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Paper 9
Date: April 8, 2022

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

PELOTON INTERACTIVE, INC.
Petitioner,

v.

MAD DOGG ATHLETICS, INC.,
Patent Owner.

IPR2022-00016
Patent 9,694,240 B2

Before HUBERT C. LORIN, JASON W. MELVIN, and BRENT M. DOUGAL, *Administrative Patent Judges*.

LORIN, *Administrative Patent Judge*.

DECISION
Granting Institution of *Inter Partes* Review
35 U.S.C. § 314

I. INTRODUCTION

A. Background

Peloton Interactive, Inc. ("Petitioner") filed a Petition (Paper 1, "Pet.") requesting *inter partes* review of claims 1–17 of U.S. Patent No. 9,694,240 B2 (Ex. 1001, "the '240 patent"). Mad Dogg Athletics, Inc. ("Patent Owner") filed a Preliminary Response (Paper 6, "Prelim. Resp."). In accordance with the Board's prior authorization (Exhibit 3001), Petitioner filed a Preliminary Reply (Paper 7, "Pet. Prelim. Reply") and the Patent Owner filed a Preliminary Sur–Reply (Paper 8, "PO Prelim. Sur–Reply").

We have jurisdiction under 35 U.S.C. § 6.

Upon consideration of the arguments and evidence presented by Petitioner, we are persuaded that Petitioner has demonstrated, under 35 U.S.C. § 314(a), a reasonable likelihood that it would prevail in showing the unpatentability of at least one challenged claim.

For the reasons stated below, we institute *inter partes* review as to challenged claims 1–13, 16 and 17[1] of the '240 patent.

B. Related Proceedings

Petitioner indicates, and Patent Owner agrees, that the '240 patent was asserted in *Mad Dogg Athletics, Inc. v. Peloton Interactive, Inc.*, No. 2:20-cv-00382 (E.D. Tex. 2020) ("District Court Action") but that the case was dismissed without prejudice and was closed. Pet. 73 (citing Ex. 1020); Prelim. Resp. 12.

Also, Petitioner notifies us that related U.S. Patent No. 10,137,328 is

[1] As discussed below, claims 14 and 15 have been disclaimed by Patent Owner. *See* Ex. 2005.

challenged in "*Peloton Interactive Inc. v. Mad Dogg Athletics Inc.*, IPR2022-00017 (Oct. 13, 2021)." Pet. 76.

C. The '240 patent (Ex. 1001)

1. Disclosure

The '240 patent, titled "Programmed Exercise Bicycle With Computer Aided Guidance," relates to exercise devices and programs. Ex. 1001, code (54), 1:18–19.

The '240 patent explains that "instructor-led exercise classes using stationary exercise bikes have become increasingly popular." *Id.* at 1:33–34.

According to the '240 patent, there are certain benefits one can achieve from having an instructor-led exercise class. For example, "the lack of an instructor may increase the danger of injury if the individual is not riding the bike correctly." *Id.* at 2:6–7. "This may be especially so where the bike is in a direct drive or fixed gear configuration." *Id.* at 2:7–9.

"However, instructor-led classes generally adhere to a predetermined time schedule. This presents a problem to participants that cannot attend predetermined classes because of their jobs or other scheduling conflicts." *Id.* at 1:50–53.

Accordingly,

> a need exists for a stationary exercise bike for use by an individual who is not participating in an instructor-led class, wherein the bike itself allows different riding positions and conditions, and also provides instruction to the individual so that the individual may receive benefits typically received during an instructor-led class.

Id. at 2:11–16.

To that end, the '240 patent discloses a stationary exercise bike with a display screen. This is depicted in Figure 1 of the '240 patent, reproduced below.

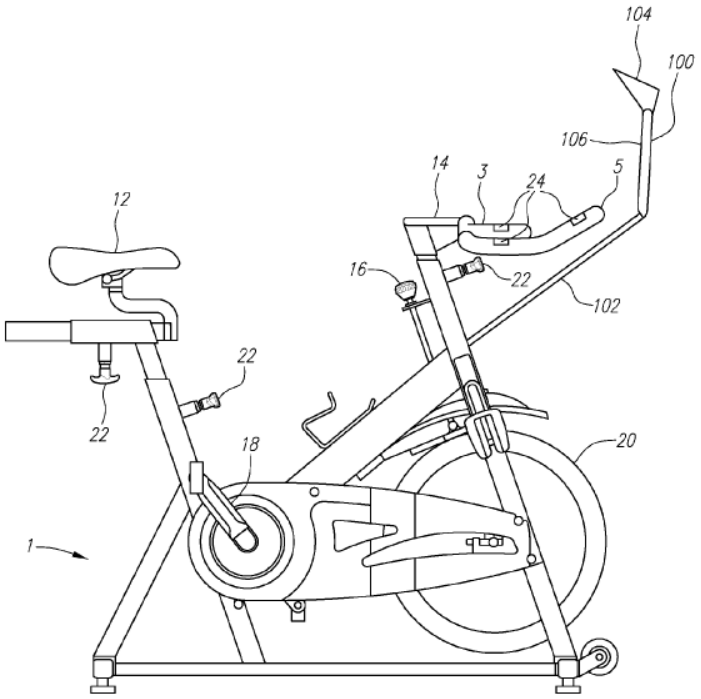


FIG. 1

Fig. 1 of the '240 patent (Ex. 1001) shows a stationary exercise bike (10) with a display (100).

The stationary exercise bike (10) depicted in Fig. 1 comprises "adjustable seat assembly 12, adjustable handlebar 14 having multiple hand position[s], variable resistance mechanism 16, pedal assembly 18 and flywheel 20 which is coupled to pedal assembly 18 in a direct drive (fixed gear) and/or non direct drive e.g., freewheeling configuration." *Id*. at 3:9–13.

A display screen (100) "includes a computer or other device to store and/or provide instructions" (*id*. at 3:4–5) and "may be attached to bike 10

by a bracket 102" (*id*. at 3:29). The computer "may be coupled to the pedal assembly 18 so that the computer may measure the rider's actual cadence." *Id*. at 6:9–10.

Fig. 2A, reproduced below, exemplifies a screen (106) of the display screen (100) which "preferably includes icons and screens that instruct the rider through the workout with different hand positions, riding positions, and varying pedaling speeds." *Id*. at 5:50–52. "[T]he icons may comprise a graphic that illustrates a rider on a bike. Riding position icons may include seated flat 112, seated climbing 114, standing flat 116, and standing climbing 118." *Id*. at 6:27–30.

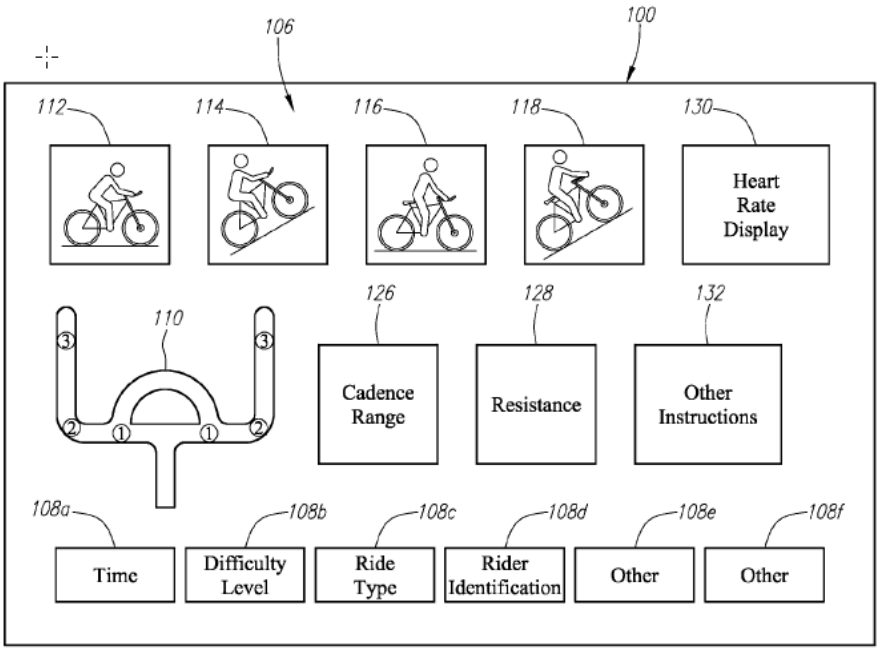


FIG. 2A

Fig. 2A of the '240 patent (Ex. 1001) shows a front view of a screen (106) of display screen (100).

2. Disclaimer (claims 14 and 15)

Patent Owner states

> [Patent Owner] has filed a statutory disclaimer regarding independent claim 14 – which the District Court had ruled was indefinite – along with its dependent claim 15. Attached as Exhibit 2005 is the statutory disclaimer filed by Patent Owner regarding claims 14-15.

PO Prelim. Sur–Reply 4. The statutory disclaimer is a completed U.S. Patent and Trademark Office form ("PTO/SB/43 (07–09)") entitled "DISCLAIMER IN PATENT UNDER 37 C.F.R. 1.321(a)." Ex. 2005 ("Disclaimer").

A "patent owner may file a statutory disclaimer under 35 U.S.C. 253(a) in compliance with §1.321(a) of this chapter, disclaiming one or more claims in the patent. No *inter partes* review will be instituted based on disclaimed claims." 37 C.F.R. § 42.107(e) (2019). A disclaimer under 35 U.S.C. § 253(a) is "considered as part of the original patent" as of the date on which it is "recorded" in the Office. 35 U.S.C. § 253(a). For a disclaimer to be "recorded" in the Office, the document filed by the patent owner must:

(1) Be signed by the patentee, or an attorney or agent of record;

(2) Identify the patent and complete claim or claims, or term being disclaimed. A disclaimer which is not a disclaimer of a complete claim or claims, or term will be refused recordation;

(3) State the present extent of patentee's ownership interest in the patent; and

(4) Be accompanied by the fee set forth in [37 C.F.R.] § 1.20(d).

37 C.F.R. § 1.321(a); *see also Vectra Fitness, Inc. v. TNWK Corp.*, 162 F.3d 1379, 1382 (Fed. Cir. 1998) (holding that a § 253 disclaimer is immediately

"recorded" on the date that the Office receives a disclaimer meeting the requirements of 37 C.F.R. § 1.321(a), and that no further action is required in the Office).

The Disclaimer is (1) electronically signed by "Theodore S. Maceiko," the attorney of record, on February 22, 2022. Ex. 2005, 1. (2) The patent (US Patent 9,694,240) is identified and it states that "I hereby disclaim the following complete claims in the above identified patent: 14 and 15." *Id.* (3) The present extent of patentee's ownership interest in the patent is indicated by "reel/frame – 016947/0364". *Id.* (4) The Disclaimer indicates that payment was made by credit card and attached to it is an "Electronic Acknowledgement Receipt" confirming payment on February 22, 2022. Ex. 2005, 1, 2.

Based on our review of the Disclaimer and Office public records, we conclude that a disclaimer of claims 14 and 15 of the '240 patent under 35 U.S.C. § 253(a) has been recorded in the Office as of February 22, 2022.

Accordingly, claims 14 and 15 have been disclaimed under 35 U.S.C. § 253(a) in compliance with 37 C.F.R. § 1.321(a).

As a result, no *inter partes* review shall be instituted as to claims 14 and 15. 37 C.F.R. § 42.107(e); *Intuitive Surgical, Inc. v. Ethicon LLC*, IPR2018-01248, Paper 7 at 2 n.1, 9–10 (PTAB Feb. 7, 2019) (discussing interplay of a disclaimed claim, Federal Circuit precedent, and our governing statutes and rules); *Daikin Indus. Ltd. v. The Chemours Co.*, IPR2018-00993, Paper 12 at 5–7 (PTAB Nov. 13, 2018) (noting that adverse judgment following partial disclaimer was not appropriate at least because the nondisclaimed claims "ha[d] yet to be 'decided.'"); *cf. General Electric Co. v. United Techs. Corp.*, IPR2017-00491, Paper 9 (PTAB July 6, 2017)

(precedential) (declining to institute *inter partes* review when all challenged claims were disclaimed under 35 U.S.C. § 253(a)).

Accordingly, we treat claims 14 and 15 as having never been part of the '240 patent, such that Petitioner cannot seek *inter partes* review of those claims. Claims 16 and 17, which depend on claim 14, are not disclaimed and we therefore consider them as remaining challenged.

3. Claims 1–13, 16 and 17

Petitioner challenges claims 1–13, 16 and 17. Pet. 1.

Claim 1 is the independent claim from which claims 2–13 depend. It is reproduced below. Claims 16 and 17 depend from claim 14 and so, though disclaimed, claim 14 is reproduced as well. Bracketing is added to assist in referring to the claim elements.

1. [1pre] An exercise bike, comprising:

> [1.1] a frame that is configured to allow a rider to ride in sitting and standing positions;
>
> [1.2.1] a direct drive mechanism that couples a pedal assembly and a flywheel [1.2.2] and that facilitates a smooth transition between sitting and standing positions;
>
> [1.3] a set of handlebars that is coupled to the frame and that provides the rider with at least one hand position;
>
> [1.4] a mechanism that provides resistance to the flywheel and that is manually adjustable by the rider to vary the pedaling resistance;
>
> [1.5] [1.5.1] a computer that is coupled to the stationary bike, [1.5.2] that is configured to connect with the internet or other computer network [1.5.3] to access a collection of exercise routines, [1.5.4] wherein the exercise routines include instructions regarding cadence, pedaling resistance, and riding positions including sitting and standing positions, [1.5.5] and that stores power exerted by the rider;

[1.6] [1.6.1] a display that is coupled to the computer, [1.6.2] that displays an exercise routine from the collection of exercise routines so that the rider is provided with instructions for the rider to manually adjust pedaling resistance, and instructions for the rider to vary cadence and riding positions including sitting and standing positions, [1.6.3] thereby simulating an instructor-led exercise class, [1.6.4] and that displays power exerted by the rider; and

[1.7] an input device that is coupled to the computer and that enables the rider to input data into the computer.

Ex. 1001, 7:50–8:10.

14. [14pre] An exercise bike, comprising:

[14.1] a frame that is configured to allow a rider to ride in sitting and standing positions;

[14.2.1] a direct drive mechanism that couples a pedal assembly and a flywheel [14.2.2] and that facilitates a smooth transition between sitting and standing positions;

[14.3] a set of handlebars that is coupled to the frame and that provides the rider with at least one hand position;

[14.4] a mechanism that provides resistance to the flywheel and that is manually adjustable by the rider to vary the pedaling resistance; [14.5] a mechanism that measures the rider's cadence;

[14.6] [14.6.1] a computer that is coupled to the stationary bike, [14.6.2] that is configured to connect with the internet or other computer network [14.6.3] to access a collection of exercise routines, [14.6.4] wherein the exercise routines include instructions regarding cadence, pedaling resistance, and riding positions including sitting and standing positions, [14.7] [14.7.1] wherein the computer is configured to measure the pedaling resistance and the rider’s cadence [14.7.2] and is configured to calculate power exerted by the rider based on the pedaling resistance and the rider’s cadence; and

[14.8] [14.8.1] a display that is coupled to the computer, [14.8.2] that displays an exercise routine selected by the rider from the

> collection of exercise routines so that the rider is provided with instructions for the rider to manually adjust pedaling resistance and to vary cadence, [14.8.3] and that displays power exerted by the rider.

Id. at 8:54–9:14.

D. Asserted References

Petitioner relies on the following references:

Name	Reference	Ex. No.
Baudhuin–429	U.S. Patent Application Publication No. 2009/0227429A1, published Sep. 10, 2009	1012
Rice	U.S. Patent Application Publication No. 2003/0171190A1, published Sep. 11, 2003	1008
Sotokoshi	Japanese Unexamined Patent Application Publication No. H11-128394, published May 18, 1999	1010[2]
Warner	U.S. Patent No. 5,961,424, issued Oct. 5, 1999	1009

Petitioner also relies on the Declaration of Bruce Sargeant (Ex. 1005, "Sargeant–240 Decl."[3]) and the prosecution file for the '240 patent (Ex. 1003) as support for the various contentions.

[2] Ex. 1010 includes both the original and a certified English translation.

[3] The parties' references to "Sergeant–240" refer to Ex. 1005.

E. Asserted Grounds

Petitioner contends that claims 1–13, 16, and 17 of the '240 patent are unpatentable under the following grounds:

Ground	Claims Challenged	35 U.S.C. §	Reference(s)/Basis
I	1–13, 16, 17	§ 103[4]	Rice and Warner
II	2, 16, 17	§ 103	Rice, Warner, and Sotokoshi
III	1–13, 16, 17	§ 103	Baudhuin–429 and Sotokoshi

Pet. 1.

II. ANALYSIS

A. Discretionary Denial Under 35 U.S.C. § 325(d)

Section 325(d) provides that the Director may elect not to institute a proceeding if the challenge to the patent is based on matters previously presented to the Office. 35 U.S.C. § 325(d) states, in pertinent part, that "[i]n determining whether to institute or order a proceeding under this chapter, chapter 30, or chapter 31, the Director may take into account whether, and reject the petition or request because, the same or substantially the same prior art or arguments previously were presented to the Office."

[4] The Leahy-Smith America Invents Act, Pub. L. No. 112-29, 125 Stat. 284 (2011) ("AIA"), amended 35 U.S.C. §§ 102 and 103. Because the challenged claims of the '240 patent have an effective filing date before the effective date of the applicable AIA amendments, we refer to the pre-AIA versions of 35 U.S.C. § 103 throughout this Decision.

The Board uses a two-part framework for evaluating arguments under § 325(d):

> (1) whether the same or substantially the same art previously was presented to the Office or whether the same or substantially the same arguments previously were presented to the Office; and
>
> (2) if either condition of first part of the framework is satisfied, whether the petitioner has demonstrated that the Office erred in a manner material to the patentability of challenged claims.

Advanced Bionics, LLC v. MED-EL Elektromedizinische Geräte GmbH, IPR2019-01469, Paper 6 at 8 (PTAB Feb. 13, 2020) (precedential) ("*Advanced Bionics*"). "[T]he *Becton, Dickinson* factors provide useful insight into how to apply the framework under 35 U.S.C. § 325(d)." *Id.* at 9 (footnote omitted). The non-exclusive Becton, Dickinson factors are:

> (a) the similarities and material differences between the asserted art and the prior art involved during examination;
>
> (b) the cumulative nature of the asserted art and the prior art evaluated during examination;
>
> (c) the extent to which the asserted art was evaluated during examination, including whether the prior art was the basis for rejection;
>
> (d) the extent of the overlap between the arguments made during examination and the manner in which Petitioner relies on the prior art or Patent Owner distinguishes the prior art;
>
> (e) whether Petitioner has pointed out sufficiently how the Examiner erred in its evaluation of the asserted prior art; and
>
> (f) the extent to which additional evidence and facts presented in the Petition warrant reconsideration of the prior art or arguments.

Becton, Dickinson & Co. v. B. Braun Melsungen AG, IPR2017-01586, Paper 8 at 17–18 (PTAB Dec. 15, 2017) (precedential as to § III.C.5, first

paragraph) ("*Becton, Dickinson*"). *Becton, Dickinson* factors (a), (b), and (d) relate to the first part of the *Advanced Bionics* framework (whether the same or substantially the same art or arguments previously were presented to the Office), and *Becton, Dickinson* factors (c), (e), and (f) relate to the second part of that framework (previous Office error). *Advanced Bionics*, Paper 6 at 9–11. Only if the same or substantially the same art or arguments were previously presented to the Office do we then consider whether the petitioner has demonstrated a material error by the Office. *Id*.

Under § 325(d), the art or arguments must have been previously presented to the Office during proceedings, such as examination of the underlying patent application, pertaining to the challenged patent. *Advanced Bionics*, Paper 6 at 7. Previously presented art includes art made of record by the Examiner, and art provided to the Office by an applicant, such as on an Information Disclosure Statement ("IDS"), in the prosecution history of the challenged patent. *Id*. at 7–8.

First step of the framework

It is not disputed that Rice (Ex. 1008) was applied during prosecution of the '240 patent. *See* Pet. 5; Prelim. Resp. 22.

Although Warner (Ex. 1009) was not *applied* during prosecution of the '240 patent, it was cited in its specification and therefore considered to have been previously presented. Pet. 74; Prelim. Resp. 22; Ex. 1001, 3:15–18.

Thus the same art (Rice and Warner) previously was presented to the Office.

Second step of the framework

Petitioner contends that "[t]o overcome the prior art combination of Hernandez [Ex. 1014] and Rice, Patent Owner amended claim 1 to add limitations regarding power exerted by the rider and added claim 14." Pet. 5.

However, according to Petitioner,

> [i]n a section entitled "torque reader," Rice expressly teaches that its bike "senses and measures the actual power/force being applied to the cranks of a bicycle," disclosing the measurement of power. Ex. 1008 (Rice) [0176]-[0177]; Sargeant–240 ¶¶133-134. Rice discloses storing this power in the computer's memory and using it with the training maps to inform the user of his performance. Sargeant–240 ¶¶135-137. Rice further discloses displaying this power. *Id*. ¶¶138-139.

Id. at 6.

According to Petitioner, the Examiner did not consider said Rice disclosure regarding "power." *Id*. (citing Sargeant–240 Decl. ¶¶ 140–141). Petitioner states that the Examiner's discussion of Rice "is limited to just Figure 1 and paragraph [0100]." *Id*. at 5 (citing Ex. 1003, 135–36; Sargeant–240 Decl. ¶ 136).

Patent Owner does not appear to dispute Petitioner's position that (a) claims 1 and 14 were amended to include "power" limitations so as to overcome a prior art rejection involving Rice; (b) Rice discloses storing and displaying power as claimed; and, (c) the Examiner did not address whether Rice disclosed said "power" limitations *See* generally Prelim. Resp. 20–24.

Rather, Patent Owner argues that "Rice does not teach a number of other claim elements, so any alleged lack of evaluation of Rice's torque meter does not change the overall analysis." Prelim. Resp. 23. *See* also PO Prelim. Sur–Reply 2 for a similar argument.

We have reviewed the record.

Claims 1 and 14 include limitations to the computer and display such that they "store[ ]" and "display" "power exerted by the rider," respectively. *See* Ex. 1001 at 7:67, 8:8 (claim 1), 9:7, 9:14 (claim 14).

Rice discloses that its bike senses and measures power. Ex. 1008 ¶ 177 ("This is a device that senses and measures the actual power/force being applied to the cranks of a bicycle. . . ."); Sargeant–240 Decl. ¶ 133. Mr. Sargeant further explains that Rice discloses storing (*id*. at ¶ 137 (citing Ex. 1008 ¶ 481)) and displaying (*id*. at ¶ 139 (citing Ex. 1008 ¶¶ 94, 178, and 137)) said power.

Accordingly, the evidence supports Petitioner's contention that Rice discloses the "power" limitations as claimed.

Further, the prosecution file supports Petitioner's contention that the "power" limitations were added to claims 1 and 14 by amendment to overcome a rejection under 35 U.S.C. §103 over Hernandez and Rice but there is no indication how the Examiner considered said "power" limitations in view of the prior art. Ex. 1003, 135–136.

Accordingly, the evidence supports Petitioner's contention that the Examiner did not address whether Rice disclosed the "power" limitations.

Given the evidence supports that (a) the "power" limitations of claims 1 and 14 were added to overcome a rejection involving Rice and Hernandez; (b) Rice discloses storing and displaying said "power" limitations; and, (c), the Examiner did not address whether Rice disclosed the claimed "power" limitations, Petitioner has demonstrated that the Office erred in a manner material to the patentability of the challenged claims.

Patent Owner's argument that "Rice does not teach a number of other claim elements, so any alleged lack of evaluation of Rice's torque meter does not change the overall analysis" (Prelim. Resp. 23) does not alter the conclusion that the Office erred in a manner material to the patentability of the challenged claims in not addressing whether Rice discloses the "power" limitations which were added to claims 1 and 14 to overcome their rejection under 35 U.S.C. § 103 over Rice and Warner.

Patent Owner also argues that "[t]he alleged direct drive feature of Warner was indeed addressed when the Examiner cited Hernandez." Prelim. Resp. 23.

Irrespective of whether or not Warner is cumulative of Hernandez with respect to the "direct drive" claim limitation, Petitioner has nevertheless demonstrated that the Office erred in a manner material to the patentability of the challenged claims.

3. Conclusion re 325(d)

Under the circumstances of this case, where Petitioner has demonstrated that the Office erred in a manner material to the patentability of the challenged claims by failing to apply Rice with respect to the claim "power" limitations, we determine that exercising discretion to deny the Petitioner under § 325(d) is unwarranted.

B. Principles of Law for Patentability

A patent claim is unpatentable under 35 U.S.C. § 103(a) if the differences between the claimed subject matter and the prior art are such that the subject matter, as a whole, "would have been obvious at the time the invention was made to a person having ordinary skill in the art to which

said subject matter pertains." *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007). The question of obviousness is resolved on the basis of underlying factual determinations including: (1) the scope and content of the prior art; (2) any differences between the claimed subject matter and the prior art; (3) the level of ordinary skill in the art; and (4) when in evidence, objective evidence of nonobviousness. *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966).

"In an [*inter partes* review], the petitioner has the burden from the onset to show with particularity why the patent it challenges is unpatentable." *Harmonic*, 815 F.3d at 1363 (citing 35 U.S.C. § 312(a)(3) (requiring *inter partes* review petitions to identify "with particularity . . . the evidence that supports the grounds for the challenge to each claim")). This burden of persuasion never shifts to Patent Owner. *See Dynamic Drinkware, LLC v. Nat'l Graphics, Inc.*, 800 F.3d 1375, 1378 (Fed. Cir. 2015) (discussing the burden of proof in *inter partes* review).

C. Level of Ordinary Skill in the Art

Petitioner contends:

> A POSA in February of 2005 would have at least a bachelor's degree in biomechanics or engineering (or equivalent) and about five years or more industry experience or equivalent experience in designing cardiovascular exercise equipment (such as treadmills, bicycles, steppers, ellipticals) or in a similar field. A POSA could substitute directly relevant additional education for experience, e.g., substituting an advanced degree relating to the design of cardiovascular exercise.

Pet. 3–4 (citing Sargeant–240 Decl. ¶¶ 50–54). Patent Owner states that "the Petition essentially repeats the same proposed standard [as in the

District Court Action]. As such, there appears to be no significant dispute over the level of skill in the art possessed by a POSA." Prelim. Resp. 14.

Petitioner's proposed definition of a person of ordinary skill in the art appears reasonable, and we adopt that definition for our analysis in this decision.

Moreover, we see no reason why the level of ordinary skill in the art is not adequately reflected by the prior art of record. *See Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001); *In re GPAC Inc.*, 57 F.3d 1573, 1579 (Fed. Cir. 1995); *In re Oelrich*, 579 F.2d 86, 91 (CCPA 1978).

D. Claim Construction

For petitions filed on or after November 13, 2018, "[claims] of a patent . . . shall be construed using the same claim construction standard that would be used to construe the [claims] in a civil action under 35 U.S.C. § 282(b), including construing the [claims] in accordance with the ordinary and customary meaning of such claims as understood by one of ordinary skill in the art and the prosecution history pertaining to the patent." 37 C.F.R. § 42.100 (2019); *see also Phillips v. AWH Corp.*, 415 F.3d 1303, 1312–14 (Fed. Cir. 2005).

Petitioner does not submit constructions for any claim terms.

According to Petitioner, certain claim terms were construed in the District Court Action "according to their plain and ordinary meanings." Pet. 3 (citing Ex. 1021 ("Claim Construction Order")). "Patent Owner submits that no further claim construction beyond the Claim Construction Order is necessary." Prelim. Resp. 13.

Only those terms that are in controversy need to be construed, and only to the extent necessary to resolve the controversy. *Vivid Techs., Inc. v.*

Am. Sci. & Eng'g, Inc., 200 F.3d 795, 803 (Fed. Cir. 1999). To the extent the meaning of any term requires discussion, however, we provide it in our analysis of the patentability challenges.

E. Overview of the Prior Art References

1. Baudhuin–429 (Ex. 1012)

As Petitioner notes, "Baudhuin-429's disclosure incorporates substantially the same entire disclosure as the '240 patent. [Sargeant–240 Decl.] ¶¶128-129; Ex. 1040 (Comparison-240/429)." Pet. 8. The discussion above on what the '240 patent discloses applies to Baudhuin–429. *See* section I.C.1. above; Ex. 1040. For example, Baudhuin–429 identically discloses Figs. 1 and 2A discussed in that section. Ex. 1040, 2–3.

2. Rice (Ex. 1008)

Rice discloses "an exercise bicycle in FIG. 2." Ex. 1008, ¶ 543. Fig. 2 is reproduced below.

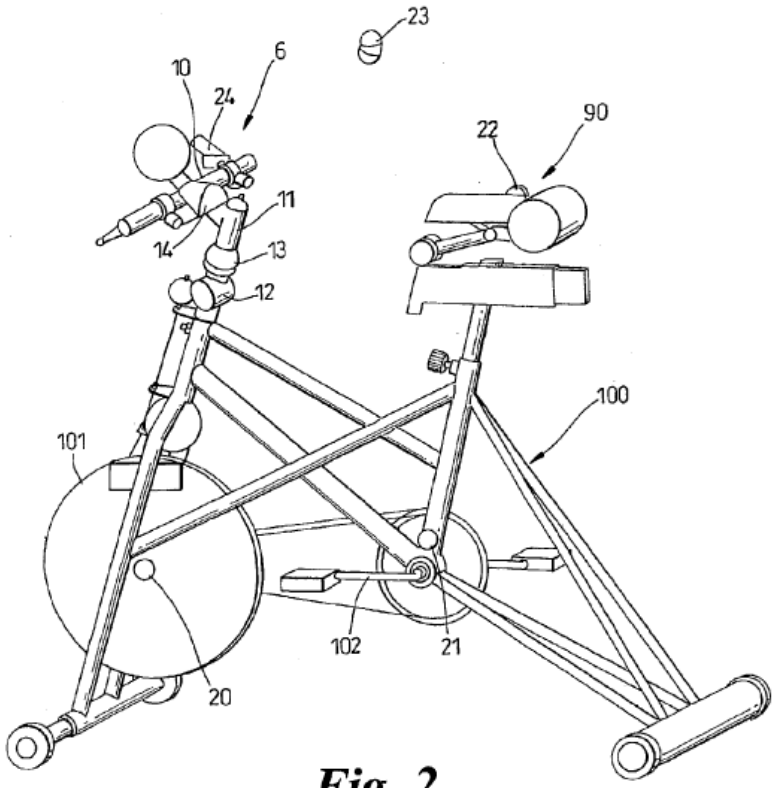


Fig. 2

FIG. 2 is a first side view of the controller (comprising handlebar assembly 6 and saddle assembly 90) and its input devices (e.g., first input sensor 20) as connected to an exercise apparatus.

In one aspect, Rice discloses a handlebar assembly (6) which functions as a controller for a microprocessor based unit to allow "a user to play a game on a bicycle" while "at the same time as exercising on the bicycle." Ex. 1008 ¶ 14. The controller may be attached to "stationary exercise bicycles." *Id*. at ¶ 22.

> The controller may further include a display and speakers which are mounted onto the handlebar assembly and which is adapted to display/sound information dependent upon the signals produced by the input devices or from either microprocessor. The display may show gear selection information or heart rate for example, or perhaps speed, cadence, time, distance. It may also display a training map in the form of a histogram or other graphical representation of the users exercise

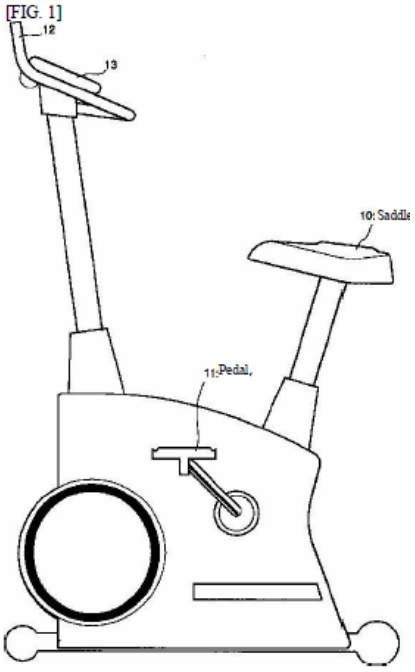
> program. The speakers may warn of changes to occur or encourage the user or may provide for communications.

Id. ¶ 94.

3. Sotokoshi (Ex. 1010)

Sotokoshi "relates to a training apparatus and training method that enables exercise in a stationary state, indoors or outdoors, such as a bike training apparatus equipped with pedals." Ex. 1010 ¶ 1.

Fig. 1 of Sotokoshi, reproduced below, depicts a bike training apparatus with an operating panel 13. *Id*. ¶ 17.



> Fig. 1 of Sotokoshi (Ex. 1010) depicting a stationary exercise bike with handle bars (12), operating panel (13), saddle (10), and pedals (11).

Fig. 2 of Sotokoshi, reproduced below, shows the displaying portion 20 of the operating panel 13. *Id*. ¶¶ 19–20.

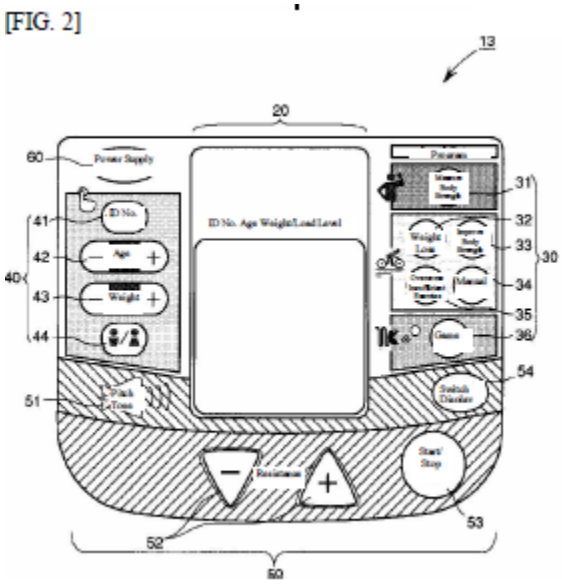


Fig. 2 of Sotokoshi (Ex. 1010) depicting the displaying portion (20) of the operating panel (13).

The display portion may display, for instance, resistance level. *Id.* ¶ 20.

4. Warner (Ex. 1009)

Warner "concerns a clutch mechanism for use on an exercise bicycle." Ex. 1009, 1:66–67. Warner's primary focus is "to provide a free-wheeling clutch mechanism that allows an exercise bike to include the direct-drive relationship between the drive train and the flywheel, and at the same time allow the drive train and the flywheel to turn independently from one another under certain conditions." *Id.* at 3:45–51.

Fig. 1, reproduced below, shows Warner's exercise bicycle.

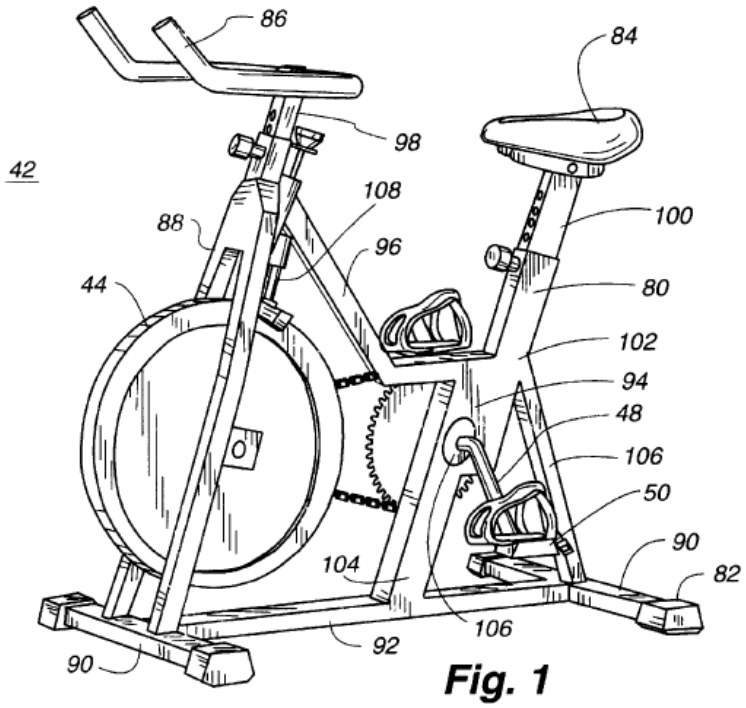


Fig. 1 of Warner (Ex. 1009) depicting an exercise bicycle.

According to Warner, "[t]he benefit of exercising on a direct drive exercise bicycle is well known. … One benefit of the direct drive exercise bicycle is that the direct drive gear train provides 'pedal-through assistance' for the rider." *Id*. at 1:14–23. However, there is also a drawback. "The direct drive relationship is inconvenient when the rider wishes to quickly stop the pedals, or loses the pedaling rhythm required to keep up with the rotating flywheel." *Id*. at 1:44–49. Accordingly, "it is desirable to have a free wheeling mechanism for an exerciser of the inertia flywheel type which provides means for selectively disengaging the flywheel from the drive means." *Id*. at 2:1–4. To that end, Warner discloses a "clutch mechanism [that] allows [inter alia] for the beneficial direct-drive connection between the drive train and the flywheel." *Id*. at 2:4–6.

Fig. 3, reproduced below, shows Warner's exercise bicycle with clutch mechanism 40 attached to flywheel 44 "integral" to a drive train that includes "the drive sprocket 46, the crank arms 48 and associated pedals 50 attached to the drive sprocket, the drive axle assembly 52, the slave sprocket 54, and the chain or belt 56 that interconnects the drive and slave sprockets." *Id*. at 5:35–38.

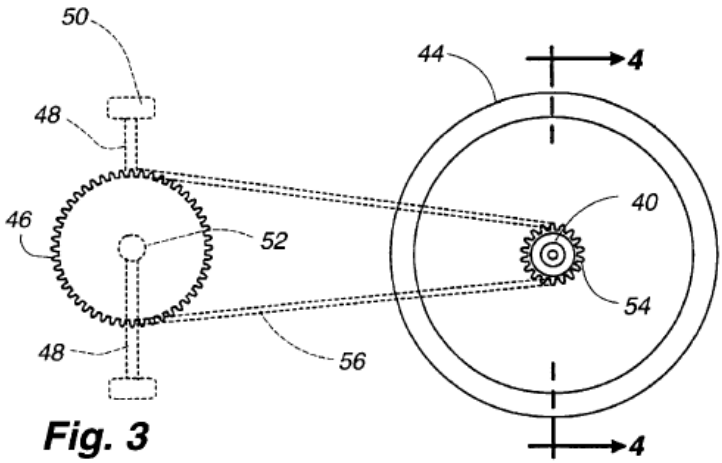


Fig. 3 of Warner (Ex. 1009) depicting clutch mechanism 40 attached to flywheel 44 integral to a drive train of the exercise bicycle.

F. Ground I

Petitioner challenges claims 1–13, 16 and 17 as unpatentable under 35 U.S.C. § 103(a) over the combination of Rice and Warner. Pet. 8–48.

Basically, Petitioner contends that Rice (Ex. 1008) discloses all of the "exercise bike" that is claimed but for the element "direct drive mechanism that couples a pedal assembly and a flywheel that facilitates a smooth transition between sitting and standing positions" (Ex. 1001, 7:53–55 (claim 1); 8:57–59 (claim 14)), for which Warner (Ex. 1009) is relied upon.

Pet. 13–17. According to Petitioner, it would have been obvious to a person of ordinary skill in the art to incorporate Warner's "direct drive mechanism" into Rice's exercise bike and thereby reach the "exercise bike" as claimed because *inter alia* Warner discloses that "[t]he benefit of exercising on a direct drive exercise bicycle is well known" (Ex. 1009, 1:14–15). Pet. 11. "For example, direct-drive mechanisms are advantageous because they provide 'pedal-through' assist and they 'provide[] a smooth, non-jerky pedaling rhythm.' [Ex. 1009,] 1:20-31." *Id*.

Patent Owner disagrees, arguing *inter alia* that Rice teaches away from incorporating a "direct drive mechanism" as claimed. Prelim. Resp. 29.

For the reasons explained herein, we are persuaded, based on the record presented at this stage, that Petitioner sufficiently shows that one of ordinary skill would have been motivated to combine the teachings of Rice and Warner in the manner recited in the claims, at the time of the filing of the '240 patent, to thereby teach the "exercise bike" with a "direct drive mechanism" as claimed.

We now more specifically evaluate the sufficiency of Petitioner's showing as to each claim element of claim 1 in light of Patent Owner's arguments.

In order to address whether the evidence sufficiently supports Petitioner's contention that the combination of Rice and Warner would render obvious dependent claims 16 and 17, the subsequent analysis also specifically evaluates the sufficiency of Petitioner's showing as to each claim element of disclaimed claim 14.

a. Independent claim 1/disclaimed independent claim 14

[1pre]/[14pre] "An exercise bike, comprising"

With regard to limitation [1pre]/[14pre], Petitioner contends that "Rice discloses and depicts an 'exercise bicycle or stationary bicycle.'" Pet. 11 (citing Ex. 1008 ¶ 512; Sargeant–240 Decl. ¶¶ 154–155, 241).

We have reviewed the record.

The claims call for "an exercise bike."

Rice discloses using "any exercise or stationary bicycle." Ex. 1008, ¶ 512. Rice exemplifies a stationary bicycle in Fig, 2. Pet. 12 (Fig. 2 of Rice is reproduced in section II.E.2 above). The Sargeant Declaration additionally explains that "Fig. 2 depicts a view of the Rice exercise bicycle." Sargeant–240 Decl. ¶ 154.

The evidence sufficiently supports Petitioner's contention.

Patent Owner argues that the statement in Rice (i.e., Ex. 1008, ¶ 512) that Petitioner relies upon to support its contention "does not disclose the exercise (stationary) bike of the claimed invention because it describes how either an exercise bicycle or stationary bicycle are 'coupled with a turbo trainer.' The claimed invention does not refer to any exercise device coupled to a turbo trainer." Prelim. Resp. 26.

Patent Owner's argument does not undermine Petitioner's contention. Patent Owner agrees with Petitioner that Rice discloses "an *exercise* bicycle or *stationary bicycle*." *Id.*, quoting Ex. 1008 ¶ 512; emphasis added. Accordingly, notwithstanding Rice discloses coupling a turbo trainer to a bicycle, there is no dispute that Rice nevertheless discloses "the exercise

(stationary) bike of the claimed invention" (*id.*) as broadly as it is claimed (i.e., "an exercise bike" (claim 1)).

Patent Owner also argues that "significant portions of Rice … teach away from the challenged claims – because they relate to bikes which ordinarily move when they are ridden." *Id.* Relying on *inter alia* the Claim Construction Order of the District Court Action (Ex. 1037), Patent Owner argues that the claim phrase "exercise bike" excludes exercise bikes that are held stationary for purpose of exercising. *Id.* at 25, citing Ex. 1021, 13, 30 and Ex. 1037, 3:16–9:10. According to Patent Owner, the claim phrase "exercise bike" is limited to stationary bikes. *Id.*

Petitioner does not appear to take a position on the construction of the claim phrase "exercise bike." But even if we would find, at this stage of proceeding, that the record weighs in favor of construing the claim phrase "exercise bike" to have a scope that excludes exercise bikes that are held stationary and thereby limits it to stationary bicycles, it would still not undermine Petitioner's contention. Notwithstanding "significant portions of Rice … relate to bikes which ordinarily move when they are ridden" (*id.*), Petitioner has shown that Rice expressly discloses what the claim broadly calls for, e.g., a "stationary bicycle". Pet. 11–12, citing Ex. 1008 ¶ 512 and Fig. 2 of Rice; Sargeant–240 Decl. ¶¶ 154–155, 241.

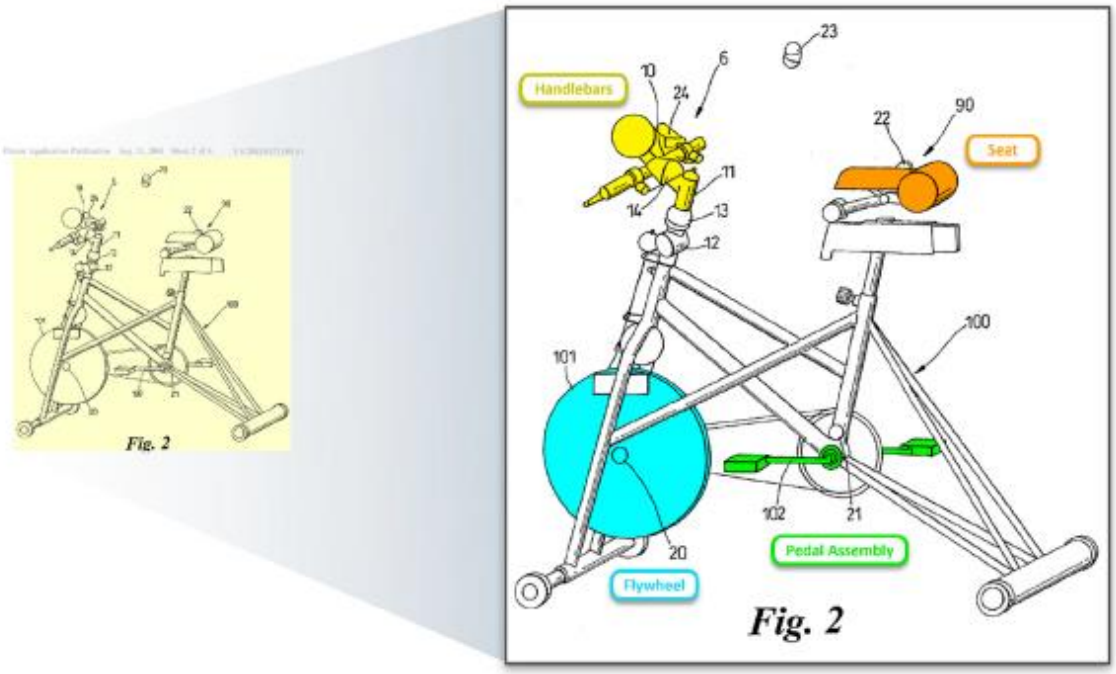
In our view, Petitioner sufficiently shows on this record that Rice discloses an "exercise bike" as claimed.

[1.1]/[14.1] "a frame that is configured to allow a rider to ride in sitting and standing positions;"

"frame"

Petitioner contends that Rice discloses a "frame" as claimed. Pet. 12–13.

Petitioner states that "[t]he '240 patent's only description of a bike frame is in Figure 1, with no further description." Pet. 12, citing Sargeant–240 Decl. ¶ 156. According to Petitioner, "Rice discloses a bike … in similar detail to Figure 1 of the '240 patent." Pet. 13. (Fig. 1 of the '240 patent is reproduced in section I.C.1, *supra*.) To illustrate their similarity, Petitioner provides an annotated version of Fig. 2 of Rice, reproduced below:



Petitioner's annotated version of Rice Fig. 2. Pet. 13.

As indicated on the annotated version, Fig. 2 "discloses a bike with a frame, a seat (for sitting), pedals, handlebars, and a flywheel." Pet. 13.

Patent Owner has not responded to Petitioner's challenge as to this limitation with any particularity at this stage of the proceeding.

We have reviewed the record.

Consistent with Petitioner's contention, the structural arrangement of the exercise bike shown in the annotated version of Fig. 2 of Rice is similar to the one shown in Fig. 1 of the '240 patent (Ex. 1001; Fig. 1 is reproduced in section I.C.1. above). Accordingly, Petitioner sufficiently shows on this record that Rice discloses a "frame" as claimed.

"configured to allow a rider to ride in sitting and standing positions"

Petitioner contends that "Rice discloses that its frame is configured to allow riding in sitting and standing positions." Pet. 13, citing Sargeant–240 Decl. ¶157–159, 242. Petitioner relies, in part, on Rice's statement that "'pedaling whilst standing on the pedals exercises different muscle groups and provides for greater upper body exercise too.' Rice [0148], [0552] (sensor detecting seated or standing positions)." *Id.*

As Petitioner points out, Rice discloses enabling structured training where the actual physical exercise can involve "pedaling whilst standing on the pedals." Ex. 1008 ¶ 148, cited at Pet. 13. Accordingly, Rice's frame is not only configured to allow a rider to sit but to stand as well.

Patent Owner has not responded to Petitioner's challenge as to this limitation ("configured to allow a rider to ride in sitting and standing positions").

Rather, Patent Owner argues that Rice does not disclose a frame that facilitates a "*smooth transition* between sitting and standing." Prelim. Resp. 36–41 (with respect to limitation [1.2.2/14.2.1] ("a direct drive mechanism … that facilitates a smooth transition between sitting and standing positions"), emphasis added. According to Patent Owner, when the claimed subject matter is considered as a whole, "the frame must be configured to not only allow sitting and standing riding positions, but the smooth transition there between. At most, Rice discloses only that the rider may sit and may stand, but it teaches nothing about a smooth transition therebetween." *Id*. at 39. "Rice does not teach a frame that would allow a smooth transition between sitting and standing." *Id*. at 36. In support thereof, figures depicting various frames (e.g., Fig. 2 of Rice and Fig. 1 of the '240 patent) are reproduced to show that, in contrast to what the '240 patent discloses, "Rice's Figure 2 is relatively high up and near the seat." *Id*. at 39.

Patent Owner's argument does not undermine Petitioner's position. The claim calls for a frame "configured to allow a rider to ride in sitting and standing positions," not one configured to facilitate a smooth transition between sitting and standing.

Even if we assume for argument's sake that the claim term "frame" should be construed to more narrowly confine it to a structure that facilitates a smooth transition between sitting and standing (which the claim requires of the "direct drive mechanism"), there is insufficient evidence on the present record that the Rice's frame is any different. The frames Patent Owner illustrates for comparison show different configurations but do not alone suffice to show that some frames (e.g., Fig. 1 of the '240 patent) facilitate a

smooth transition between sitting and standing rather than others (e.g., Fig. 2 of Rice).

Accordingly, based on the evidence at this stage, Petitioner sufficiently shows that Rice discloses "a frame that is configured to allow a rider to ride in sitting and standing positions" as claimed.

> *[1.2]/[14.2] "a direct drive mechanism that couples a pedal assembly and a flywheel and that facilitates a smooth transition between sitting and standing positions"*
>
> *[1.2.1]/14.2.1] "a direct drive mechanism that couples a pedal assembly and a flywheel"*
>
> *'240 patent*

The parties dispute the construction of "direct drive"; that is, whether the claim phrase "direct drive mechanism" equates to a fixed gear mechanism.

Petitioner contends that the '240 patent equates "direct drive" to fixed gear. Pet. 13, citing Ex. 1001, 3:11–13 ("flywheel 20 which is coupled to pedal assembly 18 in a *direct drive (fixed gear)* … configuration.") Emphasis added. Petitioner elaborates:

> The specification discusses a "direct drive" twice; in both cases, it equates fixed gear and direct drive. First, the '240 patent states that "Bike 10" includes a "flywheel 20 which is coupled to pedal assembly 18 in a direct drive (fixed gear) and/or non direct drive, e.g., freewheeling configuration." '240 patent 3:8-13. Thus, the specification defines "direct drive" as "fixed gear" and a "non direct drive" as a "freewheel[]." Second, the specification states: "lack of an instructor may increase the danger of injury," when using "a direct drive or fixed gear configuration," ('240 patent 2:6-9), again equating "fixed gear" and "direct drive."

Pet. Prelim. Reply 6–7.

Patent Owner disagrees. "Contrary to Petitioner's position, the phrase 'direct drive (fixed gear)' does not equate a direct drive mechanism to a fixed gear." Prelim. Resp. 34. "The [Pet. Prelim.] Reply references two passages from the '240 Specification which Petitioner claims equates a direct drive and fixed gear (Reply, pp. 6-7): . . . Instead, these excerpts support Patent Owner because there is no definition provided in the specification and these excerpts simply do not equate 'direct drive' and 'fixed gear." PO Prelim. Sur–Reply 7.

We have reviewed the record and find that the evidence weighs in favor of Patent Owner's position.

The entire paragraphs containing the two statements from the '240 patent (Ex. 1001) that are at the center of the dispute (3:8-13 ("direct drive (fixed gear)") and 2:6-9 ("a direct drive or fixed gear configuration") are reproduced below:

> Certain health clubs may have indoor cycling bikes available on their floor to ride by individuals who are not participating in an instructor-led class. But without an instructor, the individual may not receive the proper instruction or guidance essential to simulating the different riding positions and/or resistances and/or pedal cadences that an instructor typically provides during a class. Indeed, instructors such as certified SPINNING® instructors receive significant and ongoing training in order to lead classes. Accordingly, the individual that simply pedals a stationary exercise bike on a health club floor will generally not achieve the benefits of an instructor-led class. Furthermore, the lack of an instructor may increase the danger of injury if the individual is not riding the bike correctly. This may be especially so where the bike is in a *direct drive or fixed gear* configuration.

Ex. 1001, 1:61–2:9 (emphasis added).

> FIG. 1 shows a stationary exercise bike 10 along with a display screen 100. The display screen includes a computer or other device to store

> and/or provide instructions. The bike 10 shown is an indoor cycling bike that is adjustable and has an open geometry that allows a rider to simulate different riding positions and conditions. Bike 10 preferably includes adjustable seat assembly 12, adjustable handlebar 14 having multiple hand position, variable resistance mechanism 16, pedal assembly 18 and flywheel 20 which is coupled to pedal assembly 18 in a *direct drive (fixed gear)* and/or non direct drive e.g., freewheeling configuration. U.S. Pat. Nos. 6,468,185 and 6,793,608 are hereby incorporated by reference herein. A clutching mechanism may also be included which may be preferred where bike 10 is in a fixed gear configuration. U.S. Pat. No. 5,961,424[5] is hereby incorporated by reference herein.

Id. at 3:3–18 (emphasis added).

When read in the context of the entirety of the first paragraph, the phrase "direct drive or fixed gear configuration" suggests that the two configurations are alternatives but it does not necessarily indicate that they equate to each other.

When read in the context of the entirety of the second paragraph, the phrase "direct drive (fixed gear)" also does not necessarily suggest that they equate to each other. The entire phrase is "direct drive (fixed gear) and/or non direct drive e.g., freewheeling configuration." Ex. 1001, 3:12–13; cited at Pet. Prelim. Reply 6. In other words, "direct drive (fixed gear)" configurations are not non–direct drive configurations, such as freewheeling configurations. Other than indicating that they are not non–direct drive configurations, there is insufficient additional indication that "direct drive" and fixed gear mechanisms equate to each other.

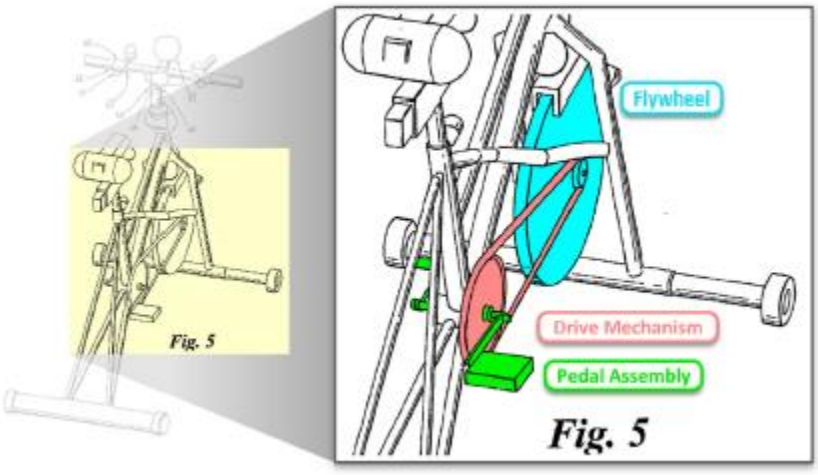
[5] Warner (Ex. 1009).

Accordingly, the evidence at this stage more strongly supports Patent Owner's argument that the '240 patent does not disclose that "direct drive" configurations equate to fixed gear configurations. Given no other evidence at this stage to show that one of ordinary skill in the art would understand the '240 patent's disclosure of "direct drive (fixed gear)" (Ex. 1001, 3:12–13) and "a direct drive or fixed gear configuration" (*id*. at 2:6–9) to mean that "direct drive" equates to fixed gear, Petitioner has not sufficiently shown that the '240 patent equates "direct drive" to fixed gear configurations.

Rice

Petitioner states that "Rice does not explicitly disclose a fixed gear mechanism." Pet. 15.

That being said, Petitioner includes an annotated version of Fig. 5 of Rice (Ex. 1008) (reproduced below) to additionally contend that "Figure 5 shows a single gear ratio which is typical of a fixed gear." *Id*.



Petitioner's annotated version of Rice Fig. 5. Pet. 15.

Petitioner highlights in pink the "Drive Mechanism" it believes shows a single gear ratio.

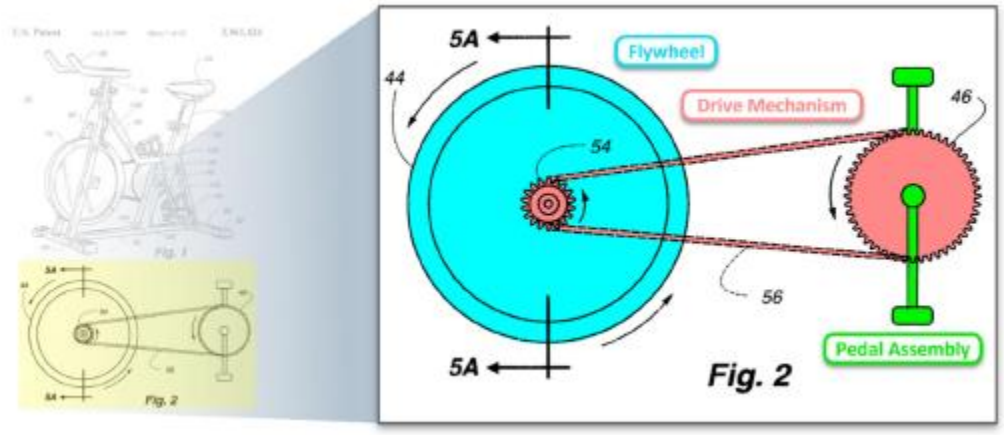
Patent Owner agrees with Petitioner in that "Rice does not teach or suggest 'a direct drive mechanism that couples a pedal assembly and a flywheel' as recited in the challenged claims." Prelim. Resp. 27.

Accordingly, there is no dispute that Rice does not expressly disclose "a direct drive mechanism that couples a pedal assembly and a flywheel" as claimed, notwithstanding Petitioner's additional contention that Rice shows a configuration "typical of a fixed gear."

Warner

Petitioner contends that Warner discloses a "direct drive" mechanism.

In support thereof, Petitioner provides an annotated version of Fig. 2 of Warner (Ex. 1009), reproduced below:



Petitioner's annotated version of Warner Fig. 2. Pet. 16.

According to Petitioner,

> Warner discloses a "direct drive bicycle" in which the fixed-gear drive train couples the inertia flywheel and the crank arms (or pedals).

> Warner 1:20-31 ("the direct drive interaction between the inertia flywheel and the crank arms"), Fig. 2 (annotated); Sargeant-240 ¶¶168.

Pet. 15. The Sargeant Declaration additionally explains that "Warner discloses a 'direct drive bicycle' in which the fixed-gear drive train couples the inertia flywheel and the crank arms (or pedals)." Sargeant–240 Decl. ¶ 168 (quoting Ex. 1009, 1:15–31). Petitioner highlights in pink on the annotated version of Fig. 2 of Warner the "Drive Mechanism" – that is, the combination of "drive sprocket 46," "chain 56," and "slave sprocket 54 attached on the flywheel 44" (Ex. 1009, 7:45–50).

In our view, the evidence on this record sufficiently supports Petitioner's contention that Warner discloses "a direct drive mechanism that couples a pedal assembly and a flywheel" as claimed.

Furthermore, although Patent Owner does not directly address the "Drive Mechanism" of Warner that is illustrated on Petitioner's annotated version of Warner's Fig. 2, Patent Owner agrees that "Warner makes cursory reference to bikes involving a direct drive." Prelim. Resp. 29.

Accordingly, it would appear that there is no dispute that Warner discloses a "direct drive mechanism."

That being said, Patent Owner argues that "[t]he whole thrust of Warner regards free wheeling devices." *Id.*, citing Ex. 1009 at 1:8–10 ("This invention relates generally to free wheeling devices, and more particularly to a free wheel clutch mechanism useful with crank operated exercise bicycles employing an inertia flywheel.") According to Patent Owner, Warner more generally "teaches the use of a clutch mechanism to avoid what are described as drawbacks of such direct drive mechanisms." *Id.* Patent Owner discusses, *inter alia*, various embodiments disclosed in the

Warner specification to support its view that "the vast majority of the specification is directed to the detailed description of the clutch components that have no use with, and teach away from, the direct drive mechanism." *Id*. at 30.

Patent Owner's argument does not undermine Petitioner's position. The level of attention Warner devotes to a free wheel clutch mechanism does not weaken the evidence that Warner otherwise expressly discloses a "direct drive mechanism." As the Sargeant Declaration explains, "Warner discloses a 'direct drive bicycle' in which the fixed-gear drive train couples the inertia flywheel and the crank arms (or pedals)." Sargeant–240 Decl. ¶ 168 (quoting Ex. 1009, 1:15-31); Pet. 15.

Teaching Away

Patent Owner further argues that Rice and Warner teach away from using a "direct drive mechanism" as claimed.

"Rice teaches away from a direct drive bike." Prelim. Resp. 29. Patent Owner relies on a statement in Rice about what a user should do when "landing a jump." *Id*. at 28, quoting from Ex. 1008 ¶ 149 ("not only should the user stop pedalling [sic] as discussed earlier but also they should be off the seat preparing to take the shock on landing."). According to Patent Owner, "[t]his statement teaches away from the use of a direct drive because if a direct drive mechanism as recited in the challenged claims is used, the rider would risk significant injury if he or she were to stop pedaling while standing." *Id*. "[E]ven Warner acknowledges the drawback of the 'stop pedaling while standing' scenario suggested by Rice." *Id*., quoting from Ex. 1009 at 1:44–53 ("The direct drive relationship between the

flywheel and drive train is also a drawback of exercising on this type of bicycle. . . .")

The difficulty with this argument is that there is insufficient evidence on this record to support Patent Owner's characterization of Rice's "technical training, e.g., landing a jump" (Ex. 1008 ¶ 149) as discouraging a person of ordinary skill from devising an exercise bike having a "direct drive mechanism" to "facilitate a smooth transition between sitting and standing positions" as claimed. For example, the connection between Rice's training and the claimed "direct drive mechanism" is difficult to discern given the current record, assuming there is one.

Also, to the extent Patent Owner is arguing that Warner discloses a "drawback" to using a "direct drive mechanism" and therefore provides a teaching away that renders the claimed "direct drive mechanism" patentable, it is substantially weakened by the fact that there is no dispute that Warner expressly discloses using a "direct drive mechanism." *See* Pet. 15 and Prelim. Resp. 29. *Cf. In re Gurley*, 27 F.3d 551, 553 (Fed. Cir. 1994) ("A known or obvious composition does not become patentable simply because it has been described as somewhat inferior to some other product for the same use.")

For the foregoing reasons, Patent Owner's "teaching away" argument does not undermine Petitioner's position.

> *[1.2.2]/[14.2.2] "a direct drive mechanism ... that facilitates a smooth transition between sitting and standing positions;"*

According to Petitioner, "[t]he '240 patent does not describe a 'smooth transition.' It uses the term 'smooth, to vaguely criticize prior art Lifecycle-type bikes. '240 patent 7:17." Pet. 14. Petitioner points out that

"in the District Court Action, Patent Owner equates the claimed 'direct drive mechanism' with the pedals, flywheel, and belt of the Peloton Bike. Ex. 1028 (Infringement Contentions) 11." *Id*. at 17.

Given this, Petitioner contends that

> Warner teaches that the "pedal-through assistance" provided by a direct-drive mechanism helps the rider smoothly power through top and bottom dead-center pedal positions proving a smoother pedaling stroke. Warner 1:23-25, 1:28-30. Therefore, to the extent the claimed "smooth transition" is understandable, the direct drive mechanism disclosed in Warner smooths the rider's pedaling rhythm, such that Warner's direct drive mechanism facilitates a smooth transition.

Pet. 16–17, citing Sargeant–240 Decl. ¶¶ 179–180.

We reproduce the Warner disclosures Petitioner relies upon in support of its contention:

1. "One benefit of the direct drive exercise bicycle is that the direct drive gear train provides 'pedal-through assistance' for the rider." Ex. 1009, 1:20–23; Pet. 16.
2. "The 'pedal-through' feature assists the rider by pushing the pedal through the top and bottom dead center pedal positions to help make the transition smooth and efficient." *Id*. at 1:23–25.
3. "The inertia flywheel provides a smooth, non-jerky pedaling rhythm which provides an efficient and rigorous exercise for the rider, … ." *Id*. at 1:28–30; Pet. 16.

These statements would suggest to one of ordinary skill that a direct drive exercise bicycle provides pedal-through assistance for the rider and that said pedal-through assistance helps make the transition between the top and bottom dead center pedal positions smooth and efficient.

As far as making the "transition between sitting and standing positions" smooth, as the claims more particularly require, the Sargeant Declaration explains that

> A POSA would have understood that the direct drive mechanism smooths the pedaling rhythm and general pedaling movement in this fashion, and this impacts the rider's transition from sitting and standing during the ride, such that the direct drive mechanism as disclosed in Warner facilitates the smooth transition as required by this claim limitation.

Sargeant–240 Decl. ¶ 179; Pet. 16.

Patent Owner disagrees that Warner's "pedal-through assistance" discloses "a direct drive mechanism … that facilitates a smooth transition *between sitting and standing positions*." Prelim. Resp. 34–36 (emphasis added). First, "there is nothing disclosed about the smooth transition between riding positions." *Id*. at 35. Second, "Warner's pedal-through assistance regards only the smoothness of the rider's act of pedaling through the top and bottom dead centers of the rider's pedal stroke. Warner states nothing about a transition between sitting and standing." *Id*. And, third,

> the pedal-through assistance only regards those points of a rider's 360 degree pedal stroke located at top dead center, i.e., 0 degrees, and bottom dead center, i.e., 180 degrees, where the rider's legs are weakest. In sharp contrast, the smooth transition recited in the challenged claims do not regard the top and bottom dead center of a rider's pedal stroke.

Id. at 36.

We have reviewed the record.

In our view, at this stage the evidence weighs more in favor of Petitioner's position.

While Warner states nothing about a transition between sitting and standing as Patent Owner argues, Warner's "pedal-through" feature would appear to be present whether one sits or stands. Between sitting and standing, the Sargeant Declaration explains that "the direct drive mechanism [that] smooths the pedaling rhythm and general pedaling movement … impacts the rider's transition from sitting and standing during the ride." Sargeant–240 Decl. ¶ 179; Pet. 16. This supports Petitioner's contention that the "pedal-through" feature associated with a direct drive exercise bicycle, as Warner discloses, "smooths the rider's pedaling rhythm, such that Warner's direct drive mechanism facilitates a smooth transition" between sitting and standing positions as claimed. Pet. 16–17.

In addressing the "direct drive mechanism" limitation, the Preliminary Response includes a section entitled "**Rice does not teach a frame that would allow a smooth transition between sitting and standing.**" Prelim. Resp. 36–41. The arguments in this section of the Preliminary Response are directed to the "frame" element, which we previously discussed with respect to the "frame" limitation. *See* section II.F.1.a.[1.1/14.1] above. For the reasons discussed there, Patent Owner's argument in this section of the Preliminary Response does not undermine Petitioner's position with respect to the "direct drive mechanism" element.

In our view, Petitioner sufficiently shows that Warner discloses "a direct drive mechanism … that facilitates a smooth transition between sitting and standing positions" as claimed.

[1.3]/[14.3] "a set of handlebars that is coupled to the frame and that provides the rider with at least one hand position;"

Petitioner contends that Rice discloses "a set of handlebars that is coupled to the frame and that provides the rider with at least one hand position." Pet. 17, citing Ex. 1008, code (57) ("a handlebar assembly") and Figs. 5-6; Sargeant–240 Decl. ¶¶ 183-185, 244.

Patent Owner has not responded to Petitioner's challenge as to this limitation with any particularity at this stage of the proceeding.

We have reviewed the record.

Petitioner provides annotated versions of Figs. 5 and 6 of Rice showing Rice discloses handlebars as claimed. Pet. 18. In further support of Petitioner's contention, the Sargeant Declaration explains that

> Rice discloses that the handlebar enables the rider to have at least one hand position: "[A] handlebar assembly [which can be held by a user at the hand-grips 42 (Fig. 5) and] which includes one or more input devices adapted to generate input signals for supply to a microprocessor based unit, at least one of the input devices being responsive to movement of the handlebars by the user." Rice, [0013].

Sargeant–240 Decl. ¶ 185; Pet. 17.

In our view, Petitioner sufficiently shows on this record that Rice discloses "a set of handlebars that is coupled to the frame and that provides the rider with at least one hand position" as claimed.

[1.4]/[14.4] "a mechanism that provides resistance to the flywheel and that is manually adjustable by the rider to vary the pedaling resistance;"

According to Petitioner, "[t]he only disclosure of 'a mechanism that provides resistance' in the specification is the 'resistance mechanism' labeled 16 in Figure 1." Pet. 18. According to Petitioner, a "POSA would

understand that mechanism 16 is a friction brake." *Id.*, citing Sargeant–240 Decl. ¶¶ 186–187.

Given this, Petitioner contends that "Figure 6 of Rice [ ] discloses a similar mechanism used to manually adjust the resistance applied to the flywheel." Pet. 19. According to Petitioner, the resistance mechanism Rice discloses is "manually adjustable by the rider to vary the pedaling resistance" as claimed. Pet. 20, citing Ex. 1008 ¶¶ 61, 572, 167–168, 508, cl. 46 and Sargeant–240 Decl. ¶¶ 188–193.

Patent Owner has not responded to Petitioner's challenge as to this limitation with any particularity at this stage of the proceeding.

We have reviewed the record.

Petitioner provides annotated versions of Fig. 1 of the '240 patent and Fig. 6 of Rice showing similar "friction brakes." *See* Pet. 19 and 20, respectively. In further support of Petitioner's contention, the Sargeant Declaration explains that

> A POSA would have recognized the device highlighted above [in the annotated version of Fig. 1 of the '240 patent], labeled with reference numeral 16, as a mechanical friction brake. … Fig. 6 of Rice (annotated below [*see* Sargeant–240 Decl. ¶ 188]) shows a similar resistance mechanism used to manually adjust the resistance applied to the flywheel. … Rice [ ] explains that braking means 54 is "manually adjustable by the rider to vary the pedaling resistance." In particular, Rice teaches that a "position sensor [] reads ***the resistance***, incline or gear, or handlebar, seat or brake resistances, ***manually selected by the user on the exercise equipment***. It is specifically designed to bring all the functionality of my games controller to all types of manually adjusted resistance exercise equipment and Trainers." Rice, [0167] (emphasis added).

Sargeant–240 Decl. ¶ 188 and 190; Pet. 20.

In our view, Petitioner sufficiently shows on this record that Rice discloses "a mechanism that provides resistance to the flywheel and that is manually adjustable by the rider to vary the pedaling resistance" as claimed.

[14.5] "a mechanism that measures the rider's cadence;"

According to Petitioner,

> Rice expressly discloses a mechanism for measuring the rider's cadence that comprises "a magnetic sensing means such as a reed switch and magnet whereby a signal is produced whenever the magnet passes the magnetic sensing means." Rice [0140]. The magnet is attached to the pedal crank and the reed switch is attached near the pedal crank arm so as to measure each revolution of the crank and thus measure the rider's cadence. *Id*. [0140]-[0141]. Therefore, Rice discloses "a mechanism that measure the rider's cadence." Sargeant-240 ¶¶247-248.

Pet. 21.

Patent Owner has not responded to Petitioner's challenge as to this limitation with any particularity at this stage of the proceeding.

We have reviewed the record.

As the Sargeant Declaration explains," the prior art explicitly describes a "mechanism that measures the rider's cadence." Rice expressly discloses a mechanism for measuring the rider's cadence [at Ex. 1009, ¶¶ 139–1401]." Sargeant–240 Decl. ¶ 247; Pet. 21.

In our view, Petitioner sufficiently shows on this record that Rice discloses "a mechanism that measures the rider's cadence" as claimed in claim 14.

> *[1.5]/[14.6] "a computer that is coupled to the stationary bike, that is configured to connect with the internet or other computer network to access a collection of exercise routines, wherein the exercise routines include instructions regarding cadence, pedaling resistance, and riding positions including sitting and standing positions"*
>
> *[1.5.1]/[14.6.1] "a computer that is coupled to the stationary bike"*

Petitioner contends that Rice discloses a computer "coupled" to a stationary bike. Pet. 22–24, Sargeant–240 Decl. ¶ 197. According to Petitioner,

> Rice discloses a "microprocessor-based unit" (4) coupled to a "controller." Rice explains that the "microprocessor-based unit" may be a Sony PlayStation or "alternatively comprise a personal computer." Rice Fig. 1; [0114]. Rice therefore discloses "a computer."

Pet. 22, citing Sargeant–240 Decl. ¶¶ 195–196. In support thereof, Petitioner reproduces Fig. 1 of Rice, reproduced below.

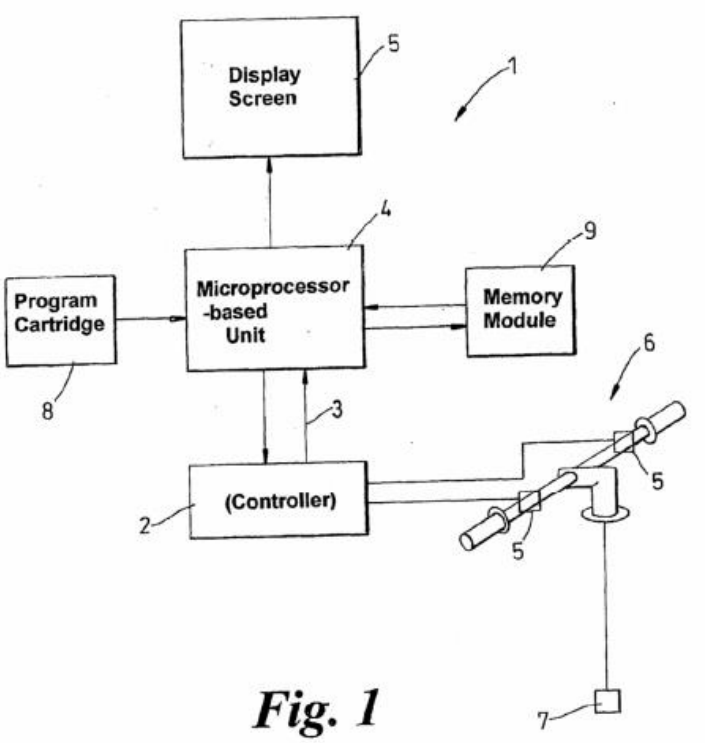


Fig. 1

> Fig. 1 of Rice illustrates the connection of the controller (2) into a gaming and exercise apparatus (1).

Petitioner explains that "Rice teaches that the controller is 'attached to the stationary exercise bicycle' and 'can be used to supply signals 3 to a microprocessor based unit.' Rice [0534], [0535], [0542]." *Id*. at 23, citing Sargeant–240 Decl. ¶ 198.

> Rice discloses that the microprocessor-based unit can be physically integrated into the handlebar assembly. Sargeant-240 ¶¶199; Rice [0095] ("[t]he controller may include a microprocessor and thus form a complete integrated system"); [0121], [0136], [0152], [0154], [0190]. Thus, Rice discloses "a computer that is coupled to a stationary bike," both physically and electrically.

Id. at 23–24.

Patent Owner disagrees that Rice shows a computer "coupled" to the stationary bike. Prelim. Resp. 41–44.

According to Patent Owner, "[t]he plain and ordinary meaning of 'coupled' is attached, joined or combined." Prelim. Resp. 42. In support thereof, Patent Owner submits dictionary definitions for "coupled". *Id.* ("(Ex. 2001, Cambridge International Dictionary of English (1996) at 314 ('join or combine'); Ex. 2002, Chambers Dictionary (1998) at 375 ('to join together')").

Patent Owner states further that "the specification of the '240 patent that describes and shows the computer and display *integrated* with the exercise bike." Prelim. Resp. 42, emphasis added.

Patent Owner argues that

> Rice[ ] merely discloses that "[i]t is most preferred that the controller assembly is adapted to produce output signals that may be passed to a games console such as a Sony Playstation through a connector that is plugged into the controller port of the console." (Ex. 1008, p. 12; Rice, ¶ [0075].)

Id. "[T]he game console is not 'coupled' to the stationary bike, but instead is wired over some distance to the controller 2; and it is only the controller 2 that is coupled to the disclosed bike. *See*, e.g., Ex. 1008, pp. 12, 35; Rice, ¶¶ [0075], [0442]." *Id.* at 42–43.

Accordingly, in Patent Owner's view "wir[ing] [a games console comprising a computer] over some distance to the controller 2" (which is attached to the stationary bike) is insufficient to "couple" (i.e., "integrate" as Patent Owner defines "couple") the computer to the stationary bike.

Petitioner responds, *inter alia*, by arguing that "[t]he specification states that while the computer is preferably contained within display 100, the computer also may be remotely located. '240 patent (Ex. 1001) 3:56-58." Pet. Prelim. Reply 5. In other words, the Specification supports a broader

construction of "coupled" than the one Patent Owner's proposes; i.e., "integrated." Patent Owner disagrees, arguing, inter alia, "the specification does not use the word 'coupled' to refer to that arrangement, and the multiple consistent uses in the claim language confirm that 'coupled' refers to the preferred arrangement where the computer is 'contained within display.'" PO Prelim. Sur–Reply 6.

We have reviewed the record.

The evidence weighs in favor of Petitioner's position.

Petitioner sufficiently shows, via Figure 1 of Rice that Rice's computer ("Microprocessor–based Unit" 4) is joined to handlebar assembly 6 and thus sufficiently shows Rice discloses a computer joined to the exercise bike. The dictionary definitions Patent Owner has submitted in support of the ordinary and customary definition of the claim term "coupled" define it as "join" (Ex. 2001, 314) and "join together" (Ex. 2002, 375). Prelim. Resp. 42. Accordingly, Petitioner has sufficiently shown that Rice discloses a computer "coupled" to the exercise bike consistent with the ordinary and customary definition of "coupled."

The difficulty with Patent Owner's proposed construction of "coupled" as "integrated" is that it does not comport with the ordinary and customary meaning of "coupled" which according to the dictionary definitions Patent Owner has provided does not require elements to be "integrated" with each other. All that is required is that the elements be "joined" to each other. The Specification does not provide an express definition for the claim term "coupled" and thus the ordinary and customary meaning of "coupled" controls. In that regard, the evidence insufficiently supports construing "coupled" to mean "integrated" rather than, more

broadly, "joined" as Petitioner contends. Cf. Pet. Prelim. Reply 6, citing *Johnson Worldwide Assocs., Inc. v. Zebco Corp.*, 175 F.3d 985, 992, (Fed. Cir. 1999) ("the unmodified term 'coupled' generically describes a connection, and does not require a mechanical or physical coupling.").

In our view, Petitioner sufficiently shows on this record that Rice discloses "a computer that is coupled to the stationary bike" as claimed.

> *[1.5.2]/[14.6.2] "that is configured to connect with the internet or other computer network"*

Petitioner contends that Rice discloses a computer configured to connect with the internet or other computer network. Pet. 24–25.

In support, Petitioner cites, inter alia, disclosure at ¶ 104 of Rice about enabling the use of the system "over the internet or networked in this way." Ex. 1008 ¶ 104; Pet. 24, Sargeant–240 Decl. ¶ 200.

In further support thereof, the Sargeant Declaration explains that

> Rice's "computer-controlled and monitored exercise bicycle/trainer; giv[es] all the benefits of the programmability, memory, structured training and monitoring to such equipment along with the added functionality of it being connectable to any external computer to train along with full interactive video and sound and the means for technical training." Rice, [0512]. A POSA reading these portions of Rice would have concluded that Rice's computer had the ability to connect to the internet or another computer network.

Sargeant–240 Decl. ¶ 200, quoting Ex. 1008 ¶ 512; Pet. 24.

Patent Owner relies on its "integrated" construction of "coupled" to argue that "the only item that may be coupled to Rice's stationary cycle 100 is the controller 2." Prelim. Resp. 44. From that perspective, "the controller being coupled to the bike does not teach a computer that is configured to connect with the internet." *Id.*

Patent Owner's argument does not undermine Petitioner's position. Given Rice's disclosure of the ability to use its computer over the Internet (Ex. 1008 ¶ 104; Pet. 24) and that, according to the Sargeant Declaration, a person of ordinary skill in the art would have concluded that Rice's computer had the ability to connect to the internet or another computer network (Sargeant–240 Decl. ¶ 200; Pet. 24), Petitioner sufficiently shows on this record that Rice discloses a computer "that is configured to connect with the internet or other computer network" as claimed.

[1.5.3]/[14.6.3] "to access a collection of exercise routines"

Petitioner contends that Rice discloses using the internet (or another computer network) to access a collection of exercise routines. Pet. 25–26.

In support thereof, Petitioner cites, inter alia, ¶ 510 of Rice (Ex. 1008) which discloses that its computer stores "the current, and possibly future and past, training programs and data." *Id*. at 25. According to the Sargeant Declaration, "[a] POSA would have understood the multiple training maps and programs discussed in this section [i.e., ¶ 510 of Rice] to be a "collection of exercise routines."" Sargeant–240 Decl. ¶ 209; Pet. 26.

Petitioner also argues that "the disclosed computer can 'download' the 'training maps' 'from external'—i.e., the training map is accessible over the internet. *Id*. ¶¶213; Rice [0481], [0525]." *Id*. at 29. The Sargeant Declaration explains:

> Rice discloses that a given "training map" can be "stored in the integral memory from an integral program ***or downloaded from external***." Rice, [0481] (emphasis added). A POSA would have understood that downloading a training map from an external source over the internet allows a user to select one from a collection of "the training maps," or exercise routines. *Id*.

Sargeant–240 Decl. ¶ 205; Pet. 25.

Given that ¶ 510 of Rice (Ex. 1008) discloses a computer that stores training maps, programs and data and in light of the Sargeant Declaration explaining that a person of ordinary skill in the art would have understood the training maps and programs to be a "collection of exercise routines", the evidence at this stage sufficiently supports Petitioner's contention that Rice discloses a computer configured to connect with the internet to access a collection of exercise routines as claimed.

Patent Owner argues that Rice does not disclose a collection of exercise routines with "instructions regarding cadence, pedaling resistance, and riding positions including sitting and standing positions" as claimed. Prelim. Resp. 45–46. We address this argument in the next section regarding limitation [1.5.4]/[14.6.4].

For the foregoing reasons, Petitioner sufficiently shows on this record that Rice discloses a computer "that is configured to connect with the internet or other computer network to access a collection of exercise routines" as claimed.

> *[1.5.4/[14.6.4] "wherein the exercise routines include instructions regarding cadence, pedaling resistance, and riding positions including sitting and standing positions;"*

Petitioner contends, supported by the Sargeant Declaration, that Rice discloses "'structured training programs' or 'training maps'" (which we have determined sufficiently supports Petitioner's contention that Rice discloses "exercise routines") that "include instructions regarding 'what ***resistance setting***, speed, ***cadence***, ***seating position***, pedal pressures, heart rates, etc. should be exerted by the user over different time periods, varying over the

whole time period in accordance with a structured training program.' Sargeant-240 ¶¶210-211; Rice [0481]." Pet. 28. "Rice elaborates that the computer 'instruct[s] the user as to the resistance setting to select via live instructions and can read what resistance setting the user has selected.' Rice [0171], [0321], [0493]". *Id*. According to Petitioner, the instructions relative the resistance setting, cadence, and seating position provided by the training map amount to "instructions regarding cadence, pedaling resistance, and riding positions." Pet. 28–29, citing Sargeant–240 Decl. ¶ 212 ("[A] POSA would have understood a signal providing a 'target' cadence and seating position are 'instructions regarding cadence … and riding positions including sitting and standing positions.'").

In our view, given that Rice discloses a computer that, *inter alia*, "instruct[s] the user as to the resistance setting" (Ex. 1008, ¶ 171), as well as providing target/levels with respect to speed, cadence, and seating position (*id*. at ¶ 481), Petitioner sufficiently shows that Rice discloses a computer configured to access "exercise routines include instructions regarding cadence, pedaling resistance, and riding positions including sitting and standing positions" as claimed.

Patent Owner states that Rice "merely teaches use of the so-called training map," not "'a collection of exercise routines' having 'instructions' regarding a user's cadence, pedaling resistance and riding positions." Prelim. Resp. 46. However, Patent Owner does not dispute that ¶ 481 of Rice (Ex. 1008) discloses a training map consisting of "targets/signals … i.e., what resistance setting, speed, cadence, seating position, pedal pressures, heart rates, etc." and does not otherwise explain why, in contrast to the Sargeant Declaration (Sargeant–240 Decl. ¶ 212; Pet. 28), that said

setting of said targets/signals amounts to instructions as claimed. Accordingly, Patent Owner's statement does not undermine Petitioner's contention.

In our view, Petitioner sufficiently shows on this record that Rice discloses "a collection of exercise routines wherein the exercise routines include instructions regarding cadence, pedaling resistance, and riding positions including sitting and standing positions" as claimed.

[1.5.5] "and that stores power exerted by the rider;"

Petitioner contends that "Rice plainly disclosed that power determinations are stored. Sargeant-240 ¶¶214." Pet. 29.

> Rice describes in detail a "torque reader" "that senses and measures the ***actual power/force being applied to the cranks of a bicycle***" and "communicates a signal representative thereof to the microprocessor-based unit(s), directly or indirectly." Rice [0177]. This device "therefore provides the system with a reading of ***actual energy being expended at a given resistance***." *Id*. Therefore, Rice discloses measuring power exerted by the rider and communicating it to the computer. Sargeant-240 ¶¶215-216; Rice [0083]. The computer in Rice also "include[s] an area of electronic memory adapted to store information indicative of a user[']s physiological ability" including "***information about the users power output when pedaling***." Rice [0093]. Therefore, Rice discloses storing "the power exerted by the rider." Sargeant-240 ¶¶217-218.

Id. at 29–30.

Patent Owner has not responded to Petitioner's challenge as to this limitation with any particularity at this stage of the proceeding.

Given, *inter alia*, that Rice discloses a "torque reader" "that senses and measures the actual power/force being applied to the cranks of a bicycle" (Ex. 1008, ¶ 177) and communicating that information to a

computer with a "memory adapted to store information … about the users power output when pedaling" (*id*. at ¶ 93), Petitioner sufficiently shows on this record that Rice discloses a computer "that stores power exerted by the rider;" as claimed.

> *[14.7] "wherein the computer is configured to measure the pedaling resistance …"*
>
> *[14.7.1] "wherein the computer is configured to measure the pedaling resistance and the rider's cadence"*

Regarding the computer being configured to measure the "pedal resistance," Petitioner contends that

> Rice discloses a "resistance setting reader" which produces "a signal indicative of the level of resistance that the exercise device is providing ***against the users movements***." Rice [0165]-[0166]. Therefore, Rice discloses measuring the resistance applied against the rider's pedal movements. Sargeant-240 ¶¶252.

Pet. 30.

Regarding the computer being configured to measure the "rider's cadence," Petitioner contends that

> Rice discloses a "mechanism that measures the rider's cadence." Rice also discloses that the "mechanism" (reed switch) communicates "signals representative" of the cadence "to the microprocessor(s)." Rice [0140]. Therefore, the mechanism that measures cadence communicates a signal representing the cadence to the computer. Sargeant-240 ¶¶255.

Id. at 31.

Patent Owner has not responded to Petitioner's challenge as to this limitation with any particularity at this stage of the proceeding.

Based on the evidence Petitioner has presented, Petitioner sufficiently shows on this record that Rice discloses a computer "configured to measure the pedaling resistance and the rider's cadence" as claimed.

> *[14.7.2] "and is configured to calculate power exerted by the rider based on the pedaling resistance and the rider's cadence;"*

Regarding the computer being configured "to calculate power exerted by the rider based on the pedaling resistance and the rider's cadence," Petitioner contends, *inter alia*, that this is disclosed in Rice at ¶ 83. Pet. 33.

> First, Rice discloses an "input device" which produces "control signals which are indicative of the ***resistance*** setting of the pedals." Rice [0083]. Rice explains that the "input device" determines "how much ***power*** is needed to pedal at a given ***cadence***." *Id*. The "input device" in Rice determines how much "power is need at a given cadence" and produces a control signal "indicative of the ***resistance*** setting of the ***pedals***" based on that information. *Id*. Therefore, Rice explains the relationship between power, pedaling resistance, and cadence and, in particular, how to determine "how much power is needed" at a "given cadence" and "resistance setting." Sargeant-240 ¶¶260-261. Rice thus discloses this limitation.

Pet. 32–33.

Petitioner also contends that, "[a]lternatively, Rice discloses a 'speed sensor' used to measure the rider's output—i.e., the simulated travel (or ground) speed of the exercise bike. Rice [0140], [0345], [0204]. In Rice, speed is a mathematical function of the user's power, and therefore would render this limitation obvious. [Sargeant–240 Decl.] ¶¶262." *Id*.

Patent Owner has not responded to Petitioner's challenge as to this limitation with any particularity at this stage of the proceeding.

Based on the evidence Petitioner has presented, Petitioner sufficiently shows on this record that Rice discloses a computer "configured to calculate power exerted by the rider based on the pedaling resistance and the rider's cadence" as claimed.

[1.6]/[14.8] "a display …"

[1.6.1]/[14.8.1] "a display that is coupled to the computer,"

Petitioner states that "Rice explicitly states that '[t]he controller may further include a ***display*** and speakers which are ***mounted onto the handlebar assembly***' and which can display signals "from either ***microprocessor***.' Rice [0094]; Sargeant-240 ¶¶220-222." Pet. 35. In support thereof Petitioner cites, *inter alia*, Fig. 1 of Rice (Ex. 1008), which illustrates a box with the words "Display Screen" inside it as part of the controller. *Id*. Fig. 1 of Rice is reproduced above in the analysis of limitation [1.5.1]/[14.6.1].

This is not being disputed. *See* generally Prelim. Resp. 46–49.

Rather, Patent Owner argues that Rice's display is not "coupled" to the computer for the same reasons Patent Owner argued that Rice's computer is not "coupled" to the stationary bike. *Id.*, cf. the discussion of Patent Owner's arguments regarding Rice and limitation [1.5.1]/[14.6.1]. For the reasons discussed with respect to limitation [1.5.1]/[14.6.1], the evidence on this record insufficiently supports construing "coupled" to mean "integrated" rather than, more broadly, "joined" as Petitioner contends. Thus, Patent Owner's argument does not undermine Petitioner's contention.

As shown in Fig. 1 of Rice, the display and computer are "joined." Pet. 35. Accordingly, Petitioner sufficiently shows on this record that Rice discloses "a display that is coupled to the computer" as broadly claimed.

> *[1.6.2]/[14.8.2] "that displays an exercise routine [selected by the rider] from the collection of exercise routines so that the rider is provided with instructions for the rider to manually adjust pedaling resistance, and [instructions for the rider] to vary cadence [and riding positions including sitting and standing positions]*
>
> Petitioner contends, inter alia, that
>
> [Rice's] display can, for example, display "readouts for ***target*** and actual times, speeds, ***rpms***, heart rates, ***seat statuses, resistances***" textually and/or graphically," *Id.*, or [] "a ***training map*** in the form of a histogram ***or other graphical representation of the users exercise program***." *Id.* [0094]. Therefore, Rice "displays an exercise routine […] from the collection of exercise routines." Sargeant-240 ¶¶223-224.

Pet. 36.

> Additionally, Rice discloses "instructions for the rider to ***manually adjust*** pedaling resistance." Rice teaches using the exercise routines to "***instruct the user as to the resistance setting*** to select" and to "warn[] the user, ***via the display and/or audio signal, of an increase in resistance***." Sargeant-240 ¶¶226. Rice [0171]. Rice additionally discloses prompting the user to ***manually*** increase the resistance. Sargeant-240 ¶¶226-227.

Id. at 37.

Patent Owner has not responded to Petitioner's challenge as to this limitation with any particularity at this stage of the proceeding. Rather, Patent Owner argues this limitation in combination with limitation [1.6.3]. Prelim. Resp. 47–48. We address Patent Owner's argument below with respect to limitation [1.6.3].

Based on the evidence Petitioner has presented, Petitioner sufficiently shows on this record that Rice discloses "a display" that displays information as claimed.

> *[1.6.3] thereby simulating an instructor-led exercise class, and"*

Petitioner contends that Rice "simulate[s] an instructor-led exercise class." Pet. 38, relying *inter alia* on Ex. 1008 ¶ 321 ("[o]n screen suggestions may be made in a training mode to instruct the user") and ¶ 171 ("instruct the user as to the resistance setting to select via live instructions"); citing Sargeant–240 Decl. ¶¶ 228–229.

Patent Owner argues that the "'display' in Rice cannot display 'an exercise routine from the collection of exercise routines … thereby simulating an instructor-led exercise class." Prelim. Resp. 48. According to Patent Owner, "[s]imulation of an instructor-led exercise class requires more computing power than the microprocessor-containing controller of Rice is capable of." *Id.*

Patent Owner's argument does not undermine Petitioner's position because there is insufficient evidence on this record to support the need for more computing power when "simulating."

Petitioner has sufficiently shown that Rice's display provides on–screen suggestions and instructions. *See* discussion regarding limitation [1.6.2]. Additionally, the Sargeant Declaration explains that "Rice's teaching of a computerized system that provides a 'structured training program' that 'warns' a rider of upcoming increases in resistance, makes training 'suggestions' and provides 'encouragement' reinforces to a POSA

that Rice teaches 'simulating and instructor-led class.'" Sargeant–240 Decl. ¶ 229; Pet. 38.

In our view, Petitioner sufficiently shows on this record that Rice discloses "simulating an instructor-led exercise class" as claimed.

> *[1.6.4]/[14.8.3] "and that displays power exerted by the rider;"*

According to Petitioner,

> Rice explains that the "torque reader" provides "enhanced calorie consumption and ***power output readings***." Rice [0179]. A POSA would have understood that a "power output ***reading***" is a display of power exerted by the rider. Sargeant-240 ¶¶234; *see* also Rice [0094], [0178], [0137].

Pet. 40.

Patent Owner has not responded to Petitioner's challenge as to this limitation with any particularity at this stage of the proceeding.

In our view, the evidence in this record put forward by Petitioner sufficiently supports Petitioner's position that Rice discloses a display "that displays power exerted by the rider" as claimed.

> *[1.7] "an input device that is coupled to the computer and that enables the rider to input data into the computer."*

According to Petitioner, "Rice discloses a variety of input devices coupled to the computer/games console and that enable the rider to input data. Rice [0354]-[0403]." Pet. 40, citing Sargeant–240 Decl. ¶¶ 237–239.

Patent Owner has not responded to Petitioner's challenge as to this limitation with any particularity at this stage of the proceeding.

In our view, the evidence in this record put forward by Petitioner sufficiently supports Petitioner's position that Rice discloses "an input

device that is coupled to the computer and that enables the rider to input data into the computer" as claimed.

b. Motivation to Combine Rice and Warner

In order to demonstrate obviousness, a petitioner must demonstrate that a skilled artisan would have had a reason to combine the teachings of the prior art in the manner claimed in the patent and would have had a reasonable expectation of success in doing so. *KSR*, 550 U.S. at 406 (2007). "To facilitate review, this analysis should be made explicit. *See In re Kahn*, 441 F.3d 977, 988 (C.A.Fed. 2006) ("[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness")." *Id*. at 418.

Petitioner contends, *inter alia*, that "a POSA would have been explicitly motivated to incorporate the fixed gear mechanism of Warner into the exercise bicycle of Rice for a number of reasons." Pet. 10. Petitioner cites Warner as disclosing that "direct-drive mechanisms are advantageous because they provide 'pedal-through' assist and they 'provide[] a smooth, non-jerky pedaling rhythm.' [Ex. 1009] 1:20-31. A POSA would have been motivated to utilize the drivetrain of Warner to take advantage of these benefits. Sargeant-240 ¶176." *Id*. at 11.

Patent Owner argues that there would have been no motivation to combine Rice and Warner for three reasons. Prelim. Resp. 24–25. However, Patent Owner does not contest Petitioner's reason why one of ordinary skill in the art would incorporate Warner's direct drive mechanism into Rice's exercise bicycle.

Patent Owner's reasons go to the scope and content of Rice and Warner and have been addressed above as follows:

1. "Rice is directed towards 'a controller (or input/output device)' and not to a stationary exercise bike as detailed in the challenged claims." Prelim. Resp. 24. *See* limitation [1pre]/14pre].
2. "Warner is directed to a free wheel clutch mechanism, which if anything, teaches away from a direct drive." *Id*. *See* limitation [1.2.1]/14.2.1].
3. "Rice does not teach 'a computer system coupled to a stationary bike,' (Petition, p. 9), as recited in the challenged claims." *Id*. at 25. *See* limitation [1.2.1]/14.2.1].

For the reasons discussed in said sections, Patent Owner's argument does not undermine Petitioner's position as to the scope and content of Rice and Warner with respect to the argued–over limitations.

After considering Petitioner's and Patent Owner's positions, as well as the supporting evidence, we determine that Petitioner has established that a person of ordinary skill in the art would have had sufficient reason to combine the teachings of Rice and Warner in the manner proposed by Petitioner.

c. Secondary Considerations

Notwithstanding what the teachings of the prior art would have suggested to one skilled in the art, objective evidence of nonobviousness (so called "secondary considerations") may lead to a conclusion that the challenged claims would not have been obvious. *In re Piasecki*, 745 F.2d 1468, 1471–72 (Fed. Cir. 1984). Objective evidence of nonobviousness

"may often be the most probative and cogent evidence in the record" and "may often establish that an invention appearing to have been obvious in light of the prior art was not." *Transocean Offshore Deepwater Drilling, Inc. v. Maersk Drilling USA, Inc.*, 699 F.3d 1340, 1349 (Fed. Cir. 2012) (citing *Stratoflex, Inc. v. Aeroquip Corp.*, 713 F.2d 1530, 1538 (Fed. Cir. 1983)).

"In order to accord substantial weight to secondary considerations in an obviousness analysis, 'the evidence of secondary considerations must have a "nexus" to the claims, i.e., there must be "a legally and factually sufficient connection" between the evidence and the patented invention.'" *Fox Factory, Inc. v. SRAM, LLC*, 944 F.3d 1366, 1373 (Fed. Cir. 2019) (citing *Henny Penny Corp. v. Frymaster LLC*, 938 F.3d 1324, 1332 (Fed. Cir. 2019)). "The patentee bears the burden of showing that a nexus exists . . . ." *WMS Gaming Inc. v. Int'l Game Tech.*, 184 F.3d 1339, 1359 (Fed. Cir. 1999). Nexus is a legally and factually sufficient connection between the objective evidence and the claimed invention, such that the objective evidence should be considered in determining nonobviousness. *Demaco Corp. v. F. Von Langsdorff Licensing Ltd.*, 851 F.2d 1387, 1392 (Fed. Cir. 1988). A nexus is presumed when "the patentee shows that the asserted objective evidence is tied to a specific product and that product 'embodies the claimed features, and is coextensive with them.'" *Fox Factory*, 944 F.3d at 1373 (quoting *Polaris Indus., Inc. v. Arctic Cat, Inc.*, 882 F.3d 1056, 1072 (Fed. Cir. 2018)). "A finding that a presumption of nexus is inappropriate does not end the inquiry into secondary considerations," as "the patent owner is still afforded an opportunity to prove nexus by showing that the evidence of secondary considerations is the 'direct result of the unique

characteristics of the claimed invention.'" *Id.* at 1373–74 (citing *In re Huang*, 100 F.3d 135, 140 (Fed. Cir. 1996)).

Patent Owner argues that objective evidence regarding its Bike and Bike+ products supports the nonobviousness of the challenged claims. Prelim. Resp. 63–67. Patent Owner puts forth evidence of copying, long-felt but unsolved need, and commercial success. *Id.*

Patent Owner bears the burden of showing that a nexus exists. *WMS Gaming*, 184 F.3d at 1359. On this record, Patent Owner does not sufficiently demonstrate that it is entitled to a presumption of nexus. To establish nexus with respect to commercial success, Patent Owner argues that "[a] significant part of this commercial success is attributable to the Bike and Bike+, which have incorporated the technology of the challenged claims." Prelim. Resp. 66. However, Patent Owner does not provide details regarding its Bike and Bike+ products, and, thus, fails to establish persuasively that its Bike and Bike+ products "embod[y] the claimed features, and is coextensive with them." *Fox Factory*, 944 F.3d at 1373 (quoting *Polaris*, 882 F.3d at 1072). Thus, on this record, Patent Owner has not shown sufficiently that it is entitled to a presumption of nexus. For the same reasons, on this record, Patent Owner has not sufficiently shown that the alleged commercial success is a "direct result of the unique characteristics of the claimed invention." *See id.* at 1373–74.

At this stage of the proceeding, and on this record, Patent Owner has not sufficiently established a nexus between the asserted objective indicia of nonobviousness and the claimed invention of the '240 patent.

d. Conclusion as to claim 1

On this record, Petitioner has demonstrated a reasonable likelihood of prevailing in demonstrating that claim 1 of the '420 patent is obvious over the combined teachings of Rice and Warner.

e. Claims 2–13, 16 and 17

Petitioner argues that dependent claims 2–13, 16 and 17 are obvious over Rice and Warner. Pet. 41–48.

Patent Owner does not provide any specific arguments as to these claims, relying on its arguments in connection with claim 1 and disclaimed claim 14, discussed in section II.F.a. above. Prelim. Resp. 49.

On this record, Petitioner has demonstrated a reasonable likelihood of prevailing in demonstrating that claims 2–13, 16 and 17 of the '420 patent are obvious over the combined teachings of Rice and Warner.

G. Ground II

Petitioner challenges claims 2, 16 and 17 as unpatentable under 35 U.S.C. § 103(a) over the combination of Rice, Warner and Sotokoshi. Pet. 50–55.

Claim 2

Claim 2 further limits the "input device" of claim 1 so that it comprises:

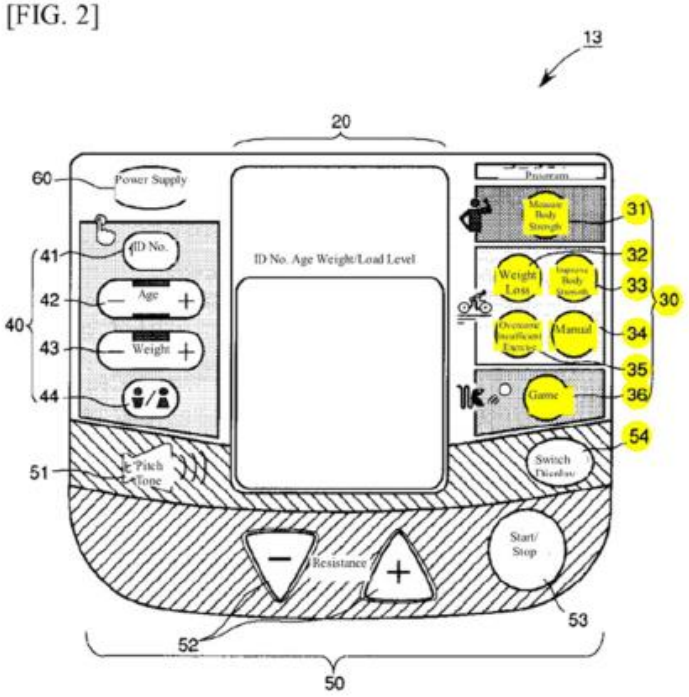
> a menu button;
>
> a menu screen that is accessible by the menu button and that includes a selection regarding power exerted;
>
> a pair of directional arrows to scroll through the data on the menu screen; and

a select button to choose a selection from the menu screen.

Ex. 1001, 8:11–19.

Petitioner relies principally on Fig. 2 of Sotokoshi (Ex. 101) as evidence that an input device as set forth in claim 2 is disclosed in the prior art. Petitioner provides an annotated version of Fig. 2 (reproduced below) showing various elements corresponding to those in the claim. Pet. 55.

[FIG. 2]



According to Petitioner,

> POSAs understood "displaying portion 20" is a "menu screen," and "Switch Display" button 54 that switches the display is a "menu button." Further, that the input switch portion 30 of Figure 2 discloses, or at least renders obvious, a menu button, which affects the displaying portion 2, a menu screen. Sargeant-240 ¶343-344. Further, "program input switch portion 30 *for selecting* an[d] inputting a training program" are "select buttons." And, the arrow-shaped "Resistance" buttons, are "a pair of direction arrows." Sargeant-240 ¶343-344.

Id.

Petitioner argues, *inter alia*, that "Sotokoshi's power calculation techniques offers a cheaper and easier way to measure and implement power calculations over the method disclosed in Rice. … a POSA would have been motivated to look to Sotokoshi to use the power calculation techniques of Sotokoshi. Sargeant-240 ¶323." *Id*. at 50. Petitioner adds that "implementing Sotokoshi's power calculation technique in the system of Rice would have been simple and inexpensive, and would not have required undue experimentation to implement. Sargeant-240 ¶324-325." *Id*.

Patent Owner does not dispute Petitioner's characterization of what Sotokoshi discloses. Patent Owner disputes there is motivation to combine the prior art references to arrive the claim 2 subject matter. Prelim Resp. 52–53.

First, Patent Owner argues that "Sotokoshi is an upright bike." *Id*. at 52. "[T]here would have been no motivation to combine the upright bike of Sotokoshi, with the free wheel bike of Warner and with the games controller of Rice." *Id*.

This argument does not undermine Petitioner's rationale for combining the cited references to reach the claimed subject matter. In contrast to Patent Owner's discussion, Petitioner explains more substantively that Rice, Warner, and Sotokoshi are analogous art since each is directed to the same field of endeavor and are "reasonably pertinent to the same problem because each attempts to create efficient and rigorous exercise for indoor riders." Pet. at 49, citing Ex. 2010, ¶ 7; Sargeant–240 Decl. ¶ 318. This adds support to Petitioner's contention that one of ordinary skill in the

art would be led to combine the prior art references to arrive the claim 2 subject matter.

Second, Patent Owner argues that "Rice does not disclose "a computer that is coupled to the stationary bike that is configured to connect with the internet or other computer network". . . ." Prelim. Resp. 53. This was addressed under Ground I with respect to limitation [1.5]/[14.5].

Third, Patent Owner argues that "Rice and Sotokoshi are directed to games." *Id*. "There would be no motivation to combine devices that provide games to arrive at the instructor-led exercise routines of the challenged claims." *Id*.

For the same reason discussed above with respect to the first argument, this argument does not undermine Petitioner's rationale for combining the cited references to reach the claimed subject matter.

After considering Petitioner's and Patent Owner's positions as well as the supporting evidence, we determine that Petitioner has established that a person of ordinary skill in the art would have had sufficient reason to combine the teachings of Rice, Warner and Sotokoshi in the manner proposed by Petitioner.

On this record, Petitioner has demonstrated a reasonable likelihood of prevailing in demonstrating that claim 2 of the '420 patent is obvious over the combined teachings of Rice, Warner, and Sotokoshi.

Claims 16 and 17

We reach a different result as to claims 16 and 17.

We do not see that Petitioner has addressed claims 16 and 17 under this ground. The discussion is focused solely on claim 14, which is disclaimed. Pet. 51–54. Even if we would find that Petitioner has

demonstrated a reasonable likelihood of prevailing in demonstrating that the subject matter of claim 14 of the '420 patent is obvious over the combined teachings of Rice, Warner, and Sotokoshi, it would not be dispositive of the likelihood of prevailing in demonstrating that claims 16 and 17 of the '420 patent is obvious over the combined teachings of Rice, Warner, and Sotokoshi.

On this record, Petitioner has not demonstrated a reasonable likelihood of prevailing in demonstrating that claims 16 and 17 of the '420 patent are obvious over the combined teachings of Rice, Warner and Sotokoshi.

H. Ground III

Petitioner challenges claims 1–13, 16 and 17 as unpatentable under 35 U.S.C. § 103(a) over the combination of Baudhuin–429 and Sotokoshi. Pet. 56–72.

a. Priority Dispute

Petitioner contends that Baudhuin–429 qualifies as prior art because "Baudhuin-429 was published on September 10, 2009, more than one year before the actual filing date of the '240 patent, January 7, 2015." Pet. 56; Ex. 1012, codes (43). Patent Owner disagrees. Prelim. Resp. 54–63.

The '240 patent issued from U.S. Patent Application Serial No. 14/591,849 ("the '849 application"), filed on January 7, 2015 as a

> Continuation of application No. 13/960,795, filed on Aug. 6, 2013, now Pat. No. 8,944.968, which is a continuation of application No. 13/136,998, filed on Aug. 16, 2011, now Pat. No. 8,506,457, which is a continuation of application No. 11/050,460, filed on Feb. 2, 2005, now Pat. No. 8,021,277.

Ex. 1001, codes (21), (22), (63).

Petitioner contends that the earliest application in the chain, U.S. Patent Application Serial No. 11/050,460 ("'460 application"), filed February 2, 2005, does not provide written description support for the '240 patent claims. Pet. 47. If the contention is correct, the '240 patent would not be entitled to the benefit of the earlier filing date of the '460 application and Baudhuin–429 would qualify as prior art.

"It is elementary patent law that a patent application is entitled to the benefit of the filing date of an earlier filed application only if the disclosure of the earlier application provides support for the claims of the later application, as required by 35 U.S.C. § 112." *PowerOasis, Inc. v. T-Mobile USA, Inc.*, 522 F.3d 1299, 1306 (Fed. Cir. 2008); *see also Research Corps. Techs. v. Microsoft Corp.*, 627 F.3d 859, 871–72 (Fed. Cir. 2010) (holding the later-filed application, with claims that were not limited to a "blue noise mask," was not entitled to the priority filing date of the parent application, which was "limited to a blue noise mask"); *ICU Med., Inc. v. Alaris Med. Sys.*, 558 F.3d 1368, 1377–78 (Fed. Cir. 2009) (holding that "spikeless" claims "added years later during prosecution" were not supported by the specification which "describe[d] only medical valves with spikes"); *Tronzo v. Biomet, Inc.*, 156 F.3d 1154, 1158–60 (Fed. Cir. 1998) (holding the generic shaped cup claims of the later-filed child application were not entitled to the filing date of the parent application that "disclosed only a trapezoidal cup and nothing more"). "To satisfy the written description requirement the disclosure of the prior application must convey with reasonable clarity to those skilled in the art that, as of the filing date sought, [the inventor] was in possession of the invention." *PowerOasis*, 522 F.3d at

1306 (alteration in original, emphasis omitted). The sufficiency of written description support is based on "an objective inquiry into the four corners of the specification from the perspective of a person of ordinary skill in the art." *Ariad Pharm., Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1351 (Fed. Cir. 2010) (en banc).

Petitioner has the burden to show that Baudhuin–429 qualifies as prior art. "In an *inter partes* review, the burden of persuasion is on the petitioner to prove 'unpatentability by a preponderance of the evidence,' . . . and that burden never shifts to the patentee." *Dynamic Drinkware, LLC v. Nat'l Graphics, Inc.*, 800 F.3d 1375, 1378 (Fed. Cir. 2015) (quoting 35 U.S.C. § 316(e)). To satisfy that burden, Petitioner has the burden of showing that the '460 application does not provide written description support for the '240 patent claims. (Consistent with the Petition, the following discussion will cite to Ex. 1017, which is a copy of U.S. Patent No. 8,021,277 B2, that issued from the '460 application.)

Petitioner focuses on three claim limitations:

1. "a computer … that stores power exerted by the rider" / "a display … that displays power exerted by the rider (claim 1)" (Pet. 58–59);
2. "wherein the computer is configured to measure the pedaling resistance and the rider's cadence and is configured to calculate power exerted by the rider based on the pedaling resistance and the rider's cadence[]" (claim 14)" (Pet. 59–61); and,
3. "[A] computer … that is configured to connect with the internet or other computer network to access a collection of exercise routines[]" (claims 1 and 14)" (Pet. 61–62).

"a computer ... that stores power exerted by the rider" / "a display ... that displays power exerted by the rider (claim 1)"

Petitioner argues that the '460 application's disclosure of a generic "computer" and "display" does not provide adequate written description support for a computer and display that "stores" and "displays" "power exerted by the rider" as claimed. Pet. 58–59. "A generic computer cannot perform these functions without a specific algorithm. Sargeant-240 ¶61-62." Pet. 59. "There is also no description of displaying power exerted by the rider." *Id.*

Patent Owner argues that the '460 application discloses a computer in a display having a screen that inter alia "provides the rider with an instructed resistance level." Prelim. Resp. 55, citing Ex. 1017 at 6:20–21 ("Screen 106 may also include a resistance display 128 that provides the rider with an instructed resistance level."). Patent Owner explains that said disclosure was discussed in a "Response, dated January 13, 2017, in which claim 1 [of the '240 patent] was amended to add that the computer also 'stores power exerted by the rider' and to add that the display also 'displays power exerted by the rider.' [Ex. 1003] at pp. 160-62." *Id.* at 9. Patent Owner reproduces the remarks in the Response that discuss the support for the "power" amendments in the application. *Id.* at 9–11. Those remarks cite to the same disclosure, i.e., "Screen 106 may also include a resistance display 128 that provides the rider with an instructed resistance level." *Id.* at 9–11, citing Ex. 1003, 32 (¶¶ 48–49) [Ex. 1001, 6:39–56].

> After this Response, the '849 application was allowed on May 10, 2017. (Ex. 1003, p. 171.) As such, throughout prosecution of the '240 patent, the Patent Office made no rejections for lack of written description support for any of these claim elements were made

Id. at 11.

We have reviewed the record.

On balance, the evidence weighs in favor of Patent Owner's position.

Patent Owner points to disclosure describing a computer/display that "provides the rider with an instructed resistance level." Prelim. Resp. 55, citing Ex. 1017, 6:20–21. This would appear to provide adequate written description support for what is claimed.

For its part, Petitioner does not provide sufficient evidence to support the necessity to have spelled out a specific algorithm in the '460 application in order for a person of skill in the art to have been convinced that Patent Owner possessed the invention as now claimed at the time the '460 application was filed.

Petitioner relies on statements made in the Sargeant Declaration. Pet 59, citing Sargeant–240 Decl. ¶¶ 61–62. But it simply repeats what the Petition says without explaining *why* a specific algorithm would be needed for a person of ordinary skill in the art to have been convinced that Patent Owner possessed a computer that stores and displays power as claimed. *See* Sargeant–240 Decl. ¶ 61 ("A generic computer cannot store power exerted by the rider during prior workouts without specific programming or an algorithm.")

Also, "it is unnecessary to spell out every detail of the invention in the specification; only enough must be included to convince a person of skill in the art that the inventor possessed the invention … ." *LizardTech, Inc. v. Earth Resource Mapping, Inc.*, 424 F.3d 1336, 1345 (Fed. Cir. 2005). "[T]he invention is, for purposes of the 'written description' inquiry,

whatever is now claimed." *Vas–Cath*, 935 F.2d 1555, 1564 (Fed. Cir. 1991) (emphasis in original)." *PowerOasis*, 522 F.3d at 1311.

In that regard, the claim generally calls for a computer and display to "store[ ]" and "display[ ]" "power exerted by the rider." Petitioner has not sufficiently shown on this record that the '460 application's disclosure of a computer/display, let alone one that "provides the rider with an instructed resistance level" (*see* Prelim. Resp. 55, citing Ex. 1017, 6:20–21), does not provide adequate written description support for a computer and display that "stores" and "displays" "power exerted by the rider" as generally claimed.

> "*wherein the computer is configured to measure the pedaling resistance and the rider's cadence and is configured to calculate power exerted by the rider based on the pedaling resistance and the rider's cadence" (claim 14)"*

Petitioner argues that the '460 application's disclosure of a generic "computer" does not provide adequate written description support for a computer "configured to measure the pedaling resistance and the rider's cadence and is configured to calculate power exerted by the rider based on the pedaling resistance and the rider's cadence" as claimed. "A generic computer cannot perform these functions without a specific algorithm. Sargeant-240 ¶64." Pet. 59.

For the same reason regarding the previously discussed claim limitation, Petitioner does not provide sufficient evidence to support the necessity to have spelled out a specific algorithm in the '460 application in order for a person of skill in the art to have been convinced that Patent Owner possessed a configured to perform the functions as now claimed at the time the '460 application was filed. As evidence, Petitioner relies on statements in the Sargeant Declaration. Pet. 60, citing Sargeant–240 Decl.,

e.g., ¶ 64 ("A generic computer, without specific algorithms or programming, cannot measure pedaling resistance and cadence and cannot calculate the power exerted by the rider without a specific algorithm."). But Mr. Sargeant simply repeats the same point without explaining *why* a specific algorithm would be needed for a person of skill in the art to have been convinced that Patent Owner possessed a computer that is configured to perform the functions as claimed.

Petitioner also contends that "[n]othing in the 2005 specification provides support for the broad scope of the claims." Pet. 60.

> For example, the claims recite "a mechanism that provides resistance to the flywheel," but POSAs knew of many resistance mechanisms, each requiring a different method by which pedaling resistance is measured such that the related algorithms for the computer to measure the pedaling resistance also were different. Sargeant-240, ¶67. The 2005 specification does not disclose any such method, much less all of them that fall within the scope of the claim. The same applies to calculating power, the calculation depends on which metrics (such as resistance and cadence) are measured (and how they are measured). *Id.* ¶68.

Id. at 60–61.

The '460 application must convey with reasonable clarity to those skilled in the art that, as of the filing date sought, that the inventor was in possession of the invention. However, "[e]ach case must be viewed as it would be understood by a person of ordinary skill in the field of the invention." *Anascape, Ltd. v. Nintendo of America Inc.*, 601 F.3d 1333, 1339 (Fed. Cir. 2010). *See also LizardTech,* 424 F.3d at 1345:

> While the embodiment in LizardTech's specification covers only one way of creating a seamless DWT, claim 21 is not invalid simply for that reason. A claim will not be invalidated on section 112 grounds simply because the embodiments of the specification do not contain examples

> explicitly covering the full scope of the claim language. *See Union Oil Co. v. Atl. Richfield Co.*, 208 F.3d 989, 997 (Fed. Cir. 2000). That is because the patent specification is written for a person of skill in the art, and such a person comes to the patent with the knowledge of what has come before. *In re GPAC Inc.*, 57 F.3d 1573, 1579 (Fed.Cir.1995). Placed in that context, it is unnecessary to spell out every detail of the invention in the specification; only enough must be included to convince a person of skill in the art that the inventor possessed the invention and to enable such a person to make and use the invention without undue experimentation.

We have reviewed the evidence.

In support of its contention, Petitioner cites the Sargeant Declaration. Pet. 60–61, Sargeant–240 Decl. ¶¶ 67–68. But the Sargeant Declaration simply repeats what the Petition says without explaining what a person of ordinary skill *in the field of the invention would have understood at the time the '460 application was filed*.

Furthermore, as Patent Owner argues, Petitioner does not account for what the '460 application in fact discloses. Prelim. Resp. 55, 57–61. For example, the '460 application incorporates by reference U.S. Pat. Nos. 6,468,185 and 6,793,608. *Id*. at 58 (referring to Ex. 1017, 2:65–66). According to Patent Owner,

> The statement that was properly incorporated by reference into the '240 specification was:
>
> > Additionally, an ergometer may be attached to the present invention. Also, a computer controlled energy measuring and indicating device may be attached to the present invention. (Ex. 1015, p. 8; '185 patent, 4:47-50; Ex. 1016, p. 9; '608 patent, 4:4-9.)

Id. Patent Owner points out that "Petitioner has itself acknowledged that '[b]y the 1980's, stationary bikes included ergometers (power meters) to

store, display, and *calculate the power exerted by the rider*…." (Petition, p. 4.)" *Id*. at 59 (emphasis added). "Furthermore, Mr. Sargeant's declaration reiterates the foregoing, and provides even more description of the incorporated subject matter. (Ex. 1003, p. 43; Sargeant-240, ¶92)." *Id*. at 60.

Petitioner does not explain why said disclosures would not convey with reasonable clarity to those skilled in the art that, as of the filing date sought, that the inventor was in possession of a computer "configured" as claimed.

For the foregoing reasons, Petitioner has not sufficiently shown on this record that the '460 application's disclosure does not provide adequate written description support for a computer "configured to measure the pedaling resistance and the rider's cadence and is configured to calculate power exerted by the rider based on the pedaling resistance and the rider's cadence" as claimed.

> *"a computer … that is configured to connect with the internet or other computer network to access a collection of exercise routines" (claims 1 and 14)"*

Petitioner contends that disclosure in the '460 application of a computer connected to the internet to send or receive "data" does not provide adequate written description support for a computer connected to the internet to access "a collection of exercise routines." Pet. 61–62.

Petitioner agrees that the '460 application discloses a computer receiving and sending data over the internet. Pet. 61, citing Ex. 1017, 4:55–58 ("Alternatively, display 100 may include a device enabling connection of the computer with the internet or some other computer network. In this

embodiment, the computer may send and receive data over the internet.") But "[n]owhere does it mention the claim's requirement of configuring a computer to access 'a collection of exercise routines' over the internet." *Id.* at 62. In support thereof, Petitioner relies on Mr. Sargeant's Declaration. *Id.*, citing Sargeant–240 Decl. ¶ 73.

We have reviewed the record.

Petitioner insufficiently explains the distinction between a computer sending or receiving "data" over the internet as the '460 application discloses and a computer "configured" to access "a collection of exercise routines" as claimed from the perspective of a person of ordinary skill in the field of the invention at the time the '460 application was filed. The Sargeant Declaration is not helpful. It simply repeats what the Petition says without explaining what a person of ordinary skill in the field of the invention would have understood at the time the '460 application was filed. *See* Sargeant–240 Decl. ¶ 73.

Accordingly, on this record, the Petitioner has not sufficiently shown that the '460 application' disclosure of a computer connected to the internet to send or receive "data" would not convey with reasonable clarity to those skilled in the art that, as of the filing date sought, that the inventor was in possession of a computer "configured" to access "a collection of exercise routines" as claimed.

b. Conclusion

For the foregoing reasons, we determine that on this record Petitioner has not met its burden to show that Baudhuin–429 qualifies as prior art. Accordingly, on this record, Petitioner has not demonstrated a reasonable likelihood of prevailing in demonstrating that claims 1–13, 16 and 17 of the

'420 patent are obvious over the combined teachings of Baudhuin–429 and Sotokoshi.

III. CONCLUSION

We do not institute review of claims 14 and 15 because they have been disclaimed by Patent Owner. 37 C.F.R. § 42.107(e).

For the foregoing reasons, we determine that Petitioner has demonstrated a reasonable likelihood that it would prevail in showing the unpatentability of at least one of claims 1–13, 16 and 17 of the '240 patent. Accordingly, we grant the Petition and institute an inter partes review of the '240 patent.

Because a decision to institute is "a simple yes-or-no institution choice respecting a petition, embracing all challenges included in the petition," *PGS Geophysical AS v. Iancu*, 891 F.3d 1354, 1360 & n.2 (Fed. Cir. 2018) (citing *SAS Inst., Inc. v. Iancu*, 138 S. Ct. 1348, 1359–60 (2018) and corresponding USPTO Guidance, https://www.uspto.gov/patents-application-process/patent-trial-and-appeal-board/trials/guidance-impact-sas-aia-trial (Apr. 26, 2018)), and because we have determined that at least one ground set forth in the Petition satisfies the threshold for institution, trial is instituted on the proposed grounds based on Rice, Warner, Sotokoshi, and Baudhuin–429.

IV. ORDER

It is hereby:

ORDERED that, pursuant to 35 U.S.C. § 314(a), *inter partes* review of claims 1–13, 16 and 17 of the '240 patent is instituted with respect to all grounds set forth in the Petition; and

FURTHER ORDERED that, pursuant to 35 U.S.C. § 314(c) and 37 C.F.R. § 42.4(b), *inter partes* review of claims 1–13, 16 and 17 of the '240 patent shall commence on the entry date of this Order, and notice is hereby given of the institution of *inter partes* review.

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