US 20130203557A1

(19) United States

(12) Patent Application Publication

(10) Pub. No.: US 2013/0203557 A1

(43) Pub. Date: Aug. 8, 2013

SU et al.

(54) **FITNESS COURSE GUIDANCE SYSTEM FOR INTEGRATING IDENTIFICATION CAPABILITY INTO PERSONAL DEVICE**

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(21) Appl. No.: **13/364,665**

(22) Filed: **Feb. 2, 2012**

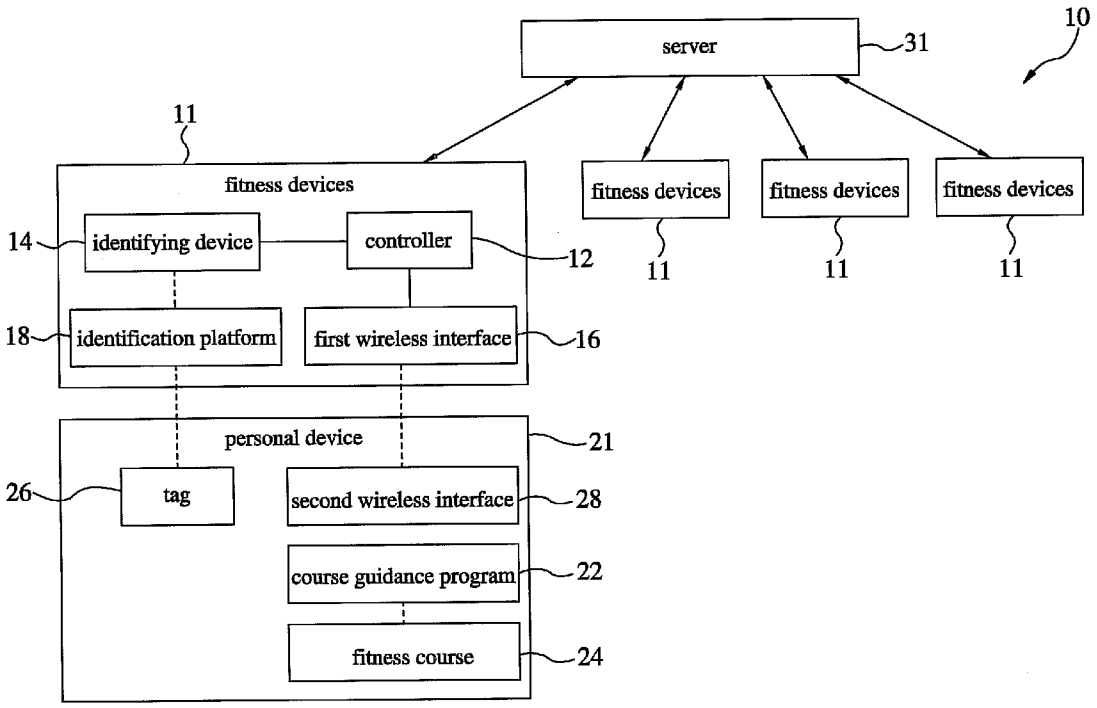
Publication Classification

(51) **Int. Cl.**
A63B 24/00 (2006.01)

(52) **U.S. Cl.**
USPC **482/4**

(57) **ABSTRACT**

A fitness course guidance system for integrating identification capability into a personal device includes: a plurality of fitness devices each including a controller, an identifying device, and a first wireless interface; at least one personal device including a course guidance program, at least one fitness course, a tag, and a second wireless interface, being positioned on one of the fitness devices to allow the fitness device to identify the at least one personal device, executing the course guidance program to use the at least one fitness course, issuing an instruction to a user, and receiving the use status and related data of the fitness devices; and a server electrically connected to the controller of the fitness devices and the at least one personal device in a wired or wireless manner and adapted to collect the use status of the fitness devices.



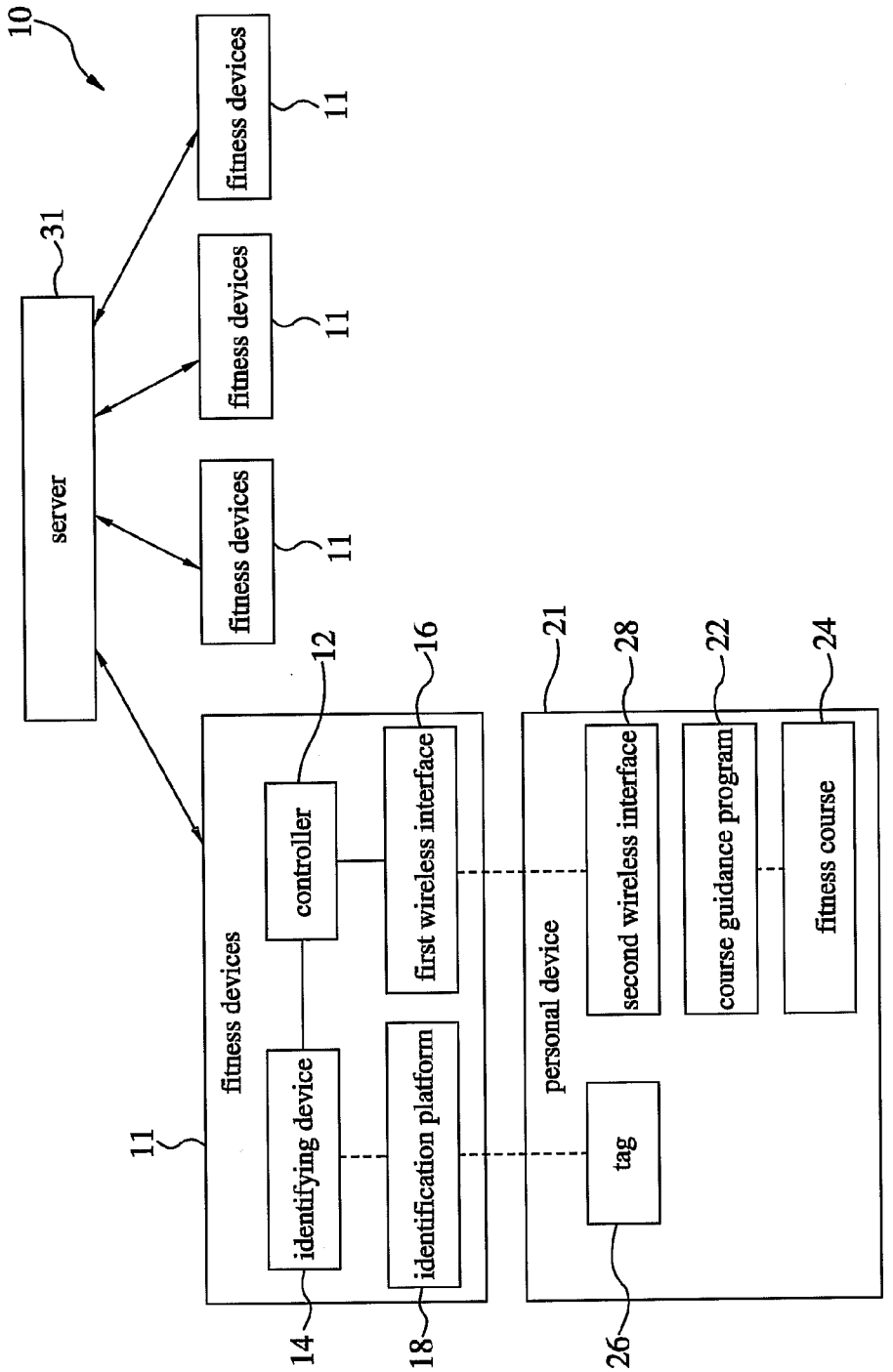

10
server
31
fitness devices
11
fitness devices
11
fitness devices
11
fitness devices
11
fitness devices
controller
12
identifying device
14
first wireless interface
16
identification platform
18
personal device
21
second wireless interface
28
tag
26
course guidance program
22
fitness course
24

FIG.1

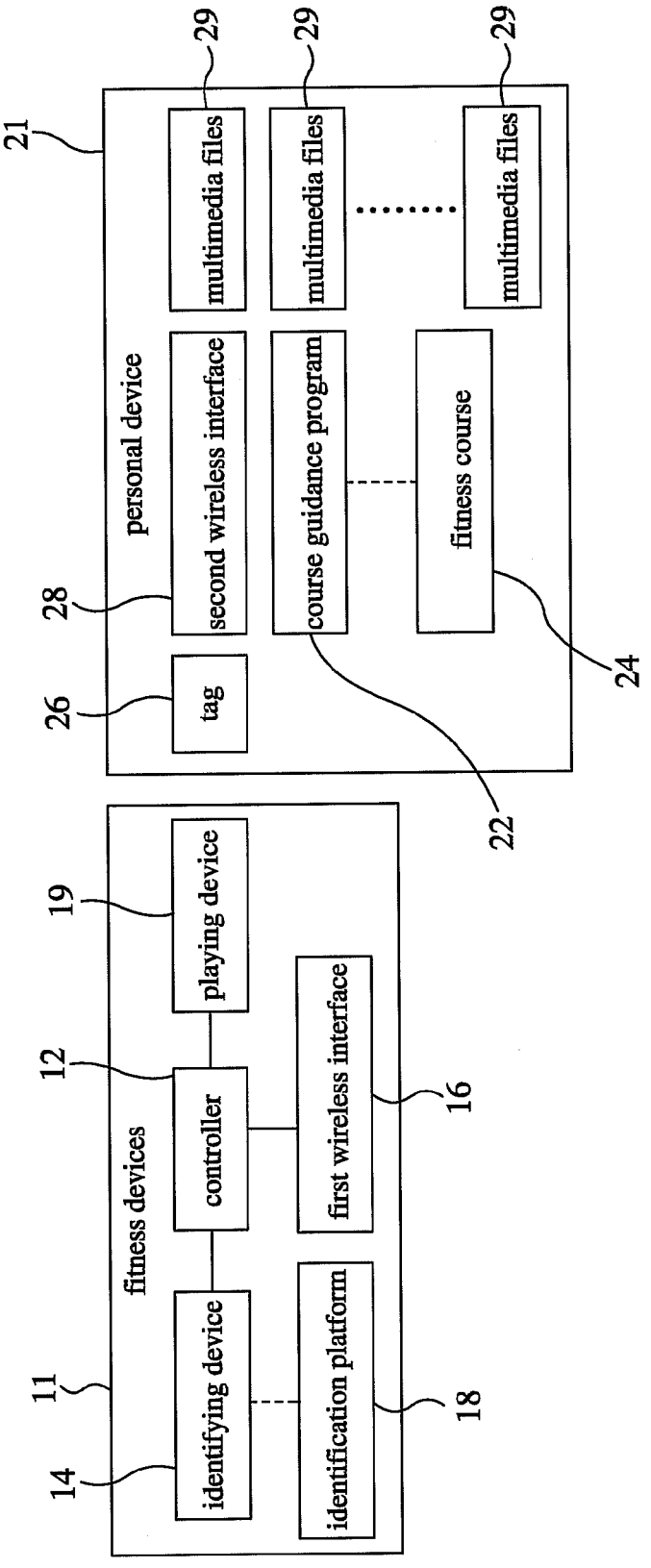

21
personal device
multimedia files
29
multimedia files
29
multimedia files
29
second wireless interface
28
course guidance program
fitness course
tag
26
24
22
fitness devices
11
playing device
19
controller
12
first wireless interface
16
identifying device
14
identification platform
18

FIG.2

FITNESS COURSE GUIDANCE SYSTEM FOR INTEGRATING IDENTIFICATION CAPABILITY INTO PERSONAL DEVICE

BACKGROUND OF THE INVENTION

[0001] 1. Technical Field

[0002] The present invention relates to fitness devices, and more particularly, to a fitness course guidance system for integrating identification capability into a personal device.

[0003] 2. Description of Related Art

[0004] Clients working out with fitness equipment in a gymnasium usually use the fitness equipment in sequence according to the fitness courses recommended by a fitness coach with a view to achieving the goal and effect of fitness training.

[0005] However, few clients can afford to hire a personal coach who gives instructions promptly at any time. Instead, most clients hire a coach who delivers to the clients instructions on the fitness courses before the clients look for related fitness equipment on their own to start their workout sessions. In such a situation, the clients judge on their own whether they have completed a fitness course with a specific exercise device—for example, whether they have met workout time requirements, exercise repetition requirements, and exercise strength requirements, and the clients operate the fitness equipment at will. Those clients who are lazy or cannot wait for the end of a workout session are likely to reduce the exercise repetition frequency or shorten the workout session, and in consequence the clients fail to achieve the goal and effect of fitness training or end up with an unsatisfactory effect of fitness training.

[0006] Taiwan Patent M344892 discloses an exercise device in interactive connection with a medical service platform. The exercise device applies identification and data transmission technology. When operated by a user, the exercise device identifies the user and sends to an external medical service platform the data pertaining to the user's use of the exercise device and the user's physiological condition.

[0007] The aforesaid prior art merely teaches sending to a medical service platform the data pertaining to the user's use of the exercise device and the user's physiological condition; in other words, it discloses a technique whereby a medical service platform takes care of the user. However, according the aforesaid prior art, communication is restricted to between the exercise device and the medical service platform. Hence, the aforesaid prior art does not enable a fitness coach to take the initiative in giving a suggestion or a reminder to the user of exercise device.

BRIEF SUMMARY OF THE INVENTION

[0008] It is a primary objective of the present invention to provide a fitness course guidance system for integrating identification capability into a personal device, wherein the fitness course guidance system comprises a personal device for providing course guidance to users using fitness devices and thereby allowing the users to complete a fitness course correctly.

[0009] In order to achieve the above and other objectives, the present invention provides a fitness course guidance system for integrating identification capability into a personal device. The fitness course guidance system comprises: a plurality of fitness devices each comprising a controller, an identifying device, and a first wireless interface, the controller being electrically connected to the identifying device and the first wireless interface and adapted to send out a use status and related data of the fitness devices; at least one personal device carried by a user, being capable of computing and processing, comprising a course guidance program, at least one fitness course, a tag, and a second wireless interface, being positioned on one of the fitness devices to allow the identifying device of the fitness device to identify the tag, electrically connected to the fitness device via the second wireless interface and the first wireless interface of the fitness device, issuing the user an instruction based on the at least one fitness course according to a motion mode of the fitness devices, and receiving the use status and related data from the controller of the fitness devices, so as to execute the course guidance program and thereby determinate a state of execution of the fitness course; and a server electrically connected to the controller of the fitness devices and the at least one personal device in a wired or wireless manner and adapted to collect the use status of the fitness devices. Accordingly, the present invention discloses that a personal device gives course guidance to a user while the user is working out with fitness devices, such that the user can complete a fitness course correctly.

BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWINGS

[0010] The structure and features of the present invention are hereunder illustrated with preferred embodiments in conjunction with the accompanying drawings, in which:

[0011] FIG. **1** is a structural schematic view of a preferred embodiment of the present invention; and

[0012] FIG. **2** is a partial block diagram of a preferred embodiment of the present invention, showing a fitness device equipped with a playing device, and a personal device provided with multimedia files.

DETAILED DESCRIPTION OF THE EMBODIMENTS OF THE INVENTION

[0013] Referring to FIG. **1**, in a preferred embodiment of the present invention, a fitness course guidance system **10** for integrating identification capability into a personal device essentially comprises a plurality of fitness devices **11**, at least one personal device **21**, and a server **31**.

[0014] The fitness devices **11** each comprise a controller **12**, an identifying device **14**, and a first wireless interface **16**. The identifying device **14** and the first wireless interface **16** are electrically connected to the controller **12**. The controller **12** sends out the use status and related data of the fitness devices **11**. In this embodiment, the fitness devices **11** each further comprise an identification platform **18**. The fitness devices of the present invention include, for example, a treadmill, a fitness bicycle, a chest expander, and a step exercise device.

[0015] This embodiment is exemplified by one said at least one personal device **21**. The personal device **21** is adapted to be carried by a user and exemplified by a smartphone or a personal digital assistant (PDA). In this embodiment, the personal device **21** is exemplified by a smartphone. The personal device **21** is capable of computing and processing, and comprises a course guidance program **22**, at least one fitness course **24**, a tag **26**, and a second wireless interface **28**. This embodiment is exemplified by one said at least one fitness course **24**. The personal device **21** is positioned on the iden-

tification platform **18** of the fitness device **11**, such that the tag **26** can be identified by the identifying device **14** of the fitness devices **11**. Furthermore, the personal device **21** is electrically connected to the fitness devices **11** via the second wireless interface **28** and the first wireless interface **16** of the fitness devices **11**. To execute the course guidance program **22**, the personal device **21** issues the user an instruction based on the at least one fitness course **24** according to a motion mode of the fitness devices **11** and receives the use status and related data from the controller **12** of the fitness devices **11** so as to determinate the state of execution of the fitness course **24**.

[0016] In this embodiment, the identifying device **14** of the fitness devices **11** is spaced apart from the tag **26** by a distance of less than 10 cm while identifying the tag **26**. The identifying device **14** and the tag **26** are radio frequency identification (RFID) devices or near field communication (NFC) devices. In this embodiment, the identifying device **14** and the tag **26** are RFID devices. In this embodiment, the first wireless interface **16** and the second wireless interface **28** are Bluetooth interfaces or radio frequency interfaces and are illustrated with Bluetooth interfaces.

[0017] The server **31** is electrically connected to the controller **12** of the fitness devices **11** and the personal device **21** in a wired or wireless manner. The server **31** collects the use status and related data of the fitness devices **11**. Regarding the collection operation, it can be directly carried out by the fitness devices **11**. Alternatively, it is feasible that the personal device **21** collects the use status and related data of the fitness device **11** on which the personal device **21** is positioned.

[0018] The framework of this embodiment is described above. The operation state of this embodiment is described below.

[0019] Referring to FIG. **1**, before the commencement of the fitness course **24**, the user must have the personal device **21** ready to operate, that is, having installed the fitness course **24** and the course guidance program **22** on the personal device **21**. The personal device **21** gets electrically connected to the server **31** in a wired or wireless manner as soon as the user enters the gymnasium.

[0020] To begin a workout session, the user executes the course guidance program **22** by means of the personal device **21** to access the intended fitness course **24**, and employs the first and second wireless interfaces **16**, **28** to inform the server **31** that there is a client who is going to start taking the fitness course **24**. The server **31** collects data related to the use status of all the fitness devices **11** currently connected and sends the data to the personal device **21**. Upon receipt of the data, the personal device **21** determines an available one of the fitness devices **11** and informs the user to undertake the workout with the available fitness device **11**.

[0021] At this point in time, the user approaches the available fitness device **11** and puts the personal device **21** on the identification platform **18** of the fitness device **11**. Then, the fitness device **11** identifies the personal device **21** instantly and informs the personal device **21** that the identification procedure is done. As a result, the personal device **21** can determine that the user has already arrived at the correct fitness device **11** and is ready for exercise, and that the course guidance is going to resume.

[0022] Afterward, the course guidance program **22** makes reference to the fitness course **24** and instructs the user to use the fitness device **11**. Then, the fitness device **11** sends the use status and related data to the personal device **21** and the server **31**, so as to allow the personal device **21** to determine the state of execution of the fitness course **24**. Furthermore, the personal device **21** monitors the user's exercise status and gives the user a timely prompt or suggestion (such as "you are running too fast," "you are running too slow", "you are stretching your muscles too hard," or "you are not stretching your muscles sufficiently"). After the user has finished exercising with the fitness device **11** as required, the course guidance program **22** makes reference to the fitness course **24** again and instructs the user to switch to the next fitness device **11** for continuing the workout. In doing so, the user works out with the fitness devices **11** in sequence until the user completes the fitness course **24**.

[0023] As indicated above, the present invention discloses that the personal device **21** gives course guidance to the user while the user is working out with the fitness devices **11**, such that the user can complete the fitness course **24** correctly.

[0024] Referring to FIG. **2**, a plurality of multimedia files **29**, such as audio files, are stored in the personal device **21**, whereas the fitness device **11** comprises a playing device **19**, such as a speaker. The personal device **21** is positioned on the fitness device **11** and sends the multimedia files **29** to the fitness device **11** via the two wireless interfaces. After the fitness device **11** has received the multimedia files **29**, the playing device **19** plays the multimedia files **29**. Hence, the fitness device **11** plays the multimedia files **29** in the personal device **21** while the user is exercising. With the personal device **21** being in the possession of the user, the contents of the multimedia files **29** are supposed to appeal to the user. As a result, users can listen to or watch their favorite multimedia audios or videos while working out, thereby rendering the workout comfortable.

1. A fitness course guidance system for integrating identification capability into a personal device, the fitness course guidance system comprising:

a plurality of fitness devices each comprising a controller, an identifying device, and a first wireless interface, the controller being electrically connected to the identifying device and the first wireless interface and adapted to send out a use status and related data of the fitness devices;

at least one personal device carried by a user, being capable of computing and processing, comprising a course guidance program, at least one fitness course, a tag, and a second wireless interface, being positioned on one of the fitness devices to allow the identifying device of the fitness device to identify the tag, electrically connected to the fitness device via the second wireless interface and the first wireless interface of the fitness device, issuing the user an instruction based on the at least one fitness course according to an availability of the fitness devices, and receiving the use status and related data from the controller of the fitness devices, so as to execute the course guidance program and thereby determinate a state of execution of the fitness course; and

a server electrically connected to the controller of the fitness devices and the at least one personal device in a wired or wireless manner and adapted to collect the use status of the fitness devices.

2. The fitness course guidance system of claim **1**, wherein the identifying device is spaced apart from the tag by a distance of less than 10 cm while identifying the tag.

3. The fitness course guidance system of claim **2**, wherein the identifying device and the tag are radio frequency identification (RFID) devices.

4. The fitness course guidance system of claim **2**, wherein the identifying device and the tag are near field communication (NFC) devices.

5. The fitness course guidance system of claim **1**, wherein the first wireless interface and the second wireless interface are Bluetooth interfaces or radio frequency interfaces.

6. The fitness course guidance system of claim **1**, wherein the fitness devices each further comprise an identification platform for holding the at least one personal device and then identifying the at least one personal device.

7. The fitness course guidance system of claim **1**, wherein the at least one personal device is a smartphone or a personal digital assistant (PDA).

8. The fitness course guidance system of claim **1**, wherein the at least one said personal device is stored therein with a plurality of multimedia files, and the fitness devices each comprise a playing device, wherein the at least one personal device is positioned on one of the fitness devices and sends the multimedia files to the fitness device via the two wireless interfaces, wherein, after the fitness device has received the multimedia files, the playing device plays the multimedia files.

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