

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.

Patent No. 10,923,225

Inter Partes Review No. IPR2023-00424

PETITIONER'S REPLY TO PATENT OWNER RESPONSE

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

Exhibit Description	Exhibit #
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
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**Petitioner's Exhibits 1001 – 1013 were previously filed and are listed again here based on 37 C.F.R. § 42.63.*

*** Petitioner's Exhibits 1014 – 1016 are newly filed.*

Petitioner submits that the challenged claims are unpatentable for the reasons set forth below.

I. CLAIM CONSTRUCTION

Nike has twice asked the Board to rewrite “data.” Nike first proposed “factual information, from which decisions or subsequent actions can be made.” (Patent Owner Preliminary Response (“POPR”) (Paper 10), 18.) This construction was an attempt to get around Acres and Abbondanza that transmit commands/instructions. Nike’s tactic did not go unnoticed. In its Decision on Institution (“DI”), the Board recognized that “Patent Owner offers that meaning in an attempt to distinguish over a ‘command’ action performed in the prior art.” (DI (Paper 11), 9.) Even though the Board found Nike’s construction to be “so restrictive,” it nonetheless tentatively concluded that Nike’s construction did not overcome the art: “it is not immediately clear that such a command or signal is entirely devoid of content recognized as ‘factual information’ so as to be beyond the contours of what a skilled artisan would regard as ‘data.’” (*Id.*, 10.)

Nike has now added “that is sensed or collected” to factual information in a second attempt to get around the art. (Patent Owner Response (“POR”) (Paper 19), 15.) There is no support for Nike’s additional language. As discussed below, the correct construction of data is “information.” And Nike’s construction, beyond the conspicuous importing of claim limitations, is unsupported by the intrinsic record

and extrinsic evidence. In any event, even under Nike's construction, the challenged claims are unpatentable as discussed in Sections II-VI.

A. The Board Should Give “data” Its Ordinary And Customary Meaning

1. The intrinsic record shows that “data” means “information”

a) Claims

The claims here “provide substantial guidance as to the meaning of particular claim terms,” *i.e.*, data. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1314 (Fed. Cir. 2005) (en banc); 37 C.F.R. § 42.100(b). There is nothing before or after “data” in limitation [1B] to limit its scope in the manner Nike urges. Limitation [1B] simply recites that the “data” is for “operating a first function,” without further restraint on scope. (Ex. 1001, 45:12-14; Ex. 1015, ¶7.)

Besides the claim language of the independent claims, the dependent claims provide guidance as to the meaning of “data.” Dependent claims 9 and 18 require “data” comprise user identification “information.” And, consistent with “data” comprising “information” in dependent claims 9 and 18, other dependent claims reflect “data” as information used to increase/decrease workout time, resistance level, workout speed, and incline level. (Ex. 1001, 45:30-63; Ex. 1015, ¶7.) Even Nike frames the purported invention based on “information”: “the ’225 patent improves on the prior art by adapting the performance monitoring systems to ‘send

information to the exercise equipment 604, e.g., for display by the exercise equipment’ and/or to control the system.”¹ (POR, 3 (citing Ex. 1001, 20:1-6).)

b) Specification

The ’225 specification also supports lululemon’s construction of “data” as “information.” It uses “data” and “information” interchangeably, particularly in its Figure 6 discussion upon which Nike relies. (POR, 3-4.)

For example, 19:34-37 provides: “[*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.” (*See also* POR, 4 (citing the same in describing an exemplary embodiment of the purported invention).) Importantly, the paragraph continues to provide numerous examples that interchange “data” with “information.” (Ex. 1015, ¶8.) The first example refers to transmitting “user ID *information*” to the exercise equipment. (Ex. 1001, 19:37-40.) The paragraph then refers to the portable equipment, such as module 502, “*control[ing]* the exercise equipment” and using “*workout information*.” (*Id.*, 19:41-54.) The paragraph ends by describing “data” collected during a workout by module 502 and noting that “[o]f course, *other information* also may be transmitted from the

¹ Any emphasis is added, unless otherwise noted.

user's portable equipment to [exercise equipment] 604.” (*Id.*, 19:61-67; Ex. 1015, ¶8.)

Other specification passages support “data” as “information.” The specification at 17:39-40 refers to “sensed *information*” and, later, 23:8 similarly uses “sensed *data*.” And 21:49-54 provides that “the sensor included with module 502 . . . may be able to detect at least some *data . . . such as information* relating to step count, heart rate, . . . *or other data*.” (Ex. 1015, ¶9.)

To be sure, the specification has passages where “data” and “information” are not presented interchangeably. But those passages do not rise to a level of lexicography that would exclude data as being considered as information. *Thorner v. Sony Comp. Entm’t Amer., LLC*, 669 F.3d 1362, 1365-66 (Fed. Cir. 2012). Nor can Nike argue that the claims should be limited to any given embodiment. That’s verboten and, in any event, the relied-upon Figure 6 embodiment treats “data” and “information” interchangeably as discussed above.

c) Prosecution history

The prosecution history also supports that “data” should be construed as “information” and not be restricted as Nike urges. During prosecution, the Examiner rejected limitation [1B] and mapped “data” to the “machine *control* signal” of Brown. (Ex. 1011, 3.) Rather than challenge the Examiner’s mapping, the Applicant pivoted to distinguishing over Brown’s machine control signal on the

basis of “activity data” in limitation [1C]. (Ex. 1012; Ex. 1015, ¶10.) In doing so, the Applicant acquiesced to reading “data” in limitation [1B] as encompassing control signals (*i.e.*, commands/instructions).

The recent decision *Malvern Panalytical Inc. v. TA Instruments-Waters LLC* is informative. 85 F.4th 1365 (Fed. Cir. 2023). There the issue turned on whether the applicant’s pursuit of a narrow scope of a disputed term constituted prosecution history disclaimer. The Court said no, because the applicant had acquiesced to the Examiner’s broader scope. Specifically, because the applicant abandoned its argument that the disputed term encompassed only a “manual guiding mechanism” after the examiner rejected it, the Court found that “[a] reasonable interpretation of this colloquy with the examiner is that by abandoning its argument . . . [the] applicant acquiesced to the examiner’s views regarding the scope of the [disputed term].” *Malvern Panalytical, Inc.*, 85 F.4th at 1376. Here Nike ***never*** challenged the Examiner’s reading of “data” in limitation [1B] as including control signals (*i.e.*, commands/instructions) and thus acquiesced to the Examiner’s understanding as to the breadth of that limitation. (Ex. 1015, ¶10.)

Nike’s restrictive reading of “data” is further belied by its failure to address the prosecution history. Nike never discusses the prosecution history in its claim construction analysis, even though *Phillips* emphasizes the history’s importance. *Phillips*, 415 F.3d at 1315 (“[t]he best source for understanding a technical term is

the specification from which it arose, informed, as needed, by the *prosecution history*"); *see also* 37 C.F.R. § 42.100(b); (POR, 15). Nike's expert even conceded that he did not recognize the relevant parts of the prosecution history. (Ex. 1014, 105:17-20.) On this basis alone, Nike and its expert's claim construction analysis is deficient.

2. Nothing in the intrinsic record supports Nike's second construction

Nike's second construction—"factual information that is sensed or collected, and from which decisions or subsequent actions can be made"—fares no better than its first construction. Nike's addition of "that is sensed or collected" has no basis in the claim language and, in any event, does nothing, as the prior art already discloses sensing or collecting factual information. (*Infra* §§ II-VI.) And since decisions or subsequent actions *can* be made from commands/instructions, "from which decisions or subsequent actions can be made" is meaningless too.

(Ex. 1015, ¶14.) Even Nike's own expert offered a construction that omitted this second part. (Ex. 1014, 118:14-17 ("Q. But 'data,' in your opinion, means factual information that is sensed or collected, correct? A. Correct.")) Finally, the intrinsic record and extrinsic evidence refute Nike's proposed construction.

a) Claims

The Board should reject Nike's proposed construction based on the language of the claims for multiple reasons.

First, Nike argues that “both types of claimed data—the ‘first set of data’ and the ‘first set of activity data’—are sensed by a ‘*sensor*’” to show support in the claim language for its construction. (POR, 15 (emphasis in original).) Wrong. Claim 1 merely requires that “data” be “transmitted” by a sensor device—not that the transmitted “data” be “sensed or collected” by the sensor device. (Ex. 1001, 45:12-15, 46:13-19; Ex. 1015, ¶12; Ex. 1014, 32:25-33:2, 41:23-42:5.) Thus, Nike’s “claim language” argument is based on non-existent claim limitations.

Second, dependent claims 9 and 18 recite “user identification information.” As a result, independent claims 1 and 12 must be broad enough to encompass “identification information.” *TecSec, Inc. v. Adobe Sys. Inc.*, 658 F. App’x 570, 577 (Fed. Cir. 2016) (“the limitation in the parent [claim] be at least broad enough to encompass the limitation in the dependent claim”). Nike’s expert, however, believed that “factual information” excludes “identification information.” (Ex. 1014, 35:1-36:12 (Nike’s expert testifying that the only data that the sensor device senses or collects is performance data).) Based on that understanding, Nike’s construction of “factual information” for “data” would improperly exclude claims 9 and 18 from the scope of the independent claims. *Trustees of Columbia Univ. in City of New York v. Symantec Corp.*, 811 F.3d 1359, 1370 (Fed. Cir. 2016) (“construing the independent claim to exclude material covered by the dependent claim would be inconsistent”); (Ex. 1015, ¶13).

Finally, the Board should reject Nike proposed construction, because “from which decisions or subsequent actions can be made” is redundant and does nothing to clarify the meaning of “data.” *O2 Micro Int’l Ltd. v. Beyond Innovation Tech. Co.*, 521 F.3d 1351, 1362 (Fed. Cir. 2008) (stating that a purpose of claim construction is “to clarify”). For instance, limitation [1B] already requires a decision or subsequent action (“operating a first function of the piece of workout equipment”) and so does limitation [1C] (“display the first set of activity data”). (Ex. 1015, ¶14; Ex. 1014, 47:21-50:12 (Nike’s expert agreeing that increasing/decreasing speed (claims 3 and 7’s “first function”) and increasing/decrease incline (claims 3 and 8’s “first function”) are subsequent actions), 53:4-11.) The fact that the claims recite such requirements shows that Nike “did not contemplate that the term [“data”] already contained” those requirements. *Phillips*, 415 F.3d at 1324.

b) Specification

Nike conflates “activity data” and “data” for limitation [1B] in its specification cites. (POR, 23 (Nike mapping heart rate to “data” of limitation [1B]).) For example, Nike cites 4:13-17 to contend that “data” is factual information that is sensed or collected. (POR, 17.) However, the passage’s “athletic performance sensing . . . to measure . . . physical and/or physiological data” refers to “activity data.” (*See also id.*, 15-16 (citing Ex. 1001, 5:27-30 for

“describing the ‘output from the sensor’ as including ‘athletic performance data’”); Ex. 1015, ¶¶15-16.)

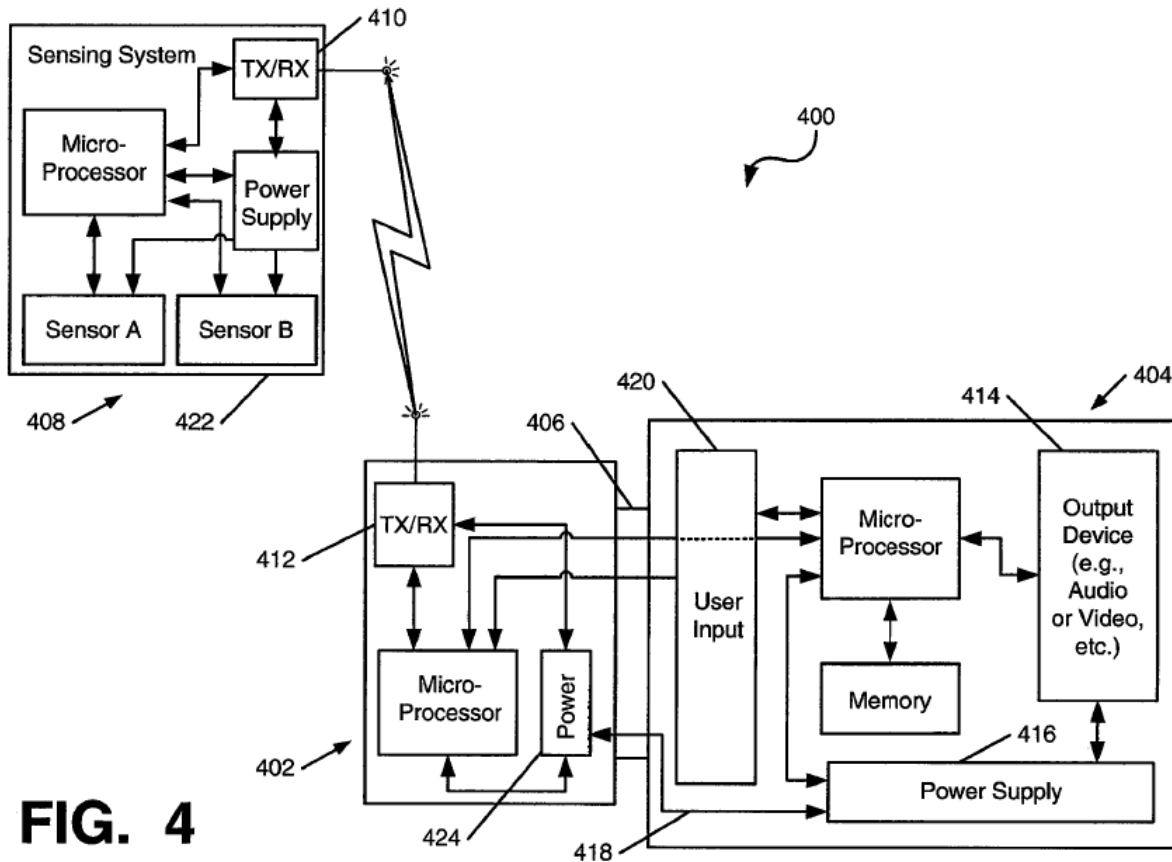
Nike’s other specification citations similarly show this conflation. The specification at 9:31-36 discusses different types of “activity data” such as “step count and data associated with [] activities,” GPS data, force data, jump height data, and “data relating to an athletic performance that may be sensed and/or collected[.]” And 9:43-49 discusses “data relating to an athletic performance.” (Ex. 1014, 37:14-24 (Nike’s expert agreeing that “activity data” is “athletic performance data” and “data associated with activities”; Ex. 1015, ¶17.) To wit, Nike’s cites are only specific to “activity data” (of limitation [1C])—not “data.”

Moreover, Nike’s expert believed the *only* type of data that a sensor device senses or collects is performance/activity data. (Ex. 1014, 35:5-8 (“Q. . . . is it your opinion that performance data is the *only data* that the sensor device senses or collects? A. Yes.”), 37:14-17 (agreeing that “athletic performance data” is “activity data”).) Because Nike provides only specification cites of “activity data” for “data” and because Nike’s expert believed the only type of data is performance/activity data, Nike is effectively asking the Board to narrow “data” to “activity data.” But “data” of limitation [1B] must be broader than “activity data” of limitation [1C]; otherwise the claim term “activity” is superfluous. *Bicon, Inc.*

v. Straumann Co., 441 F.3d 945, 950 (Fed. Cir. 2016) (“[C]laims are interpreted with an eye toward giving effect to all terms in the claim.”).

Nike’s other attempt to narrow “data”—by adding “that is sensed or collected”—also fails in view of the specification. (POR, 17-18.) The specification describes “data” in other ways beyond Nike’s restrictive view of “data” as raw data sensed or collected directly by a sensor device. For example, “data” may be “data pointing to [a] memory location.” (Ex. 1001, 8:6-8.) “Data” also includes “data *derived* from the physical or physiological data from the sensing devices” (*id.*, 12:13-14), “*process[ed]* . . . or otherwise *manipulate[d]*” [] data prior to being transmitted (*id.*, 14:64-67) and, along with “raw data directly from one or more of the sensors, data *derived* at least in part from the raw data, etc.” (*id.*, 15:5-8). (Ex. 1015, ¶18.)

Another example is Figure 4 (below). The sensing system 408 (top left of figure) includes sensors A and/or B. Data that has been sensed or collected directly by these sensors is transmitted to a microprocessor as shown below. (Ex. 1001, 14:50-57; Ex. 1015, ¶19.)

**FIG. 4**

The microprocessor of the sensor device 408 then “may *process the sensor data*, chang[ing] its form or format, or otherwise manipul[at]ing the data *prior to sending it* on to other parts of the system 400” such as workout equipment.

(Ex. 1001, 14:64-67; Ex. 1015, ¶19.) That is, the sensing system 408 is transmitting data that is not “raw” data. Yet Nike’s understanding of “data” as limited to “raw” data would exclude this embodiment of the ’225 patent, *i.e.*, non-raw data being transmitted from the sensing system 408. The Board should reject Nike’s invitation to read out Figure 4 from the claims. *Oatey v. IPS Corp.*, 514 F.3d 1271, 1277 (Fed. Cir. 2008) (“At leas[t] where claims can reasonably [be]

interpreted to include a specific embodiment, it is incorrect to construe the claims to exclude that embodiment, absent probative evidence on the contrary.”).

3. **Extrinsic evidence confirms lululemon’s construction and refutes Nike’s construction**

Nike’s own extrinsic evidence confirms lululemon’s construction and refutes Nike’s construction. Contrary to Nike’s argument, a POSITA would not use the first definition (“[f]actual information, such as that derived from observation, experimentation, or calculation, especially that which is used for processing and/or further analysis”) of the Wiley Dictionary over its second definition (“[i]nformation, which is represented in a manner suitable for digital transmission or computer use”). (Ex. 2002, 164; Ex. 1015, ¶20.) After all, the second definition is “suitable for [] *transmission or computer* use”—just like the ’225 patent claims. (Ex. 1001, 45:12-13 (“*transmitting*, by the sensor device [(*computer*)] and to the piece of workout equipment [(*computer*)]”); Ex. 1015, ¶20; Ex. 2004, 16 fn.1; Ex. 1014, 120:13-17, 122:25-2.) lululemon’s expert, Dr. Houh, on cross-examination also explained that:

the second definition . . . is more applicable to this case.

. . .

[T]he first definition . . . is more about experimentation and recording results and observations from experiments . . . I took a bunch of data . . . used that data to perform analysis. . . .

certainly in the context of the 225 patent . . . we’re talking about computerized systems . . . and transmission media and . . . things with

microprocessors. So . . . the second definition . . . is a better definition to use in this case.

(Ex. 2005, 163:9-164:23.) Nike does not dispute Dr. Houh’s testimony regarding the second definition being more applicable to the ’225 patent. And the Oxford Dictionary of Computing confirms this point—and more generally the breadth of the term “data”: “[i]nformation, *in any form*, on which *computer programs operate*.” (Ex. 2003, 4.) Nike never quotes this portion of the definition. (POR, 18-19.)

Against this evidence, Nike’s arguments that the Oxford Dictionary and Dr. Houh’s testimony distinguish “data” from “instructions” fail. (POR, 19.) As Dr. Houh explained, “data” comprises both instruction data and non-instruction data. (Ex. 1015, ¶¶21-22; Ex. 2005, 158:8-13 (“[i]t’s not that instructions are not data . . . the difference is [] the [non-instruction] data upon which a program operates cannot simply be treated as an instruction.”).) In the computer science field, a POSITA “look[s] at *instructions as just another form of data*. . . . And when you look at a program, . . . you can’t tell the difference between -- what are instructions and what might not be instructions because it’s all digital data.” (*Id.*, 118:2-15.) Both instructions and non-instruction data are 1s and 0s, where instructions are interpreted by the computer as instructions, and non-instruction data are interpreted as information that itself is not an instruction. (Ex. 1015, ¶21.) Consistent with this testimony, extrinsic evidence explains that “[c]rucially, there is *no distinction*

between instructions and data in the von Neumann architecture. *For all intents and purposes, instructions are data.*” (Ex. 1016, 2.)

B. The Board Should Exclude Nike’s Expert’s Opinions

Nike’s expert’s opinion regarding the meaning of “data” is misinformed. As noted above, Dr. McLean conceded that he did not recognize the relevant parts of the prosecution history. (Ex. 1014, 105:17-20.) He also conceded that he had not even seen any of Nike’s technical dictionaries before this proceeding. (Ex. 1014, 28:5-11.) Given these lapses in his claim construction analysis, Dr. McLean’s opinion that “data” does not encompass a command/instruction (*i.e.*, machine control signal) should be given little or no weight.

II. GROUND 1: ACRES

The Board preliminary found that Acres teaches every limitation of claims 1 and 12. (DI, 15-17.) The Board’s findings were correct, and it should adopt them in its final written decision.

A. Acres Teaches “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” (Limitation [1B]) And Limitation [12Cii]

Nike and its expert agree that Acres’s Bug transmits commands to an exercise machine. (POR, 21; Ex. 2004, ¶59; Ex. 1014, 95:5-20.) Nike disputes limitations [1B] and [12Cii] solely on its proposed construction of “data,” which is

wrong. (*Supra* § I.) Under the correct construction, Acres's commands are information, and Acres thus teaches limitations [1B] and [12Cii]. (Ex. 1015, ¶23.)

Yet even if Nike's construction of "data" was correct, Acres still would satisfy limitations [1B] and [12Cii].

1. "factual information that is sensed or collected"

Acres discloses an embodiment where the Bug is integrated with a heart rate monitor. As explained in the Petition:

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 wireless communicating with an external heart rate monitor *or the Bug can have a heart rate monitor integrated within itself.*") .)

(Petition, 9; Ex. 1005, ¶49.) Nike does not dispute that heart rate is factual information, and that Acres's sensors sense or collect heart rate. (POR, 15-16, 21; Ex. 2004, ¶39 (discussing heart rate as an example of factual information sensed or collected by a sensor); Ex. 1014, 97:3-98:2 (Nike's expert agreeing); Ex. 1015, ¶24.) Acres's Bug and its associated sensors, working together as a sensor device, transmit factual information, that has been sensed or collected, to the exercise equipment. In this embodiment, the Bug senses or collects factual information for controlling the exercise equipment. (POR, 15 ("A 'sensor' is a device that measures or collects factual information.")) .)

Moreover, as Dr. Houh explains, commands include informational content that informs of the corresponding subsequent action. (Ex. 1015, ¶25.) For example, a command that tells a treadmill to increase the speed by a specific amount includes informational content regarding increasing the speed and the specific amount of increase. (*Id.*; *see also* Ex. 1002, [0095] (describing the Bug instructing the treadmill “to increase speed by 0.3 MPH”).) In its DI, the Board also found that a Bug’s command has factual information. (DI, 16 (“however, on the record before us, it is not apparent why commands sent by Acres’s Bug that include information for controlling various operational parameters of a treadmill do not constitute data, even if data is something that is ‘factual information.’ In other words, at this time, we question why the skilled artisan would have regarded the informational content of those commands being something other than ‘factual information’ so as to be excluded from being ‘data.’”).)

Finally, Nike’s construction is not limited to factual information that is sensed. Its construction allows for factual information to also be “collected.” (POR, 15.) A command that tells a treadmill to increase the speed by a specific amount includes informational content collected as to a target parameter, as Dr. Houh testified on direct and cross-examination. (Ex. 1015, ¶25; Ex. 2005, 43:17-45:13.) Furthermore, Acres discloses the user associating the Bug with the user’s profile that may reflect exercise goals. (Ex. 1002, [0022]-[0023].) The

exercise goals are collected factual information that is transmitted by the Bug to control the treadmill. (*See, e.g., id.*, [0096] (“[T]he Bug 601 can control both speed and incline to match the fitness goals of the exerciser.”); Ex. 1015, ¶25.)

In short, Acres discloses “factual information that is sensed or collected” whether one considers what is sensed or collected by the Bug or what the Bug transmits.

2. “decisions or subsequent actions can be made” from the commands

Acres further discloses decisions or subsequent actions can be made from factual information, such as increasing the speed/incline of the treadmill, or controlling any number of machine parameters. (Ex. 1015, ¶26; Ex. 1014, 47:21-50:12 (Nike’s expert agreeing that increasing/decreasing speed and increasing/decrease incline are subsequent actions).) For example, “the Bug 601 sends a command to the treadmill 150 telling it to increase the speed by a specific amount.” (Ex. 1002, [0089].) As another example, “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.” (*Id.*, [0096].)

3. Nike’s arguments on Acres are without merit

First, Nike’s argument that the specification makes a distinction between “command” (user or voice “command”) and “data” is wrong. (POR, 23 (citing Ex. 1001, 9:65-10:4, 13:6-9).) It makes no difference whether a user’s command

or a voice command in the specification refers to an action taken by the user. The disputed limitation refers to an action taken by a computer, similar to Acres's command. (Ex. 1001, 45:12-14 (“transmitting, by a sensor device [(*computer*)] to the piece of workout equipment [(*computer*)]”); Ex. 1015, ¶27; Ex. 2004, 16 fn.1 (Nike's expert discussing “[c]omputers associated with workout equipment”).)

Second, Nike is wrong to argue that Acres commands are not “data” because they are processed. (POR, 24 (Nike arguing that new commands cannot be generated prior to transmission), 24-25 (Nike arguing that the “data” itself must “operate[] a first function of the piece of workout equipment”).) As discussed above, “data” is not limited to *raw data* sensed or collected directly by a sensor. (Ex. 1015, ¶¶28-29; *supra* § I.) In any event, as Dr. Houh explained, raw data needs to be processed in order to perform a corresponding operation. For example, the processor needs to process pulses with heartbeats to determine heart rate. (Ex. 1015, ¶¶28-29; Ex. 2005, 84:14-85:10 (“when you send a 5 kilohertz signal pulse with each heartbeat, you're not actually sending a rate. You're sending pulses. Then -- the [processor] is interpreting those pulses. . . . to compute a heart rate.”), 87:16-88:2 (discussing processing of the pulses to determine heart rate).)

B. Acres Teaches Claims 5 And 14

For claims 5 and 14, Nike recycles its arguments from claims 1 and 12. (POR, 25-26.) The Board should reject Nike’s arguments and find that Acres teaches claims 5 and 14. (*Supra* § II.A.)

C. Nike Does Not Dispute That Acres Teaches Claims 2-4, 7, 13, And 16

Separate from challenging claims 1 and 12, Nike does not dispute lululemon’s showing that Acres teaches claims 2-4, 7, 13, and 16. (Petition, 13-23.)

III. GROUND 2: ACRES

Nike attacks Ground 2 (claims 1-5, 7, 10, 12-14, and 16 as obvious over Acres) based on the same arguments from Ground 1. Nike’s arguments fail for the reasons set forth above. (*Supra* § II.)

IV. GROUND 3: ACRES AND PYLES

A. Acres Teaches Claims 1 And 12

For Ground 3 with respect to Acres, Nike incorporates its earlier arguments from Grounds 1 and 2. (POR, 27.) As explained above, those arguments have no merit. (*Supra* §§ II, III.)

B. A POSITA Would Have Combined Acres And Pyles

Nike’s lone argument regarding the combination of Acres and Pyles for claims 9 and 18 is that there is no motivation to combine. (POR, 27-28.) As the

Petition and Dr. Houh explained, a POSITA would have been motivated to combine Acres and Pyles to obtain the benefits of Pyles’s teachings. (Petition, 29-31; Ex. 1005, ¶¶68-69, 72-73; Ex. 1015, ¶31.) Pyles teaches storing user-specific historical data, *e.g.*, an exercise log, at an exercise machine to be beneficial over storing at a central site because it results in a simpler, cheaper system. (Petition, 29-31; Ex. 1005, ¶¶68-69, 72-73; Ex. 1015, ¶31.) Storage at the exercise machine reduces the number of separate components, eliminates the need for transferring data over an internet connection, and expands the customer base by appealing to customers who may not have consistent access to the internet. (*Id.*) Neither Nike nor its expert disputes that there are benefits to the combination of Acres and Pyles.

Nike only argues that the combination has disadvantages. (POR, 28.) But the obviousness inquiry demands more than some purported disadvantages. “[T]he legally proper question is whether the [prior art’s teachings] would be a suitable option in *some* respects, not necessarily in *every* respect.” *E.I. du Pont de Nemours vs. MacDermid Printing Sols., LLC*, 657 F. App’x 1004, 1014 (Fed. Cir. 2016) (emphasis in original). A POSITA would have had reasons (simpler, cheaper, expanded customer base, etc.) for applying Pyles’s teachings to Acres, in some instances, even if it meant foregoing some of Acres’s benefits. *In re Urbanski*, 809 F.3d 1237, 1243 (Fed. Cir. 2016) (finding that a POSITA “would

have been motivated to pursue the desirable properties taught by [the secondary reference], even at the expense of foregoing the benefit taught by [the primary reference]”); (Ex. 1015, ¶31.) For example, a user may consistently use one exercise machine (*e.g.*, at-home treadmill), where portability and broad data access to multiple pieces of equipment are not needed. (*Id.*) Accordingly, a POSITA would be motivated to combine Acres and Pyles, because the benefits outweigh the costs.

V. GROUND 4: ABBONDANZA

For Ground 4, Nike and its expert do not dispute that Abbondanza’s base unit transmits instructions to an exercise machine. (POR, 29; Ex. 2004, ¶70; Ex. 1014, 76:3-12.) Nor do they dispute that Abbondanza’s sensor senses or collects factual information. (POR, 29; Ex. 2004, ¶59; Ex. 1014, 74:15-17; Ex. 2004, ¶39 (discussing heart rate as an example of factual information sensed or collected by a sensor).) Instead, Nike disputes whether Abbondanza teaches transmitting “data” from a “sensor device.” (POR, 29.) Because Abbondanza teaches both a “sensor device” and “data,” Nike’s arguments fail.

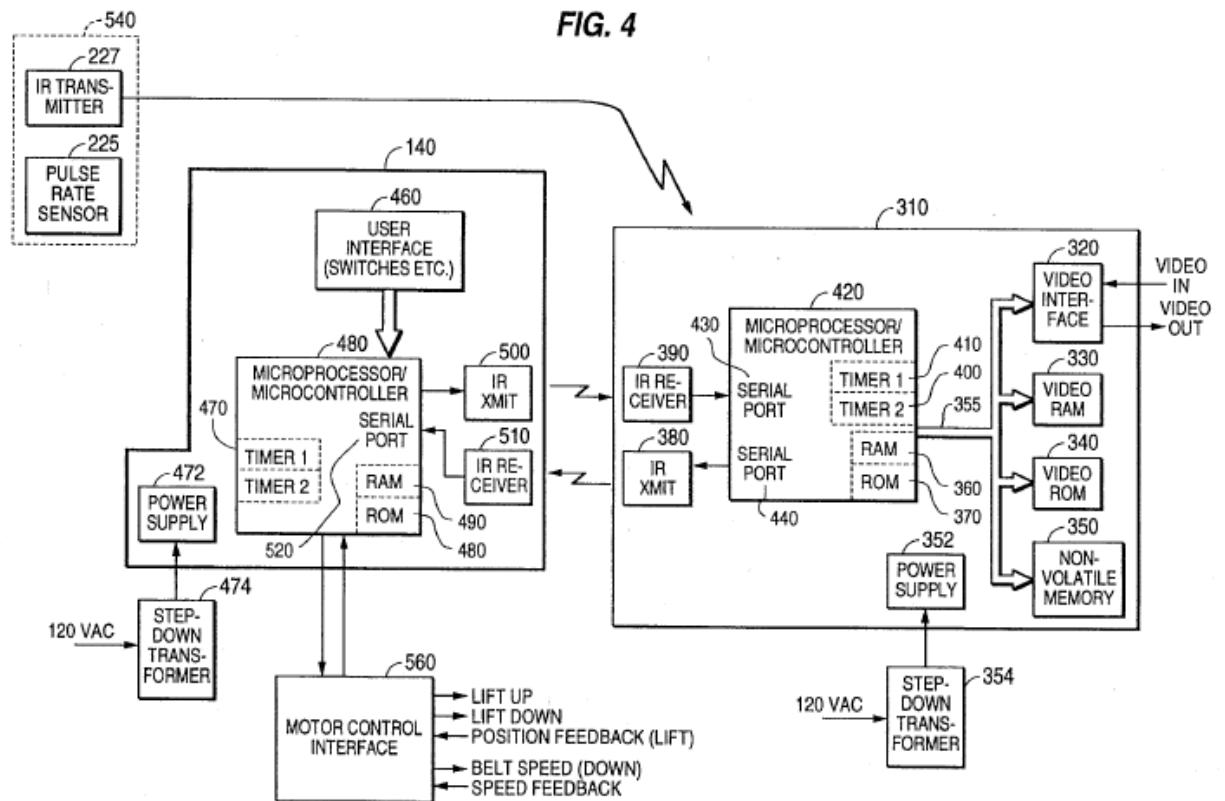
A. Abbondanza Teaches A “sensor device” (Limitation [1A]) And Limitation [12Cii]²

Claim 1 requires a “sensor device.” (Ex. 1001, 45:9, 45:12, 45:15.) The ’225 describes a “sensor device” as including “athletic performance data sensors, a data transfer system, *processing capabilities*, a power supply, and/or the like.” (Ex. 1001, 16:54-57; *see also id*, 10:35-37, 11:50-58 (describing a data transfer system as included in the same structure as the sensor), 10:51-53 (describing the sensor device outputting data for “further” processing); Ex. 1015, ¶32.)

As the Petition explained, Abbondanza’s pulse rate sensor and base unit sensor are together a sensor device. (Petition, 34.) The pulse rate sensor is an athletic performance data sensor, and the base unit includes processing capabilities. (Ex. 1003, 10:60-64, 11:14-17; Ex. 1015, ¶33; Ex. 1014, 76:23-77:12; Ex. 2004, ¶70; Ex. 2005, 26:7-27:10, 44:21-25.) Abbondanza describes the pulse rate sensor and base unit as working together: “[t]his invention also provides for *a pulse controlled exercise system comprised of a base unit* that has . . . a first controller. Moreover, *a pulse rate sensor* for sensing the pulse rate of a user of the exercise system *is included*.” (Ex. 1003, 5:16-20; Ex. 1015, ¶33.) Figure 4 confirms,

² Nike does not make a distinction between the scope of claims 1 and 12 as to limitations [1B] and [12Cii]. (POR, 21, 30.)

showing signals from the pulse rate sensor 225 (top left) going only to the base unit 310 (right). (Ex. 1003, Fig. 4; Ex. 1015, ¶33.)



Nike argues that Abbondanza's base unit is a component separate from a sensor. (POR, 34.) But the '225 claims are unlike those in *Becton, Dickinson and Co. v. Tyco Healthcare Grp., LP*, 616 F.3d 1249, 1254 (Fed. Cir. 2010). In *Becton, Dickinson and Co.*, the court found the components to be separate because they were listed as separate elements in the claims. *Id.* Here, the sensor and its processing capabilities are **not** listed separately in the claims.

B. Abbondanza Teaches “data” (Limitations [1B] And [12Cii])

Under the proper construction of “data” as “information,” Abbondanza meets limitations [1B] and [12Cii.] Abbondanza’s instructions are information. (Ex. 1015, ¶34.)

Nike disputes whether Abbondanza teaches “data” under its incorrect construction. (*Supra* § I.) But even according to Nike’s construction, Abbondanza still would meet limitations [1B] and [12Cii]. Both parties agree that Abbondanza’s pulse rate sensor senses or collects pulse rate data, and Abbondanza’s base unit transmits instructions to the exercise equipment. (POR, 32; Ex. 1014, 74:15-17, 76:9-12.) Thus, Abbondanza’s pulse rate sensor and base unit, working together, transmit factual information, that has been sensed or collected, to a piece of workout equipment. (Ex. 1015, ¶¶34-35.)

Furthermore, instructions are factual information because they include informational content that informs of the corresponding subsequent action, *e.g.*, whether to speed up or slow down. (Ex. 1015, ¶36.) Additionally, informational content such as a target parameter is collected and used to instruct the treadmill to speed up or slow down. (*Id.*; Ex. 2005, 43:17-45:13; Ex. 1002, [0085], [0089]-[0090].)

Finally, decisions or subsequent actions can be made from Abbondanza’s instructions. For example, “[b]ase unit 250’s controller . . . instructs treadmill

device 230 to either speed-up or slow-down.” (Ex. 1003, 11:17-23.) Here, the decision or subsequent action made from the instructions would be the action of speeding up or slowing down the treadmill. (Ex. 1015, ¶37; Ex. 1014, 47:21-50:12.)

Nike’s rebuttal that Abbondanza does not teach “data” because its instructions are not raw data sensed or collected directly from the sensor fails for the reasons stated above. (*Supra* § I; Ex. 1015, ¶38.)

C. Nike Does Not Dispute That Abbondanza Teaches Claims 2-5, 7, 10, 13, 14, 16, And 19

Nike does not dispute lululemon’s showing that Abbondanza teaches claims 2-5, 7, 10, 13, 14, 16, and 19. (Petition, 37-44.) Because Nike fails to refute lululemon’s showing for claims 1 and 12, the Board should cancel claims 2-5, 7, 10, 13, 14, 16, and 19. (*Supra* §§ V.A, V.B.)

VI. GROUND 5: ABBONDANZA AND PYLES

Nike does not dispute lululemon’s showing that Abbondanza and Pyles render obvious claims 9 and 18. (Petition, 45-46.) Because Nike’s arguments for claims 1 and 12 lack merit, the Board should cancel claims 9 and 18. (*Supra* § V.)

VII. CONCLUSION

For the foregoing reasons, as well as those set forth in its Petition, Petitioner respectfully requests cancellation of the challenged claims of the ’225 patent.

IPR2023-00424

Dated: January 17, 2024

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Certification of Word Count (37 C.F.R. § 42.24)

I hereby certify that this PETITIONER’S REPLY TO PATENT OWNER RESPONSE has 5,239 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, a listing of facts which are admitted, denied, or cannot be admitted or denied, a certificate of service or word count, or appendix of exhibits.”

Dated: January 17, 2024

By /Mehran Arjomand/

Certificate of Service (37 C.F.R. § 42.6(e)(4))

I hereby certify that the attached PETITIONER'S REPLY TO PATENT OWNER RESPONSE was served on the below date via e-mail (by agreement) to the following counsel of record for the Patent Owner:

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