

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.

Case IPR2023–00424

Patent No. 10,923,225

PATENT OWNER’S PRELIMINARY RESPONSE

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2002	Wiley Electrical and Electronics Engineering Dictionary, IEEE Press (2004)

I. INTRODUCTION

Patent Owner Nike, Inc. (“Nike”) submits this Preliminary Response to the Petition of lululemon athletica canada inc. and lululemon usa inc. (collectively, “lululemon”) challenging the validity of claims 1–10 and 12–19 (the “Challenged Claims”) of U.S. Patent No. 10,923,225 (Ex. 1001, the “’225 patent”). lululemon has not established a reasonable likelihood that it will prevail for any Challenged Claim in any of the grounds raised in the Petition.

The ’225 patent relates to using a sensor device or performance monitoring system to control workout equipment and provide data that controls workout equipment. lululemon presents five grounds collectively challenging claims 1–10 and 12–19 of the ’225 patent. Grounds 1–3 are based primarily on U.S. Patent Application Publication No. 2005/0070809 (“Acres”), and Grounds 4–5 are based primarily on U.S. Patent No. 5,527,239 (“Abbondanza”).

Each of lululemon’s asserted grounds suffers from fundamental flaws. In Grounds 1–3, lululemon fails to show that Acres teaches “*a first set of data* for operating a first function of the piece of workout equipment.” Rather than pointing to *data*, lululemon points to *commands*. As explained below, commands are not data. Instead, a command is simply a signal or instruction that causes a device to perform a function, whereas data is factual information that is observed or collected. The only data identified in lululemon’s discussion of this limitation is a

user’s heart rate. But lululemon relies on the user’s heart rate for an entirely different limitation (“a first set of activity data corresponding to an activity performed by a user”), and thus cannot rely on that same heart rate to satisfy “a first set of data for operating a first function of the piece of workout equipment.”

lululemon commits a similar error in Grounds 4–5 by relying on the user’s pulse rate to satisfy these separate and distinct “data” limitations. In addition, lululemon fails to establish a reasonable likelihood that Abbondanza renders obvious any Challenged Claim because lululemon has not shown that Abbondanza’s pulse rate sensor (i.e., the alleged “sensor device”) establishes “data communication” with a piece of workout equipment and transmits a set of “data for operating a function” and a set of “activity data” to the workout equipment, as recited in the independent claims. Instead, lululemon improperly relies on the *combination* of Abbondanza’s pulse rate sensor and base unit to allegedly meet these limitations. lululemon’s argument, however, is incompatible with the ordinary and customary meaning of the claim language, which recites only a sensor device, and not some other component, performing the claimed steps.

For at least these reasons, and as discussed further below, lululemon has not carried its burden of proving a reasonable likelihood of unpatentability for at least one Challenged Claim. Nike respectfully requests that the Board decline to institute review.

II. BACKGROUND

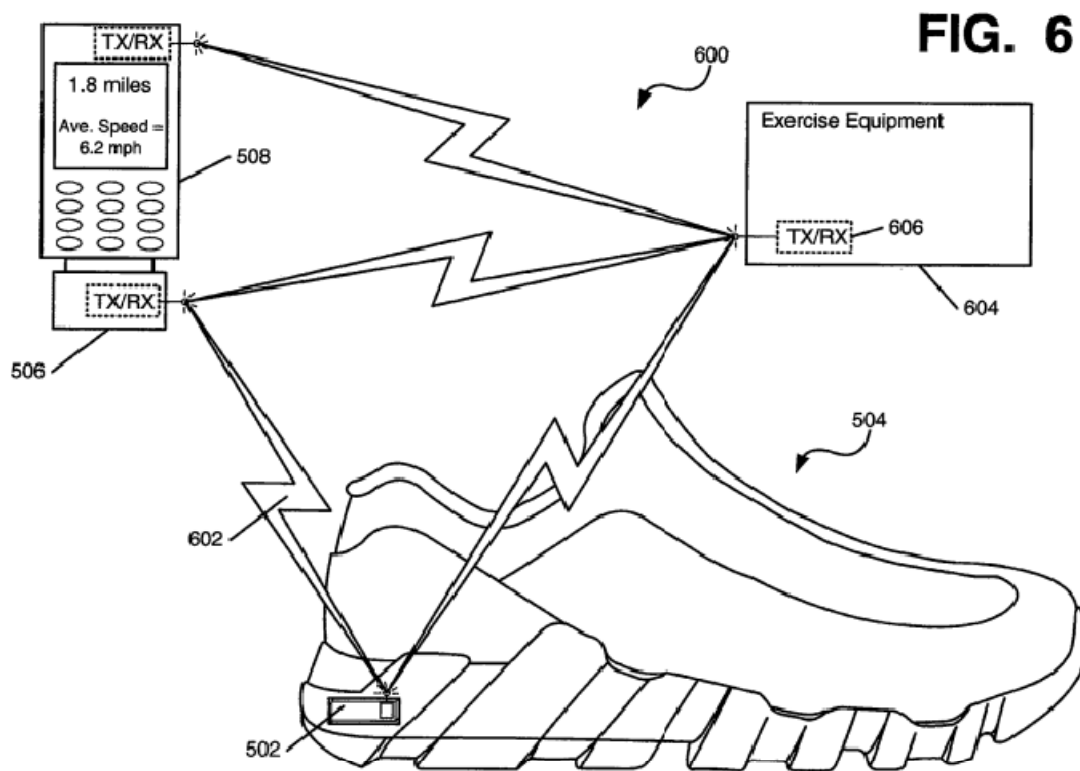
A. The '225 Patent

The '225 patent, titled “Athletic Performance Sensing and/or Tracking Systems and Methods,” issued on February 16, 2021.¹ The claims of the '225 patent are directed to using a sensor device or performance monitoring system to control workout equipment. The '225 patent explains that prior art monitoring systems “have deficiencies, for example, in their portability, convenience, customizability, and/or user friendliness.” Ex. 1001 at 2:14–16. The '225 patent also explains that prior art performance monitoring systems were able to present data and information to users, but did not control the workout equipment. *Id.* at 41:5–46. Accordingly, the '225 patent improves on the prior art because the claimed invention includes adapting the performance monitoring system to “send information to the exercise equipment 604, e.g., for display by the exercise equipment” or to control the system. *Id.* at 20:1–6.

The claimed methods and systems are used in “any type of athletic event, exercise, training, routine, or the like, including events performed as training exercises, events performed as part of actual competitions, etc.” *Id.* at 4:19–22.

¹ lululemon recognizes September 7, 2006 as the earliest priority date for the '225 patent, and does not challenge that date. *E.g.*, Petition at 7.

Figure 6 below illustrates an exemplary embodiment showing electronic communications between an athletic performance sensing system 600 and external exercise equipment 604 in accordance with the claimed invention. *Id.* at 3:44–47.



Id., Fig. 6.

In this embodiment, the user has portable equipment comprising performance sensing module 502 carried in the article of footwear 504, interface device 506, and electronic device 508. *Id.* at 17:44–50, 18:18–22. As illustrated, “any or all of the [sensing] module 502, interface device 506, and/or electronic device 508 [e.g., a music player or cellular phone] may be configured to exchange data with one or more pieces of exercise equipment 604 or other things” *Id.*

at 17:51–55, 19:34–37. For example, the user’s portable equipment may transmit user identification information so that the exercise equipment 604 can store workout data associated with the specific user. *Id.* at 19:37–40. The user’s portable equipment, which includes a sensor device, may also be used to control the exercise equipment 604, such as weight machine settings, resistance settings, incline settings, target distance settings, target calorie burn settings, or treadmill speed or incline settings, etc. *Id.* at 19:41–61. Furthermore, “[d]ata collected as a workout progresses (e.g., via [sensing] module 502, etc.) also may be used, if desired, to control the exercise equipment or other workout or athletic performance devices (e.g., to set or change intensity or resistance levels, to shorten or lengthen workout times, etc.).” *Id.* at 19:61–65. In addition, “the user’s portable equipment (e.g., [sensing] module 502, interface device 506, and/or electronic device 508) may be programmed and adapted to send information to the exercise equipment 604, e.g., for display by the exercise equipment 604” *Id.* at 20:1–7.

Independent claim 1 is reproduced below with limitations 1A–1C identified:²

² Claim 12, the only other independent claim, claims an athletic activity tracking system that includes a sensor programmed and adapted to perform the same steps enumerated in claim 1.

1. A method comprising:

[1A] establishing, by a sensor device, data communication with a piece of workout equipment;

[1B] transmitting, by the sensor device and to the piece of workout equipment, a first set of data for operating a first function of the piece of workout equipment; and

[1C] transmitting, by the sensor device and to the piece of workout equipment, a first set of activity data corresponding to an activity performed by a user during a first time period, wherein the piece of workout equipment is configured to display the first set of activity data.

B. Alleged Prior Art References

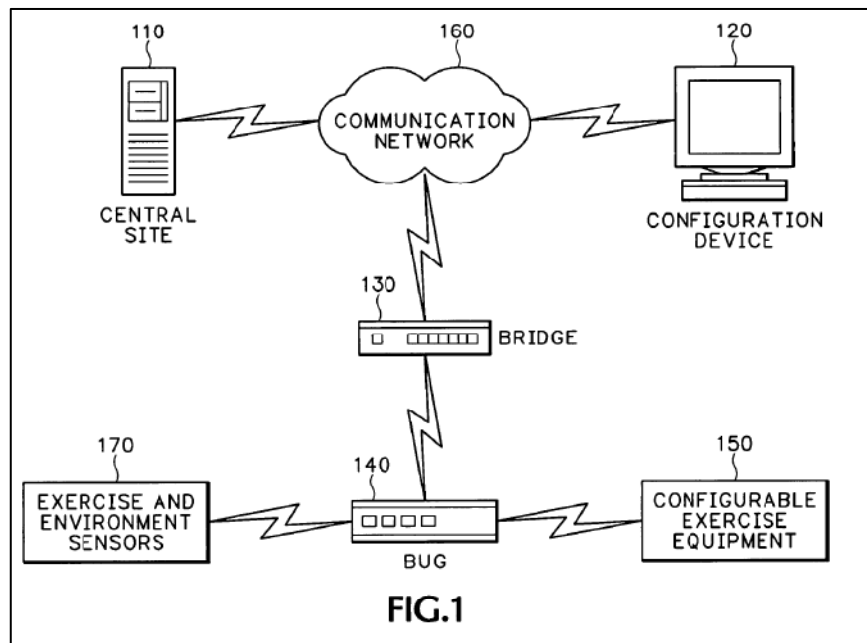
1. Acres

U.S. Patent Publication No. 2005/0070809 (Ex. 1002, “Acres”), titled “System For Regulating Exercise and Exercise Network,” was published on March 31, 2005. Acres is directed to “an automatic system for configuration, direction and recording of exercise program for an individual, based upon the attained heart rate of that person during an exercise period.” Ex. 1002 at Abstract. Acres teaches that “[a] key metric to exercise is heart rate.” *Id.* at [0005]. “Once a maximum recommended heart rate is determined, fitness goals are set that specify a particular target duration of exertion at a heart rate that is some fraction of the maximum rate.” *Id.*

According to Acres, an exerciser aiming to maintain a target heart rate previously had to repeatedly look at a display in a wristband in communication

with a heart rate monitor such as a chest strap and manually “adjust[] her exertion level to stay within a target exertion zone.” *Id.* at [0008]. Acres purports to improve over the prior art by “eliminat[ing] the need for exercisers to calculate appropriate heart rate targets or to monitor heart rate exertion levels during exercise sessions.” *Id.* at [0012]. To do so, a user wears a “Bug,” an electronic hardware component, which communicates with an exercise network. *Id.* at [0023].

Figure 1 depicted below shows an overview of the exercise network disclosed by Acres:



Id., Fig. 1. The “central site 110 can include a computer system, such as a personal computer (PC),” *id.* at [0032], and “maintains an account for each individual exerciser . . . includ[ing] information regarding the exerciser’s profile,” *id.* at

[0035]. The exerciser’s profile may include “age, fitness level, maximum heart rate, current workout regimen, exercise machine configurations and an exercise log.” *Id.* “When an individual exerciser begins to use embodiments of this invention, she uses the configuration device 120 to establish her account with the central site 110.” *Id.* at [0036].

Acres explains that “[t]ypically, the Bug 140 is worn on the clothing or held in a pocket of the person exercising.” *Id.* at [0047]. “The Bug is capable of wirelessly communicating with an external heart rate monitor or the Bug can have a heart rate monitor integrated within itself.” *Id.* at [0025]. The “Bug is capable of configuring and monitoring exercise performance on compatible exercise equipment,” based on the exerciser’s heart rate. *Id.* at [0028]. Specifically, the “Bug transmits signals to the exercise machine to increase or decrease the exercise workload in accordance with the dictates of the exercise program it carries and the current heart rate of the exerciser.” *Id.* at [0029]. As the user exercises while wearing the Bug, “[t]he current exertion level is compared against a previously calculated exertion goal and the user is instructed to increase, decrease, or maintain her exertion level,” based on the target heart rate. *Id.* at [0012].

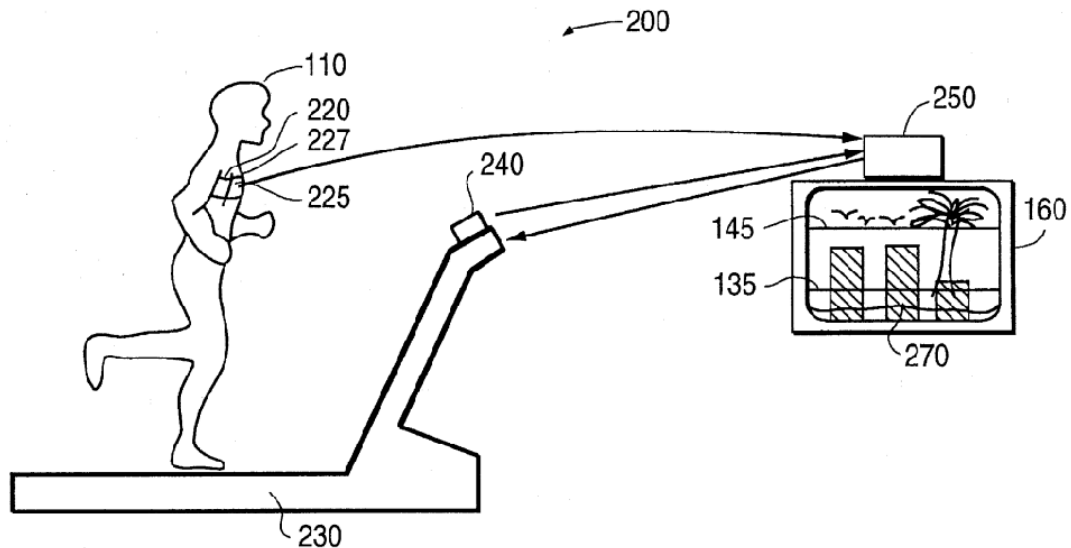
2. Abbondanza

U.S. Patent No. 5,527,239 (Ex. 1003, “Abbondanza”), titled “Pulse Rate Controlled Exercise System,” issued on June 18, 1996. Abbondanza is directed to

“exercise devices and systems that incorporate electronic control systems that are controlled via the measurement of a user’s heart or pulse rate.” Ex. 1003 at 1:26–30. Abbondanza explains that “[t]he amounts of effort that a person must realize in order to experience varying exercise effects directly relates to that person’s heart rate during his or her exercise regimen.” *Id.* at 1:63–66. For instance, a person exercising at 50–60% of their maximum heart rate is in the fat burning range. *Id.* at 2:5–14. However, according to Abbondanza, some prior art exercise devices did not provide sufficient information for the user to determine if their heart rate was within the target heart rate range for the desired benefits. *Id.* at 2:62–67, 3:27–32. Abbondanza purportedly solved this problem by providing “a pulse controlled exercise system which allows a user of the system to constantly be aware of his pulse rate as he or she progresses through his or her work out regimen by displaying the user’s pulse rate on a monitor.” *Id.* at 5:1–6.

lululemon relies on Abbondanza’s embodiment depicted in Figure 3.

FIG. 3



Id., Fig. 3. In this embodiment, the user 110 is wearing a chest belt 220 which is equipped with a pulse rate sensor device 225, that senses the user's pulse rate, and an infrared pulse rate transmitter 227, that transmits the pulse rate to base unit 250.

Id. at 10:59-64. On the treadmill device 230, a control center 240 includes a transmitter which transmits signals representing the various states in which the treadmill device 230 operates. *Id.* at 10:65-11:8. On top of the monitor 160, the base unit 250 processes the machine states received from the control center 240 and the user's pulse rate received via infrared pulse rate transmitter 227. *Id.* at 11:10-16. The base unit 250 "determines if the user's pulse rate is within that user's target heart rate range and instructs [the] treadmill device 230 to either speed-up or slow-down ultimately to cause the user to either work harder ... or

work softer....” *Id.* at 11:16–22. In addition, the “base unit 250’s controller will cause the user’s pulse rate to be displayed on monitor 160.” *Id.* at 11:22–24.³

III. DEFINITION OF A PERSON OF ORDINARY SKILL IN THE ART

For the purposes of this Preliminary Response only, Nike applies lululemon’s proposed level of skill in the art (“POSITA”): a POSITA for the technology of the ’225 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

³ In Grounds 3 and 5, lululemon contends that dependent claims 9 and 18 are rendered obvious by each of Acres and Abbondanza in combination with U.S. Patent Application Publication No. 2005/0272564 (Ex. 1004, “Pyles”), titled “Exercise Apparatus and Method for Tracking Number of Steps.” As explained below in Sections VI–X, lululemon fails to establish that Acres and Abbondanza disclose, teach, or suggest each and every limitation of independent claims 1 and 12, upon which claims 9 and 18 depend, respectively. Because the Board may deny institution for the reasons discussed in Sections VI–X, Nike does not address Pyles in this preliminary response. Nike reserves the right to address lululemon’s contentions with respect to Pyles if this *inter partes* review is instituted.

biomechanical devices, remotely-controlled systems or interfaces, network-based applications and/or equipment, or the equivalent experience or education. Petition at 5 (citing Ex. 1005 at ¶¶ 43–44). Nike reserves the right to further address lululemon’s formulation of a POSITA if trial is instituted.

IV. CLAIM CONSTRUCTION

As a general rule, claim terms are given their “ordinary and customary meaning.” *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (en banc). The “ordinary and customary meaning” is “the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention.” *Id.* at 1313. A POSITA is deemed to read the claim term “not only in the context of the particular claim in which the disputed term appears, but in the context of the entire patent, including the specification.” *Id.*

lululemon concedes that no claim construction is necessary for the purposes of this proceeding.⁴ Petition at 6. Nike agrees. All terms and phrases in the ’225

⁴ lululemon’s position in the Petition contradicts its constructions for claim terms in the parallel District Court case. In the District Court case, lululemon argues that the term “a piece of workout equipment” should be construed as “a training machine on which the user performs workout activities.” *See* Ex. 2001 at 3. Thus, in the parallel District Court case, lululemon proposes a narrower scope limiting

patent have their ordinary and customary meanings, which are readily apparent, and no further construction is required. Nike discusses the ordinary and customary meaning of certain claim terms in the context of lululemon’s unpatentability grounds below.

**V. LULULEMON HAS NOT ESTABLISHED A REASONABLE
LIKELIHOOD OF PREVAILING FOR ANY CHALLENGED CLAIM**

lululemon “bears the burden on institution of demonstrating a reasonable likelihood that it will prevail in showing the unpatentability of at least one claim. In making this showing, [lululemon] must file a Petition that, among other requirements, ‘identifies ... the evidence that supports the grounds for the challenge to each claim.’” *SMIC, Ams. v. Innovative Foundry Techs., LLC*, IPR2020–00837, Paper 13, at 13–14 (PTAB Oct. 9, 2020) (citing 35 U.S.C. §§ 314(a) and 312(a)(3)). To meet its burden, “[i]t is of the utmost importance” that lululemon “identify ‘with particularity’ the ‘evidence that supports the grounds for the challenge to each claim.’” *Intelligent Bio-Sys., Inc. v. Illumina Cambridge*

“workout equipment” to a “training machine” that the user is “on” when performing workout activities. *Id.* The ordinary and customary meaning of “workout equipment” is not so limited. Indeed, the ’225 Patent specification discloses that “a piece of athletic equipment” may include “a bicycle, bat, racket, club, vehicle, ball, etc.” Ex. 1001 at 10:14-16; *see also id.* at 9:50–65.

Ltd., 821 F.3d 1359, 1369 (Fed. Cir. 2016) (citing 35 U.S.C. § 312(a)(3)).

Applying that standard here, the Board should deny institution of *inter partes* review under 35 U.S.C. § 314(a) because lululemon has not met its burden to demonstrate a reasonable likelihood that it will prevail as to any Challenged Claim based on the information contained within the Petition.

Anticipation requires evidence “that a single prior art reference discloses each and every element of a claimed invention.” *Silicon Graphics, Inc. v. ATI Techs., Inc.*, 607 F.3d 784, 796 (Fed. Cir. 2010). For Ground 1, lululemon must show a reasonable likelihood of proving that “the four corners of a single, prior art document describe every element of the claimed invention” in the same specific “arrange[ment] as in the claim.” *See Net MoneyIN, Inc., v. Verisign, Inc.*, 545 F.3d 1359, 1371 (Fed. Cir. 2008).

As to its obviousness grounds, lululemon must show a reasonable likelihood of proving that “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 POSITA. *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007). An obviousness determination must be based on four factual inquiries: (1) the scope and content of the prior art; (2) the differences between the claims and the prior art; (3) the level of ordinary skill in the art; and (4) objective indica of nonobviousness. *Id.* at 406 (citing *Graham v.*

John Deere Co. Kan. City, 383 U.S. 1, 17–18 (1996)). lululemon must “articulate specific reasoning, based on evidence of record, to support the legal conclusion of obviousness.” *U.S. Well Servs., LLC v. Halliburton Energy Servs., Inc.*, IPR2022–01163, Paper 9 at 10 (PTAB Dec. 20, 2022) (quoting *In re Magnum Oil Tools Int’l, Ltd.*, 829 F.3d 1364, 1380 (Fed. Cir. 2016)).

As discussed on a ground-by-ground basis below, lululemon has not shown a reasonable likelihood of success for any Challenged Claim under any ground of unpatentability. Accordingly, the Board should deny institution.

VI. GROUND 1: LULULEMON FAILS TO SHOW THAT ACRES ANTICIPATES ANY CHALLENGED CLAIM

In Ground 1, lululemon asserts that Acres anticipates claims 1-8, 10, 12-17, and 19. *See* Petition at 7–23. But, lululemon fails to show a reasonable likelihood of proving that Acres anticipates independent claims 1 and 12 by disclosing “every element of the claimed invention” in the same specific “arrange[ment] as in the claim.” *See Net MoneyIN*, 545 F.3d at 1371. Specifically, lululemon fails to show that Acres discloses transmitting, by the sensor device and to the piece of workout equipment, “a first set of data for operating a first function of the piece of workout equipment,” as recited by both independent claims.

A. lululemon fails to show that Acres discloses transmitting, by the sensor device and to the piece of workout equipment, “a first set

of data for operating a first function of the piece of workout equipment,” as recited by independent claims 1B and 12C[ii]

Limitation 1B recites “transmitting, by the sensor device and to the piece of workout equipment, a first set of data for operating a first function of the piece of workout equipment,” and independent claim 12 recites a similar limitation. Ex. 1001 at 45:12–14, 46:16–18. lululemon fails to show that Acres discloses transmitting, by the sensor device and to the piece of workout equipment, “*a first set of data* for operating a first function of the piece of workout equipment.” lululemon instead relies on Acres’ disclosure of “*commands* that adjust parameters of an exercise machine.” See Petition at 11–12, 22 (emphasis added).

Acres’ commands, however, do not disclose the recited “first set of data.” Specifically, although a command may be driven or dictated by a data input—a command, itself, is not data. Like turning a light on or off, a command is a specific signal that drives a prescribed action; data, on the other hand, is factual information. See Ex. 2002 at 3 (defining “command” as “[o]ne or more signals which actuate a device” or “[a]n instruction that causes a computer action”), 4 (defining “data” as “[f]actual information, such as that derived from observation, experimentation, or calculation, especially that which is used for processing and/or further analysis”).

The parties agree that the term “a first set of data” in claims 1 and 12 has its ordinary and customary meaning. Petition at 6. Here, the ordinary and customary

meaning of “data” is factual information, from which decisions and subsequent actions can be made. In addition to the dictionary referenced above, this meaning is reflected in the specification. *See Phillips*, 415 F.3d at 1314. For example, the ’225 patent discloses that “[d]ata also may be transferred from the user’s portable equipment (e.g., module 502, interface device 506 , and/or electronic device 508) to the exercise equipment or other workout or athletic performance setting 604.” Ex. 1001 at 19:34–37. The ’225 patent explains that an example of such data is “user ID information” that “may be transmitted so that the exercise equipment or other workout or athletic performance setting 604 can store workout data associated with the specific user.” *Id.* at 19:38–40; *see also id.* at claim 9 (“The method of claim 1, wherein the first set of data comprises user identification information, and wherein the first function comprises associating activity data stored at the piece of workout equipment with the user.”). In addition, the ’225 patent further explains that “[*d*]ata *collected* as a workout progresses (e.g., via [sensing] module 502, etc.) also may be used, if desired, to control the exercise equipment or other workout or athletic performance devices.” *Id.* at 19:61 (emphasis added). Thus, from the intrinsic evidence, a POSITA would have understood that the “first set of data” is factual information, such as the user ID information or workout performance information collected as the workout progresses.

The specification does not, however, provide support for lululemon’s allegation that “*commands* that adjust parameters of an exercise machine” are sufficient to disclose “a first set of data for operating a first function of the piece of workout equipment.” Petition at 11 (emphasis added). lululemon’s arguments do not show otherwise. In particular, the portions of the specification on which lululemon relies (Petition at 11-12 (citing Ex. 1001 at 19:41-46, 54-55, claims 3, 7, 8) say nothing about the transfer of data from a sensor to the workout equipment. At column 19, lines 41-46, the ’225 patent merely discloses that “the user’s portable equipment . . . may be used, at least in part, to control the exercise equipment . . . to make the workout machine settings correspond to a workout pre-programmed into or downloaded to the user’s portable equipment.” Ex. 1001 at 19:41-46. At column 19, lines 54-55, the ’225 patent merely discloses exemplary settings that may be adjusted, such as treadmill speed or incline settings. *Id.* at 19:54-55. Notably, the ’225 patent specification does not refer to the commands to control the settings of the workout equipment as “data.” *Compare id.* at 19:41-46, *with id.* at 19:61-65 (“Data collected as a workout progresses (e.g., via module 502, etc.) also may be used, if desired, to control the exercise equipment or other workout or athletic performance devices (e.g., to set or change intensity or resistance levels, to shorten or lengthen workout times, etc.).”) (emphasis added). In addition, dependent claims 3, 7, and 8, on which lululemon relies, recite

additional limitations further specifying the “first function,” not the “first set of data,” and thus do not support lululemon’s position. Ex. 1001 at 45:23–25, 45:46–59.

lululemon thus fails to show that Acres discloses “a first set of *data* for operating a first function of the piece of workout equipment,” as recited in claim 1 and similarly recited in claim 12. Ex. 1001 at 45:12–14, 46:16–18. Because the remaining claims challenged in this ground depend from either claim 1 or 12, for this reason alone, lululemon has not shown a reasonable likelihood of success for any claim challenged in Ground 1.

B. lululemon improperly relies on Acres’ heart rate data as disclosing multiple distinct claim limitations

To the extent the Board considers Acres’ “commands” as disclosing the “a first set of data for operating a first function of the piece of workout equipment,” Petition at 11–12, 22, lululemon’s arguments in Ground 1 fail for another reason—lululemon ignores a fundamental rule of claim construction: “Different claim terms are presumed to have different meanings.” *SimpleAir, Inc. v. Sony Ericsson Mobile Comm’s AB*, 820 F.3d 419, 431 (Fed. Cir. 2016) (quoting *Bd. of Regents of the Univ. of Tex. Sys. v. BENQ Am. Corp.*, 533 F.3d 1362, 1371 (Fed. Cir. 2008)). The Board regularly denies petitions that ignore this rule. *See e.g., Askeladden LLC v. Aml IP LLC*, IPR2022–00319, Paper 11 at 34–35 (PTAB May 11, 2022); *Necksgen, Inc. v. Simpson Performance Prod., Inc.*, IPR2018–00133, Paper 11 at

6–7 (PTAB July 25, 2018). Claims 1 and 12 recite two separate and distinct types of data: (1) “a first set of data for operating a first function of the piece of workout equipment” and (2) “a first set of activity data” corresponding to an activity performed by a user. Ex. 1001 at 45:12–20, 46:16–24.

The Board should deny institution because lululemon has not mapped different data to these two distinct limitations. *SimpleAir*, 820 F.3d at 431. “It is well-established law that a single element in the prior art cannot serve as two different claim limitations.” *Ex Parte Vembu*, Appeal No. 2020-005681, 2021 WL 5756111, at *4 (PTAB Dec. 2, 2021); *see also Becton, Dickinson v. Tyco Healthcare Group, LP*, 616 F.3d 1249, 1254 (Fed. Cir. 2010) (“Where a claim lists elements separately, ‘the clear implication of the claim language’ is that those elements are ‘distinct components[s]’ of the patented invention.”); *Ex Parte Iwai*, Appeal No. 2015-000382, 2016 WL 3194950, at *3 (PTAB June 6, 2016) (“It is improper . . . to use a single structure/element in the cited reference to disclose two separate claimed elements.”); *Ex Parte Rahman*, Appeal 2011-012961, 2014 WL 343758, at *2 (PTAB Jan. 27, 2014) (“[W]hen a claim requires two separate elements, using one element construed as performing two separate functions will not suffice to meet the terms of the claim.”). lululemon points to the same disclosure in Acres, (i.e. the user’s heart rate), as allegedly supporting its arguments for both limitations. *See* Petition at 11 (alleging that the “commands

that adjust parameters of an exercise machine” are “based upon the exerciser’s *heart rate*” to meet limitation 1B) (emphasis added) (quoting Ex. 1002 at [0089]), 12–13 (alleging that “Acres discloses that *heart rate* data ‘is optionally displayed’ to meet limitation 1C) (emphasis added) (quoting Ex. 1002 at [0091]), 22 (same). And, lululemon has not provided any arguments to rebut the presumption that “a first set of data for operating a first function of the piece of workout equipment” and “a first set of activity data” require different “data” to satisfy each limitation. *See Microsoft Corp. v. Ipa Techs., Inc.*, IPR2019–00812, Paper 44 at 138–39 (PTAB Oct. 15, 2020); *Ex Vembu.*, 2021 WL 5756111, at *4; *Becton, Dickinson*, 616 F.3d at 1254.

For these reasons, lululemon has not shown a reasonable likelihood of success for any Challenged Claim in Ground 1.

VII. GROUND 2: LULULEMON FAILS TO SHOW THAT ACRES RENDERS OBVIOUS ANY CHALLENGED CLAIM

In Ground 2, lululemon challenges the patentability of claims 1–8, 10, 12–17, and 19 as obvious over Acres. Petition at 23–27. But lululemon fails to show that its arguments based on obviousness cure the deficiencies identified by Nike in Ground 1. Instead, lululemon relies solely on its insufficient anticipation arguments and makes additional obviousness arguments only as to the additional limitations of certain dependent claims. *See* Petition at 23–27. As a result, for the same reasons set forth in Ground 1, lululemon fails to show a reasonable likelihood

of proving that Acres renders independent claims 1 and 12 obvious. lululemon’s challenges of dependent claims 2–8, 10, 13–17, and 19 on this ground fail for the same reasons. Thus, lululemon has not shown a reasonable likelihood of success for any claim challenged in Ground 2.

VIII. GROUND 3: LULULEMON’S RELIANCE ON AN ADDITIONAL REFERENCE IN GROUND 3 DOES NOT CURE THE DEFICIENCIES WITH RESPECT TO THE INDEPENDENT CLAIMS IN GROUNDS 1 AND 2

In Ground 3, lululemon addresses the additional limitations of dependent claims 9 and 18 only, and lululemon does not rely on its analysis of those limitations as teaching any limitation of the independent claims. *See* Petition at 27–31. Accordingly, lululemon has not shown a reasonable likelihood of prevailing on unpatentability for claims 9 and 18, which depend on independent claims 1 and 12, for the same reasons discussed above for Grounds 1 and 2.

IX. GROUND 4: LULULEMON FAILS TO SHOW THAT ABBONDANZA RENDERS OBVIOUS ANY CHALLENGED CLAIM

A. Abbondanza does not teach or suggest establishing, by a “sensor” device, “data communication” with a piece of workout equipment as recited by claims 1A and 12C[i]

Independent claim limitations 1A and 12C[i] both recite that a “sensor” establishes “data communication” with the piece of workout equipment. Ex. 1001 at 45:10–11, 46:12–15. lululemon, however, does not contend that Abbondanza’s pulse rate sensor establishes “data communication” with the treadmill device 230. Instead, lululemon contends that “Abbondanza’s *base unit* establishes a data

communication with the treadmill.” Petition at 34 (emphasis added). lululemon further alleges that “a POSITA would have understood that to send instructions to the treadmill, the *base unit* must establish a data communication with the treadmill.” *Id.* But Abbondanza’s *base unit* undisputedly is not a sensor.

In an attempt to cure this deficiency, lululemon improperly maps the recited “sensor” to two separate and distinct components of Abbondanza: (1) the base unit and (2) the pulse rate sensor. lululemon contends, without support, that “Abbondanza’s base unit *and* pulse rate sensor are together a sensor device.” Petition at 34 (emphasis added); *id.* at 34–35 (“Abbondanza therefore discloses establishing a data communication between a sensor device — the base unit and corresponding pulse rate sensor — and a piece of exercise equipment — the treadmill.”). Notably, lululemon does not cite any expert (or other) support for its contention, and it does not attempt to argue any obviousness rationale for combining the physically distinct base unit and pulse rate sensor into a single device.

lululemon’s combination of these fundamentally different and distinct components without any supporting evidence or reasoning should be rejected. As an initial matter, claim 1 recites “a sensor device” and claim 12 recites “a first sensor,” both of which indicate a contained device that may house different

components (e.g., the sensor, processor, battery, etc.), but not separate components that are physically distinct. Ex. 1001 at 45:10–11, 46:12–14.

Consistent with the ordinary and customary meaning of the term “sensor device,” as reflected in the specification, a “sensor device” is a device that senses or measures a parameter or condition. *See Phillips*, 415 F.3d at 1314. For example, the ’225 patent describes “one or more sensors that sense physical or physiological characteristics relating to user participation in the workout routine.” Ex. 1001 at 5:20–24; *see also id.* at 9:23–39 (describing “sensing devices” 102(a), 102(b), 102(c), and 102(d) which “sense data associated with the athletic performance, including, for example, physical or physiological data associated with the athletic performance”), Fig. 1. The specification does not provide any support for lululemon’s argument that a separate base unit and sensor can together make up a “sensor device.” *See* Petition at 34.

Abbondanza’s base unit is not a sensor device because it does not sense any physical or physiological characteristics relating to the user’s participation in the workout (Ex. 1001 at 5:20–24), and lululemon does not contend that Abbondanza’s base unit alone is a sensor device. Instead, Abbondanza only discloses measurement of the user’s data associated with the athletic performance through the use of the pulse rate sensor 225. Ex. 1003 at 10:62–64 (“Pulse rate sensor 225 senses user 110’s pulse rate”). Thus, only Abbondanza’s pulse rate sensor

constitutes a sensor device. *See id.* Abbondanza’s pulse rate sensor, however, does not “establish data communication with the piece of workout equipment,” as recited in claim limitations 1A and 12C[i]. Ex. 1001 at 45:10–11, 46:12–15.

Even if Abbondanza’s base unit and pulse rate sensor were considered together as the claimed “sensor” (they would not be), lululemon fails to show that Abbondanza teaches or suggests that the base unit establishes “data communication” with the treadmill, under the ordinary and customary meaning of the term “data.” lululemon relies on Abbondanza’s disclosure of *instructions* sent to the treadmill to either speed-up or slow-down as the claimed “data communication.” Petition at 34. As explained in Ground 1, a POSITA would have understood that data is factual information, from which decisions and subsequent actions can be made. *See* Ex. 2002 at 4. Thus, a POSITA would have understood that Abbondanza’s *instructions* which are transmitted to the treadmill are the subsequent actions taken after the collection of factual information, not the claimed *data* itself. Abbondanza’s *instructions* are akin to Acres’ *commands*, neither of which are *data*. *Id.* at 3. Thus, the base unit’s transmission of instructions to the treadmill are not equivalent to the claimed “*data* communication.”

Accordingly, Abbondanza does not teach or suggest establishing, by a “sensor” device, “data communication” with a piece of workout equipment as recited by claim limitations 1A and 12C[i]. Because the remaining claims

challenged in this ground depend from either claim 1 or 12, for this reason alone, lululemon has not shown a reasonable likelihood of success for any Challenged Claim in Ground 4.

B. Abbondanza does not teach or suggest “transmitting, by the sensor device and to the piece of workout equipment, a first set of data for operating a first function of the piece of workout equipment” as recited by claims 1B and 12C[ii]

Limitations 1B and 12C[ii] both recite that the “sensor” transmits to the piece of workout equipment “a first set of data” for operating a first function of the piece of workout equipment. Ex. 1001 at 45:12–14, 46:16–18. Abbondanza does not teach or suggest these limitations for at least three reasons.

First, lululemon does not contend that Abbondanza’s pulse rate sensor transmits to the workout equipment a first set of data for operating a first function of the piece of workout equipment. Instead, as discussed for limitations 1A and 12C[i] above, lululemon contends that Abbondanza discloses that the *base unit* transmits to the workout equipment a first set of data for operating a first function of the workout equipment. See Petition at 35 (“Abbondanza discloses that the *base* ‘instructs treadmill device 230 to either speed-up or slow-down’”) (citing Ex. 1003 at 11:16–23.), *id.* (“The treadmill receives these instructions *from the base unit* through a receiver maintained in a control center mounted on the treadmill.”) (citing Ex. 1003. at 10:65–11:10.) (emphases added).

For the reasons discussed above, the combination of Abbondanza’s base unit and pulse rate sensor is not equivalent to the claimed “sensor.”

Second, even if Abbondanza’s base unit is considered together with the pulse rate sensor as a sensor device (it would not be), lululemon fails to show that Abbondanza teaches that the base unit and pulse rate sensor transmit “a first set of *data*.” Abbondanza discloses that the base unit transmits *instructions* to either speed-up or slow-down the treadmill. Ex. 1003 at 11:16-23. lululemon contends that “[t]hese instructions are a ‘set of data.’” Petition at 35. As explained above with respect to Acres’ commands, Abbondanza’s *instructions* are not equivalent to the claimed “first set of data” because the *instructions* are not factual information, such as that derived from observation, experimentation, or calculation. Put simply, *instructions* are not *data*. Ex. 2002 at 4. Rather, Abbondanza’s instructions which are transmitted to the treadmill are the subsequent actions taken after the collection of factual information by Abbondanza’s pulse rate sensor.

Third, lululemon has failed to show that Abbondanza teaches or suggests that the sensor device transmits “a first set of data” for operating a first function of the piece of workout equipment, as recited in the independent claims. As explained above, claims 1 and 12 recite two separate and distinct types of data: (1) “a first set of data for operating a first function of the piece of workout equipment”

and (2) “a first set of activity data” corresponding to an activity performed by a user. Ex. 1001 at 45:12–20, 46:16–24.

Abbondanza does not teach or suggest that the sensor device (i.e., the pulse rate sensor) transmits a “first set of data for operating a first function of the piece of workout equipment,” which is separate and distinct from “a first set of activity data corresponding to an activity performed by a user.” *See, e.g., Ex Parte Vembu*, 2021 WL 5756111, at *4 (“It is well-established law that a single element in the prior art cannot serve as two different claim limitations.”); *Becton, Dickinson* 616 F.3d at 1254 (“Where a claim lists elements separately, ‘the clear implication of the claim language’ is that those elements are ‘distinct components[s]’ of the patented invention.”). Abbondanza discloses that the pulse rate sensor 225 senses user 110’s pulse rate. Ex. 1003 at 10:62–64; *see also id.* at 11:13–16 (“The controller that resides in base unit 250 processes the machine states received from control center 240 and the user’s pulse rate received via infrared pulse rate transmitter 227.”). The base unit 250 then uses the user’s pulse rate to determine if the user is exercising within the target heart rate range and provides *instruction* to the treadmill to either speed-up or slow-down. *Id.* at 11:16–22. But, the user’s pulse rate is the same data that is displayed on the monitor 160. *Id.* at 11:22–24. Thus, lululemon only identifies one type of data in Abbondanza (i.e. the user’s pulse rate) that is transmitted at all.

For these reasons, Abbondanza does not teach or suggest transmitting, by the sensor device and to the piece of workout equipment, “a first set of data for operating a first function of the piece of workout equipment” as recited in claims 1B and 12C[ii].

C. Abbondanza does not teach or suggest “transmitting, by the sensor device and to the piece of workout equipment, a first set of activity data corresponding to an activity performed by a user” as recited by claims 1C and 12C[iii]

Independent claim limitations 1C and 12C[iii] both recite that the “sensor” transmits to the piece of workout equipment a first set of “activity data” corresponding to an activity performed by a user during a first time period, wherein the piece of workout equipment is configured to display the first set of activity data. As discussed above, lululemon does not contend that Abbondanza’s pulse rate sensor transmits activity data to the workout equipment. Instead, lululemon contends that “Abbondanza discloses that the *base unit* ‘will cause the user’s pulse rate to be displayed on monitor 160.’” (Petition at 36 (citing Ex. 1003 at 11:22–24)) (emphasis added). For the reasons discussed above, the claimed “sensor” is not taught by the *combination* of Abbondanza’s base unit and pulse rate sensor.

For the reasons discussed above, lululemon has failed to establish a reasonable likelihood that Abbondanza renders obvious independent claims 1 and 12. The remaining claims challenged in Ground 4 depend from either independent

claim 1 or 12, and thus lululemon's contentions as to those claims are deficient for the same reasons.

X. GROUND 5: LULULEMON'S RELIANCE ON AN ADDITIONAL REFERENCE IN GROUND 5 DOES NOT CURE THE DEFICIENCIES WITH RESPECT TO THE INDEPENDENT CLAIMS IN GROUND 4

In Ground 5, lululemon relies only on its Ground 3 analysis for the additional limitations of dependent claims 9 and 18. *See* Petition at 45. Accordingly, lululemon has not shown a reasonable likelihood of prevailing on unpatentability for claims 9 and 18, which depend on independent claims 1 and 12, for the same reasons discussed above for Ground 4.

XI. CONCLUSION

For the reasons set forth above, Nike respectfully requests that the Board deny institution of the Petition for all Challenged Claims of the '225 patent.

Dated: April 20, 2023

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CERTIFICATE OF WORD COUNT

Under the provisions of 37 C.F.R. § 42.24(d), the undersigned hereby certifies that the Microsoft Office word count including all footnotes for the foregoing Patent Owner Nike's Preliminary Response, excluding the table of contents, table of authorities, certificate of word count, appendix and certificate of service, totals 6,703 words, which is less than the 14,000 words allowed under 37 C.F.R. § 42.24(b)(1).

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CERTIFICATE OF SERVICE

The undersigned hereby certifies service on lululemon, pursuant to 37 C.F.R. § 42.6(e) and by agreement of counsel, by electronic (e-mail) delivery of a true copy of the foregoing **PATENT OWNER'S PRELIMINARY RESPONSE**, **which** was served on April 20, 2023 to the following Counsel for lululemon via e-mail:

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