

IPR2023-00424
U.S. Patent No. 10,923,225

lululemon athletica canada inc. et al.

v.

Nike, Inc.

April 16, 2024

Roadmap

- **'225 Patent**
- **Claim Construction**
- **Acres**
- **Pyles**
- **Abbondanza**

'225 Patent

'225 Patent

US010923225B2

(12) **United States Patent**
Riley et al.

(10) **Patent No.:** US 10,923,225 B2
(45) **Date of Patent:** Feb. 16, 2021

(54) **ATHLETIC PERFORMANCE SENSING AND/OR TRACKING SYSTEMS AND METHODS**

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(73) Assignee: **NIKE, Inc.**, Beaverton, OR (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 91 days.

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G16H 20/30 (2018.01)
A63B 24/00 (2006.01)
(Continued)

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CPC **G16H 20/30** (2018.01); **A61B 5/118** (2013.01); **A61B 5/74** (2013.01); **A61B 5/7405** (2013.01);
(Continued)

(58) **Field of Classification Search**
CPC G06F 3/165; G06F 16/4387; G06F 19/00; G06F 19/3481; G06F 16/68;
(Continued)

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(Continued)
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Feb. 1, 2008—(WO) Partial Search Report—App. No. PCT/US07/019384.
Primary Examiner—Sundhara M Ganesan
(74) **Attorney, Agent, or Firm**—Banner & Witcoff, Ltd.
(57) **ABSTRACT**
Athletic performance sensing and/or tracking systems include components for measuring or sensing athletic performance data and/or for storing and/or displaying desired information associated with the athletic performance to the user (or others). Such systems can allow users a wide variety of options in creating workouts, selecting and presenting media content during the athletic performance, etc., e.g., to help keep users entertained and motivated. In some instances, user feedback may be used, optionally in combination with objective data relating to a workout, to control features of the workout routine, to control the music or other media content selected and/or presented, and/or to control features of future workout routines and/or the presented media content.

20 Claims, 19 Drawing Sheets

The diagram shows a side view of a shoe (500) with a sensor (502) on the sole. A transmitter (504) is connected to the sensor. The transmitter is also connected to a box labeled 'Exercise Equipment' (604) via a signal line (600). The transmitter has a label 'TX/RX' and '1.5 mHz'. The exercise equipment has a label 'TX/RX' and '604'. The sensor has a label '502'.

lululemon athletica canada inc. and lululemon usa inc. Exhibit 1001 Page 1

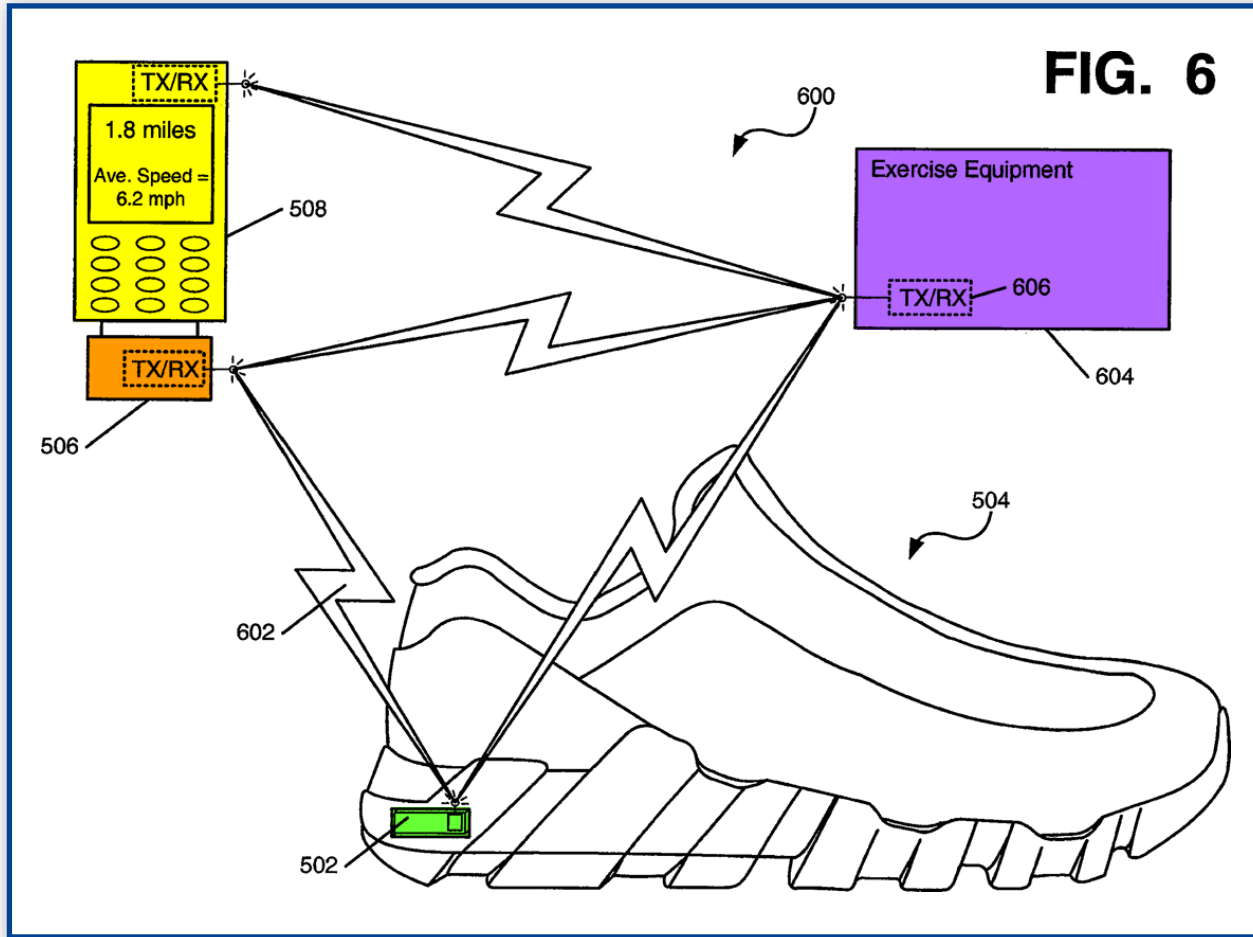
As another example, if desired, the user's portable equipment (e.g., module 502, interface device 506, and/or electronic device 508) may be used, at least in part, to control the exercise equipment or other workout or athletic performance setting 604, e.g., to make the workout machine settings correspond to a workout pre-programmed into or downloaded to the user's portable equipment. For example,

'225 patent (Ex. 1001), 19:41-46

As another potential option or alternative, if desired, the user's portable equipment (e.g., module 502, interface device 506, and/or electronic device 508) may be programmed and adapted to send information to the exercise equipment 604, e.g., for display by the exercise equipment 604, for transmission to a remote source (e.g., via a network maintained at the gym or spa, etc.), etc. As more specific

'225 patent (Ex. 1001), 20:1-7

'225 Patent



'225 patent (Ex. 1001), Fig. 6

Data 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. For example,

'225 patent (Ex. 1001), 19:34-37

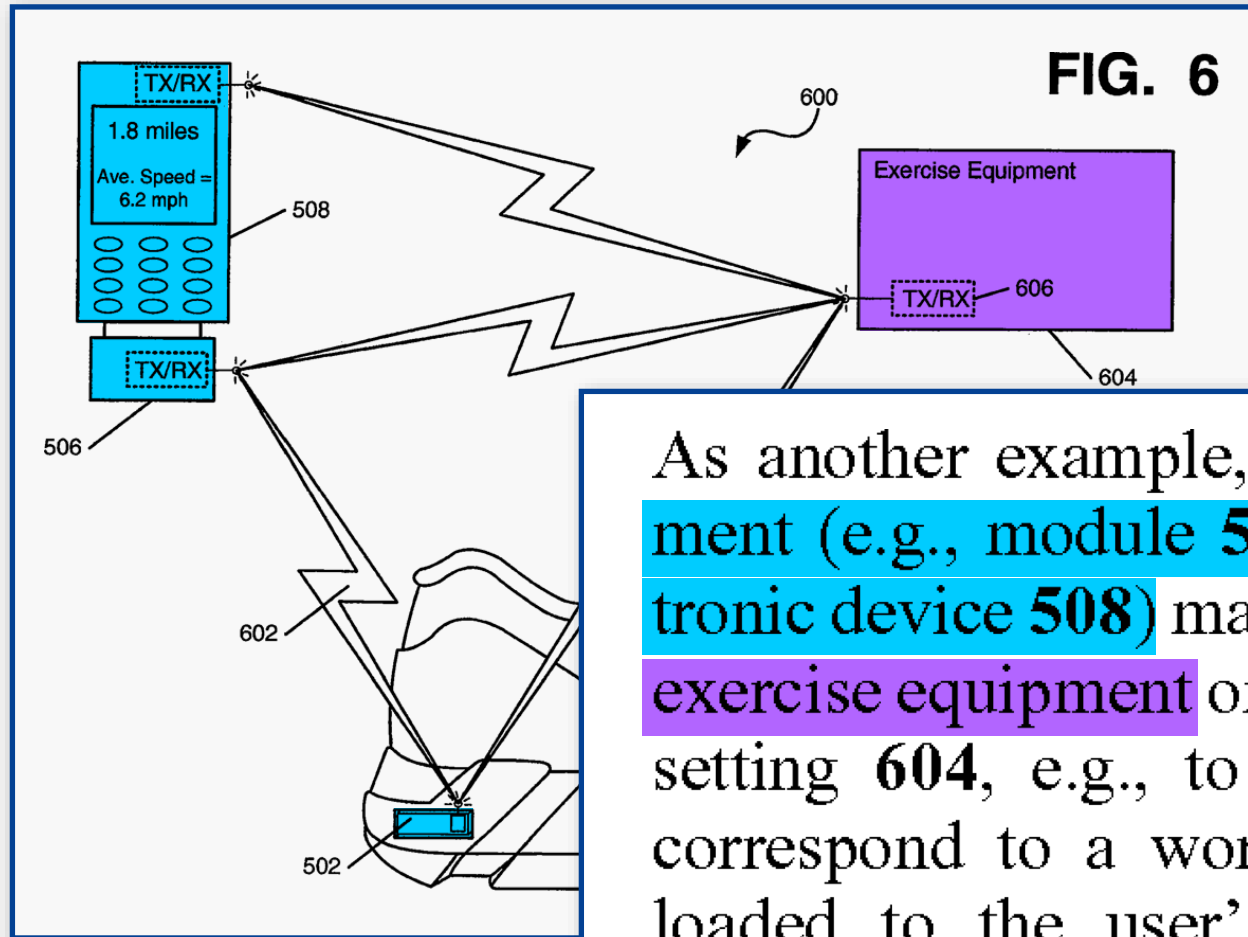
'225 Patent, Claim 1

1. A method comprising:
establishing, by a sensor device, data communication with
a piece of workout equipment;
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
transmitting, by the sensor device and to the piece of
workout equipment, a first set of activity data corre-
sponding to an activity performed by a user during a
first time period, wherein the piece of workout equip-
ment is configured to display the first set of activity
data.

[1B]

[1C]

'225 Patent: "first set of data for operating a first function"



'225 patent (Ex. 1001), Fig. 6

As another example, if desired, the user's portable equipment (e.g., module 502, interface device 506, and/or electronic device 508) may be used, at least in part, to control the exercise equipment or other workout or athletic performance setting 604, e.g., to make the workout machine settings correspond to a workout pre-programmed into or downloaded to the user's portable equipment. For example,

'225 Patent (Ex. 1001), 19:41-46

'225 Patent: “first set of activity data . . . to display”

Aspects of the present invention relate generally to systems and devices used for athletic performance sensing, e.g., to measure, process, store, and/or **output physical and/or physiological data** associated with an athletic event, an exercise routine, or other physical or athletic performance

'225 Patent (Ex. 1001), 4:13-17

detail below. The **athletic performance data presented by the display system** may include information based on output from the sensor (such as speed information, distance information, timing information, heart rate, pulse rate, etc.).

'225 Patent (Ex. 1001), 5:27-30

'225 Patent: “first set of activity data . . . to display”

mance. As some more specific examples, in the environment illustrated in FIG. 1, sensors 102(a) and/or 102(b) may sense step count and data associated with such activities (e.g., for pedometer type speed and/or distance measuring), GPS data (e.g., location and/or altitude data, time data, etc.), step impact force data (e.g., for active impact attenuation control), jump height data, or the like. Sensor 102(c) may sense

'225 Patent (Ex. 1001), 9:31-36

from this invention. Additional examples of potential types of data relating to an athletic performance that may be sensed and/or collected include, but are not limited to: route data; ambient temperature data; ambient humidity data; barometric pressure data; sole member compression data; air intake rate or volume data; air expel rate or volume data; EEG data; blood gas content data; and the like.

'225 Patent (Ex. 1001), 9:43-49

Claim Construction: “data”

Proposed Constructions Of “data”

Petitioner’s Construction	Patent Owner’s Construction
“information”	“factual information that is sensed or collected, and from which decisions or subsequent actions can be made”

Reply (Paper 25), 1

POR (Paper 19), 15

Meaning Of “data”

Decision on Institution



On the current record before us, it is difficult to objectively conclude, as Patent Owner urges, that the ordinary meaning of “data” is so restrictive in its meaning that it necessarily excludes, for instance, the content of a transmitted command or signal to an exercise machine that includes content used to adjust parameters of that machine. Although those commands or signals may not incorporate the two types of example data discussed by Patent Owner from the ’225 patent, i.e., “user ID information” or “workout performance information,” it is not apparent that “data” excludes other types of information. In other words, even assuming that the term “data” designates some types of “factual information,” at this time, 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.” For the purposes of evaluating whether to institute *inter partes* review, we proceed with that understanding as to the meaning of “data.”

DI (Paper 11),
10

“data” Comprises Identification Information

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.

User Identification Information Of Claims 9 And 18

Petitioner's Expert

13. In my opinion, Nike's and Dr. McLean's construction is incorrect at least because it is at odds with claims 9 and 18. Claims 9 and 18 require the "first set of data comprises user identification information." (Ex. 1001, 45:60-61, 46:60-61.) A POSITA would not understand the user identification information of the '225 patent to be sensed or collected by a sensor device. Even Dr. McLean believed that factual information that is sensed or collected excludes identification information (user identification information). (Ex. 1014, 35:24-36:12.)

Houh Reply Dec. (Ex. 1015), ¶13

“data” Means Information

Petitioner’s Expert

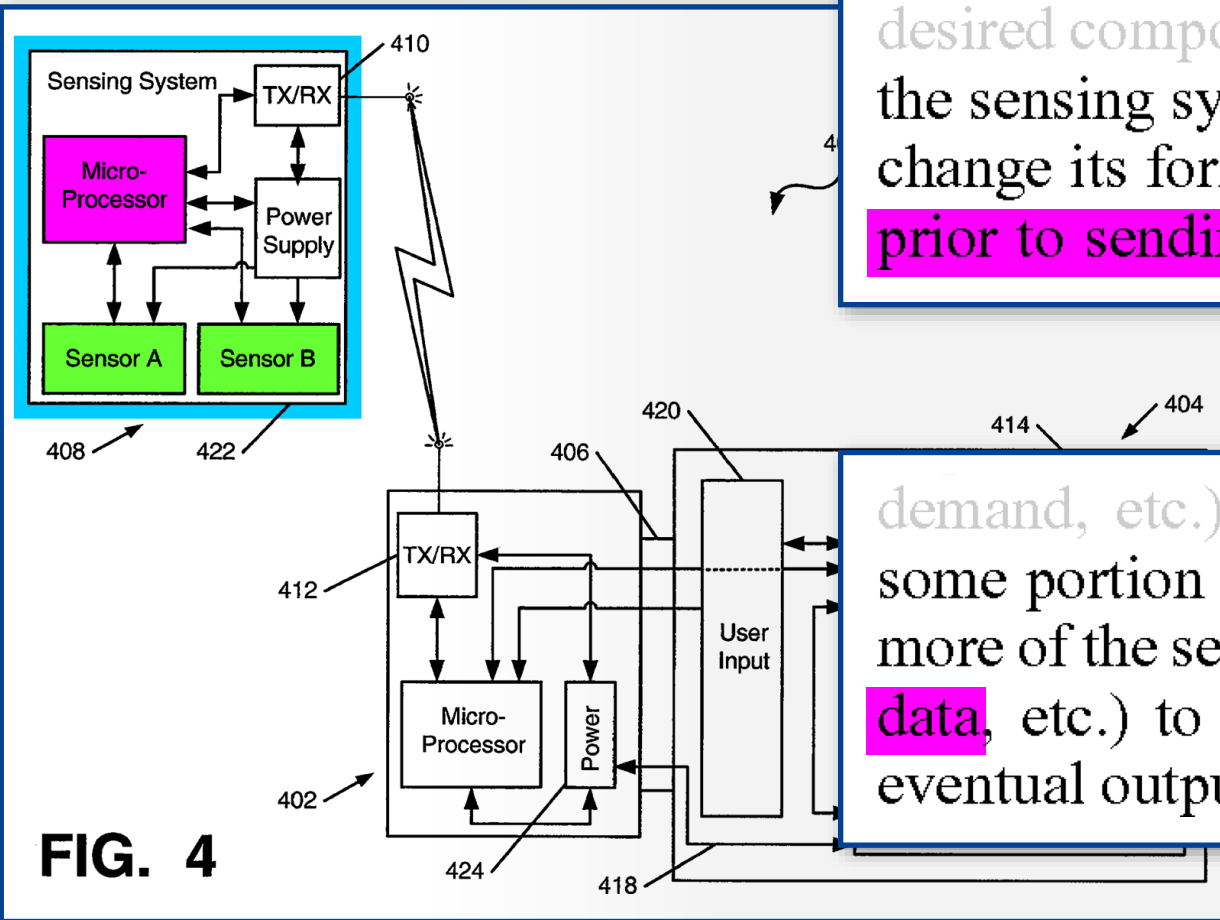
A. A POSITA Would Understand That “data” Means “information”

7. In my opinion, the claims support “data” as meaning “information.”

Limitation [1B] simply recites “data” as information for “operating a first function of a piece of workout equipment.” A POSITA would understand the “data” of limitation [1B] as information because the data are used to increase or decrease the time period associated with the workout (claim 5), increase or decrease resistance level (claim 6), increase or decrease workout speed (claim 7), and increase or decrease incline level (claim 8). Further, “data” of limitation [1B] comprise user identification information (claims 9 and 18).

*Houh Reply Dec.
(Ex. 1015), ¶7*

Transmitted “data” Includes Processed Information



desired components. If desired, the microprocessor on board the sensing system 408, if any, may process the sensor data, change its form or format, or otherwise manipulate the data prior to sending it on to other parts of the system 400. The

'225 Patent (Ex. 1001), 14:64-67

demand, etc.), the sensing system 408 may send at least some portion of its data (e.g., raw data directly from one or more of the sensors, data derived at least in part from the raw data, etc.) to the electronic interface device 402, e.g., for eventual output to a user via electronic device 404. This may

'225 Patent (Ex. 1001), 15:5-9

'225 Patent (Ex. 1001), Fig. 4

Transmitted “data” Includes Processed Information

19. Additionally, Figure 4 (below) of the '225 patent shows data that has been sensed or collected directly by the sensors as being processed before being transmitted. (Ex. 1001, 14:50-15:2.) Figure 4 shows the sensing system 408 (top left of figure) including sensors A and/or B, and data from the sensors being transmitted to the microprocessor before the microprocessor transmits data to other parts of the system 400. (*Id.*, 14:50-57.) That is, the microprocessor “may **process the sensor data**, chang[ing] its form or format, or otherwise **manipulat[ing]** the data **prior to sending it** on to other parts of the system 400” such as workout equipment. (Ex. 1001, 14:64-67.) As a result, the **data transmitted by the sensing system 408 is not limited to raw data.**

Houh Reply Dec. (Ex. 1015), ¶19

Interchanging “data” And “information”

Data 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. For example, user ID information may be transmitted so that the exercise equipment or other workout or athletic performance setting 604 can store workout data associated with the specific user.

'225 Patent (Ex. 1001), 19:34-40

Interchanging “data” And “information”

As another example, if desired, the user's portable equipment (e.g., module 502, interface device 506, and/or electronic device 508) may be used, at least in part, to control the exercise equipment or other workout or athletic performance setting 604, e.g., to make the workout machine settings correspond to a workout pre-programmed into or downloaded to the user's portable equipment. For example, workout information downloaded from a workout routine stored in or available through the portable equipment may be used to control various features of the workout, such as: weight machine settings, resistance settings, incline (or hill level) settings, target distance (or other overall time length or duration) settings, target calorie burn (or other physiological based parameter) settings, treadmill speed or incline settings, etc. As yet another example, if desired, the user's

*'225 Patent
(Ex. 1001),
19:41-55*

Interchanging “data” And “information”

settings, etc. As yet another example, if desired, the user's portable equipment may send workout identification information (e.g., Workout 12) to the exercise equipment or other workout or athletic performance setting 604, which then may use this identification information to provide the desired settings for the identified workout from information stored in memory. Data collected as a workout progresses (e.g., via module 502, etc.) also may be used, if desired, to control the exercise equipment or other workout or athletic performance devices (e.g., to set or change intensity or resistance levels, to shorten or lengthen workout times, etc.). Of course, other information also may be transmitted from the user's portable equipment to element 604.

*'225 Patent
(Ex. 1001),
19:55-67*

“data” Means Information

Petitioner’s Expert

8. In my opinion, the specification supports “data” as meaning “information.” This is because the specification uses “data” and “information” interchangeably. For example, the passage at 19:34-67 begins by describing: “[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.” And then the passage discusses transmitting “user ID information” to the exercise equipment (19:37-40), “control[ling] the exercise equipment” and using “workout information” (19:41-54), and “send[ing] workout identification information . . . to the exercise equipment” (19:56-60). After that, the same passage discusses “[d]ata collected as a workout progresses” and then states “[o]f course, other information also may be transmitted from the user’s portable equipment to [exercise equipment] 604.” (*Id.*, 19:61-67.)

*Houh Reply Dec.
(Ex. 1015), ¶8*

“data” Means Information

FIGS. 6 and 7 illustrate additional features of and environments of use for example performance sensing and tracking systems and methods in accordance with this invention. In addition to running or walking on an open course using pedometer based speed and distance **information (or other sensed information)**, as illustrated in FIG. 1, systems

'225 Patent (Ex. 1001),
17:39-40

508, etc. Any of the **sensed data, timing information**, and the like may be stored, retrieved, and further processed and analyzed by users. Systems and methods according to at

'225 Patent (Ex. 1001),
23:8

device 508 and stored. In some instances, the sensor included with the module 502 (if any) may be able to detect at least some **data** associated with these types of workouts, even if no machine is directly involved, such as **information** relating to step count, heart rate, pulse rate, cadence, accelerometer data, or other data. From this data, some features

'225 Patent (Ex. 1001),
21:49-54

“data”

Petitioner’s Expert

18. The specification further describes “data” as being broad, including different types of data, including (but not limited to) information that is not “sensed or collected.” For example, the passage at 8:6-8 describes “data pointing to [a] memory location.” The passage at 12:13-14 describes “data *derived* from physical or physiological data from the sensing devices.” The passage at 14:64-67 describes data that has been “*process[ed]* . . . or otherwise *manipulate[d]* [] data prior to” being transmitted. And the passage at 15:5-8 describes “raw data directly from one or more of the sensors, data *derived* at least in part from the raw data, etc.”

*Houh Reply Dec.
(Ex. 1015), ¶18*

“data”

time. The data providing or setting forth the workout routine information additionally may include the data for presenting the desired media content or data pointing to memory location (optionally from an external source) and/or allowing retrieval or presentation of the desired media content. In

'225 Patent (Ex. 1001), 8:5-9

Any desired way of placing data derived from the physical or physiological data from the sensing devices 102(a) through 102(d) in the proper form or format for display on or output from electronic device 110 may be provided without departing from the invention. As examples, if

'225 Patent (Ex. 1001), 12:13-17

“data”

desired components. If desired, the microprocessor on board the sensing system 408, if any, may process the sensor data, change its form or format, or otherwise manipulate the data prior to sending it on to other parts of the system 400. The

'225 Patent (Ex. 1001), 14:64-67

At an appropriate or desired time (e.g., when a data request is received, periodically, automatically, upon user demand, etc.), the sensing system 408 may send at least some portion of its data (e.g., raw data directly from one or more of the sensors, data derived at least in part from the raw data, etc.) to the electronic interface device 402, e.g., for eventual output to a user via electronic device 404. This may

'225 Patent (Ex. 1001), 15:2-9

Prosecution History: “data” Encompasses A Control Signal

Final Office Action

equipment (38); 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 (Fig. 3, “machine control signal”); transmitting, by the sensor device (10) and

Prosecution History (Ex. 1011), 3

Prosecution History: Control Signal

Applicant's Office Action Response

[1C]

the exercise machine (i.e., machine control signals). (See Brown, at ¶ 43). Accordingly, Brown fails to disclose the claimed “transmitting, by the sensor device and to the piece of workout equipment, a first set of activity data...”

Prosecution History (Ex. 1012), 7

[1B]

Brown does not teach or suggest that such machine control signals comprise activity data. Rather, Brown expressly states that these machine control signals are used to control the movement/function of exercise machine 38. (See Brown, at ¶¶ 62, 70, claim 11). Also, Brown

* * *

transmits activity data to exercise machine 38. Rather, Figure 3 merely shows that a communication medium is used to exchange information (i.e., machine control signals) between system 10 and the exercise machine. (See Brown, at ¶¶ 17, 38-40, 70). Gravage does not cure

Prosecution History (Ex. 1012), 8

“data” Encompasses A Control Signal

Petitioner’s Expert

10. In my opinion, the prosecution history supports “data” as meaning “information” including commands or instructions. I note that Dr. McLean does not discuss the prosecution history. During prosecution, the Examiner rejected the claims as anticipated by Brown. (Ex. 1010, 2.) Applicant amended the claims, introducing the recitation “a first set of data for operating a first function of the piece of workout equipment.” (*Id.*, 7.) The Examiner rejected the claims again, but this time as being obvious over Brown and another reference. In rejecting limitation [1B], the Examiner mapped “a first set of data” of limitation [1B] to Brown’s “machine *control* signal.” (Ex. 1011, 3 (emphasis added).) Applicant responded, but focused its arguments on limitation [1C]. (Ex. 1012.) Applicant remained silent with regard to limitation [1B], not challenging that “first set of data” encompasses commands or instructions (*i.e.*, control signals).

Houh Reply Dec.
(Ex. 1015), ¶10

Malvern Panalytical Inc. v. TA Instruments-Waters LLC

“Here, although the ’782 patent applicant argued that the ’968 application discloses only a manual guiding mechanism, J.A. 2919, the examiner clearly stated its rejection of this argument several times. J.A. 2858, 2872-73, 2893, 2906-07, 2926-27. The ’782 patent applicant then abandoned the unviable argument that the ’968 application only discloses a manual guiding mechanism and instead successfully argued that the ’968 application did not qualify as prior art. J.A. 2842, 2852. A reasonable interpretation of this colloquy with the examiner is that by abandoning its argument that the ’968 application discloses only a manual guiding mechanism, the ’782 patent applicant acquiesced to the examiner’s views regarding the scope of the ’968 application.”

Malvern Panalytical Inc. v. TA Instruments-Waters LLC,
85 F.4th 1365, 1376 (Fed. Cir. 2023)

Prosecution History



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11333 7590 08/03/2020
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EXAMINER
GANESAN, SUNDHARA M

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PTOL-90A (Rev. 04/07)

lululemon athletica canada inc. and lululemon usa inc. Exhibit 1011 Page 1

Patent Owner's Expert

Q. -- Exhibit 1011. Dr. McLean, do you recognize this exhibit?

A. I don't think so, no. I don't recall if I have.

McLean Depo Trans. (Ex. 1014), 105:17-20

Wiley Dictionary

WILEY ELECTRICAL AND ELECTRONICS ENGINEERING DICTIONARY

Steven M. Kaplan
Lexicographer



A JOHN WILEY & SONS, INC., PUBLICATION

Exhibit 2002 - Page 1 of 4

lululemon v. NIKE, Inc.
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Ex. 2002

data 1. Factual information, such as that derived from observation, experimentation, or calculation, especially that which is used for processing and/or further analysis. 2. Information which is represented in a manner suitable for digital transmission or computer use. 3. Originally the plural form of the word datum, although data is commonly used in either the plural or singular form.

Wiley Dictionary (Ex. 2002), 164

Second Definition Of The Wiley Dictionary

Petitioner's Expert

And so I think the second definition is -- is more applicable to this case.

* * *

But even under the first definition, which I think is -- is more about experimentation and recording results and observations from experiments, as I -- I took data from my -- my -- you know, I did an experiment once in neutron scattering in a nuclear reactor, and I took a bunch of data for that, and I wrote it in my lab notebook, and I used that data to perform analysis.

I think of one as -- as -- as being more applicable in that type of context, but certainly in the context of the 225 patent -- you know, we're talking about computerized systems here and -- and transmission media and, you know, things with microprocessors.

So I do think that second definition listed here, "information that is represented in a manner suitable for digital transmission or computer use," is a better definition to use in this case.

Houh Depo Trans. (Ex. 2005), 163:9-164:23

Second Definition Of The Wiley Dictionary

Petitioner's Expert

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” relates to lab experiments, whereas the second definition “[i]nformation which is represented in a manner suitable for digital transmission or computer use” relates to transmission and computers, like the '225 patent.

(Ex. 2002, 164.) Thus, a POSITA would understand the ordinary and customary meaning of “data” in the '225 patent according to the second definition, not the first definition.

Houh Reply Dec. (Ex. 1015), ¶20

Oxford Dictionary

A Dictionary of
Computing

SIXTH EDITION

OXFORD
UNIVERSITY PRESS

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Ex. 2003

Exhibit 2003 - Page 1 of 10

Sixth edition 2008

data 1. *Information, in any form, on which computer programs operate. The distinction between program (instructions) and data is a fundamental one in computing (see VON NEUMANN MACHINE). It is in this funda-

Oxford Dictionary (Ex. 2003), 4

Oxford Dictionary

Petitioner's Expert

21. The definition from the Oxford Dictionary of Computing

("[i]nformation, in any form, on which computer programs operate") confirms that the ordinary and customary meaning of "data" is information. Nike and Dr.

McLean argue that the Oxford Dictionary of Computing distinguishes "data" from "instructions," and takes my testimony out of context to support their argument.

(POR, 18-19; Ex. 2004, ¶42 (citing Ex. 2003, 124 ("[t]he distinction between program (instructions) and data is a fundamental one in computing")).) This is

incorrect. As I explained in my deposition, "[d]ata" is a broad term. Data encompasses a lot of different things, I think, generally speaking." (Ex. 2005,

143:6-10.) "It's not that instructions are not data. . . . the difference is . . . the

*Houh Reply Dec.
(Ex. 1015), ¶21*

Instruction Data And Non-Instruction Data

Petitioner's Expert

It's not that instructions are not data. I think that's how you're interpreting it. But what -- what the difference is, is that data cannot be treated as instructions. Data that's not -- the data upon which a program operates cannot simply be treated as an instruction.

Houh Depo Trans. (Ex. 2005), 158:8-13

digital -- digitally encoded. And when you look at a program, if you just look at it, you can't tell the difference between -- you can't necessarily tell the difference between what are instructions and what might not be instructions because it's all digital data.

Houh Depo Trans. (Ex. 2005), 118:10-15

Oxford Dictionary

Petitioner's Expert

and what might not be instructions because it's all digital data.” (*Id.*, 118:2-15.) In other words, data comprises information in the form of instructions and information that is not in the form of instructions (non-instruction data)—the computer interpreting instructions differently than interpreting non-instruction data is the “distinction” that the Oxford Dictionary of Computing is referring to. Thus, “data” comprises instructions *and* non-instruction data, where instructions are one type of data that “further instructs the computer what specific other sequences are to be done” (and non-instruction data are another type of data). (Ex. 2005, 154:16-19; *see also id.*, 141:11-12 (“instructions are a form of data, but they’re a very specific type”).) And the Oxford Dictionary of Computing is not saying that “data” and “instructions” are mutually exclusive, as Dr. McLean suggests. Rather,

Houh Reply Dec.
(Ex. 1015), ¶21

Computer Science Textbook

and the instructions that are being executed by the ALU. Crucially, there is no distinction between instructions and data in the von Neumann architecture. For all intents and purposes, instructions *are* data.

Dive Into Systems Textbook (Ex. 1016), 2

'225 Patent, Claim 1

1. A method comprising:
establishing, by a sensor device, data communication with
a piece of workout equipment;
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
transmitting, by the sensor device and to the piece of
workout equipment, a first set of activity data corre-
sponding to an activity performed by a user during a
first time period, wherein the piece of workout equip-
ment is configured to display the first set of activity
data.

[1B]

[1C]

Heart Rate Data

Patent Owner Response

1. lululemon fails to show that Acres discloses transmitting, by the sensor device and to the piece of workout equipment, “a first set of data for operating a first function of the piece of workout equipment,” as recited by claim limitations 1B and 12C[ii]

POR (Paper 19), 21

the exercise equipment according to what it computed.”). Acres “commands” are themselves the subsequent actions performed in response to the receipt of data, i.e., the “exerciser’s heart rate.” In this way, Acres itself recognizes a distinction between “data” and “commands.” Ex. 2004, ¶¶58–59.

POR (Paper 19), 23

Data That Is Sensed Or Collected

Patent Owner's Expert

Q. And when you say the system receives additional types of information that the sensor senses or collects performance data, is it your opinion that performance data is the only data that the sensor device senses or collects?

A. Yes.

McLean Depo Trans. (Ex. 1014), 35:3-8

Q. So would you agree that activity data in the '225 patent is athletic performance data?

* * *

THE WITNESS: Yes.

McLean Depo Trans. (Ex. 1014), 37:14-17

“data” Comprises Identification Information

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.

Identification Information

Patent Owner's Expert

Q. So in your opinion, does the sensor sense or collect factual information that is identification information?

THE WITNESS: So the sensor collects or senses factual information related to athletic performance.

McLean Depo Trans. (Ex. 1014), 35:16-22

Q. Yes. In your opinion, is identification information factual information about performance?

THE WITNESS: No.

McLean Depo Trans. (Ex. 1014), 36:9-12

Instituted Grounds

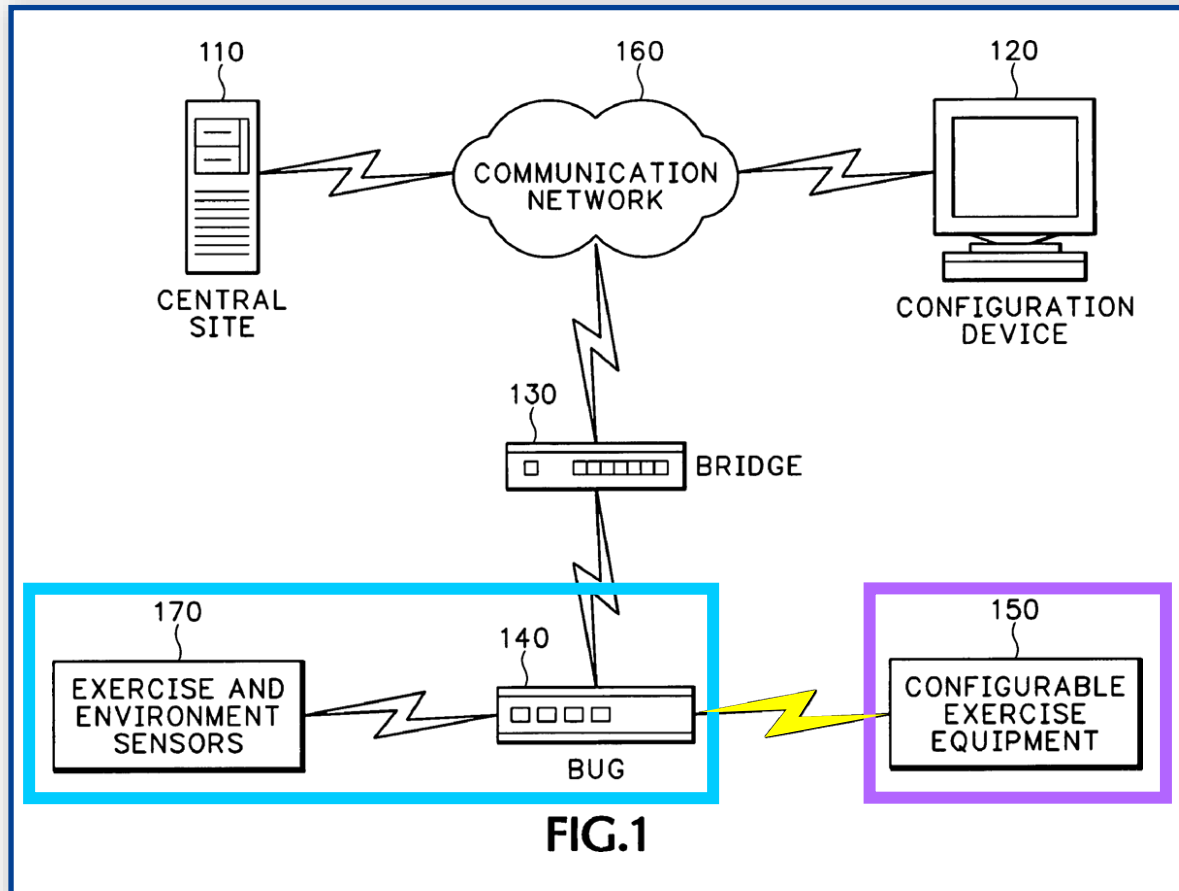
Instituted Grounds

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

Petition (Paper 2), 7

Acres (Grounds 1 And 2)

Acres



Acres (Ex. 1002), Fig. 1

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. After

Acres (Ex. 1002), [0089]

'225 Patent, Claim 1

1. A method comprising:
establishing, by a sensor device, data communication with
a piece of workout equipment;
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
transmitting, by the sensor device and to the piece of
workout equipment, a first set of activity data corre-
sponding to an activity performed by a user during a
first time period, wherein the piece of workout equip-
ment is configured to display the first set of activity
data.

Acres Transmits “data”

Decision on Institution

does not include Acres’s commands. *See id.* As discussed above in our Claim Construction section (§ II.C), 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.”

DI (Paper 11), 16

Acres Transmits “data”

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. After

Acres (Ex. 1002), [0089]

MPH and then wait for Mary’s heart rate to stabilize. If Doug’s heart rate were 5 beats per minute below the goal, the Bug 601 would instruct the treadmill 150 to increase speed by 0.3 MPH and then wait for Doug’s heart rate to stabilize. The Bug 601 can profile its exerciser’s heart rate

Acres (Ex. 1002), [0095]

Acres Transmits “data”

Petitioner’s Expert

25. Further, informational content of the commands reflect factual information that informs of the corresponding subsequent action to be taken. For example, a command that tells a treadmill to increase the speed by a specific amount includes informational content that provides information (subsequent action is to increase the speed, the specific amount of increase, *e.g.*, “the Bug 601 would instruct the treadmill 150 to increase speed by 0.3 MPH”) corresponding to the subsequent action to be taken. (Ex. 1002, [0095].) Further, commands include

Houh Reply Dec. (Ex. 1015), ¶25

Acres Transmits “data”

[0022] In some embodiments, the exerciser visits a central computer site through any compatible networked device, including computer, telephone, personal organizer, etc. and completes a list of specifications regarding age, gender, health and exercise goals. The central computer site then creates a profile for the exerciser along with a customized exercise program.

* * *

unique identifier. The exerciser associates that Bug ID with her exercise profile by actuating a user controlled input

Acres (Ex. 1002), [0022], [0023]

601 can reduce treadmill speed to compensate. Alternatively, the Bug 601 can control both speed and incline to match the fitness goals of the exerciser. The Bug 601 can be configured

Acres (Ex. 1002), [0096]

Acres Transmits “data”

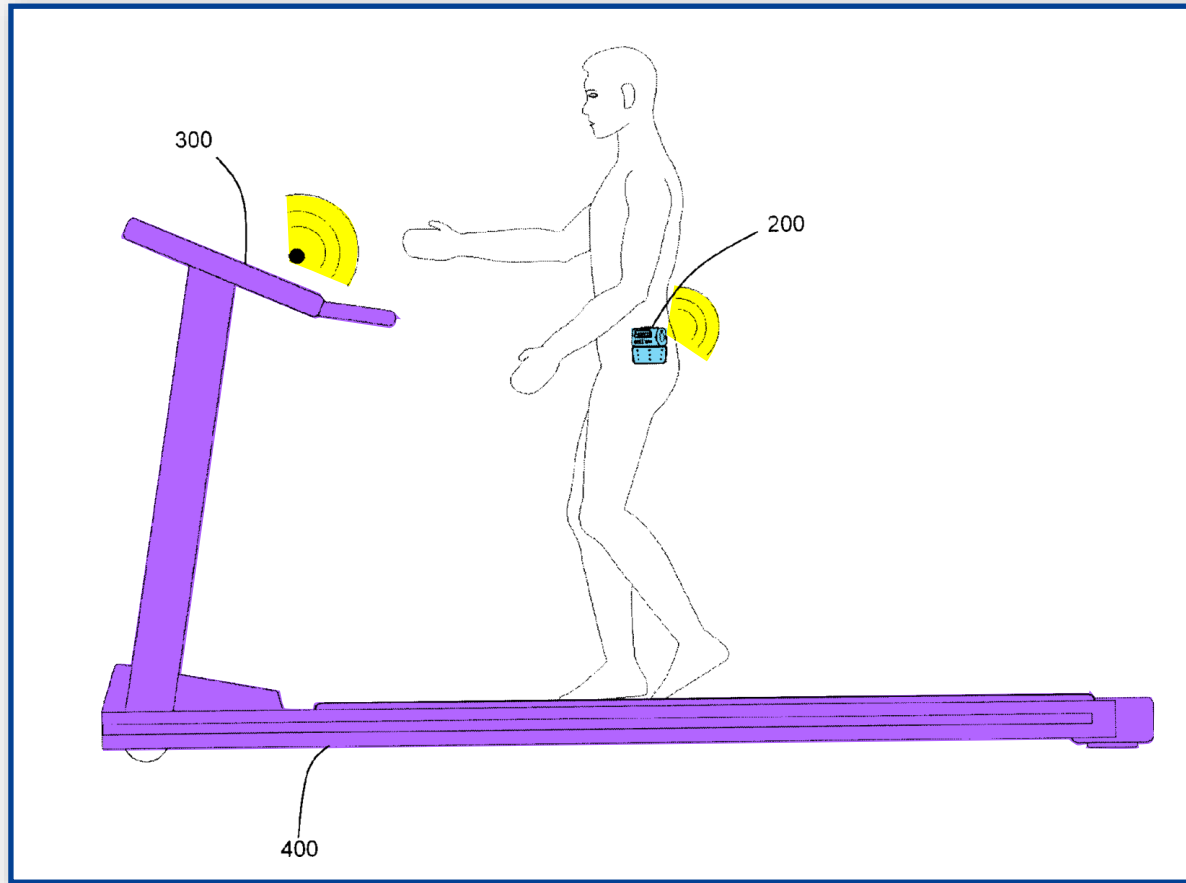
Petitioner’s Expert

the subsequent action to be taken. (Ex. 1002, [0095].) Further, commands include informational content that has been collected such as a target parameter. (Ex. 2005, 43:1-24, 45:5-13.) In Acres, the user creates a user profile that reflects exercise goals, and the user profile is associated with the Bug. (Ex. 1002, [0022]-[0023].) As Acres explains, “the Bug 601 can control both speed and incline to match the [exercise] goals of the exerciser. The Bug 601 can be configured to control any number of machine parameters.” (*Id.*, [0096].) Thus, the exercise goals are factual information that has been collected that the Bug transmits to the treadmill to control its speed, incline, or any number of machine parameters.

*Houh Reply Dec.
(Ex. 1015), ¶25*

Acres And Pyles (Ground 3)

Pyles



[0029] The step counter 200 is in communication with the console 300 when the user is using the exercise machine 400. The step counter 200 comprises a first communication means for communicating the cumulative number of steps taken by the user from the step counter 200 to the console 300. In one version, the step counter 200 has a “send”

Pyles (Ex. 1004), [0029]

Motivation To Combine Acres And Pyles

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.*)

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Motivation To Combine Acres And Pyles

equipment and people. (Ex. 2004, ¶¶64-68.) In my opinion, a POSITA would recognize that, in some instances (such as when a user consistently uses one exercise machine and may not need portability or more data access to multiple pieces of equipment), there are benefits to storing user-specific historical data at an exercise machine over storing at a central site. As I explained in my opening declaration, these benefits include a reduced number of separate components, lower costs, eliminating the need for transferring data over an interconnection, and an expanded customer base. (Ex. 1005, ¶¶72-73.) Thus, a POSITA would be motivated to combine Acres and Pyles when these benefits are desired.

Houh Reply Dec. (Ex. 1015), ¶31

Acres

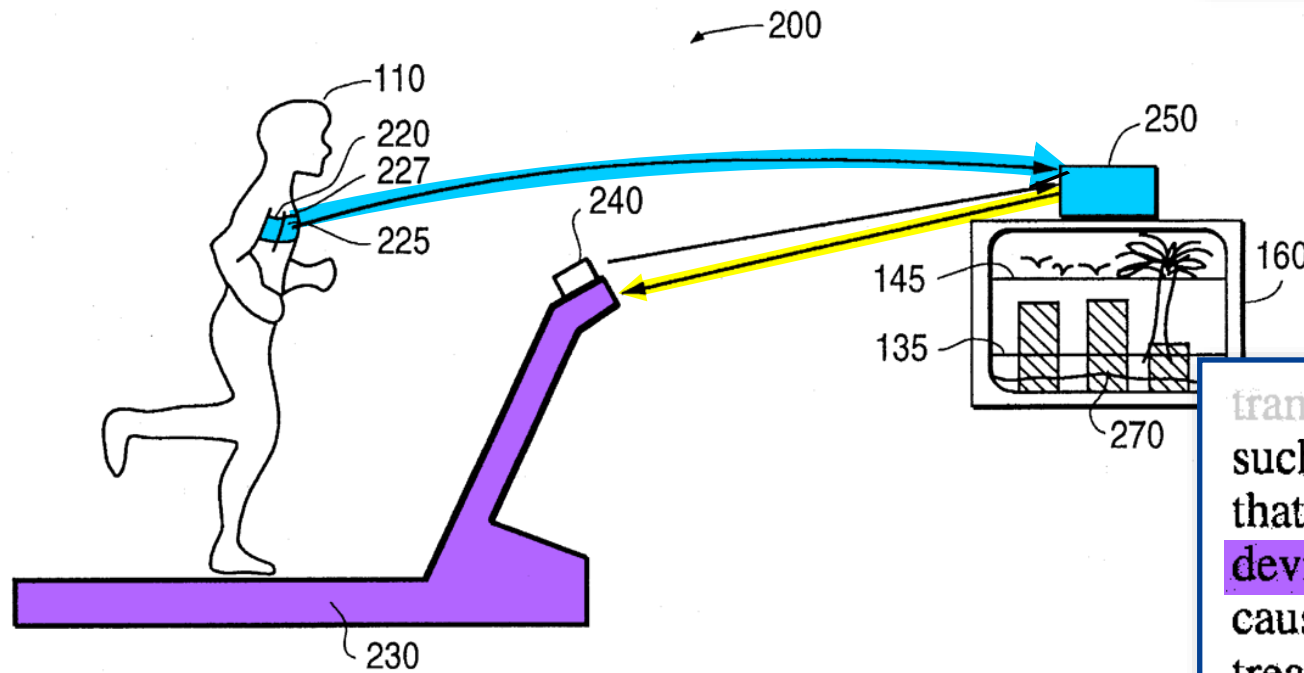
[0030] Alternative Bug embodiments provide an input mechanism on the Bug itself by which the user can configure heart rate and, optionally, exercise goals without need for connecting to a central computer site. This embodiment communicates through a wired or wireless connection to a unit of compatible exercise equipment. Once the connection is made, the Bug guides the exercise equipment's workload settings to keep the exerciser's heart rate within a desired range.

Acres (Ex. 1002), [0030]

Abbondanza (Grounds 4 And 5)

Abbondanza

FIG. 3



transmitter 227. 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.

Abbondanza (Ex. 1003), 10:62-64

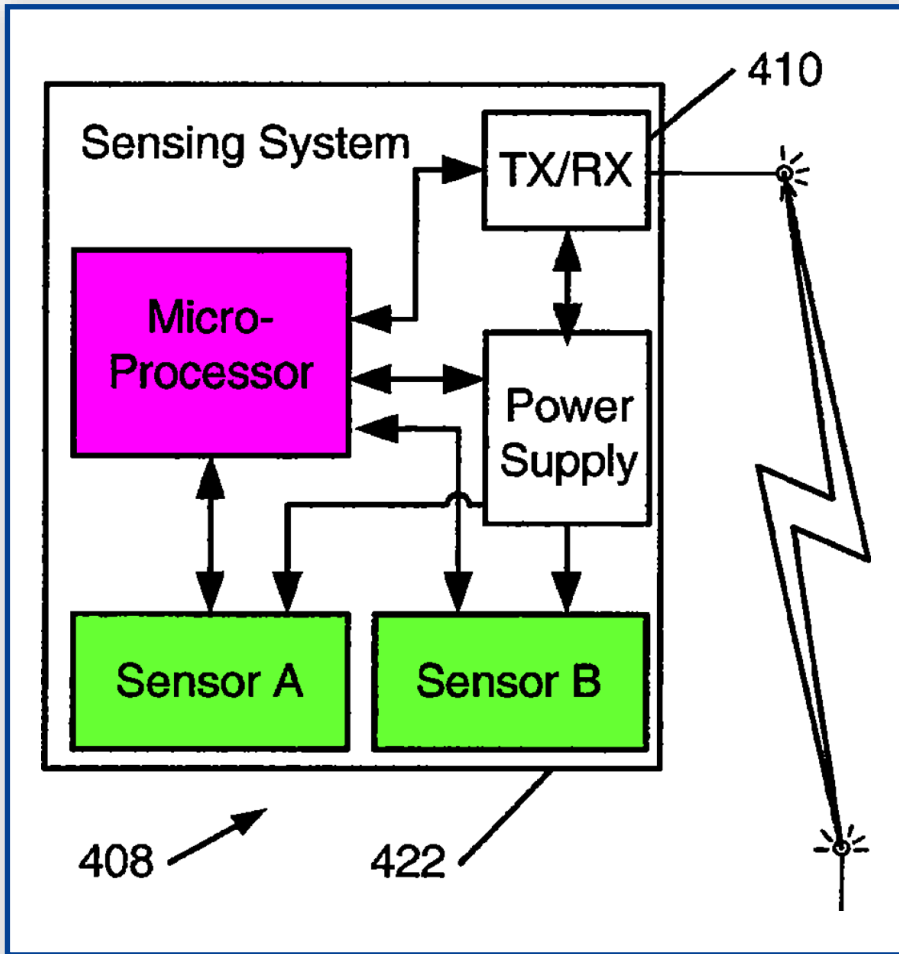
transmitter 227. Base unit 250's controller is equipped in such a way that it determines if the user's pulse rate is within that user's target heart rate range and instructs treadmill device 230 to either speed-up or slow-down ultimately to cause the user to either work harder (i.e. run faster on treadmill device 230) or work softer (e.g. run slower on treadmill device 230) respectively. Additionally, base unit

Abbondanza (Ex. 1003), 11:16-23

'225 Patent, Claim 1

1. A method comprising:
establishing, by a sensor device, data communication with
a piece of workout equipment;
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
transmitting, by the sensor device and to the piece of
workout equipment, a first set of activity data corre-
sponding to an activity performed by a user during a
first time period, wherein the piece of workout equip-
ment is configured to display the first set of activity
data.

'225 Patent



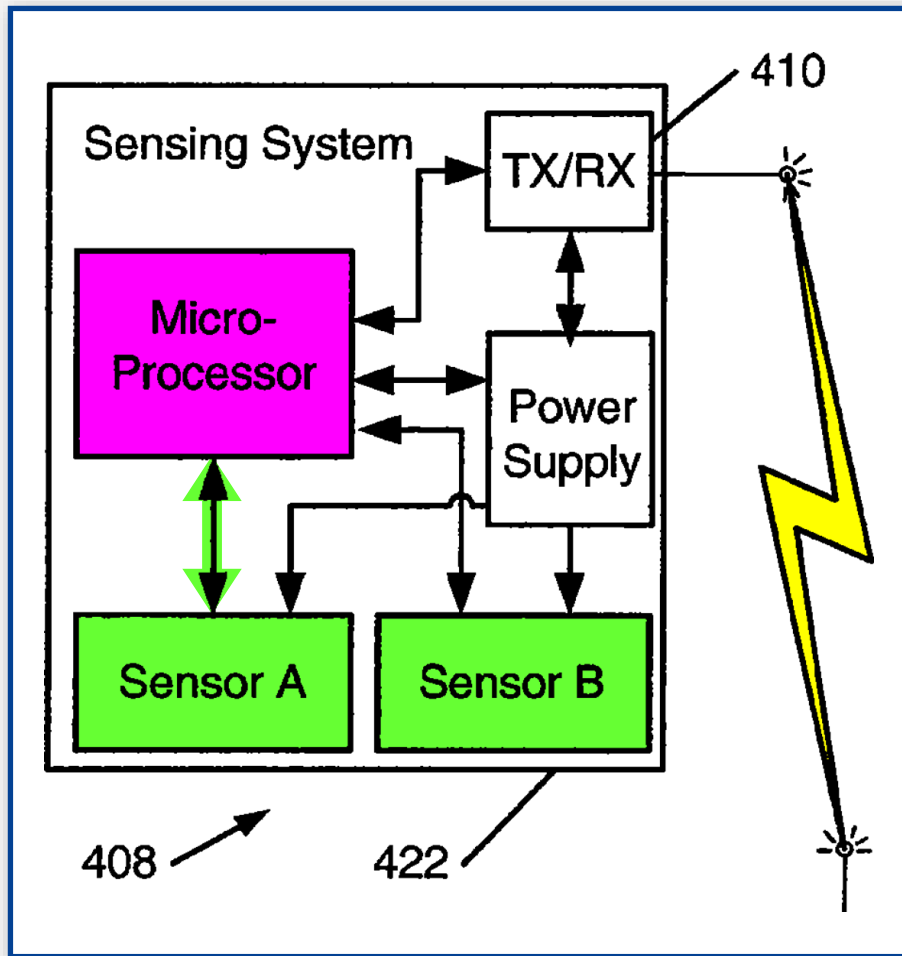
'225 Patent (Ex. 1001), Fig. 4

mounted in an article of athletic footwear 504. The module 502 may include, for example, one or more athletic performance data sensors, a data transfer system, processing capabilities, a power supply, and/or the like (e.g., like the system 408 shown in FIG. 4). Any desired manner of

'225 Patent (Ex. 1001), 16:54-57

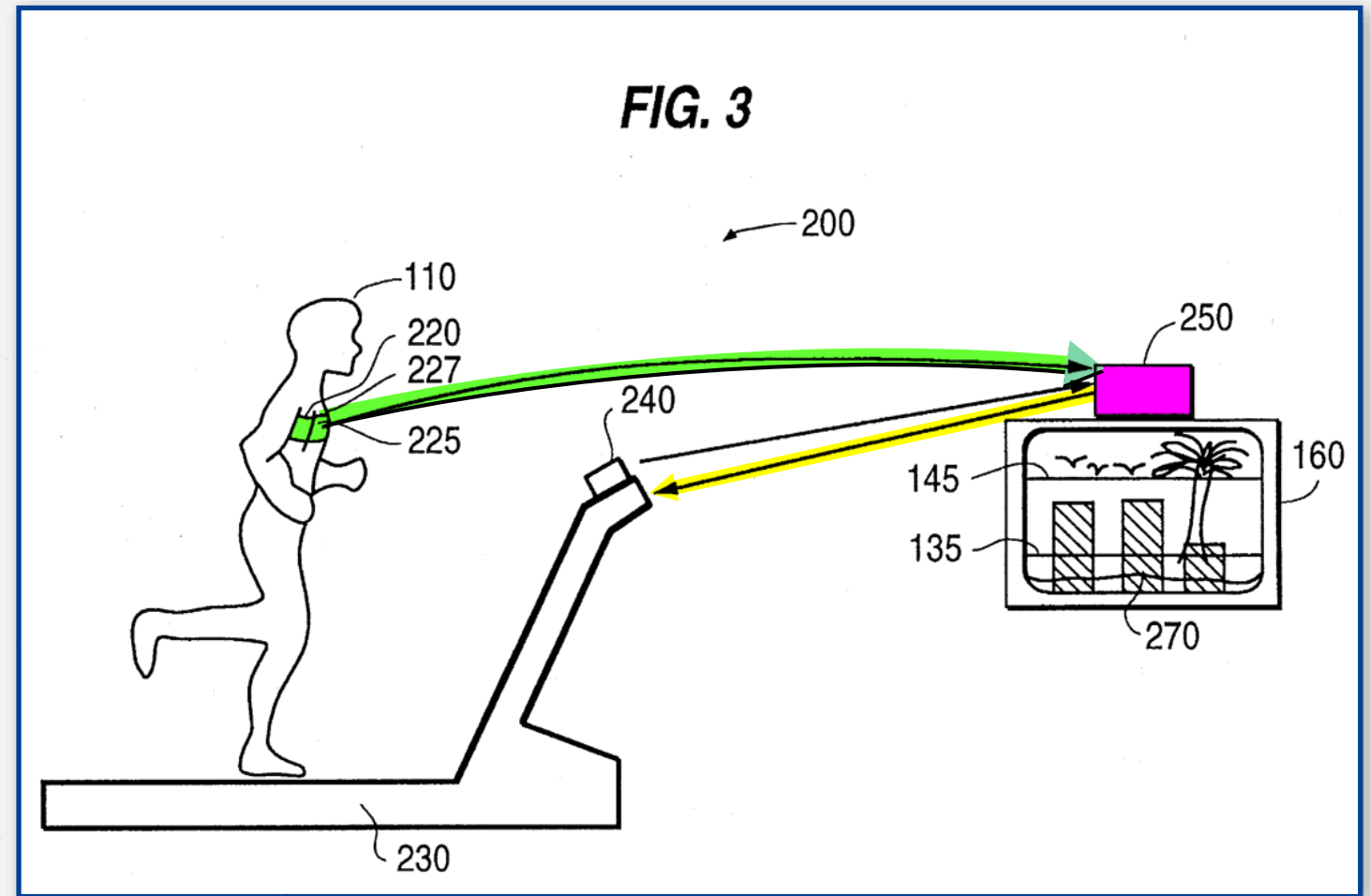
'225 Patent vs. Abbondanza

'225 Patent



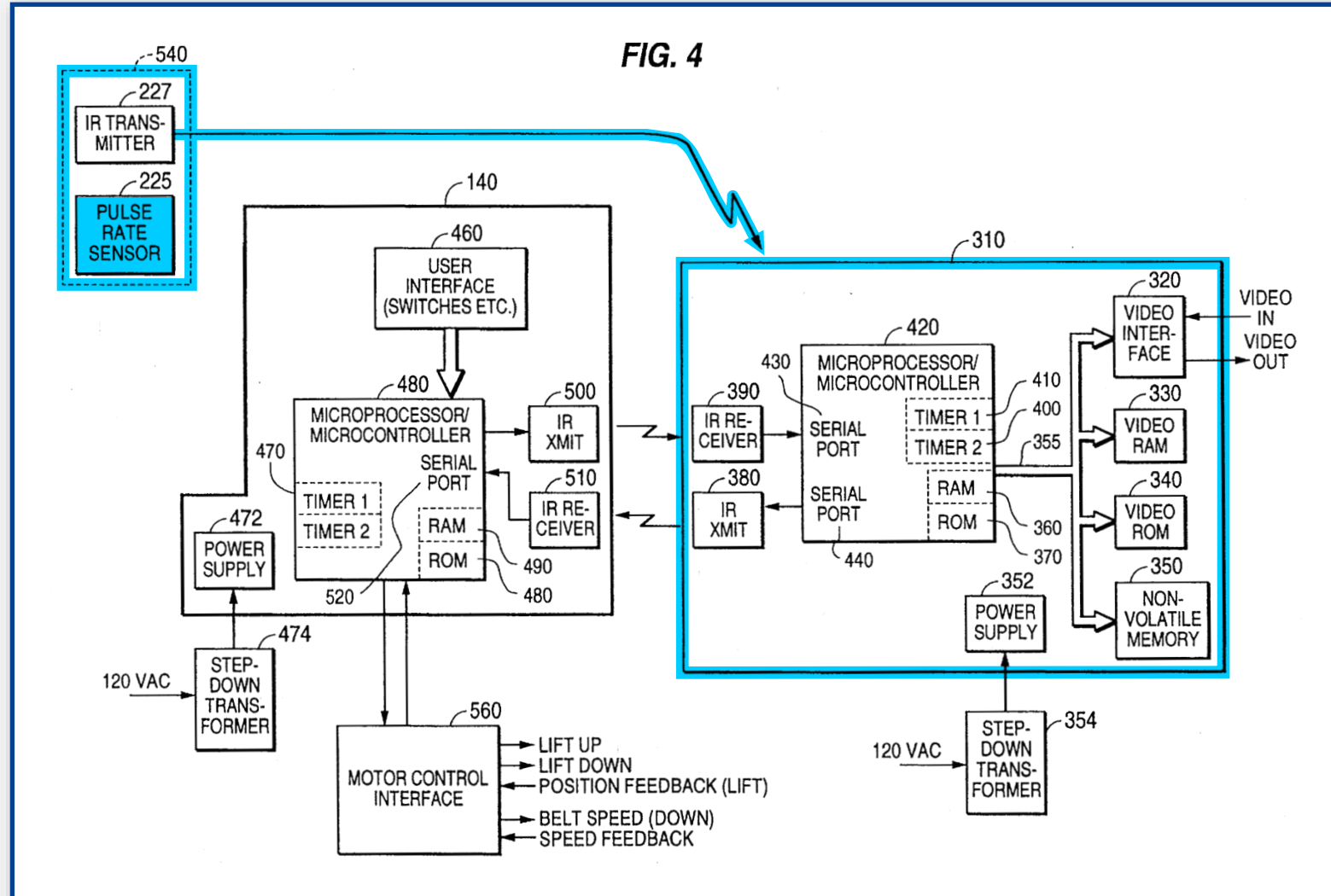
'225 Patent (Ex. 1001), Fig. 4

Abbondanza



Abbondanza (Ex. 1003), Fig. 3

Abbondanza



Abbondanza (Ex. 1003), Fig. 4

Abbondanza Transmits “data”

transmitter 227. Base unit 250's controller is equipped in such a way that it 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 (i.e. run faster on treadmill device 230) or work softer (e.g. run slower on treadmill device 230) respectively. Additionally, base unit

Abbondanza (Ex. 1003), 11:17-22

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

I hereby certify that the attached PETITIONER'S DEMONSTRATIVES
was served as of the below date via e-mail (by agreement) to the following counsel
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Dated: April 12, 2024

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