

**UNITED STATES PATENT AND TRADEMARK OFFICE**

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**BEFORE THE PATENT TRIAL AND APPEAL BOARD**

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

v.

NIKE, INC.,  
Patent Owner.

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Case: IPR2023-00424  
Patent No. 10,923,225

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**PETITION FOR *INTER PARTES* REVIEW  
OF U.S. PATENT NO. 10,923,225**

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**Exhibit List for *Inter Partes* Review of U.S. Patent No. 10,923,225**

| <b>Exhibit Description</b>                                                        | <b>Exhibit #</b> |
|-----------------------------------------------------------------------------------|------------------|
| U.S. Patent No. 10,923,225 to Riley et al. ('225 Patent)                          | 1001             |
| U.S. Patent Application Publication No. 2005/0070809 (“Acres”)                    | 1002             |
| U.S. Patent No. 5,527,239 (“Abbondanza”)                                          | 1003             |
| U.S. Patent Application Publication No. 2005/0272564 (“Pyles”)                    | 1004             |
| Declaration of Dr. Henry H. Houh, Ph.D.                                           | 1005             |
| <i>Curriculum Vitae</i> of Dr. Henry H. Houh, Ph.D.                               | 1006             |
| Application No. 15/968,243 (Original Application)                                 | 1007             |
| May 15, 2018 Preliminary Amendment to Application No. 15/968,243                  | 1008             |
| Dec. 2, 2019 Non-Final Rejection of Application No. 15/968,243                    | 1009             |
| May 4, 2020 Amendment to Application No. 15/968,243 and Corresponding Argument    | 1010             |
| Aug. 3, 2020 Final Rejection of Application No. 15/968,243                        | 1011             |
| Sept. 30, 2020 Amendment to Application No. 15/968,243 and Corresponding Argument | 1012             |
| Nov. 4, 2020 Notice of Allowance for Application No. 15/968,243                   | 1013             |

lululemon athletica canada inc. and lululemon usa inc. (“Petitioner” or “lululemon”) petitions for *inter partes* review of claims 1-10 and 12-19 of U.S. Patent No. 10,923,225 (the “’225 patent” (Ex. 1001)) in accordance with 35 U.S.C. §§ 311-19 and 37 C.F.R. §§ 42.100 *et seq.*

## **I. INTRODUCTION**

The ’225 patent claims a system that transmits data from a sensor device to a piece of workout equipment. The transmitted data is of two types: data that controls the operation of the workout equipment and activity data that the workout equipment is configured to display.

U.S. Patent Application Publication No. 2005/0070809 (“Acres”) (Ex. 1002), however, discloses exactly that. Acres describes a device called a “Bug” that communicates with or has an internal sensor—for example, a pulse rate sensor. The Bug sends commands to a piece of workout equipment—for example, a treadmill—to control the settings of the workout equipment based on measurements from the sensor. For example, the Bug may command the treadmill to speed up or slow down based on pulse rate measurements to keep a user’s pulse rate within a target zone. Acres further discloses that the treadmill may be configured to display this pulse rate.

U.S. Patent No. 5,527,239 (“Abbondanza”) (Ex. 1003) likewise discloses the ’225 patent’s purported invention. Abbondanza describes a device called a base

unit that communicates with various sensors, including a pulse rate sensor. This base unit controls the settings of a piece of exercise equipment, such as a treadmill, to adjust exercise difficulty in response to measurements from the sensor and causes those measurements to be displayed on a monitor.

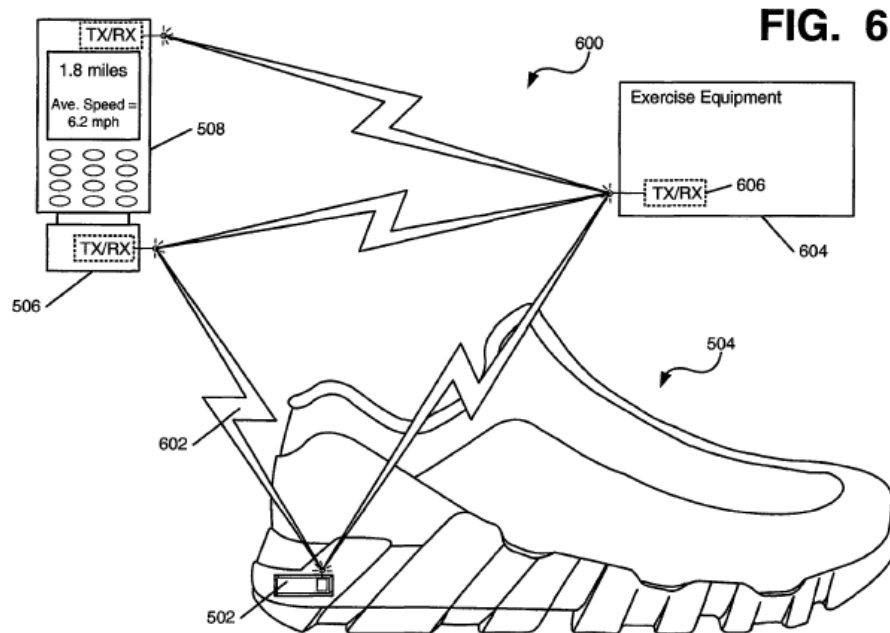
The '225 patent's dependent claims 9 and 18 require that the claimed sensor device transmit user identification information to the piece of workout equipment and that this information is associated with activity data stored at the piece of workout equipment. U.S. Patent Application Publication No. 2005/0272564 ("Pyles") discloses this additional limitation, and a person of ordinary skill in the art ("POSITA") would have been motivated to combine Pyles with either Acres or Abbondanza.

Each of claims 1-8, 10, 12-17, and 19 is anticipated or rendered obvious by Acres or Abbondanza alone, and claims 9 and 18 are rendered obvious by either Acres or Abbondanza in view of Pyles. Petitioner therefore requests cancelation of claims 1-10 and 12-19 of the '225 patent.

## **II. SUMMARY OF THE '225 PATENT**

The '225 patent generally concerns "athletic performance sensing and/or tracking systems and methods." (Ex. 1001 at 1:35-36.) The patent describes embodiments and functionalities. (*See id.* at 4:13-60 (listing exemplary aspects of the purported invention).) Most relevant to the '225 patent's

claims, Figure 6 and the corresponding discussion describe a system in which portable equipment transmits data to a piece of exercise equipment. (*See id.* at Fig. 6, 19:34-37.)



The portable equipment may include a “module,” an “interface device,” and an “electronic device.” (*Id.* at Fig. 6, 19:34-37.) The module is carried by an athlete, for example, in an article the athlete is wearing (*id.* at 17:44-48) and may include “athletic performance data sensors” (*id.* at 16:54-56) that measure “step count, timing, and/or other data” (*id.* at 17:19-21). The interface device may process data provided by the module and is connected to the electronic device. (*Id.* at 17:8-12, 17:19-24.) The electronic device may be, for example, a music playback device or cellular telephone (*id.* at 17:8-12) and may output data provided by the module (*id.* at 17:24-27).

Each of the module, interface device, or electronic device may transmit data to a piece of exercise equipment (*id.* at 19:34-37, 17:51-56), which may be “any type of exercise equipment,” including, a treadmill, stationary bicycle, or weight lifting machine (*id.* at 17:56-59). The module, interface device, or electronic device may transmit data to the exercise equipment to control settings like resistance, incline, target distance, or speed.” (*Id.* at 19:47-55.) The module, interface device, or electronic device may also transmit data for display by the workout equipment. (*Id.* at 20:1-7.)

### **III. PROSECUTION HISTORY OF THE '225 PATENT**

As originally filed, the application that would become the '225 patent included only one claim. (Ex. 1007 at 69.) In an amendment on May 15, 2018, the applicant amended the original claim and added 19 new claims. (Ex. 1008 at 2-6.)

The examiner rejected all claims as anticipated by U.S. Patent Application Publication 2006/252602 (“Brown”) on December 2, 2019. (Ex. 1009 at 2, 3, 6). The applicant amended the claims in response. (Ex 1010 at 2-6.)

On August 3, 2020, the examiner again rejected all claims. (Ex. 1011 at 1.) The examiner determined that the claims were obvious over Brown in view of U.S. Patent Application Publication 2006/0189440 (“Gravagne”). (*Id.* at 2, 5.)

In response, the applicant argued that Brown and Gravagne fail to render the claims obvious. Specifically, the applicant argued that Brown and Gravagne fail to

disclose claim 1's recited feature of "transmitting, by the sensor device and to the piece of workout equipment, a first set of activity data . . . ." (Ex. 1012 at 7-8.)

According to the applicant, Brown's disclosure of transmitting "personal data" and "machine control signals" to exercise equipment does not teach this feature because the neither is "a first set of activity data corresponding to an activity performed by a user during a first time period." (*Id.*) The applicant further argued that Gravagne did not cure this deficiency. (*Id.* at 8.) Finally, the applicant argued that claim 12 is allowable for the same reasons as claim 1 and that the other claims are allowable because they depend on claims 1 or 12. (*Id.* at 9.)

The examiner allowed the claims on November 4, 2020. (Ex. 1013 at 2.)

#### **IV. LEVEL OF ORDINARY SKILL**

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 biomechanical devices, remotely-controlled systems or interfaces, network-based applications and/or equipment, or the equivalent experience or education. (Ex. 1005, ¶¶ 43-44.)

## **V. CLAIM CONSTRUCTION**

Petitioner does not propose any terms for construction because no constructions are necessary to resolve any disputes identified in this Petition. *See Vivid Techs., Inc. v. Am. Sci. & Eng'g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999).<sup>1</sup>

## **VI. PRECISE REASONS FOR RELIEF REQUESTED**

Pursuant to 37 C.F.R. § 42.104(b), Petitioner requests cancellation of claims 1-10 and 12-19 of the '225 patent based on the following references:

| <b>Prior Art Reference</b>                           | <b>Abbreviation</b>     |
|------------------------------------------------------|-------------------------|
| U.S. Patent Application Publication No. 2005/0070809 | “Acres” (Ex. 1002)      |
| U.S. Patent No. 5,527,239                            | “Abbondanza” (Ex. 1003) |
| U.S. Patent Application Publication No. 2005/0272564 | “Pyles” (Ex. 1004)      |

The statutory grounds<sup>2</sup> for the challenge to each claim are set forth below.

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<sup>1</sup> If trial is instituted, Petitioner reserves its right to address construction of any terms raised at trial, or in the related district court action. Petitioner believes that the '225 patent claims are invalid under 35 U.S.C. §§ 101 and 112. Because those issues cannot be raised in an IPR, Petitioner has raised or reserves the right to raise those issues in the related district court action, *Nike, Inc. v. lululemon usa inc.*, No. 1:22-cv-00082-RA-OTW (S.D.N.Y.).

<sup>2</sup> All statutory citations are pre-AIA.

Acres was filed on September 27, 2004, and published on March 31, 2005. Acres therefore qualifies as prior art under Sections 102(a), (b), and (e) based on the '225 patent's earliest possible priority date of September 7, 2006.

Abbondanza was filed on February 4, 1993, and issued on June 18, 1996. Abbondanza therefore likewise qualifies as prior art under Sections 102(a), (b), and (e) based on the '225 patent's earliest possible priority date of September 7, 2006.

Pyles was filed on June 2, 2004, and published on December 8, 2005. Pyles therefore qualified as prior art under Section 102(a) and (e) based on the '225 patent's earliest possible priority date of September 7, 2006.

| Ground | 35 U.S.C. § | Claims                        | Prior Art References |
|--------|-------------|-------------------------------|----------------------|
| 1      | 102         | 1-8, 10, 12-17, and 19        | Acres                |
| 2      | 103(a)      | 1-8, 10, 12-17, and 19        | Acres                |
| 3      | 103(a)      | 9 and 18                      | Acres, Pyles         |
| 4      | 103(a)      | 1-5, 7, 10, 12-14, 16, and 19 | Abbondanza           |
| 5      | 103(a)      | 9 and 18                      | Abbondanza, Pyles    |

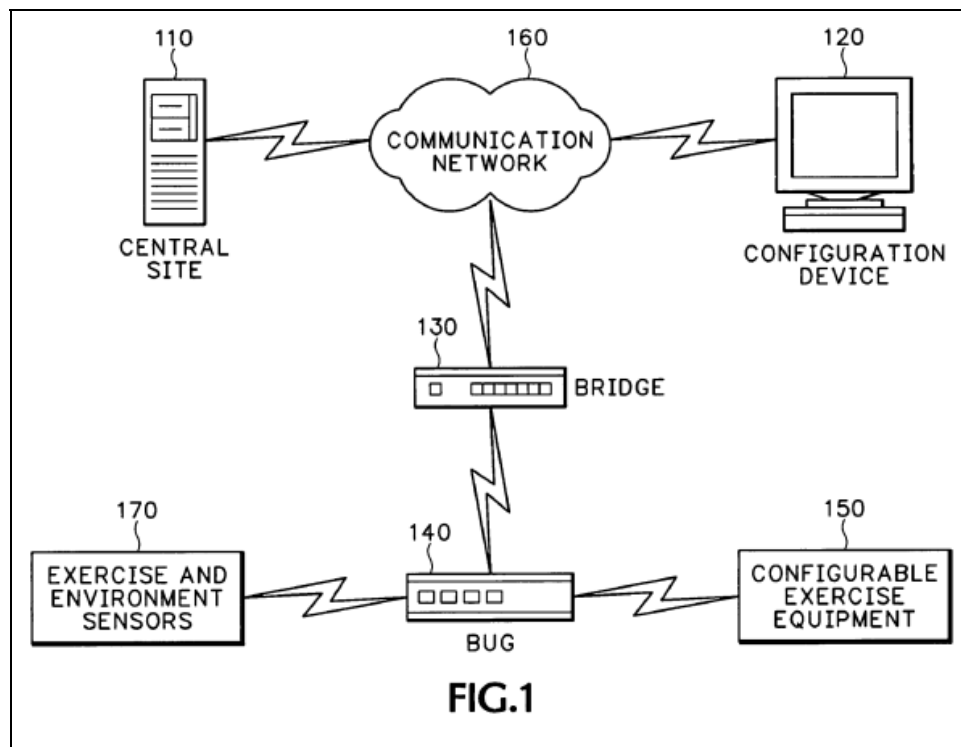
## **VII. GROUND 1: CLAIMS 1-8, 10, 12-17, AND 19 ARE ANTICIPATED BY ACRES**

### **A. Summary of Acres**

Acres (Exhibit 1002) discloses “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.) In particular, embodiments of the invention described in Acres “automatically configure compatible exercise equipment, and automatically increase or decrease its exertion settings to bring the exerciser’s heart rate to within the range of the previously established exertion goal . . . .” (*Id.* at [0012].)

Figure 1 of Acres illustrates an embodiment of the disclosed invention:



(*Id.* at Fig. 1.)

Acres discloses a portable electronic device called a “Bug” that “transmits signals to [an] exercise machine to increase or decrease the exercise workload in accordance with the dictates of [an] exercise program it carries and the current heart rate of the exerciser.” (*Id.* at [0029].) The Bug determines the exerciser’s

current heartrate using a “self-contained or external heart rate sensor.” (*Id.* at [0058].)

**B. Method Claims 1-8 and 10**

**1. Claim 1**

**a. Element 1[pre]**

*A method comprising:*

If limiting, Acres discloses a method for transmitting from a sensor device to a piece of workout equipment data for operating a piece of workout equipment and activity data corresponding to an activity performed by a user as described in claim 1. (*See infra* §§ VII.B.1.b - VII.B.1.d.)

**b. Element 1[a]**

*establishing, by a sensor device, data communication with a piece of workout equipment;*

Acres discloses establishing, by a sensor device, data communication with a piece of workout equipment. Specifically, Acres’s Bug is a sensor device, and it establishes a data communication with exercise (workout) equipment.

Acres’s Bug and its associated sensors are together a sensor device. For example, Acres discloses that the Bug “can be configured with a self-contained or external heart rate sensor.” (Ex. 1003. at [0058]; *see also id.* at [0025] (“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.”).) Acres explains that

the Bug can also be configured use sensors to monitor other parameters such as “exerciser body temperature and respiration rate, air temperature and humidity, speed, distance and direction traveled.” (*Id.* at [0068]; *see also id.* at [0025] (Bug may communicate with “pedometer, compass or GPS units” and “physical monitoring devices” that measure “body temperature, respiration rate, air temperature and humidity” and “pedometer, compass or GPS units”); *id.* at [0061] (Bug may include a “body temperature sensor,” “exercise respiration rate sensor,” and a “set of sensors . . . for detecting environmental factors”).)

Acres’s exercise equipment is workout equipment. Acres’s exercise equipment includes “treadmills, elliptical trainers, stair machines, free weights, weight machines, stationary bicycles, rowing machines and other such devices found in the home and in athletic facilities.” (*Id.* at [0028].)

Acres’s Bug establishes a data communication with the exercise equipment. For example, Acres discloses that the Bug “communicates through a wired or wireless connection to a unit of compatible exercise equipment.” (*Id.* at [0030]; *see also id.* at [0029] (“Once associated, the Bug transmits signals to the exercise machine . . . .”); *id.* at [0100] (“Bug 602 automatically establishes a communication session with each compatible exercise machine 150 within its range.”).)

**c. Element 1[b]**

*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*

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. For example, Acres discloses that the Bug may send commands to a treadmill or other exercise machine to adjust parameters like speed or incline:

At the most elementary level, the Bug 601 takes control of compatible exercise machine parameters that determine exertion level. When the Bug. 601 is used with a compatible treadmill 150, the treadmill speed is controlled by the Bug's own processor 420. If the Bug. 601 senses, based upon the exerciser's heart rate, that exertion level should increase because the exerciser's heart rate is below the target, the Bug. 601 sends a command to the treadmill 150 telling it to increase speed by a specific amount. . . .

Alternatively, the Bug. 601 can control both speed and incline to match the fitness goals of the exerciser. The Bug. 601 can be configured to control any number of machine parameters.

(Ex. 1002 at [0089]-[0096]; *see also id.* at [0029] (Bug “transmits signals to [an] exercise machine to increase or decrease the exercise workload”).)

The '225 patent's specification and dependent claims confirms Acres's commands that adjust parameters of an exercise machine are “data for operating a first function of the piece of workout equipment.” The '225 patent explains that

portable equipment may transfer data to exercise equipment that “to make the workout machine settings correspond to a workout . . . .” (’225 patent at 19:41-46.) These settings include, for example, “treadmill speed or incline settings . . . .” (*Id.* at 19:54-55.) The ’225 patent’s dependent claims confirm that these settings are “functions of the piece of workout equipment.” Specifically, dependent claim 3 claims the exemplary function of “adjusting one or more settings of the piece of workout equipment to correspond to predetermined workout.” (*Id.* at claim 3.) And dependent claims 7 and 8 limit these settings to “speed” and “incline,” respectively. (*Id.* at claims 7, 8.) That Acres discloses these same functions confirms that Acres discloses transmitting, by the sensor device (the Bug) and to the piece of workout equipment, a first set of data for operating a first function of the piece of workout equipment.

**d. Element 1[c]**

*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.*

Acres discloses “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.” For example,

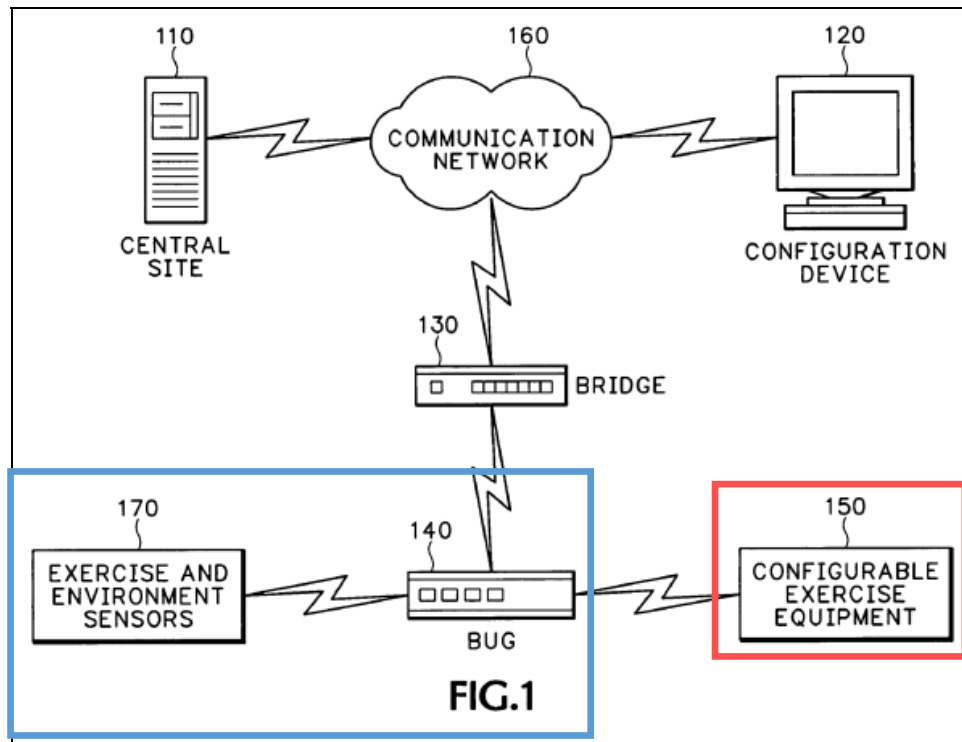
Acres discloses that heart rate data “is optionally displayed . . . through the treadmill . . . .” (Ex. 1002 at [0091].)

The Bug transmits this heart rate data to the treadmill. In every embodiment before it discloses that the treadmill may display heart rate data, Acres discloses that the Bug has or is in communication with a heart rate monitor (*See id.* at [0025], [0058]). Acres does not disclose an embodiment in which the heart rate sensor may be built into the exercise equipment until paragraph [0107]. The disclosure in paragraph [0091] therefore teaches that the Bug transmits heart rate data to the treadmill for optional display. (Ex. 1005, ¶¶ 49-51.)

## **2. Claim 2**

*The method of claim 1, wherein the sensor device is external to the piece of work out equipment.*

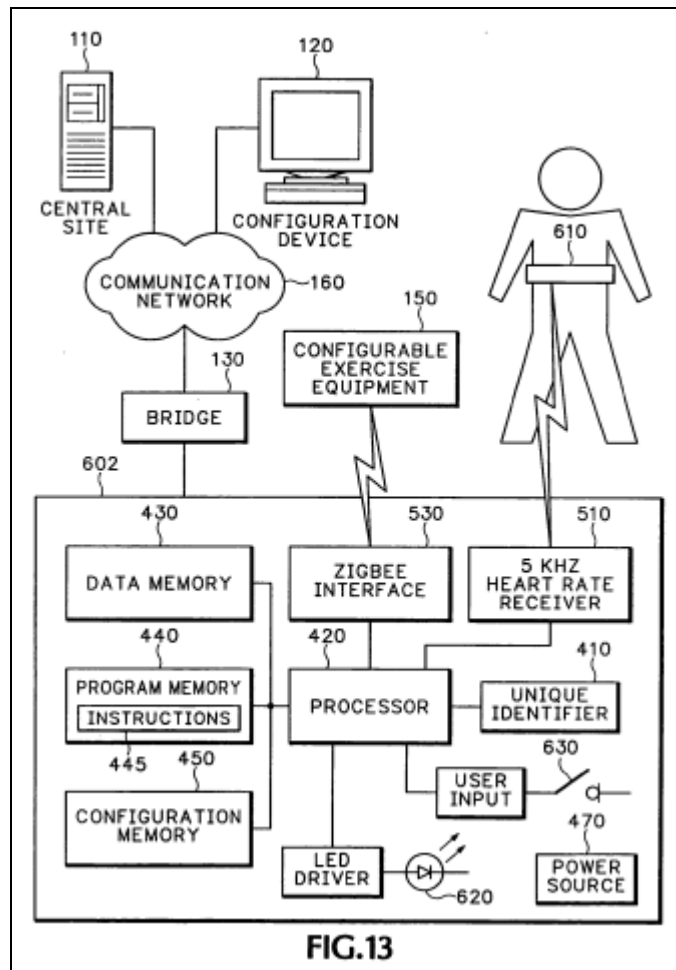
Acres discloses the additional limitation of claim 2. Specifically, Acres discloses that the Bug is external to the piece of workout equipment. For example, Figure 1 shows the Bug and its associated sensors are external to the exercise equipment:



(Ex. 1002 at Fig. 1 (annotated).)

Acres further confirms that the Bug and its associated sensors are external to the exercise equipment by explaining that the Bug “can be configured with a self-contained or external heart rate sensor” (*id.* at [0058]) and is “worn on the clothing or held in a pocket of the person exercising” (*id.* at [0047]; *see also* [0027] (“exerciser also benefits by wearing the Bug outside of exercise sessions”)).

Acres’s Figures 12-14 further confirm that Acres discloses the sensor device is external to the piece of work out equipment. For example, Figure 13 shows both the Bug and associated heart rate sensor (items 602 and 610, respectively) are external to the configurable exercise equipment (item 150):



(*Id.* at Fig. 13.) Figures 12 and 14 show similar configurations. (*See id.* at Figs. 12, 14.) In reference to Figure 13, Acres explains that “Bug 602 automatically establishes a communication session with each compatible exercise machine 150 within its range.” (*Id.* at [0100].) That the Bug may communicate with multiple exercise machines confirms the Bug is external to at least one of these machines.

### 3. Claim 3

*The method of claim 1, wherein the first function comprises adjusting one or more settings of the piece of workout equipment to correspond to predetermined workout.*

Acres discloses the additional limitation of claim 3. For example, Acres discloses that 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].) The Bug therefore “adjusts one or more settings of the piece of workout equipment” by transmitting signals to the exercise machine to control increase or decrease exercise workload. The Bug adjusts these settings “to correspond to a predetermined workout” by controlling the workload in accordance with an exercise program it carries.

As a further example, Acres discloses that “the Bug guides the exercise equipment’s workload settings to keep the exerciser’s heart rate within a desired range.” (*Id.* at [0030]; *see also* [0089]-[0090] (disclosing that the Bug controls treadmill speed based on target heart rate), [0094] (disclosing that the Bug controls exercise equipment based on target heart rates over a given warm-up duration).) Again, the Bug therefore “adjusts one or more settings of the piece of workout equipment” by controlling the exercise equipment’s workload. Here, the Bug adjusts these settings “to correspond to a predetermined workout” by “keep[ing] the exercises heartrate within a desired range.

#### **4. Claim 4**

*The method of claim 1, wherein the first set of activity data corresponding to the activity performed by the user is transmitted in real-time.*

Acres discloses the additional limitation of claim 4. As discussed above in relation element 1[C] (Section VII.B.1.d), Acres discloses that the heart rate data collected by the Bug and its corresponding sensors “is optionally displayed . . . through the treadmill. . . if the user wishes to monitor it.” (Ex. 1002 at [0091].) The present tense to explain that heart rate information “is displayed” conveys that the heart rate data is conveyed in real time. (Ex. 1005, ¶¶ 49-51.) Likewise, the heart rate data must be transmitted in real time to allow the user to monitor it. (*Id.*)

## **5. Claim 5**

*The method of claim 3, wherein adjusting the one or more settings of the piece of workout equipment comprises one of: increasing a time period associated with at least one workout activity in a workout routine; or decreasing the time period associated with at least one workout activity in the workout routine.*

Acres renders discloses the additional limitation of claim 5. For example, Acres recites functionality that would enable a user to terminate exercise during a workout program. Acres discloses that “[t]he exerciser can, at any time, override the Bug’s control of the exercise machine and modify the intensity of the workout, including terminating the exercise session.” (Ex. 1002 at [0029].) Acres further discloses that one of the commands the Bug may send is “stop exercise” (*id.* at [0048]) and that the Bug may include “user-actuated inputs” to “affect user instructions” (*id.* at [0062]). Stopping an exercise session decreases the time period for at least one workout activity in a workout routine.

**6. Claim 6**

*The method of claim 3, wherein adjusting one or more settings of the piece of workout equipment comprises one of: increasing a resistance level of the piece of workout equipment for at least one workout activity in a workout routine; or decreasing the resistance level of the piece of workout equipment for at least one workout activity in the workout routine.*

Acres discloses the additional limitation of claim 6. For example, Acres discloses that 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].)

Acres further discloses that the signal is “a signal for the exercise device to increase resistance.” (*Id.* at Claim 30.)

**7. Claim 7**

*The method of claim 3, wherein adjusting one or more settings of the piece of workout equipment comprises one of: increasing a workout speed of the piece of workout equipment; or decreasing the workout speed of the piece of workout equipment.*

Acres discloses the additional limitation in claim 7. For example, Acres discloses that the Bug may send a command to a treadmill to increase or decrease its speed:

When the Bug 601 is used with a compatible treadmill 150, the treadmill speed is controlled by the Bug’s own processor 420. If the Bug 601 senses, based upon the exerciser’s heart rate, that exertion level should increase because the exerciser’s heart rate is below the target, the Bug 601 sends a command to the treadmill 150 telling it to increase speed by a specific amount. . . .

If the heart rate is above target, the treadmill 150 is instructed to slow by a given amount. When the exercise period ends, the treadmill 150 is instructed to slow and stop

(Ex. 1002 at [0089]-[0090].) Acres therefore discloses the method of claim 3, wherein adjusting one or more settings of the piece of workout equipment comprises one of: increasing a workout speed of the piece of workout equipment; or decreasing the workout speed of the piece of workout equipment.

#### **8. Claim 8**

*The method of claim 3, wherein adjusting one or more settings of the piece of workout equipment comprises one of: increasing an incline level of the piece of workout equipment; or decreasing the incline level of the piece of workout equipment.*

Acres discloses the additional limitation in claim 7. Acres explains that “the Bug 601 can control both speed and incline to match the fitness goals of the exerciser.” (*Id.* at [0096], Claim 31.)

#### **9. Claim 10**

*The method of claim 3, wherein adjusting one or more settings of the piece of workout equipment further comprises: establishing a target activity goal.*

Acres discloses the additional limitation in claim 10. For example, Acres discloses a “current exertion level is compared against a previously calculated exertion goal and the user is instructed to increase, decrease, or maintain her exertion level.” (Ex. 1002 at [0012].) The “previously calculated exertion goal” is

an established a target activity goal. Acres also explains that goals are entered on the Bug. (*Id.* at [0030].)

Additionally, Acres discloses that “[a] typical warm-up period is fifteen minutes during which the exerciser’s heart rate should gradually rise from its normal rate to the target rate.” (*Id.* at [0092].) Acres also discloses that “the Bug 601 and exercise machine 150 work in tandem to implement a cool-down period in which exertion levels are slowly reduced until the exerciser reaches a desired minimum rate at the end of the designated cool-down time.” (*Id.* at [0093].)

Acres’s warm-up and cool-down periods are “target activity goal[s].” The ’225 patent specification never defines “target activity goal.” It does, however, explain that “target distance (or other overall time length or duration) settings” may be used to control a workout. (’225 patent at 19:47-53.) A target duration, such as warm-up and cool-down target durations (or associated target heart rates), is a “target activity goal” within the context of the ’225 patent. (Ex. 1005, ¶¶ 52-55.) Acres’s warm-up and cool-down periods are therefore “target activity goal[s].”

**C. System Claims 12-17 and 19**

**1. Claim 12**

**a. Element 12[pre]**

*An athletic activity tracking system comprising:*

Acres discloses an athletic activity tracking system. For example, Acres discloses a “Bug” that is designed to monitor and record one or more parameters about an exerciser. (Ex. 1002 at [0047].) These parameters include, for example, heart rate and distance traveled. (*Id.* at [0025].) Acres also discloses that information about the user may be stored in an exercise log. (*Id.* at [0035].) Finally, Acres discloses that the Bug may send to a piece of exercise equipment commands to control piece of exercise equipment’s operation (*see id.* at [0088]-[0089]) and data for display on the exercise equipment (*id.* at [0091]).

**b. Element 12[a]**

*a piece of workout equipment comprising a display device; and*

Acres discloses a piece of workout equipment comprising a display device. For example, Acres discloses that heart rate information transmitted from the Bug to the treadmill “is optionally displayed . . . through the treadmill . . . .” (Ex. 1002 at [0091].) A POSITA would have understood that to display the heart rate data, the treadmill must have a display device. (Ex. 1005, ¶¶ at 49-51.) Acres therefore discloses a piece of workout equipment comprising a display device.

**c. Element 12[b]**

*a first sensor to measure an athletic performance of a user,*

Acres discloses a sensor to measure an athletic performance of a user. For example, Acres discloses that “[t]he Bug is capable of wirelessly communicating with an external heart rate monitor or the Bug can have a heart rate monitor

integrated within itself.” (Ex. 1002 at [0025].) The Bug may also communicate with a pedometer and other physical monitoring devices, including devices for measuring body temperature and respiration rate. (*Id.*) Through these sensors, the Bug is capable of monitoring exercise performance. (*See id.* at [0025], [0028], [0047], [0068].)

**d. Elements 12[c][i]-[iii]**

*[c] wherein the first sensor is programmed and adapted to:*

*[i] establish data communication with the piece of workout equipment;*

*[ii] transmit, to the piece of workout equipment, a first set of data for operating a first function of the piece of workout equipment; and*

*[iii] transmit, 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, via the display device, the first set of activity data.*

Each limitation added by elements claims 12[c][i]-[iii] is identical to one of the limitations discussed above. For the same reasons, Acres discloses these limitations and meets claims 12[c][i]-[iii].

Specifically:

- element 12[c][i] adds the same limitation as element 1[a];
- element 12[c][ii] adds the same limitation as element 1[b]; and
- element 12[c][iii] adds the same limitation as element 1[c].

## **2. Claims 13-17 and 19**

Each limitation added by dependent claims 13-17 and 19 is identical to one of the limitations discussed above. For the same reasons, Acres discloses these limitations and meets claims 13-17 and 19.

Specifically:

- claim 13 adds the same limitations as claim 3;
- claim 14 adds the same limitations as claim 5
- claim 15 adds the same limitations as claim 6;
- claim 16 adds the same limitations as claim 7;
- claim 17 adds the same limitations as claim 8; and
- claim 19 adds the same limitations as claim 10.

## **VIII. GROUND 2: CLAIMS 1-8, 10, 12-17, AND 19 ARE OBVIOUS OVER ACRES**

### **A. Claims 1-4, 6-8, 12, 13, and 15-17**

As described above, Acres anticipates claims 1-4, 7, 12, 13, and 16 of the '225 patent. For the same reasons, Acres renders these claims obvious. *See, e.g., Realtime Data, LLC v. Iancu*, 912 F.3d 1368, 1373 (Fed. Cir. 2019) (“[I]t is well settled that a disclosure that anticipates under § 102 also renders the claim invalid under § 103, for anticipation is the epitome of obviousness.” (internal quotations and citation omitted)).

**B. Claim 5**

*The method of claim 3, wherein adjusting the one or more settings of the piece of workout equipment comprises one of: increasing a time period associated with at least one workout activity in a workout routine; or decreasing the time period associated with at least one workout activity in the workout routine.*

To the extent that Patent Owner argues that Acres does not expressly disclose this limitation, Acres renders obvious the additional limitation of claim 5. Acres explains that “Bug 601 can be configured to control any number of machine parameters.” (*Id.* at [0096].) For example, Acres recites functionality that would enable a user to terminate exercise during a workout program. Acres discloses that “[t]he exerciser can, at any time, override the Bug’s control of the exercise machine and modify the intensity of the workout, including terminating the exercise session.” (Ex. 1002 at [0029].) Acres further discloses that one of the commands the Bug may send is “stop exercise” (*id.* at [0048]) and that the Bug may include “user-actuated inputs” to “affect user instructions” (*id.* at [0062]). These user-actuated inputs may be programmed to accomplish multiple functions. (*Id.* at [0063].)

To the extent that Patent Owner argues that the above disclosures do not disclose the additional limitations of claim 5, it would have been obvious to a POSITA that one of the functions that the user-actuated input could be programmed to send is the Bugs “stop exercise” command or other commands that

affect the duration of the exercise. (Ex. 1005, ¶ 62.) A “stop exercise” command, if sent while the Bug is controlling exercise workload “in accordance with the dictates of [an] exercise program” (*see* Ex. 1002 at [0029]), would decrease the time period associated with a workout activity in a workout routine. And Acres already discloses that the Bug can be adjusted to handle a user defined exercise duration. (*Id.* at [0092] (“Of course, if other warm-up durations are desired, parameters within the bug 601 and/or central site 110 can be modified to accommodate.”).) A POSITA would have recognized from this disclosure that Acres is modifiable to have the Bug modify warm-up or cool-down periods (or the durations of other parts of an exercise sessions) based on the needs of the user. (Ex. 1005, ¶¶ 62-65.)

A POSITA would have been motivated to make these modifications because it would be readily recognized users would benefit from the additional functionality present in the Bug. (Ex. 1005, ¶ 62.) Acres further teaches that the ability to set exercise duration is part of achieving an exercise goal. (*Id.*, ¶ 63 *citing* Ex. 1002 at [0004].) Additionally, such modifications would have been well within the abilities of the POSITA, requiring basic programming that uses the other functionality already present in the Bug. (ex. 1005, ¶ 63.)

### **C. Claim 10**

*The method of claim 3, wherein adjusting one or more settings of the piece of workout equipment further comprises: establishing a target activity goal.*

To the extent that Patent Owner argues that Acres does not expressly disclose this limitation, Acres renders obvious the additional limitation in claim 10. For example, Acres discloses that “[a] typical warm-up period is fifteen minutes during which the exerciser’s heart rate should gradually rise from its normal rate to the target rate.” (Ex. 1002 at [0092].) Acres also discloses that “the Bug 601 and exercise machine 150 work in tandem to implement a cool-down period in which exertion levels are slowly reduced until the exerciser reaches a desired minimum rate at the end of the designated cool-down time.” (*Id.* at [0093].)

Acres’s warm-up and cool-down periods are “target activity goal[s].” The ’225 patent specification never defines “target activity goal.” It does, however, explain that “target distance (or other overall time length or duration) settings” may be used to control a workout. (’225 patent at 19:47-53.) A POSITA would have understood that a target duration setting is a “target activity goal” and would further understand that Acres’s warm-up and cool-down periods target duration settings. (Ex. 1005, ¶ 66.) A POSITA would have therefore understood that Acres’s warm-up and cool-down periods are “target activity goal[s]” and would have found it obvious to include establishing a target activity goal in Acres for the reasons explained above for claim 5. (*Id.*)

**D. Claim 14**

The limitation added by dependent claim 14 is identical to the limitation added by claim 5. For the same reasons disclosed above in Section VIII.B, Acres renders obvious claim 14.

**A. Claim 19**

The limitation added by dependent claim 19 is identical to the limitation added by claim 10. For the same reasons disclosed above in Section VIII.C, Acres renders obvious claim 19.

**IX. GROUND 3: CLAIMS 9 AND 18 ARE OBVIOUS OVER ACRES IN VIEW OF PYLES**

**A. Summary of Pyles**

Pyles (Exhibit 1004) discloses “an exercise apparatus for use in accurately and automatically tracking number of steps taken by a user both on and off of an exercise machine.” (Ex. 1004 at Abstract) The apparatus includes a step counter in communication with a console of an exercise machine. (*Id.* at [0029].) The exercise machine may be a treadmill. (*Id.* at [0032], Figs. 2, 3.) The step counter communicates the number of steps taken by the user to the console. (*Id.* at [0029].) The console includes a processor to perform calculations on the step count data it receives, including calculating progress toward a goal number of steps. (*Id.* at [0038]-[0039].) It also includes a memory means that may store historical data. (*Id.*)

**B. 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.*

Pyles discloses the additional limitation of claim 9. For example, Pyles discloses a step counter that communicates “a unique user identification (or, user ID)” to a treadmill’s console, which has a memory means that stores “user-specific historical data.” (See Ex. 1004 at [0047]-[0050].) This enables the user to later access and display that historical data, track his or her performance over time, and calculate cumulative totals or average daily measurements. (*Id.* at [0047]). And because each user has a unique user ID, multiple users can use the system to track their own specific data in exercise logs. (See *id.* at [0047], [0050].) A POSITA would have understood that the workout equipment must associate activity data stored in the memory means with a user to enable the historical tracking disclosed by Pyles. (Ex. 1005, ¶¶ 58-60.) Pyles therefore discloses the additional limitation of claim 9: transmitting user identification information from a sensor device to a piece of workout equipment and associating activity data stored at the piece of workout equipment with the user.

As another example of associating data stored at the piece of workout equipment with a user, Pyles discloses a scenario in which the user would start his or her workout on a treadmill and finish the workout off the machine. Pyles

explains that in such a scenario, the user would initiate communication between the step counter and console at the end of the day, so that the so the day's progress could be recorded in the memory means of the console. (Ex. 1004 at [0063].) A POSITA would have understood that to add steps a user performs off the machine to steps he or she performed and recorded on the machine earlier in the day, the machine must associate the steps stored at the machine with the user. (Ex. 1005, ¶ 61.) This further confirms that Pyles discloses the additional limitation of claim 9.

**C. Claim 18**

Additionally, the combination of Acres and Pyles renders obvious claim 18 for the same reasons the combination renders obvious claim 9.

**D. Motivation to Combine Acres with Pyles**

A POSITA would have been motivated to modify Acres to include Pyles's storage of user-specific historical data at an exercise machine. This motivation arises from the references' similar teachings regarding storage of historical data, the easy combination of the references given their similar components, and the benefits that would arise from combining the references.

The references' similar teachings regarding the storage of user-specific historical data would motivate a POSITA to combine the references. (Ex. 1005, ¶ 72.) Acres teaches the storage of historical data at a central site. (*See* Ex. 1002 at [0032]-[0045].) This central site "maintains an account for each individual

exerciser.” (*Id.* at [0035].) The account includes information about the user, including an “exercise log.” (*Id.*) Acres states that “[f]unctions illustrated within one particular component may be performed by other components in the system.” (*Id.* at [0108].) While a POSITA would have recognized the design choice of moving this exercise log from the central site into the treadmill disclosed in Acres based on this disclosure, Pyles expressly teaches this design choice. (Ex. 1004 at [0050], [0052]; Ex. 1005, ¶¶ 68-69.) Pyles explains that a health-club version system may store data in a remote memory means, such as one associated with a website (Ex. 1004 at [0052], [0054], [0065]), whereas a home version of the system would store data in the console at the exercise machine (*id.* at [0048], [0054]). A POSITA would have recognized that Pyles’s home version offers a simplified structure by reducing the number of separate components and eliminates the need to transfer activity data over an internet connection. (Ex. 1005, ¶¶ 72-73.) A POSITA have would therefore been motivated to modify Acres to obtain these benefits.

Furthermore, as a POSITA would have understood that Acres would have been easily modified to store user-specific historical data at its disclosed treadmill as taught in Pyles. Acres and Pyles are in the same field of invention: exercise monitoring devices. (*Compare* Ex. 1002 at [0047], *with*, Ex. 1004 at [0005].) They both teach the use of sensors in communication with treadmills. (*Compare*

Ex. 1002 at [0088]-[0089], *with*, Ex. 1004 at [0032]-[0033].) And they both teach the storage of user data in exercise logs. (*Compare* Ex. 1002 at [0035], *with*, Ex. 1004 at [0047].) Given the similarities between Acres and Pyles, a POSITA would have understood that Acres could be easily modified to incorporate the teachings of Pyles. (Ex. 1005, ¶ 70.)

Finally, a POSITA would have been motivated to combine the references given the benefit that would arise from doing so. For example, a POSITA would have recognized that storing an exercise log at an exercise machine as taught in Pyles rather than at a central site as taught in Acres would enable a POSITA to design a system that requires fewer separate components. A POSITA would have been motivated to design such a system because doing so would be simpler and less expensive than designing a system that integrates with a central site. (Ex. 1005, ¶¶ 72-73.) Moreover, such a system would be less expensive to operate as it would not require maintenance of a central site. (*Id.*) Finally, such a system would expand customer base by appealing to customers who do not have consistent access to the internet. (*Id.*)

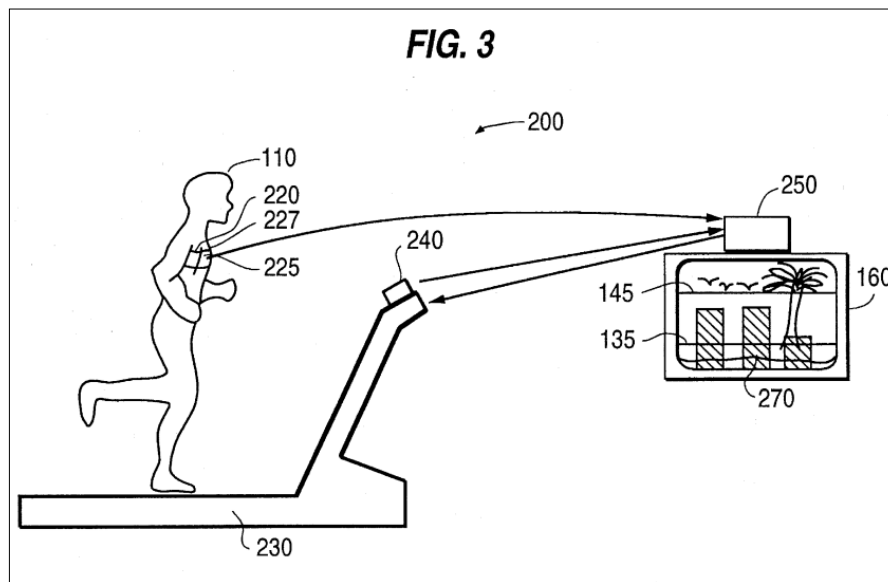
For at least these reasons, a POSITA would have been motivated to combine Acres and Pyles and would have had a reasonable expectation of success in doing so.

**X. GROUND 4: CLAIMS 1-5, 7, 10, 12-14, 16, AND 19 ARE OBVIOUS OVER ABBONDANZA**

**A. Summary of the Abbondanza**

Abbondanza (Ex. 1003) discloses “a pulse controlled exercise system . . . which incorporates an exercise device, a monitor capable of displaying images formed from television signals, a pulse rate sensor . . . and a controller.” (Ex. 1003 at Abstract.) Abbondanza’s controller “is used to control the exercise device’s speed . . . and to cause the pulse rate of the user to be displayed on the monitor.” (*Id.*)

Figure 3 of Abbondanza illustrates an embodiment of the disclosed invention:



(*Id.* at Fig. 3.)

Abbondanza discloses that base unit and an associated pulse rate sensor work together to control the speed of a treadmill. Specifically, the base unit receives a user's pulse rate from a pulse rate sensor (*id.* at 10:62-63) and then “determines if the user's pulse rate is within that user's target heart rate range and instructs treadmill device 230 to either speed-up or slow-down ultimately to cause the user to either work harder . . . or work softer . . . .” (*id.* at 11:17-22.)

Abbondanza further discloses that the base unit's controller causes the user's pulse rate to be displayed on the monitor. (*Id.* at 11:22-24.)

**B. Method Claims 1-5, 7, 10**

**1. Claim 1**

**a. Element 1[pre]**

*A method comprising:*

Abbondanza discloses a method for transmitting from a sensor device to a piece of workout equipment data for operating a piece of workout equipment and activity data corresponding to an activity performed by a user as described in claim

1. For example, Abbondanza discloses that base unit and an associated pulse rate sensor work together to control the speed of a treadmill. The base unit receives a user's pulse rate from a pulse rate sensor (Ex. 1003 at 10:62-63.) and then “determines if the user's pulse rate is within that user's target heart rate range and instructs treadmill device 230 to either speed-up or slow-down ultimately to cause the user to either work harder . . . or work softer . . . .” (*id.* at 11:17-22.) The base

unit also causes the user's pulse rate to be displayed on a monitor. (*Id.* at 11:22-24.)

**b. Element 1[a]**

*establishing, by a sensor device, data communication with a piece of workout equipment;*

Abbondanza discloses establishing, by a sensor device, data communication with a piece of workout equipment. Specifically, Abbondanza's base unit and pulse rate sensor work together as a sensor device that establishes a data communication with a treadmill.

Abbondanza's base unit and pulse rate sensor are together a sensor device. For example, Abbondanza discloses that "[p]ulse rate sensor 225 senses user 110's pulse rate and infrared pulse rate transmitter 227 transmits user 110's pulse rate to base unit 250." (Ex. 1003 at 10:62-64.)

Abbondanza's base unit establishes a data communication with the treadmill. For example, Abbondanza discloses that the base unit "instructs treadmill device 230 to either speed-up or slow-down . . . ." (*Id.* at 11:16-23.) The treadmill receives these instructions from the base unit through a receiver maintained in a control center mounted on the treadmill. (*Id.* at 10:65-11:10.) A POSITA would have understood that to send instructions to the treadmill, the base unit must establish a data communication with the treadmill. 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.

**c. Element 1[b]**

*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*

Abbondanza 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. For example, Abbondanza discloses that the base “instructs treadmill device 230 to either speed-up or slow-down . . . .” (Ex. 1003 at 11:16-23.) The treadmill receives these instructions from the base unit through a receiver maintained in a control center mounted on the treadmill. (*Id.* at 10:65-11:10.) These instructions are a “set of data.” (Ex. 1005, ¶ 57.) And the ’225 patent confirms that adjusting the speed of a treadmill is “operating a first function of the piece of workout equipment.” (*See* ’225 patent at 19:47-55 (including “treadmill speed” amount the types of workout instructions used to control a piece of workout equipment”), claim 7 (specifying that the first function comprises adjusting a setting of the piece of workout equipment and limiting that setting “workout speed”).) Abbondanza therefore discloses transmitting, by a 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.

**d. Element 1[c]**

*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.*

Abbondanza discloses “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.” For example, Abbondanza discloses that the base unit “will cause the user’s pulse rate to be displayed on monitor 160.” (Ex. 1003 at 11:22-24.)

To the extent that Patent Owner argues that this claim requires the workout equipment to display the activity data on the workout equipment itself, a POSITA would have found it obvious to incorporate monitor 160 into the treadmill or to transmit the pulse rate to a different monitor that is part of the treadmill.

Abbondanza discloses that “monitor 160 may be a television set of any number of varieties or may even be a projection television set.” (*Id.* at 11:35-38.)

Abbondanza also incorporates by reference several disclosures in which a monitor is incorporated within a piece of workout equipment. For example, Abbondanza discloses that the exercise cycle of U.S. Patent Number 4,998,710 (the “’710 patent”) “incorporates a custom display panel which is used to report a user’s heart rate as he or she progresses through his or her exercise regimen.” (Ex. 1003 at

3:52-56.) Abbondanza also discloses that “in the SEARS AND ROBUCK catalog is a treadmill/monitor combination in which a user’s pulse rate is monitored and displayed on a custom display device which appears to incorporate a built-in LED or LCD display panel.” (*Id.* at 4:30-34.)

Reviewing these disclosures, a POSITA would have found it obvious to incorporate the monitor 160 within the treadmill disclosed in Abbondanza (*see, e.g.,* Fig. 3) or to transmit pulse rate to a separate monitor that is integrated within the treadmill. (Ex. 1005, ¶¶ 75-76.) Abbondanza therefore discloses “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.”

Alternatively, a POSITA also would have found it obvious to display the user’s pulse rate on the control center display of the exercise system. Abbondanza teaches that display of pulse rate information is useful to users. (Ex. 1003 at Abstract.) It would have been obvious to display the information in multiple locations in case the monitor 160 is not available. (Ex. 1005, ¶ 74.)

## **2. Claim 2**

*The method of claim 1, wherein the sensor device is external to the piece of work out equipment.*

Abbondanza discloses the additional limitation of claim 2. For example, Abbondanza discloses that the user wears the pulse rate sensor on a chest belt (Ex. 1003 at 10:59-64) and that the base unit may “be resting on top of [the] monitor” or “may be located elsewhere” (*id.* at 11:26-28.) Abbondanza confirms that the base unit is external to the exercise equipment by disclosing that locating the base unit’s circuitry within the exercise device is an alternative to the disclosed position of resting on top of the monitor. (*Id.* at 11:28-30.) That Abbondanza’s pulse rate sensor and base unit are external to the exercise equipment confirms Abbondanza discloses the additional limitation of claim 2.

### **3. Claim 3**

*The method of claim 1, wherein the first function comprises adjusting one or more settings of the piece of workout equipment to correspond to predetermined workout.*

Abbondanza discloses the additional limitation of claim 3. For example, Abbondanza discloses that the base unit “determines if the user’s pulse rate is within that user’s target heart rate range and instructs treadmill device 230 to either speed-up or slow-down ultimately to cause the user to work harder . . . or work softer . . . .” (Ex. 1003 at 11:17-25.) The base unit therefore “adjust[s] one or more settings of the piece of workout equipment” by controlling the treadmill’s speed. The base unit adjusts these settings “to correspond to a predetermined workout” by controlling the workload in accordance with a target heart rate.

Abbondanza confirms this target heart rate corresponds to a predetermined workout: “it will be assumed that the user will engage in some form of work out regimen on a treadmill device which will be instructed to either speed up or slow down . . . depending on how the user (i.e. his heart rate) responds to various degrees of resistance.” (*Id.* at 14:14-19.)

#### **4. Claim 4**

*The method of claim 1, wherein the first set of activity data corresponding to the activity performed by the user is transmitted in real-time.*

Abbondanza discloses the additional limitation of claim 4. As discussed above in relation element 1[C] (Section X.B.1.d), Abbondanza’s base unit “will cause the user’s pulse rate to be displayed on monitor 160.” (Ex. 1003 at 11:23-25.) Abbondanza states that an object of the invention is “to provide 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 display ing the user’s pulse rate on a monitor . . . .” (*Id.* at 5:1-6.) That the invention described in Abbondanza is designed to enable to a user to “constantly be aware of his pulse rate” by displaying it on the monitor confirms that the monitor must receive that pulse rate in real time. Abbondanza therefore discloses that the base unit transmits pulse rate to the monitor in real time.

## 5. Claim 5

*The method of claim 3, wherein adjusting the one or more settings of the piece of workout equipment comprises one of: increasing a time period associated with at least one workout activity in a workout routine; or decreasing the time period associated with at least one workout activity in the workout routine.*

Abbondanza discloses the additional limitation of claim 5. For example, Abbondanza discloses a series of conditions that would cause the base unit to terminate an exercise program. Abbondanza's Figures 5a-5h "outline the operation of the computer program that provides much of the functionality of the pulse controlled exercise system . . . ." (Ex. 1003 at 14:20-23.) These operations are carried out by the base unit's microprocessor/microcontroller. (*Id.* at 14:27-30.) One operation the base unit may carry out is to stop the machine and terminate the program. (*Id.* at Fig. 5 (items 704 and 706).) The base unit would carry out this operation if, for example, the exercise machine were paused during a workout regimen or the exercise device's safety key were removed. (*Id.* at 15:16-19, 15:28-33.) By terminating the program in the middle of a workout regimen, the base unit decreases the time period associated with at least one workout activity in a workout routine. Abbondanza therefore discloses the additional limitation of claim 5.

## 6. Claim 7

*The method of claim 3, wherein adjusting one or more settings of the piece of workout equipment comprises one of: increasing a workout speed of the piece of workout equipment; or decreasing the workout speed of the piece of workout equipment.*

Abbondanza discloses the additional limitation in claim 7. For example, Abbondanza discloses that the base unit “determines if the user’s pulse rate is within that user’s target heart rate range and instructs treadmill device 230 to either speed-up or slow-down . . . .” (Ex. 1003 at 11:17-25.)

## **7. Claim 10**

*The method of claim 3, wherein adjusting one or more settings of the piece of workout equipment further comprises: establishing a target activity goal.*

Abbondanza discloses the additional limitation of claim 10. Abbondanza discloses that its base unit “determines if the user’s pulse rate is within that user’s target heart rate range” and “cause[s] the user’s pulse rate to be displayed on [a] monitor.” (Ex. 1003 at 11:16-25.) The base unit also generates images related to the user’s pulse rate. (*Id.* at 11:44-45.) One such image includes two horizontal lines representing the user’s target heart rate range. (*Id.* at 11:40-42.) A POSITA would have understood that to generate an image showing the user’s target heart range on the monitor, the base unit must establish a target heart rate range and transmit it to the monitor. As described above in Section X.B.1.d (addressing Element 1[c]) a POSITA would have further found it obvious to incorporate the monitor within the treadmill or to display heart rate information in the control center display. Abbondanza therefore discloses establishing a target activity goal as recited in claim 10.

**C. System Claims 12-14, 16, and 19**

**1. Claim 12**

**a. Element 12[pre]**

*An athletic activity tracking system comprising:*

Abbondanza discloses an athletic activity tracking system. For example, Abbondanza discloses “a pulse controlled exercise system . . . which incorporates an exercise device, a monitor capable of displaying images formed from television signals, a pulse rate sensor . . . and a controller.” (Ex. 1003 at Abstract.)

Abbondanza’s controller “coupled to the pulse rate sensor” and “is used to control the exercise device’s speed . . . and to cause the pulse rate of the user to be displayed on the monitor.” (*Id.*)

**b. Element 12[a]**

*a piece of workout equipment comprising a display device; and*

Abbondanza discloses or renders obvious a piece of workout equipment comprising a display device. For example, Abbondanza discloses a treadmill and a monitor. (*E.g.*, Ex. 1003 at Fig. 3, 10:56-58, 11:32-34.) Furthermore, Abbondanza also incorporates by reference several disclosures in which a monitor is incorporated within a piece of workout equipment. As explained above in Section X.B.1.d, A POSITA would have found it obvious to incorporate the monitor or one of the cited prior art displays within the treadmill disclosed in Abbondanza

therefore discloses or renders obvious a piece of workout equipment comprising a display device.

**c. Element 12[b]**

*a first sensor to measure an athletic performance of a user,*

Abbondanza discloses a sensor to measure an athletic performance of a user. For example, Abbondanza discloses For example, Abbondanza discloses that “pulse rate sensor 225 senses user 110’s pulse rate and infrared pulse rate transmitter 227 transmits user 110’s pulse rate to base unit 250.” (Ex. 1003 at 10:62-64.) Using the pulse rate sensor, the base unit can measure the athletic performance of the user, for example, by determining whether the user’s pulse rate is within that user’s target heart rate range. (*Id.* at 11:17-18.)

**d. Elements 12[c][i]-[iii]**

*[c] wherein the first sensor is programmed and adapted to:*

*[i] establish data communication with the piece of workout equipment;*

*[ii] transmit, to the piece of workout equipment, a first set of data for operating a first function of the piece of workout equipment; and*

*[iii] transmit, 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, via the display device, the first set of activity data.*

Each limitation added by elements claims 12[c][i]-[iii] is identical to one of the limitations discussed above. For the same reasons, Acres discloses these limitations and meets claims 12[c][i]-[iii].

Specifically:

- element 12[c][i] adds the same limitation as element 1[a];
- element 12[c][ii] adds the same limitation as element 1[b]; and
- element 12[c][iii] adds the same limitation as element 1[c].

## **2. Claims 13, 14, 16 and 19**

Each limitation added by dependent claims 13, 14, 16, and 19 is identical to one of the limitations discussed above in Section X.B. For the same reasons, Abbondanza discloses these limitations and renders obvious claims 13, 14, 16, and 19.

Specifically:

- claim 13 adds the same limitation as claim 3;
- claim 14 adds the same limitation as claim 5;
- claim 16 adds the same limitation as claim 7; and
- claim 19 adds the same limitation as claim 10.

**XI. GROUND 5: CLAIMS 9 AND 18 ARE OBVIOUS OVER ABBONDANZA IN VIEW OF PYLES**

**A. Claims 9 and 18**

Pyles discloses the additional limitations of claims 9 and 18 as explained in Section IX above. The combination of Abbondanza and Pyles thus renders obvious these claims.

**B. Motivation to Combine Abbondanza with Pyles**

A POSITA would have been motivated to modify Abbondanza to include Pyles's storage of user-specific historical data at an exercise machine.

A POSITA would have recognized that Pyles's storage of historical data is a way to further achieve Abbondanza's object of "enhance[ing] exercise results and satisfaction." (*See* Ex. 1003 at 5:52-54.) For example, Abbondanza shows an example of a screen image that would be used to motivate an exerciser to maintain their workout level. (*Id.* at Fig. 7, 18:23-28.) The image uses vertical bars to represent the user's pulse rates at particular points in time during the user's exercise regimen. (*Id.* at Fig. 7, 18:15-17.) A POSITA would have recognized that a natural extension of storing and displaying pulse rates during a user's exercise regimen would be to store and display pulse rates from a user's previous exercise regimen. (Ex. 1005, ¶¶ 78-79.) As Pyles explains, the display of historical data "help[s] motivate and encourage the user to stay with his or her program." (Ex. 1004 at [0064].) A POSITA reviewing Abbondanza would

therefore be motivated to use Pyle's storage and display of historical data as an additional feature to motivate the user.

Furthermore, as a POSITA would have understood that Abbondanza would have been easily modified to store user-specific historical data at its disclosed treadmill as taught in Pyles. Abbondanza and Pyles are both directed to exercise systems. (*Compare* Ex. 1003 at Abstract, *with*, Ex. 1004 at [0005].) They both teach the use of sensor devices in communication with treadmills. (*Compare* Ex. 1003 at 10:62-64, 11:17-25, *with*, Ex. 1004 at [0032]-[0033].) Given the similarities between Acres and Pyles, a POSITA would have understood that Acres could be easily modified to incorporate the teachings of Pyles. (Ex. 1005, ¶¶ 78-79.)

For at least these reasons, a POSITA would have been motivated to combine Abbondanza and Pyles and would have had a reasonable expectation of success in doing so.

## **XII. MANDATORY NOTICES**

### **A. Real Party-in-Interest**

Pursuant to 37 C.F.R. § 42.8(b)(1), the real parties-in-interest in this proceeding are lululemon athletica inc., lululemon athletica canada inc., lululemon usa inc., and Curiouser Products, Inc. Only Petitioner has funded this Petition and has full and exclusive control over this proceeding.

**B. Related Matters**

Pursuant to 37 C.F. R. § 42.8(b)(2), Petitioner identifies *Nike, Inc. v. lululemon athletica inc. et al.*, S.D.N.Y. Case No. 1:22-cv-00082-AJN as a related matter. Patent Owner is asserting the '225 patent against Petitioner in that case.

Pursuant to 37 C.F.R. § 42.104(a), Petitioner certifies that the '225 patent is available for *inter partes* review. Petitioner also certifies that it is not barred or estopped from requesting an *inter partes* review challenging the patent claims on the grounds identified in this Petition.

**C. Lead and Back-Up Counsel and Service Information**

Pursuant to 37 C.F.R. § 42.8(b)(3), Petitioner identifies the following counsel (and a power of attorney accompanies this Petition).

| Lead Counsel for Petitioner                                                                                                                                                                                                                   | Backup Counsel for Petitioner                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Diek O. Van Nort</b><br>Registration No.: 60,777<br><a href="mailto:DVanNort@mofo.com">DVanNort@mofo.com</a><br>MORRISON & FOERSTER LLP<br>425 Market Street<br>San Francisco, CA 94105-2482<br>Tel: (415) 268-6971<br>Fax: (415) 268-7522 | <b>Mehran Arjomand</b><br>Registration No.: 48,231<br><a href="mailto:MArjomand@mofo.com">MArjomand@mofo.com</a><br><b>Alex S. Yap</b><br>Registration No.: 60,609<br><a href="mailto:AYap@mofo.com">AYap@mofo.com</a><br>MORRISON & FOERSTER LLP<br>707 Wilshire Boulevard, Suite 6000<br>Los Angeles, CA 90017-3542<br>Tel.: (213) 892-5200<br>Fax: (213) 892-5454<br><br><b>Forrest McClellen</b><br><a href="mailto:FMcclellen@mofo.com">FMcclellen@mofo.com</a><br>Registration No.: 76,553<br>MORRISON & FOERSTER LLP<br>425 Market Street |

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Pursuant to 37 C.F.R. § 42.8(b)(4), service information for lead and back-up counsel is provided above. Petitioner consents to electronic service by email to [lululemon-Nike-IPR@mofo.com](mailto:lululemon-Nike-IPR@mofo.com).

The USPTO is authorized to charge any required fees, including the fee as set forth in 37 C.F.R. § 42.15(a) and any excess claim fees, to Deposit Account No. **03-1952** referencing docket no. **57931-00000.11**.

### **XIII. CONCLUSION**

Because there is a reasonable likelihood that lululemon will prevail on at least one asserted ground with respect to at least one claim, lululemon requests that the Board institute *inter partes* review of claims 1-10 and 12-19 of the '225 patent.

Dated: January 3, 2023

Respectfully submitted,

/s/ Diek O. Van Nort  
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**Certification of Word Count (37 C.F.R. §42.24)**

I hereby certify that this Petition for *Inter Partes* Review has 9,759 words (as counted by the “Word Count” feature of the Microsoft Word™ word-processing system), exclusive of “a table of contents, a table of authorities, mandatory notices under §42.8, a certificate of service or word count, or appendix of exhibits or claim listing.”

Dated: January 3, 2023

By: /s/ Diek O. Van Nort

Diek O. Van Nort

**Certificate of Service (37 C.F.R. §42.6(e)(4) and 42.205(a))**

I hereby certify that the attached Petition for *Inter Partes* Review and supporting materials were served as of the below date by UPS, on the Patent Owner at the correspondence address indicated for U.S. Patent No. 10,923,225.

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Dated: January 3, 2023

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