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Paper 11
Entered: May15, 2023

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

LULULEMON ATHLETICA CANADA INC.
AND LULULEMON USA INC.,
Petitioner,

v.

NIKE, INC.,
Patent Owner.

IPR2023-00189
Patent 9,278,256 B2

Before MITCHELL G. WEATHERLY, CARL M. DEFRANCO, and STEPHEN E. BELISLE, *Administrative Patent Judges*.

BELISLE, *Administrative Patent Judge*.

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

I. INTRODUCTION

lululemon athletica canada inc. and lululemon usa inc. ("Petitioner") filed a Petition (Paper 2, "Pet.") requesting an *inter partes* review of claims 1–20 ("Challenged Claims") of U.S. Patent No. 9,278,256 B2 (Ex. 1001, "the '256 patent"). Petitioner identifies itself along with lululemon athletica inc. and Curiouser Products, Inc. as real parties in interest. Pet. 85. Nike, Inc. ("Patent Owner") identifies itself as a real party in interest (Paper 10, 2), and timely filed a Preliminary Response to the Petition (Paper 8, "Prelim. Resp.").

We have authority to determine whether to institute an *inter partes* review. 35 U.S.C. § 314(b) (2018); 37 C.F.R. § 42.4(a) (2022). We may not institute an *inter partes* review "unless . . . there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition." 35 U.S.C. § 314(a). The "reasonable likelihood" standard is "a higher standard than mere notice pleading" but "lower than the 'preponderance' standard to prevail in a final written decision." *Hulu, LLC v. Sound View Innovations, LLC*, IPR2018-01039, Paper 29 at 13 (PTAB Dec. 20, 2019) (precedential). When instituting *inter partes* review, the Board will authorize the review to proceed on all of the challenged claims and on all grounds of unpatentability asserted for each claim. 37 C.F.R. § 42.108(a).

Applying those standards, and upon consideration of the information presented in the Petition and Preliminary Response, we determine that Petitioner has demonstrated a reasonable likelihood of success in proving that at least one claim of the '256 patent is unpatentable. *See* 35 U.S.C. § 314; 37 C.F.R. § 42.4(a). Accordingly, we institute an *inter partes* review

as to all Challenged Claims of the '256 patent on all grounds raised in the Petition.

We base our factual findings and conclusions at this stage of the proceeding on the evidentiary record developed so far. This is not a final decision as to the construction of any claim term or the patentability of any claim. Any final decision shall be based on the full trial record, including any response timely filed by Patent Owner. Any arguments not raised by Patent Owner in a timely filed response may be deemed waived, even if they were presented in the Preliminary Response.

II. BACKGROUND

A. Related Matters

Petitioner indicates that Patent Owner asserted the '256 patent against Petitioner in a U.S. district court action, namely, *Nike, Inc. v. lululemon athletica inc. et al.*, Case No. 1:22-cv-00082-AJN (S.D.N.Y.) ("District Court Action"), which is presently stayed. Pet. 86.

Although not identified by the parties, we note that the District Court Action also involves the following U.S. Patents against which Petitioner filed the noted requests for *inter partes* review: 8,620,413 (IPR2023-00438); 9,259,615 (IPR2023-00349); 10,188,930 (IPR2023-00348); 10,232,220 (IPR2023-00180); and 10,923,225 (IPR2023-00424).

B. The '256 Patent

The '256 patent is titled "Interactive Athletic Equipment System," and issued March 8, 2016, from U.S. Patent Application No. 14/726,023, filed May 29, 2015. Ex. 1001, codes (10), (21), (22), (45), (54). The '256 patent claims priority through a series of continuation applications to U.S.

Provisional Patent Application No. 61/033,355, filed March 3, 2008. *Id.* at 1:7–23, codes (60), (63).

The '256 patent relates to "the collection of athletic information over a network, and displaying the collected information." Ex. 1001, 1:28–31. In particular, the '256 patent discloses "[v]arious examples of the invention may allow a user to 'challenge' one or more other users (i.e., athletes employing embodiments of the invention) to a competition regarding athletic activities" (*id.* at 21:59–62), and to "display a comparison of substantially real-time athletic performance data" (*id.* at 30:35–44). An example of an athletic information monitoring device employed according to such examples is shown in Figure 3, reproduced below.

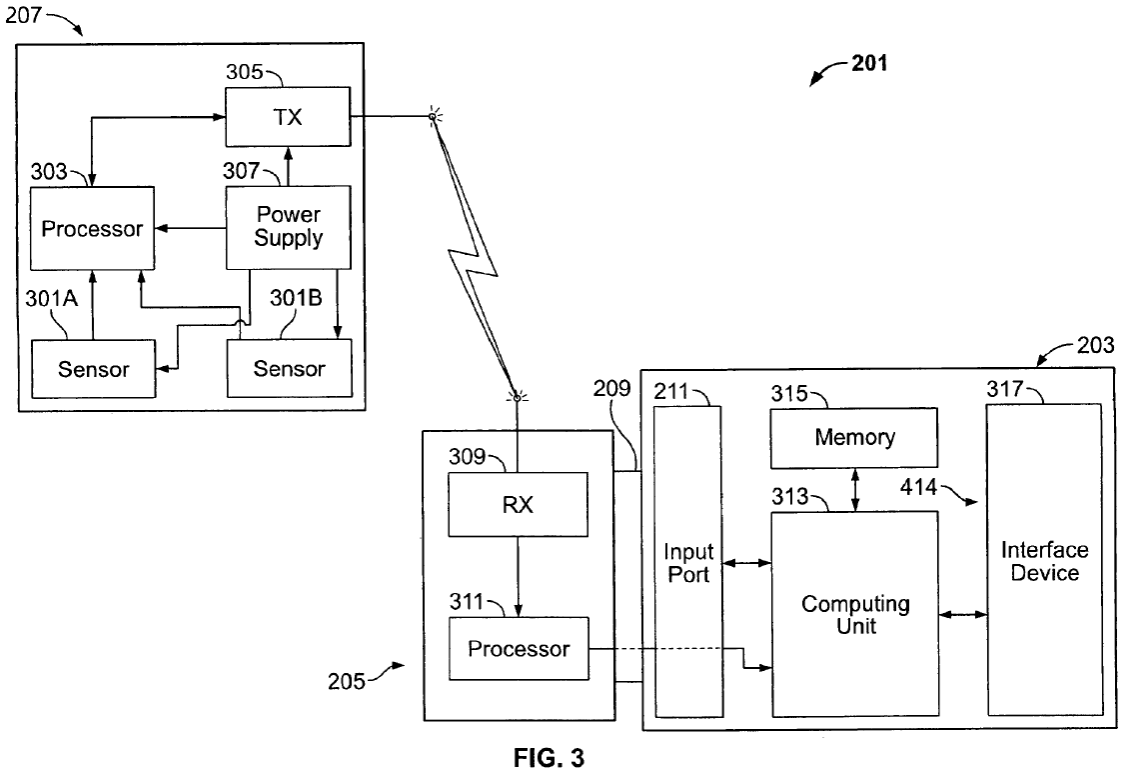

FIG. 3

Figure 3 depicts an example of an athletic information monitoring device.

Id. at 3:45–47, 7:55–8:55, Fig. 3.

As shown above in Figure 3, athletic parameter measurement device 207 includes one or more sensors 301 (e.g., 301A), such as accelerometers, "for measuring an athletic parameter associated with a person wearing or otherwise using the athletic parameter measurement device 207." Ex. 1001, 8:11–14. Athletic parameter measurement device 207 transmits processed signals to electronic interface device 205, which provides the received information to digital music player 203 or other portable electronic device. *Id.* at 8:44–46, 56–60. When digital music player 203 subsequently is connected to a computing device implementing an athletic information collection tool, computing unit 313 will download the athletic data to a display configuration tool. *Id.* at 9:58–63. According to the '256 patent, "bi-directional communication is provided between the portable device 203/athletic equipment and [an] athletic performance tracking site," and "[c]onstant updates can be provided from the athletic performance tracking site to the athletic equipment and portable device 203." *Id.* at 31:42–46.

Figure 13A, reproduced below, shows an exemplary user interface provided to create a challenge to other users. Ex. 1001, 4:5–7, Fig. 13A.

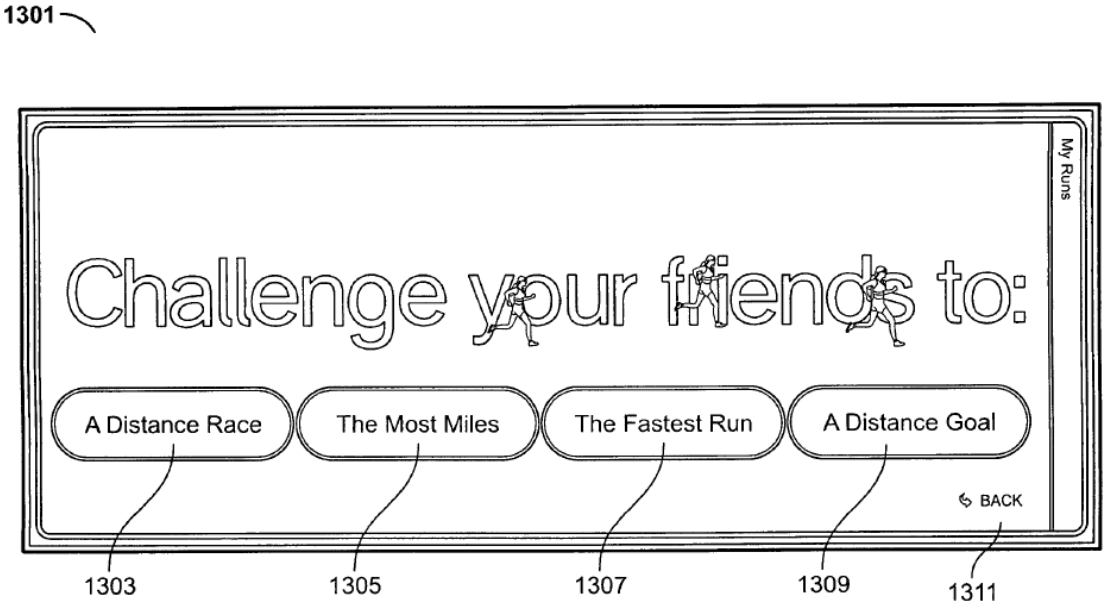

FIG. 13A

Figure 13A depicts an exemplary user interface for creating challenges to other users.

Id. at 21:57–22:8, Fig. 13A. As shown in Figure 13A, a user may issue a challenge to one or more other athletes to "Distance Race" 1303, "Most Miles" race 1305, "Fastest Run" 1307, or "Distance Goal" 1309. *Id.* at 21:65–22:1. If the user activates distance race button 1303, Figure 13B, reproduced below, shows the next sub-interface, where the user indicates "Total Distance" for the race 1315 and "Start Date" 1319. *Id.* at 22:9–16, Fig. 13B.

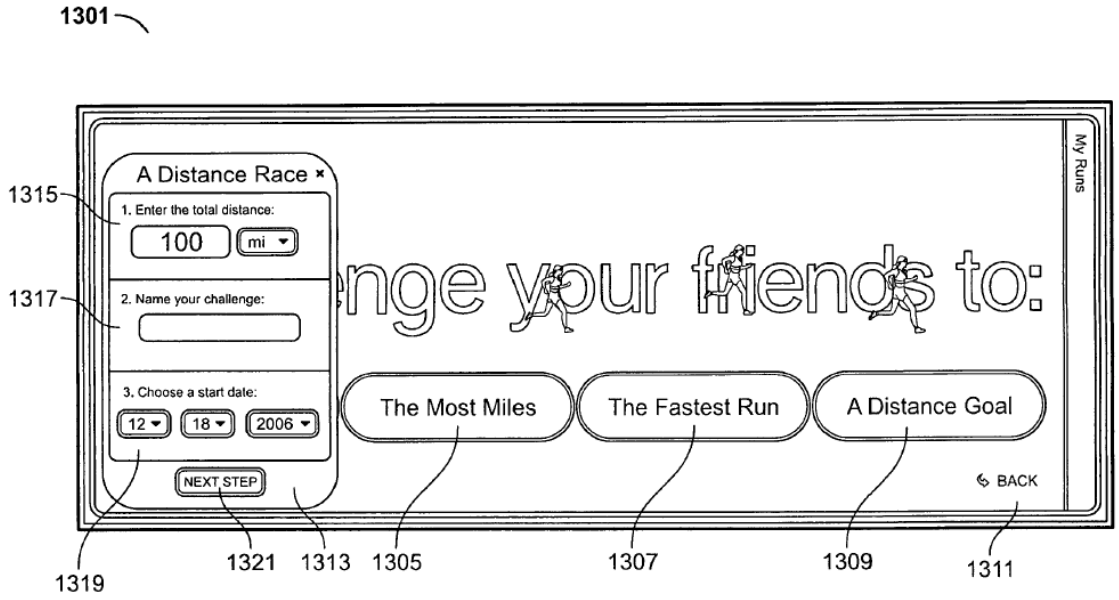

FIG. 13B

Figure 13B depicts another exemplary user interface for creating challenges to other users.

Id. at 4:5–7, Fig. 13B. After selecting "Next Step" 1321, the user enters email addresses or screen names of athletes that the user wishes to invite to participate in the challenge 1327, as shown in Figure 13C, reproduced below.

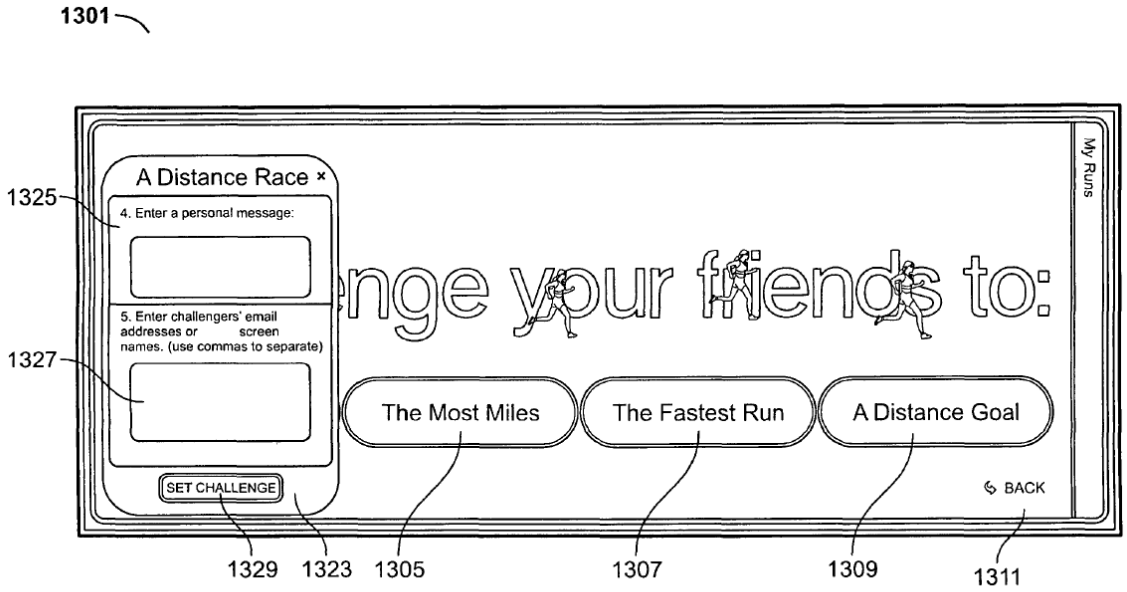

FIG. 13C

Figure 13C depicts another exemplary user interface for creating challenges to other users.

Id. at 4:5–7, Fig. 13C.

After participants agree to join the challenge, athletic data display configuration device 601 "monitors the collected athletic data for each of the participants, and aggregates the relevant data values in the collected athletic data." Ex. 1001, 23:4–7. Athletic data display configuration device 601 "may additionally provide updates regarding the status of a participant relative to the other participants." *Id.* at 23:26–38. In addition, a console, i.e., user interface 1700, may display a user's or athlete's athletic performance "substantially in real-time." *Id.* at 30:39–41; *see id.* at 33:37–40.

C. Illustrative Claim

The '256 patent includes twenty claims, all of which are challenged. Claims 1 and 11 are the challenged independent claims, and both are reproduced below with bracketing added to mirror the parties' usage thereof.

1. [pre] A system comprising:

[A] an athletic performance module configured to receive athletic activity data from a wirelessly-connected sensor worn on an appendage of a first user, wherein the first user is performing athletic activities at a first location; and

[B] a challenge module configured to:

[C] receive information specifying a challenge, wherein the challenge includes a competition between the first user, and a second user performing athletic activities at a second location, different to, and remote from, the first location;

[D] determine, from the received athletic activity data, a first amount of athletic activity performed by the first user;

[E] receive data from a second sensor indicating a second amount of athletic activity performed by the second user;

[F] determine whether the challenge has been met by the first user based on a comparison of the first amount of athletic activity performed by the first user and a second amount of athletic activity performed by the second user; and

[G] continuously generate and simultaneously communicate in real-time to the first user at the first location and the second user at the second location, an interface indicating whether the challenge has been met.

Ex. 1001, 40:42–67.

11. [pre] A method comprising:

[A] receiving a prompt inviting a first user to participate in a challenge, wherein the challenge includes a competition between the first user performing athletic activities at a first location and a second user performing athletic activities at a second location different to, and remote from, the first location;

[B] determining an amount of athletic activity performed by the first user based on sensor data received from a sensor worn on an appendage of the first user; and

[C] receiving data from a second sensor indicative of an amount of athletic activity performed by the second user;

[D] determining whether the challenge has been met by the first user based on a comparison of the amount of athletic activity performed using the first user to the amount of athletic activity performed by the second user; and

[E] continuously generating and simultaneously communicating in real-time to the first user at the first location and the second user at the second location, an interface indicating whether the challenge has been met.

Ex. 1001, 41:23–42:8.

D. Evidence of Record

Petitioner relies on the following patent and published patent application evidence.

Name	Patent Document	Exhibit
Tagliabue	US 8,162,804 B2	1004
Arrasvuori	US 2007/0239479 A1	1005
Watterson	US 6,458,060 Bl	1006
Ellis	WO 02/067449 A2	1007

Pet. 23.

Petitioner also relies upon the Declaration of Dr. Kevin Lynch (Ex. 1003).

Patent Owner relies upon the Declaration of Dr. Megan Toney-Bolger (Ex. 2001).

E. Asserted Challenges to Patentability

Petitioner challenges the patentability of claims 1–20 of the '256 patent on the following bases.

Claims Challenged	35 U.S.C. §	Reference(s)/Basis
1–20	102[1]	Tagliabue
1–4, 7, 8, 11–16	102	Arrasvuori
1–4, 7, 8, 11–16	103	Arrasvuori
13	103	Arrasvuori, Ellis
1, 7, 8, 11–13, 15, 16	103	Watterson, Arrasvuori

III. ANALYSIS

A. Applicable Law

Petitioner challenges the patentability of claims 1–20 of the '256 patent on grounds that the claims would have been anticipated under 35 U.S.C. § 102 or obvious under 35 U.S.C. § 103 in light of various references, namely Tagliabue, Arrasvuori, Watterson, and Ellis. "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 Inc. v. Avid Tech., Inc.*, 815 F.3d 1356, 1363 (Fed. Cir. 2016) (citing

[1] The Leahy-Smith America Invents Act ("AIA"), Pub. L. No. 112-29, 125 Stat. 284, 287–88 (2011), amended 35 U.S.C. §§ 102 and 103. Because the '256 patent was effectively filed before March 16, 2013, the effective date of the relevant amendment, the pre-AIA version of §§ 102 and 103 apply.

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")) (emphasis added). This burden never shifts to Patent Owner. *See Dynamic Drinkware, LLC v. Nat'l Graphics, Inc.*, 800 F.3d 1375, 1378 (Fed. Cir. 2015) (citing *Tech. Licensing Corp. v. Videotek, Inc.*, 545 F.3d 1316, 1326–27 (Fed. Cir. 2008)) (discussing the burden of proof in *inter partes* review).

To serve as an anticipatory reference under 35 U.S.C. § 102, "the reference must disclose each and every element of the claimed invention, whether it does so explicitly or inherently." *In re Gleave*, 560 F.3d 1331, 1334 (Fed. Cir. 2009). "The identical invention must be shown in as complete detail *as is contained in the . . . claim*." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236 (Fed. Cir. 1989) (emphasis added). The elements must be arranged as required by the claim, "but this is not an '*ipsissimis verbis*' test," i.e., identity of terminology is not required. *In re Bond*, 910 F.2d 831, 832–33 (Fed. Cir. 1990) (citing *Akzo N.V. v. United States Int'l Trade Comm'n*, 808 F.2d 1471, 1479 & n.11 (Fed. Cir. 1986)).

A claim is unpatentable under 35 U.S.C. § 103 if "the differences between the subject matter sought to be patented 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 skill in the art; and (4) when of record, objective evidence of

obviousness or non-obviousness, i.e., secondary considerations. *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966). Objective indicia of non-obviousness may include the following: "commercial success, long felt but unsolved needs, failure of others, etc."[2] *Id.* The totality of the evidence submitted may show that the challenged claims would not have been obvious to one of ordinary skill in the art. *In re Piasecki*, 745 F.2d 1468, 1471–72 (Fed. Cir. 1984). When evaluating a combination of teachings, we must also "determine whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue." *KSR*, 550 U.S. at 418 (citing *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006)).

We analyze the challenges presented in the Petition in accordance with the above-stated principles.

B. Level of Ordinary Skill in the Art

Petitioner contends that a person of ordinary skill in the art, at the time of the invention of the '256 patent,

> would have had (1) a bachelor's degree in engineering, computer science, industrial design, biomechanics, or a related field, and (2) at least two years of experience researching, developing, designing, and/or testing fitness or physiological sensors, wearable devices, physiological or biomechanical devices, remotely-controlled systems or interfaces, and/or network-based applications and/or equipment, or the equivalent experience or education.

Pet. 23 (citing Ex. 1003 ¶¶ 43, 44).

[2] At this stage of the proceeding, Patent Owner has not presented objective evidence of non-obviousness.

Patent Owner does not present an alternative definition at this stage of the proceeding. *See* Prelim. Resp. 18 ("Patent Owner applies Petitioner's proposed level of skill in the art.").

In determining the level of ordinary skill in the art, various factors may be considered, including the "type of problems encountered in the art; prior art solutions to those problems; rapidity with which innovations are made; sophistication of the technology; and educational level of active workers in the field." *In re GPAC Inc.*, 57 F.3d 1573, 1579 (Fed. Cir. 1995) (citation omitted). The level of ordinary skill in the art also is reflected by the prior art of record. *See Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001).

Neither party argues, at least at this stage of the proceeding, that the outcome of this case would differ based on our adoption of any particular definition of the level of ordinary skill in the art. Considering the subject matter of the '256 patent, the background technical field, the prior art, and Petitioner's proposed and unopposed definition of the skilled artisan, we apply the level of skill set forth above, which is consistent with the testimony of Dr. Lynch (Ex. 1003 ¶¶ 43, 44).

C. Claim Construction

We construe claims "using the same claim construction standard that would be used to construe the claim in a civil action under 35 U.S.C. 282(b), including construing the claim in accordance with the ordinary and customary meaning of such claim as understood by one of ordinary skill in the art and the prosecution history pertaining to the patent." 37 C.F.R. § 42.100(b) (2020); *see also Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005) (en banc).

In this context, claim terms "are generally given their ordinary and customary meaning" as understood by a person of ordinary skill in the art in question at the time of the invention. *Phillips*, 415 F.3d at 1312–13; *accord CCS Fitness, Inc. v. Brunswick Corp.*, 288 F.3d 1359, 1366 (Fed. Cir. 2002) (There is "a 'heavy presumption' that a claim term carries its ordinary and customary meaning."). "In determining the meaning of the disputed claim limitation, we look principally to the intrinsic evidence of record, examining the claim language itself, the written description, and the prosecution history, if in evidence." *DePuy Spine, Inc. v. Medtronic Sofamor Danek, Inc.*, 469 F.3d 1005, 1014 (Fed. Cir. 2006) (citing *Phillips*, 415 F.3d at 1312–17). Extrinsic evidence is "less significant than the intrinsic record in determining 'the legally operative meaning of claim language.'" *Phillips*, 415 F.3d at 1317.

Only those claim terms that are in controversy need to be construed, and only to the extent necessary to resolve the controversy. *See Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017) (stating that "we need only construe terms 'that are in controversy, and only to the extent necessary to resolve the controversy'" (quoting *Vivid Techs., Inc. v. Am. Sci. & Eng'g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999))).

"Petitioner believes no claim construction is necessary for the purposes of this Petition" (Pet. 22), and "Patent Owner agrees," contending that "[a]ll terms and phrases in the '256 Patent have their ordinary and customary meanings, which are readily apparent, and no further construction is required" (Prelim. Resp. 18). In determining whether Petitioner has demonstrated a reasonable likelihood of establishing unpatentability of at

least one challenged claim in this case, we need not and do not construe expressly any claim terms. *See Nidec*, 868 F.3d at 1017.

Nevertheless, we order the parties as provided below (*see infra* Section V) to submit proposed constructions for the limitation "continuously generat[e] and simultaneously communicat[e] in real-time to the first user at the first location and the second user at the second location, an interface indicating whether the challenge has been met," as recited in independent claims 1 and 11 (see limitations 1[G] and 11[E]). To the extent that a party proposes that this limitation should have its ordinary and customary meaning, the party shall submit and explicitly identify such meaning. For example, the parties should discuss (a) what specifically is generated and communicated in real-time; (b) whether "indicating whether the challenge has been met" requires anything more than a mere yes/no-type indication (e.g., whether the system also must indicate a real-time *comparative* progress, ranking, or positioning amongst users); (c) if a party contends that the scope of this limitation and claim as a whole includes first and second users performing athletic tasks *at different times*, what "in real-time" in this limitation means in that context; and (d) what it means to "continuously generate" and to "simultaneously communicate" "an interface" to first and second users, particularly where such users are performing athletic tasks *at different times*.

D. Alleged Anticipation of Claims 1–4, 7, 8, and 11–16 by Arrasvuori

Petitioner contends claims 1–4, 7, 8, and 11–16 are unpatentable under 35 U.S.C. § 102 as anticipated by Arrasvuori (Ex. 1005). Pet. 1–2, 11–15, 41–65. Patent Owner opposes Petitioner's contentions. Prelim. Resp. 24–27. Based on our review of the record before us, we determine

that Petitioner has established a reasonable likelihood that it would prevail in showing that claims 1–4, 7, 8, and 11–16 are unpatentable as anticipated by Arrasvuori, as discussed below. We turn first to an overview of Arrasvuori.

1. Overview of Arrasvuori (Ex. 1005)

Arrasvuori relates to systems and methods of gaming "wherein one or more users are, in the context of a video game, presented with one or more real-world fitness tasks to be performed." Ex. 1005 ¶¶ 1, 5.

Arrasvuori summarizes its "game initiation and game play operations" in Figure 1, reproduced below. Ex. 1005 ¶ 7, Fig. 1. During gameplay, user wireless nodes and/or computers and servers conduct "monitoring and feedback operations" by exchanging user athletic activity data and feedback, as summarized in Figure 2, reproduced below. *Id.* at ¶¶ 8, 38–55, 90–96, Fig. 2.

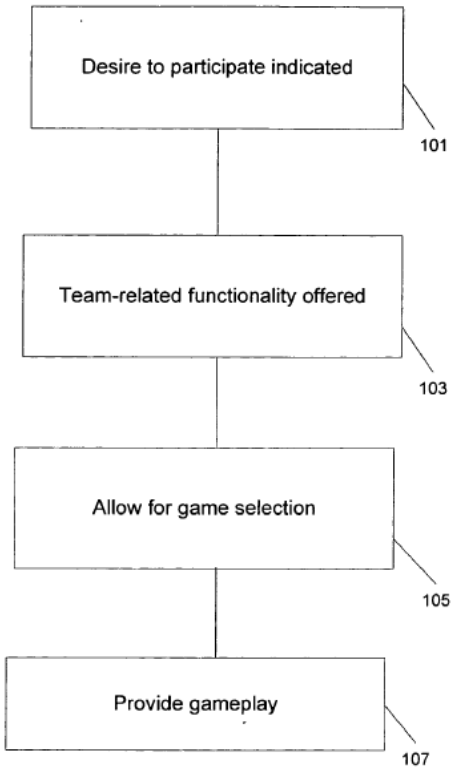

FIG. 1

Figure 1 depicts exemplary steps involved in game initiation and game play operations.

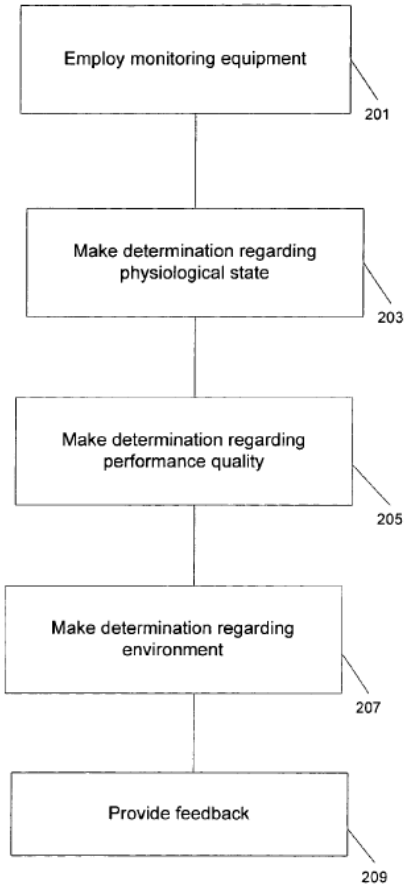

FIG. 2

Figure 2 depicts exemplary steps involved in monitoring and feedback operations.

Ex. 1005 ¶¶ 7–8, Figs. 1–2.

In step 201 of Figure 2 above, Arrasvuori employs "monitoring equipment" to collect athletic activity data from users. Ex. 1005 ¶¶ 38–40, Fig. 2. Monitoring equipment may "include one or more sensors," such as a GPS, heart rate meter, or pedometer. *Id.* at ¶ 40. Monitoring equipment is part of "wireless nodes and/or other computers of users, and/or . . . attached

to bodies of users." *Id.* at ¶ 39. Arrasvuori broadly defines "computer" to include wearable devices, such as "a computerized watch." *Id.* at ¶ 90.

In monitoring and feedback operations steps 203, 205, and/or 209, a server determines each user's athletic activity, evaluates whether any user won a real-world fitness task or challenge, and displays each user's progress. *See* Ex. 1005 ¶¶ 42–48. The server may determine, for example, "whether or not the user had reached a target heart rate" (*id.* at ¶ 42), and "the speed with which the fitness task was completed" (*id.* at ¶ 46). Arrasvuori's system and method provides "real-time feedback" to users (*id.* at ¶ 49), and may does so in the form of "leaderboards" and other graphics (*id.* at ¶¶ 48–53). Arrasvuori discloses that, "with completion of and/or *during performance of a real-world fitness task*, display might be provided wherein graphical indicators corresponding to users that *are performing* and/or that have performed the real-world fitness task are *positioned relative to one another*, a goal corresponding to the task, and/or a route corresponding to the task." *Id.* at ¶ 52 (emphases added). Arrasvuori discloses an example of displaying such real-world user progress during a challenge:

> [I]n the case where a stage of a game requires that users reach a game-world landmark by performing a real-world fitness task of running and/or jogging, display might provide a graphical representation for each user performing the task and show the graphical representations as progressing along a game-world route terminating in the game-world landmark. A user viewing such display might, for instance, be able to determine how close each participating user was to the goal and/or how well each such user was competing relative to other such users.

Id. at ¶ 53 (emphases added).

We further discuss below the disclosure of Arrasvuori in connection with the parties' arguments.

2. Analysis

a. Independent Claim 1

Petitioner provides an element-by-element analysis of independent claim 1 in relation to Arrasvuori. Pet. 41–65. Petitioner's analysis relies on testimony from its declarant, Dr. Lynch. Ex. 1003 ¶¶ 47–82. Patent Owner opposes. Prelim. Resp. 24–27. As discussed below, Petitioner contends each limitation in claim 1 is disclosed by Arrasvuori.

(1) [1[pre]] A system comprising:

Petitioner contends Arrasvuori meets the preamble by disclosing the system discussed in connection with limitations 1[A] through 1[G], discussed below. Pet. 41. Patent Owner does not contend otherwise at this stage of the proceeding. Nonetheless, the burden remains on Petitioner to demonstrate unpatentability. *See Dynamic Drinkware*, 800 F.3d at 1378. For the reasons stated in the Petition at pages 41–65, and as discussed below, Petitioner sufficiently establishes that Arrasvuori discloses this limitation.[3]

(2) [1[A]] an athletic performance module configured to receive athletic activity data from a wirelessly-connected sensor worn on an appendage of a first user, wherein the first user is performing athletic activities at a first location; and

Petitioner contends Arrasvuori discloses limitation 1[A] by describing, *inter alia*, "user 'wireless nodes and/or computers' corresponding to the 'wirelessly-connected sensor' and a computer server with software modules corresponding to the 'athletic performance module,'"

[3] Neither party at this stage of the proceeding argues that the preamble of claim 1 is limiting. We likewise express no view herein.

and "transmitting data from the wireless nodes and/or computers to the computer server during 'monitoring and feedback operations.'" Pet. 41–42 (citing Ex. 1005 ¶¶ 38–55, 90–99, Fig. 2).

As for the claimed "wirelessly-connected sensor worn on an appendage of a first user," Petitioner contends that in the first step of "monitoring and feedback operations," Arrasvuori "'[e]mploy[s] monitoring equipment' to collect athletic activity data about 'real-world fitness tasks,'" and such "monitoring equipment includes 'one or more sensors,' such as [Global Positioning System (GPS) hardware, Radio Frequency Identification (RFID) tag interface hardware, heart rate meter hardware, electrocardiogram hardware, pedometer hardware, or skin conductance measuring hardware]." Pet. 42 (citing Ex. 1005 ¶¶ 38, 40, Fig. 2). Petitioner contends Arrasvuori discloses that its "monitoring equipment is 'integrated into . . . wireless nodes and/or other computers of users, and/or . . . attached to bodies of users," and includes "a computerized watch," which typically is worn on a user's wrist (i.e., a user's appendage). Pet. 42–43 (citing, *inter alia*, Ex. 1005 ¶¶ 39, 90).

As for the claimed "athletic performance module configured to receive athletic activity data," Petitioner contends Arrasvuori "discloses a computer server containing executable software modules configured to receive athletic activity data from the wireless nodes and/or computers hosting the monitoring equipment." Pet. 43 (citing Ex. 1005 ¶¶ 38, 55); *see* Pet. 43–45 (citing, *inter alia*, Ex. 1005 ¶ 38, 49, 91–92, Fig. 4) (arguing Arrasvuori's "server is configured to wirelessly communicate with wireless nodes and/or other computers via I/O interfaces 4057 and 4058 during monitoring").

As for the claimed "first user . . . performing athletic activities at a first location," Petitioner contends Arrasvuori's server and software modules "necessarily receive athletic activity data from a user at a 'first location.'" Pet. 45.

For the reasons stated in the Petition at pages 41–45, Petitioner sufficiently establishes that Arrasvuori discloses this limitation. Patent Owner does not contend otherwise at this stage of the proceeding.

(3) [1[B]] a challenge module configured to:

Petitioner contends Arrasvuori's server and software modules correspond to the claimed "challenge module." Pet. 46. In particular, Petitioner contends Arrasvuori discloses limitation 1[B] by describing, *inter alia*, that its "server and software modules can receive a challenge from a user, determine the user's athletic activity, receive athletic activity data from a second user, evaluate which user won a competition, and provide real-time feedback to multiple users." Pet. 46. Petitioner contends that this limitation is met because Arrasvuori describes each of limitations 1[C] through 1[G], which are the actions that the claimed "challenged module" is configured to perform. Pet. 46. We discuss limitations 1[C] through 1[G] in turn below.

> *(4) [1[C]] receive information specifying a challenge, wherein the challenge includes a competition between the first user, and a second user performing athletic activities at a second location, different to, and remote from, the first location;*

Petitioner contends Arrasvuori discloses limitation 1[C] by describing, *inter alia*, that its "server receives information specifying a multiplayer challenge three times during 'Game Initiation and Game Play Operations.'"

Pet. 47 (citing Ex. 1005 ¶ 17); *see* Pet. 47–49 (citing, *inter alia*, Ex. 1005 ¶¶ 20, 25, 26, 29, 31, 36, 37, 51, 57, Fig. 1).

As for the limitation "a second user performing athletic activities at a second location, different to, and remote from, the first location," Arrasvuori describes that users can be "dispersed throughout the world." Ex. 1005 ¶ 19 (citing at Pet. 50). Petitioner alternatively contends that "Arrasvuori inherently discloses that competing users can be located remotely from each other," because "Arrasvuori's 'game initiation and game play operations might involve communication among one or more wireless nodes and/or other computers of users, and/or other wireless nodes and/or other computers (e.g., one or more servers),'" and "[t]hose computers can communicate via 'the Internet.'" Pet. 50 (citing Ex. 1005 ¶ 37).

For the reasons stated in the Petition at pages 46–50, Petitioner sufficiently establishes that Arrasvuori discloses this limitation. Patent Owner does not contend otherwise at this stage of the proceeding.

> *(5) [1[D]] determine, from the received athletic activity data, a first amount of athletic activity performed by the first user;*

Petitioner contends Arrasvuori discloses limitation 1[D] by describing "twice" that its "server determines amounts of athletic activity from the received data." Pet. 50–51 (citing Ex. 1005 ¶¶ 38–47, 55, Fig. 2).

For the reasons stated in the Petition at pages 50–51, Petitioner sufficiently establishes that Arrasvuori discloses this limitation. Patent Owner does not contend otherwise at this stage of the proceeding.

> *(6) [1[E]] receive data from a second sensor indicating a second amount of athletic activity performed by the second user;*

Petitioner contends Arrasvuori discloses limitation 1[E] by describing, *inter alia*, "a server that receives [athletic activity] data from sensors that monitor athletic activity by [multiple] user[s]":

> Monitoring might, for instance, relate to ***users*** performing real-world fitness tasks . . . . Monitoring might, for example, be performed by one ***or more*** wireless nodes and/or other computers (e.g., servers, and/or wireless nodes and/or other computers of users).

Pet. 51–52 (citing Ex. 1005 ¶38 (emphases in original)).

For the reasons stated in the Petition at pages 51–52, Petitioner sufficiently establishes that Arrasvuori discloses this limitation. Patent Owner does not contend otherwise at this stage of the proceeding.

> *(7) [1[F]] determine whether the challenge has been met by the first user based on a comparison of the first amount of athletic activity performed by the first user and a second amount of athletic activity performed by the second user; and*

Petitioner contends Arrasvuori discloses limitation 1[F] by describing, *inter alia*, a server that determines whether a challenge has been met "in one or more of steps 203, 205 and 209 of monitoring and feedback operations" as shown, for example, in Figure 2, reproduced above in Section III.D.1. Pet. 52 (citing Fig. 2 (showing steps of "[203] Make determination regarding physiological state," "[205] Make determination regarding performance quality," "[209] Provide feedback")).

Petitioner contends, in steps 203 and 205, "the server can determine each user's 'physiological state[,]'" and "'how well the fitness task was

performed." Pet. 53 (citing Ex. 1005 ¶¶ 41–43, 55). Petitioner contends, in step 209, "the server can translate its determinations into feedback in the form of leaderboards and other graphical representations of relative user performance" (Pet. 53 (citing Ex. 1005 ¶¶ 48–53)), which representations include depictions of "users that are performing and/or that have performed the real-world fitness task . . . positioned relative to one another [and/or] a goal corresponding to the task" (Ex. 1005 ¶ 52). Petitioner argues that "[b]oth forms of feedback indicate whether a challenge has been met based on a comparison of users' athletic activity and require a determination of the same." Pet. 53.

For the reasons stated in the Petition at pages 52–55, Petitioner sufficiently establishes that Arrasvuori discloses this limitation. Patent Owner does not contend otherwise at this stage of the proceeding.

> *(8) [1[G]] continuously generate and simultaneously communicate in real-time to the first user at the first location and the second user at the second location, an interface indicating whether the challenge has been met.*

Petitioner contends Arrasvuori discloses limitation 1[G] by describing, *inter alia*, that its "server 'generate[s] and simultaneously communicate[s]' whether a challenge has been met to users during step 209 of monitoring and feedback operations." Pet. 55–56 (citing Ex. 1005 ¶ 49, Fig. 2 (showing step 209 of "Provide feedback").

As noted by Petitioner, Arrasvuori discloses presenting "leaderboards" to users via interfaces that show the relative, "real-time" status of users as they progress in a given challenge:

> [0049] . . . Feedback operations might, for example, be performed by one or more [servers]. . . . [I]n various embodiments, *real-time feedback* might be provided.
>
> [0050] . . . One or [more] wireless nodes and/or other computers (e.g., one or more servers) might make available *leaderboards* showing[] user and/or team performances. Such a leaderboard might, for example, *show the performance of users with respect to other users* . . . . A wireless node and/or other computer making available leaderboards might, for instance, *make such leaderboards available for direct viewing by users* (e.g., *via a GUI* and/or other interface provided by the node and/or other computer) . . . . For example, a server *might make leaderboards available for receipt* by user wireless nodes and/or other computers, which in turn could provide leaderboard *display* to their users via GUIs and/or other interfaces.
>
> * * *
>
> [0052] . . . *[D]uring performance* of a real-world fitness task, display might be provided wherein graphical indicators corresponding to *users that are performing* . . . the real-world fitness task are *positioned relative to one another*, a goal corresponding to the task, and/or a route corresponding to the task. Such display might . . . *be presented via one or more GUIs* and/or other interfaces provided by wireless nodes and/or other computers of users. Such display might, in various embodiments, take into account quality of real-world fitness task performance.
>
> [0053] . . . [D]isplay might provide a graphical representation for each user performing the task and show the graphical representations *as progressing along* a game-world route terminating in the game-world landmark. A user viewing such display might, for instance, be able *to determine* how close each participating user was to the goal and/or *how well each such user was competing relative to other such users*.

Ex. 1005 ¶¶ 49–50, 52–53 (emphases added).

Petitioner argues "[t]he phrase 'make leaderboards available for receipt' and the verb 'display' confirm that [Arrasvuori's] server generates the leaderboards." Pet. 56 (citing Ex. 1005 ¶ 50). Petitioner argues "Arrasvuori's use of 'presented' coupled with its disclosure that '[f]eedback operations might . . . be performed by . . . servers' again confirms that the server generates the graphical indicators," and "[b]oth leaderboards and a graphical interface showing relative positions of competitors indicate whether a challenge was met." Pet. 56–57 (citing Ex. 1005 ¶ 49, 51–53, 55; Ex. 1003 ¶ 72). Petitioner argues the above description in Arrasvuori discloses that its server also "simultaneously communicates the interface to multiple users at different locations in 'real-time.'" Pet. 57 (citing Ex. 1005 ¶¶ 49–50). Petitioner argues the skilled artisan "would have understood from these disclosures that the server communicates the interfaces to users as it generates them." Pet. 58 (citing Ex. 1003 ¶ 72).

Patent Owner argues "Petitioner fails to show that Arrasvuori discloses, teaches, or suggests this limitation [1[G]], for either anticipation or obviousness, specifically that Arrasvuori has any disclosure of *continuously* generating an interface indicating whether the challenge has been met." Prelim. Resp. 24–25; *see id.* at 25 ("Tellingly, Petitioner omits the term 'continuously' from its discussion of this limitation altogether"; "Petitioner's arguments focus on whether the server generates the interface without ever addressing whether it does so continuously"; "Petitioner and its expert's failure to address the "continuously generat[ing]" element of Claims 1[G] and 11[E] is fatal to these Grounds."). Patent Owner acknowledges that Arrasvuori discloses, and Petitioner relies upon, "leaderboards," but argues "Arrasvuori does not, however, disclose that such

leaderboards are *continuously* generated throughout the real-world fitness task." *Id.* at 26–27. Patent Owner argues "Arrasvuori's interface would not be continuously generated *if the leaderboard is presented to users only at the completion of the real-world fitness task*," and conjures an example of a leaderboard being presented to users only at designated checkpoints, rather than "continuously." We find Patent Owner's arguments unavailing.

First, we preliminarily find that Patent Owner relies upon an unreasonably narrow (and unrealistic) interpretation of a "leaderboard," in arguing that the skilled artisan would not have interpreted a "leaderboard" as disclosed in Arrasvuori to be "continuously generate[d] and simultaneously communicate[d] in real-time." Indeed, Patent Owner concedes, in the context of the '256 patent, that the skilled artisan "would have understood that *updates* from [an] athletic performance tracking site, such as the messages indicating the user's relative status in a challenge, *may be continuously generated and communicated to the user*." Prelim. Resp. 7. Based on the record before us, it does not appear credible that the skilled artisan would have understood Arrasvuori to disclose "leaderboards" as being displayed (or generated) only periodically, rather than continuously—doing so only periodically would seemingly defeat the very purpose of using a "leaderboard" such as used at a golf tournament, NASCAR race, or other sporting/athletic event, where current scores are presented as the event progresses, not merely every so often.

Second, we preliminarily find that Patent Owner ignores (or at least unreasonably dismisses) Arrasvuori's disclosure *as a whole* of presenting "leaderboards" to users via interfaces that show the relative, "real-time" status of users as they progress in a given challenge. Indeed, Arrasvuori

explicitly discloses generating and providing "real-time feedback"; generating and providing "leaderboards" showing that "real-time" performance of users, and doing so "with respect to other users" "during performance of a real-world fitness task"; and generating and providing "leaderboards" that depict graphical indicators corresponding to users that "are performing" the real-world fitness task "positioned relative to one another," and displaying those indicators "as progressing along a game-world route terminating in the game-world landmark," which would allow users to determine "how well each such user was competing relative to other such users." Ex. 1005 ¶¶ 49–50, 52–53. Taking Arrasvuori's disclosure as a whole, it is not clear to us on the present record why the skilled artisan would not have understood Arrasvuori to disclose, at least via its use of leaderboards, continuously generating and simultaneously communicating in real-time an interface indicating whether a challenge has been met. Even though Patent Owner imagines scenarios where an alleged "leaderboard" might be presented to users only at designated times or checkpoints, we disagree on the record before us that this precludes the skilled artisan from understanding *Arrasvuori* to disclose and use "leaderboards" that satisfy the subject limitation.

Finally, Patent Owner's arguments here appear to depend on a particular construction of "continuously generate and simultaneously communicate in real-time . . . an interface indicating whether the challenge has been met" that Patent Owner has not yet proffered and supported. It is for at least this reason that we herein order the parties to submit proposed constructions for the subject limitation, including discussing (a) what specifically is generated and communicated in real-time; (b) whether

"indicating whether the challenge has been met" requires anything more than a mere yes/no-type indication (e.g., whether the system also must indicate a real-time *comparative* progress, ranking, or positioning amongst users); (c) if a party contends that the scope of this limitation and claim as a whole includes first and second users performing athletic tasks *at different times*, what "in real-time" in this limitation means in that context; and (d) what it means to "continuously generate" and to "simultaneously communicate" "*an interface*" to first and second users, particularly where such users are performing athletic tasks *at different times.*

Based on the foregoing reasons, and for the reasons stated in the Petition at pages 55–58, Petitioner sufficiently establishes that Arrasvuori discloses this limitation.

b. Independent Claim 11

Petitioner contends independent claim 11 would have been unpatentable as anticipated by Arrasvuori. Pet. 61–63. Claim 11 recites limitations generally commensurate in scope with independent claim 1, except that features of "system" claim 1 are embodied in "method" claim 11, and that claim 11 includes a limitation of receiving "a prompt" inviting a first user to participate in a challenge. *Compare* Ex. 1001, 41:23–42:8, *with id.* at 40:42–67. The Petition provides a detailed assessment of claim 11, with references to the Petition's analysis of claim 1, disclosures in Arrasvuori, and the declaration testimony of Dr. Lynch. Pet. 61–63. At this stage of the proceeding, Patent Owner does not present any separate arguments that are distinct to claim 11. Rather, Patent Owner generally states the view that the alleged deficiencies in the Petition with respect to claim 1 also are applicable to claim 11. *See* Prelim. Resp. 24–27.

As discussed above, we are persuaded that the cited evidence sufficiently supports Petitioner's contention that independent claim 1 is unpatentable as anticipated by Arrasvuori. For the reasons set forth in the Petition (Pet. 61–63), we also are persuaded that the current record sufficiently supports Petitioner's challenge to independent claim 11 for purposes of institution.

c. Dependent Claims 2–4, 7, 8, and 12–16

Petitioner contends claims 2–4, 7, 8, and 12–16, which depend directly or indirectly from one of independent claims 1 and 11, are unpatentable as anticipated by Arrasvuori. Pet. 58–61, 64–65. The Petition provides a detailed assessment of these claims, with references to the Petition's analysis of claims 1 and 11, disclosures in Arrasvuori, and the declaration testimony of Dr. Lynch. *Id.* At this stage of the proceeding, Patent Owner does not present any separate arguments that are distinct to any of these claims. Rather, Patent Owner generally states the view that the alleged deficiencies in the Petition with respect to claims 1 and 11 also are applicable to claims 2–4, 7, 8, and 12–16. *See* Prelim. Resp. 24–27.
As discussed above, we are persuaded that the cited evidence sufficiently supports Petitioner's contention that independent claims 1 and 11 are unpatentable as anticipated by Arrasvuori. For the reasons set forth in the Petition (Pet. 58–61, 64–65), we also are persuaded that the current record sufficiently supports Petitioner's challenges to claims 2–4, 7, 8, and 12–16 for purposes of institution.

3. Conclusion

At this stage of the proceeding and based on the record before us, we are persuaded that Petitioner's cited evidence sufficiently supports Petitioner's contention that claims 1–4, 7, 8, and 11–16 are unpatentable as anticipated by Arrasvuori. Accordingly, we determine that Petitioner has established a reasonable likelihood that it would prevail in showing that claims 1–4, 7, 8, and 11–16 are unpatentable as anticipated by Arrasvuori.

E. Alleged Obviousness of Claims 1–4, 7, 8, and 11–16 over Arrasvuori and Claim 13 over the Combination of Arrasvuori and Ellis

Petitioner alternatively contends claims 1–4, 7, 8, and 11–16 are unpatentable under 35 U.S.C. § 103 as obvious over Arrasvuori (Ex. 1005). Pet. 1–2, 11–15, 41–65. Petitioner also alternatively contends claim 13 is unpatentable under 35 U.S.C. § 103 as obvious over the combination of Arrasvuori and Ellis (Ex. 1007). Pet. 65–67. For similar reasons as discussed above regarding anticipation by Arrasvuori of claims 1–4, 7, 8, and 11–16, *a fortiori*, we determine that Petitioner has established a reasonable likelihood that it would prevail in showing that claims 1–4, 7, 8, and 11–16 are unpatentable as obvious over Arrasvuori and that claim 13 also is unpatentable as obvious over the combination of Arrasvuori and Ellis. *See Cohesive Techs., Inc. v. Waters Corp.*, 543 F.3d 1351, 1364 (Fed. Cir. 2008) ("[I]t is commonly understood that prior art references that anticipate a claim will usually render that claim obvious.").

F. Alleged Anticipation of Claims 1–20 by Tagliabue

Petitioner contends claims 1–20 are unpatentable under 35 U.S.C. § 102 as anticipated by Tagliabue (Ex. 1004).[4] Pet. 1–2, 7–11, 25–41. Patent Owner opposes Petitioner's contentions. Prelim. Resp. 21–24. Because we determine that Petitioner demonstrates a reasonable likelihood of success in establishing the unpatentability of claims 1–4, 7, 8, and 11–16 as anticipated by Arrasvuori such that we institute this proceeding (*see supra* Section III.D), and because we must therefore institute *inter partes* review on all claims and all challenges in the Petition (*see* 37 C.F.R. § 42.108(a)), for purposes of institution, we need not and do not herein address in detail Petitioner's assertions of anticipation of claims 1–20 by Tagliabue. However, we do provide below certain guidance on this challenge to assist the parties in the upcoming trial.

As with Arrasvuori discussed above in Section III.D, the parties similarly dispute whether Tagliabue discloses limitation 1[G] of independent claim 1 and limitation 11[E] of independent claim 11, and more particularly, the features in those limitations of "continuously generat[ing] and simultaneously communicat[ing] in real-time . . . an interface indicating

[4] We note that "Patent Owner reserves the right to challenge the prior art status of Tagliabue, including whether Tagliabue is entitled to the earlier priority date of the '753 provisional application and whether the invention of the '256 Patent was reduced to practice or conceived prior to the critical date of Tagliabue, if this *inter partes* review is instituted." Prelim. Resp. 12–13 n.1. We encourage the parties to reach an agreement as to the prior art status of Tagliabue or otherwise further brief their positions on that status, and more broadly, to consider whether Tagliabue should remain in the upcoming trial in view of our guidance provided herein.

whether the challenge has been met." The entirety of Petitioner's argument concerning limitations 1[G] and 11[E] consists of four sentences:

> Tagliabue discloses notifying users whether a challenge has been met via a "special-purpose interface . . . ." (Ex. 1004, 22:45–50.) During the challenge, "the athletic data display configuration device 601 may additionally provide updates regarding the status of a participant relative to other participants." (*Id.*, 22:54–56.) It "may configure and provide a user interface showing each participant's progress toward the goal of the challenge using, e.g., bar graphs for each participant of the type previously described with regard to monitoring individual goals." (*Id.*, 22:61–65.) As explained above, the competing users can be located remotely from each other. (*Supra* § VI.A.4.)

Pet. 33.

Patent Owner responds that "Petitioner's argument is insufficient for institution because it does not explain how the cited portions of Tagliabue show Tagliabue's 'special purpose interface' is ***continuously*** generated and ***simultaneously*** communicated in ***real-time*** to the users." Prelim. Resp. 22; *see id.* at 21–24. We currently find Patent Owner's argument persuasive on the record before us.

In particular, Petitioner cites merely a few statements from Tagliabue that on their face do not appear to explicitly disclose the features of the subject limitations, and we discern no explanation as to how or why the cited statements allegedly disclose such limitations. Likewise, Petitioner does not cite to any expert testimony or other evidence showing how or why the cited statements in Tagliabue allegedly disclose such limitations. Indeed, Petitioner appears to place the onus on Patent Owner—*and the Board*—to ascertain how or why the cited statements allegedly disclose such limitations.

The burden of proof here lies with Petitioner, not Patent Owner, and we do not ourselves create and adopt unpatentability arguments on behalf of Petitioner as to whether or how Tagliabue might disclose the subject limitations. *See Wasica Fin. GmbH v. Cont'l Auto. Sys., Inc.*, 853 F.3d 1272, 1286 (Fed. Cir. 2017) ("It is of the utmost importance that petitioners in the IPR proceedings adhere to the requirement that the initial petition identify with particularity the evidence that supports the grounds for the challenge to each claim." (quoting *Intelligent Bio-Sys., Inc. v. Illumina Cambridge Ltd.*, 821 F.3d 1359, 1369 (Fed. Cir. 2016))); *In re Magnum Oil Tools Int'l, Ltd.*, 829 F.3d 1364, 1381 (Fed. Cir. 2016) ("[W]e find no support for the PTO's position that the Board is free to adopt arguments on behalf of petitioners that could have been, but were not, raised by the petitioner during an IPR."); *DeSilva v. DiLeonardi*, 181 F.3d 865, 866–67 (7th Cir. 1999) ("A brief must make all arguments accessible to the judges, rather than ask them to play archeologist with the record.").

At this stage of the proceeding and constrained by the record before us, we preliminarily find that Petitioner's foregoing challenge to claims 1–20 based on anticipation by Tagliabue is unpersuasive.

G. Alleged Obviousness of Claims 1, 7, 8, 11–13, 15, and 16 over the Combination of Watterson and Arrasvuori

Petitioner contends claims 1, 7, 8, 11–13, 15, and 16 are unpatentable under 35 U.S.C. § 103 as obvious over the combination of Watterson (Ex. 1006) and Arrasvuori (Ex. 1005). Pet. 1–2, 11–18, 68–85. Patent Owner opposes Petitioner's contentions. Prelim. Resp. 28–37. Because we determine that Petitioner demonstrates a reasonable likelihood of success in establishing the unpatentability of claims 1–4, 7, 8, and 11–16 as anticipated

by Arrasvuori such that we institute this proceeding (*see supra* Section III.D), and because we must therefore institute *inter partes* review on all claims and all challenges in the Petition (*see* 37 C.F.R. § 42.108(a)), for purposes of institution, we need not and do not herein address in detail Petitioner's assertions of obviousness of claims 1, 7, 8, 11–13, 15, and 16 by the combination of Watterson and Arrasvuori. However, we do provide below certain guidance on this challenge to assist the parties in the upcoming trial.

The parties dispute, *inter alia*, whether the combination of Watterson and Arrasvuori *as presented by Petitioner* teaches the combined features of limitations 1[A], 1[D], 1[F], and 1[G], particularly whether the combination teaches determining whether a challenge has been met based on a comparison of athletic activity (1[F]) determined from athletic activity data (1[D]) received from a wirelessly-connected sensor worn on an appendage of a user (1[A]), and continuously generating and simultaneously communicating in real-time an interface indicating whether the challenge has been met based on that determined athletic activity (1[G]).

For limitation 1[A], Petitioner contends "Watterson's '*pulse* watch' corresponds to the claimed wirelessly connected sensor" (Pet. 70 (emphasis added)), argues such watches are worn on user wrists (appendages) (Pet. 71), and relies on *heart-related data* generated by such a watch (Pet. 70, 74–75). But then for limitations 1[F] and 1[G], Petitioner contends Watterson teaches determining whether a challenge has been met based on a comparison of athletic activity derived from *distance, time, or speed data* of users generated by treadmills (or the like), not doing so based on a wirelessly connected sensor attached to a user's wrist (appendage). *See*

Pet. 78 ("During a 'live on live' personalized race, users 'view[] graphical representations of the distan[ce], time, and speed of the other competitors.' Specifically, users can view 'a racing track that shows a relative position of each competitor one with another,' i.e., whether the challenge was met."); *see id.* at 78–81. Petitioner contends the combined teachings of Watterson and Arrasvuori provide a bridge via limitation 1[D] from the *heart-related data* generated by Watterson's pulse watch to the *distance/time/speed data* relied on by Watterson to determine whether a challenge has been met. *See* Pet. 74–75 ("Watterson's software normalizes competing users' velocities by their heart rates. Communication module 254 computing apparent velocity as a function of heart rate and actual velocity is a determination of 'a first amount of athletic activity performed by the first user' based on the received heart rate data;" "Arrasvuori[] discloses normalizing virtual performance according to competitor physical fitness levels."); *see id.* at 75–78.

Patent Owner emphasizes that, "[n]otably, 'the received athletic activity data" in Claim 1[D] refers to the athletic activity data received from the wirelessly-connected sensor in Claim 1[A]," and that "'the first amount of athletic activity performed by the first user' [in limitation 1[F]] refers to the athletic activity of the first user determined using the athletic activity data received from the wirelessly-connected sensor, as previously recited in Claim 1[A] and 1[D]." Prelim. Resp. 29. Patent Owner argues "[i]n an attempt to show that Watterson teaches or suggests these limitations, Petitioner strings together two unrelated disclosures from Watterson. Petitioner's argument, however, is internally inconsistent and contrary to Watterson's disclosures." *Id.* at 30. In particular, Patent Owner argues that

"in both the race around the world and the personalized race options in Watterson, the amount of athletic activity that is compared to determine whether the challenge has been met is the *distance* that users travelled [obtained from a treadmill or the like]," not *heart-rate information* from Watterson's *pulse* watch on a user's wrist (appendage). *Id.* at 31–32.

Patent Owner further argues:

> Apparently recognizing this problem, Petitioner argues with respect to Claim 1[D] that its proposed combination changes "how Watterson's software determined user speed during a personalized race so that a user's apparent velocity equaled the multiple of the user's actual speed and heart rate divided by the constant." *See* Petition at 71, 74-75. Petitioner proposes this modification in a hindsight-based attempt to incorporate athletic activity data from Watterson's pulse watch to meet the claimed limitation. However, . . . Petitioner's theory is nowhere disclosed or suggested in Watterson, and Petitioner does not provide sufficient reasoning based on rational underpinning as to why [the skilled artisan] would have been motivated to make this modification. Ex. 2001 ¶¶60–61.
>
> Watterson teaches that the race around the world and personalized race options involve a comparison of the *actual* distance travelled by the users, which can be determined based on a simple calculation using the belt speed multiplied by the duration of the workout. . . . [The skilled artisan] would have had no need to modify Watterson to incorporate the user's heart rate to calculate an *apparent* velocity.

Prelim. Resp. 32–33. We currently find Patent Owner's arguments persuasive on the record before us.

We note that for limitation 1[A], Petitioner alternatively contends "it would have been obvious to use Arrasvuori's computerized watch, which included 'heart rate meter hardware,' as the claimed wirelessly connected sensor," "[c]omputerized watches with sensors were well understood by the

early-2000s," and "[s]wapping Arrasvuori's computerized watch for Watterson's pulse watch was a 'mere substitution of one element for another known in the field.'" Pet. 71 (citing Ex. 1005 ¶¶ 39, 40, 90; Ex. 1003 ¶ 109; Ex. 1007, 17:4–5, 42:10–16, 64:10–19, 84:12–26, Figs. 19, 44, 70); *KSR*, 550 U.S. at 416. But, notably, Petitioner does not appear to carry this alternative argument, i.e., using capabilities of Arrasvuori's computerized watch or other allegedly well-known watches (*see supra* Section III.D.2.a.2), through to its arguments concerning limitations 1[D], 1[F], and 1[G], which in turn recite limitations involving data generated by such a watch. *See generally* Pet. 74–81. As noted above, the burden of proof here lies with Petitioner, not Patent Owner, and we do not ourselves create and adopt unpatentability arguments on behalf of Petitioner as to whether or how the combination of Watterson and Arrasvuori might disclose the subject limitations. *See Wasica Fin.*, 853 F.3d at 1286; *Magnum Oil Tools*, 829 F.3d at 1381 ("[W]e find no support for the PTO's position that the Board is free to adopt arguments on behalf of petitioners that could have been, but were not, raised by the petitioner during an IPR."); *DeSilva*, 181 F.3d at 866–67 (We decline "to play archeologist with the record.").

At this stage of the proceeding and constrained by the record before us, we preliminarily find that Petitioner's foregoing challenge to claims 1, 7, 8, 11–13, 15, and 16 based on obviousness over the combination of Watterson and Arrasvuori is unpersuasive.

IV. CONCLUSION

Based on the evidence before us, we determine that Petitioner has established a reasonable likelihood that at least one claim of the '256 patent

is unpatentable. Accordingly, we institute trial on all the challenges in the Petition.

At this stage of the proceeding, the Board has not made a final determination on the construction of any claim term or the patentability of any challenged claim.

V. ORDER

Upon consideration of the record before us, it is

ORDERED that, pursuant to 35 U.S.C. § 314(a), an *inter partes* review of claims 1–20 of the '256 patent is instituted with respect to all grounds set forth in the Petition;

FURTHER ORDERED that, pursuant to 35 U.S.C. § 314(c) and 37 C.F.R. § 42.4(b), *inter partes* review of the '256 patent shall commence on the entry date of this Order, and notice is hereby given of the institution of a trial; and

FURTHER ORDERED that Patent Owner, in its Response (DUE DATE 1, see Scheduling Order entered concurrently herewith), and Petitioner, in its Reply (DUE DATE 2), shall set forth proposed constructions, and the evidentiary support therefor, for the limitation "continuously generat[e] and simultaneously communicat[e] in real-time to the first user at the first location and the second user at the second location, an interface indicating whether the challenge has been met," as recited in independent claims 1 and 11 (see limitations 1[G] and 11[E]), including discussing (a) what specifically is generated and communicated in real-time; (b) whether "indicating whether the challenge has been met" requires anything more than a mere yes/no-type indication (e.g., whether the system also must indicate a real-time *comparative* progress, ranking, or positioning

amongst users); (c) if a party contends that the scope of this limitation and claim as a whole includes first and second users performing athletic tasks *at different times*, what "in real-time" in this limitation means in that context; and (d) what it means to "continuously generate" and to "simultaneously communicate" "*an interface*" to first and second users, particularly where such users are performing athletic tasks *at different times*. To the extent that a party proposes that this limitation should have its ordinary and customary meaning, the party shall submit and explicitly identify such meaning, including discussing items (a) through (d) above.

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