adequate written description for how the bio signature would be computed. Non-Final Act. 20.

Appellant asserts adequate written description support because the Specification states the system “may also be configured to determine a bio signature for an individual user based on outside temperature and one or more of the user’s body temperature, blood oxygen level, physical movements, and heart rate information, for example.” Appeal Br. 24–25 (quoting Spec. ¶ 74).

We agree with the Examiner that the Specification fails to reasonably convey to those skilled in the art that Appellant had possession of the claimed subject matter (i.e., determining a bio signature) as of the filing date. In particular, there is no description of how the server (or system) is configured to determine a bio signature, how historical values for the different parameters are used, or how/when the values are collected (i.e., when the individual is active or at rest).

Accordingly, we sustain the Examiner’s rejection of claim 23 under pre-AIA 35 U.S.C. § 112, first paragraph.

c. “identify fraudulent use of the data collection unit”

Claim 24 depends from claim 23 and recites “wherein the at least one server unit is configured to use the bio signature to identify fraudulent use of the data collection unit.” The Examiner finds the Specification merely mentions that the server may be configured to recognize unusual or “out of range” data and flag such data as possibly being associated with fraudulent use, but fails to suggest “how the Applicant has programmed their computer to determine an ‘expected range for the particular individual’ based on the historic data, [and] does not suggest how an expected range would relate to a bio signature.” Non-Final Act. 20–21.

Appellant asserts adequate written description support because the Specification states the system “may be able to detect whether certain measured values or average values are outside of expected ranges for a particular individual.” Appeal Br. 24–25 (quoting Spec. ¶ 74). In other words, if the detected readings for a particular individual are outside the “expected range” for the individual, the system may flag the account as potentially including fraudulently generated data. *See* Appeal Br. 25.

We agree with the Examiner that the Specification fails to reasonably convey to those skilled in the art that Appellant had possession of the claimed subject matter as of the filing date. As described above, the determination of a bio signature lacks adequate written description support. Moreover, we agree with the Examiner that there is inadequate written description for how Appellant would determine the “expected ranges for a particular individual,” which is used to trigger a potentially fraudulent use indication. As such, there is not adequate written description support to use the bio signature to identify fraudulent use of the data collection unit.

Accordingly, we sustain the Examiner's rejection of claim 24 under pre-AIA 35 U.S.C. § 112, first paragraph.

Rejection under pre-AIA 35 U.S.C. § 112, second paragraph

The Examiner concludes claim 17 is indefinite under pre-AIA 35 U.S.C. § 112, second paragraph, because "the received data," as recited in the claim, lacks antecedent basis. Non-Final Act. 22.

The test for definiteness under 35 U.S.C. § 112, second paragraph, is whether "those skilled in the art would understand what is claimed when the claim is read in light of the specification." *Orthokinetics, Inc. v. Safety Travel Chairs, Inc.*, 806 F.2d 1565, 1576 (Fed. Cir. 1986).

Although, as a general matter, we agree with the Examiner that consistency of terminology should be maintained throughout the claims (*see* Ans. 17), we agree with Appellant that, in context of the rest of the claim, one of ordinary skill in the art would understand that "the received data" refers to the data acquired by the data collection portal. *See* Appeal Br. 26.

Accordingly, we do not sustain the Examiner's rejection of claim 17 under pre-AIA 35 U.S.C. § 112, second paragraph.

Rejections under pre-AIA 35 U.S.C. § 103(a)

a. Claims 17–23 and 25

In rejecting claim 17, the Examiner finds, in relevant part, Shimada teaches *identifying* a baseline fitness level unique to the individual comprising baseline body temperature and baseline pulse rate; determining a physical activity score based on the *identified* baseline fitness level and at least one of a monitored pulse rate and monitored body temperature; and

determining and storing an amount of time in which the physical activity score exceeds a predetermined threshold. Non-Final Act. 24–25 (citing Shimada ¶¶ 10, 70, 78, 131–142, 146, 168–169, Fig. 4). The Examiner relies on Stubbs to teach, *inter alia*, a data collection unit including a blood oxygenation level sensor. Non-Final Act. 26–27 (citing Stubbs, col. 3, ll. 38–45, col. 4, ll. 1–14, col. 6, ll. 56–60, col. 8, ll. 6–30, col. 9, ll. 40–45, col. 10, ll. 35–55, claim 26). In addition, the Examiner relies on Amano to teach *determining* the baseline fitness level based on outputs from the pulse sensor and at least one of the body temperature sensor and blood oxygen sensor. Non-Final Act. 28–29 (citing Amano, col. 2, ll. 24–26, col. 6, ll. 29–44, col. 17, ll. 5–60, col. 26, ll. 28–67).

Appellant asserts “there is no indication in Shimada of determining the claimed baseline fitness level, the claimed physical activity score for the particular individual or for determining and storing an amount of time that the individual exhibits a physical activity score that exceeds a predetermined threshold.” Appeal Br. 28. Appellant asserts “Amano describes a device for measuring calorie expenditure, not a baseline fitness level unique to the individual or a physical activity score in view of the claimed sensor outputs and the determined baseline fitness level.” Appeal Br. 29.

As an initial matter, it is well settled that mere attorney arguments and conclusory statements, which are unsupported by factual evidence, are entitled to little probative value. *In re Geisler*, 116 F.3d 1465, 1470 (Fed. Cir. 1997); *see also In re Pearson*, 494 F.2d 1399, 1405 (CCPA 1974) (attorney argument is not evidence).

Appellant’s arguments that Shimada fails to teach determining the claimed physical activity score or determining and storing an amount of time

that the physical activity score exceeds a threshold is unsupported by persuasive evidence or argument. Accordingly, we are unpersuaded of Examiner error.

As to the limitation of “determin[ing] the baseline fitness level unique to the particular individual . . . ,” we do not find Appellant’s arguments persuasive of Examiner error. As set forth above, the Examiner relies on the combined teachings of Shimada, Stubbs, and Amano to teach this limitation. Appellant’s arguments merely attack the references individually. *See Keller*, 642 F.2d at 426 (holding that non-obviousness cannot be established by attacking references individually where the ground of unpatentability is based upon the teachings of a combination of references).

Rather than merely disclosing “a device for measuring calorie expenditure” (*see* Appeal Br. 29), Amano additionally describes a device comprising a basal metabolic state specifying element that specifies an individual’s basal metabolic state from the individual’s body temperature, and a correlation storing element to store respective regression formulas showing a correlation between pulse rate and calorie expenditure when the individual is active and at rest. Amano, Abstract. As the Examiner explains, the basal metabolic state of Amano corresponds to the baseline fitness value “because these are baseline values [(i.e., the resting pulse rate and resting body temperature of an individual, both of which are captured by respective sensors in Amano)] reflective of the users [sic] overall fitness.” Non-Final Act. 28–29. Further, as the Examiner finds, Shimada teaches determining baseline body temperature and baseline pulse rate during a resting condition for an individual. Non-Final Act. 23–24. The Examiner relies on Stubbs to teach also collecting blood oxygen levels “because blood oxygenation level

can provide an indication of an individual’s exertion level during activities (e.g. their metabolic levels) and therefore collecting this information may be used for tracking physical activity and for determining a physical activity level of a particular individual.” Non-Final Act. 26–28. In addition to finding that one of ordinary skill in the art would appreciate including measurement(s) of blood oxygen level to provide an indication of an individual’s exertion level during activities, the Examiner notes that the proposed combination is simply “a combination of old elements, and in the combination each element merely would have performed the same function as it did separately, and one of ordinary skill in the art would have recognized that the results of the combination were predictable.” Non-Final Act. 27; *see also KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 416 (2007) (“The combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results.”). Accordingly, we are unpersuaded the Examiner erred in determining the combined teachings of Shimada, Stubbs, and Amano teaches or reasonably suggests the claimed “determin[ing] the baseline fitness level unique to the particular individual”

Appellant additionally argues the Examiner’s proposed combination (particularly that of Shimada and Stubbs) appears to be based on improper hindsight. Appeal Br. 28–30. We disagree.

As set forth in the Non-Final Office Action, the Examiner provides articulated reasoning with rational underpinning to support the proposed combination. *See* Non-Final Act. 27, 29–31; *see also In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006) (cited with approval in *KSR*, 550 U.S. at 418) (holding the relevant inquiry in an obviousness analysis is whether the

Examiner has set forth “some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness”). Moreover, the Examiner basis for combining the references is not drawn from Appellant’s Specification, but rather the cited prior art references. *See In re McLaughlin*, 443 F.2d 1392 1313–14 (CCPA 1971) (“Any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning, but so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made and does not include knowledge gleaned only from applicant’s disclosure, such a reconstruction is proper.”).

For the reasons discussed *supra*, we are unpersuaded of Examiner error. Accordingly, we sustain the Examiner’s rejection of independent claim 17. Additionally, we sustain the Examiner’s rejection of claims 18–23 and 25, which depend directly or indirectly therefrom and were not argued separately. *See* Appeal Br. 30; *see also* 37 C.F.R. § 41.37(c)(1)(iv).

b. Claims 24 and 26

Appellant asserts that the additional references cited by the Examiner (i.e., Ando and Tchao) fail to remedy the alleged deficiencies in the base combination of Shimada, Stubbs, and Amano with respect to independent claim 17. Appeal Br. 30–31. As discussed above, we are unpersuaded of Examiner error or deficiencies of Shimada, Stubbs, and Amano related to independent claim 17. Accordingly, we sustain the Examiner’s rejections of dependent claims 24 and 26, which were not argued separately. *See* 37 C.F.R. § 41.37(c)(1)(iv).

CONCLUSION

We reverse the Examiner's decision rejecting claims 17–26 under the doctrine of obviousness-type double patenting.

We affirm the Examiner's decision rejecting claims 17–26 under 35 U.S.C. § 101.

We reverse the Examiner's decision rejecting claims 17, and 18 under pre-AIA 35 U.S.C. § 112, first paragraph.

We affirm the Examiner's decision rejecting claims 23 and 24 under pre-AIA 35 U.S.C. § 112, first paragraph.

We reverse the Examiner's decision rejecting claim 17 under pre-AIA 35 U.S.C. § 112, second paragraph.

We affirm the Examiner's decision rejecting claims 17–26 under pre-AIA 35 U.S.C. § 103(a).

DECISION SUMMARY

Claims Rejected	35 U.S.C. §	Reference(s)/Basis	Affirmed	Reversed
17–26		Obviousness-type Double Patenting		17–26
17–26		Provisional Obviousness-type Double Patenting ⁵		
17–26	101	Eligibility	17–26	
17, 18, 23, 24	112, first paragraph	Written Description	23, 24	17, 18
17	112, second paragraph	Indefiniteness		17
17–23, 25	103(a)	Shimada, Stubbs, Amano	17–23	
24	103(a)	Shimada, Stubbs, Amano, Ando	24	
26	103(a)	Shimada, Stubbs, Amano, Tchao	26	
Overall Outcome			17–26	

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). *See* 37 C.F.R. § 41.50(f).

AFFIRMED

⁵ As discussed above, because the application on which this provisional rejection was based has been abandoned, this rejection is moot.