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(54) **WEARABLE DEVICE**

AM KÖRPER TRAGBARES GERÄT

DISPOSITIF PORTABLE AU CORPS

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Description

TECHNICAL FIELD

[0001] The present invention relates to wearable device technologies, and in particular, to a wearable device.

BACKGROUND

[0002] With development of smart devices, smart wearable devices are becoming more popular with users. Current wearable devices mainly include smart bands, smartwatches, smart necklaces, and the like.

[0003] In the prior art, generally all wearable devices include a Bluetooth module. A wearable device can track a status of a user during exercise, sleep and so on, and can also be wirelessly connected to a mobile phone by means of Bluetooth, to transmit detected information to the mobile phone.

[0004] However, prior-art wearable devices do not have diversified functions and cannot satisfy user requirements in different scenarios. That is, man-machine interaction of prior-art wearable devices is not intelligent enough, and user experience is poor.

[0005] US 2014/0249760 A1 discloses a system for using data based on user habit information or user monitoring. The monitoring device has sensors that measure user information. The collected measurements are transmitted using a telemetry system.

[0006] US 2014/0273858 A1 discloses biometric monitoring devices and respective Bluetooth communication interfaces.

[0007] US 2014/0070957 A1 discloses a wearable communications garment that includes one or more user-selectable inputs integrated into the garment.

SUMMARY

[0008] Embodiments of the present invention provide a wearable device, to resolve a problem that man-machine interaction of prior-art wearable devices is not intelligent enough. The invention is defined in claim 1. Additional features of the invention are provided in the dependent claims 2 to 9. The embodiments and/or examples disclosed in the following description which are not covered by the appended claims are considered as not being part of the present invention.

BRIEF DESCRIPTION OF DRAWINGS

[0009] To describe the technical solutions in the embodiments of the present invention or in the prior art more clearly, the following briefly describes the accompanying drawings required for describing the embodiments or the prior art. Apparently, the accompanying drawings in the following description show some embodiments of the present invention, and persons of ordinary skill in the art may still derive other drawings from these accompanying

drawings without creative efforts.

FIG. 1 is a schematic structural diagram of Embodiment 1 of a wearable device according to the present invention;

FIG. 2 is a schematic structural diagram of Embodiment 2 of a wearable device according to the present invention;

FIG. 3 is a schematic structural diagram of Embodiment 3 of a wearable device according to the present invention; and

FIG. 4 is a schematic structural diagram of Embodiment 4 of a wearable device according to the present invention.

DESCRIPTION OF EMBODIMENTS

[0010] To make the objectives, technical solutions, and advantages of the embodiments of the present invention clearer, the following clearly and completely describes the technical solutions in the embodiments of the present invention with reference to the accompanying drawings in the embodiments of the present invention. Apparently, the described embodiments are some but not all of the embodiments of the present invention. All other embodiments obtained by persons of ordinary skill in the art based on the embodiments of the present invention without creative efforts shall fall within the protection scope of the present invention.

[0011] FIG. 1 is a schematic structural diagram of Embodiment 1 of a wearable device according to the present invention. As shown in FIG. 1, a wearable device 001 includes a microprocessor control unit (Microprocessor Control Unit, MCU for short) 01, a first switch module 02, a Bluetooth module 03, and a multimedia module 04.

[0012] The Bluetooth module 03, the multimedia module 04, and the microprocessor control unit 01 are all connected to the first switch module 02.

[0013] The Bluetooth module 03 is configured to send a switch request to the first switch module 02 according to a received scenario notification.

[0014] The first switch module 02 is configured to establish a data transmission connection between the Bluetooth module 03 and the multimedia module 04, or establish a data transmission connection between the Bluetooth module 03 and the microprocessor control unit 01, according to the switch request.

[0015] The data transmission connection may be a universal asynchronous receiver/transmitter (Universal Asynchronous Receiver/Transmitter, UART for short) connection. The UART connection is mainly used to transmit data between the modules. Certainly, the present invention is not limited to the UART protocol, and the connection may be established by using another protocol.

[0016] In a specific implementation process, for example, in an initial state, a data transmission connection is established between the first switch module 02 and the

Bluetooth module 03, a data transmission connection is established between the first switch module 02 and the multimedia module 04, and a data transmission connection is established between the first switch module 02 and the microprocessor control unit 01. The first switch module 02 switches an internal switch according to a switch request, to connect the Bluetooth module 03 to the multimedia module 04, or connect the Bluetooth module 02 to the microprocessor control unit 01, thereby establishing the data transmission connection between the Bluetooth module 03 and the multimedia module 04 or the data transmission connection between the Bluetooth module 02 and the microprocessor control unit 01.

[0017] The multimedia module 04 is configured to store and play a multimedia file. That is, the wearable device 001 may locally store and play multimedia files. Formats of the multimedia files may be Moving Picture Experts Group Audio Layer 3 (MPEG-1 Audio Layer 3, MP3 for short), Windows Audio Volume (Windows Audio Volume, WAV for short), or Advanced Audio Coding (Advanced Audio Coding, AAC for short), but are not limited thereto. The multimedia files may alternatively be in music, text, image or other formats.

[0018] The microprocessor control unit 01 is configured to monitor and store data corresponding to a preset event. Specifically, the preset event may be an exercise event, and data corresponding to the exercise event may include various parameters such as exercise duration, an exercise distance, an exercise type, an exercise speed, and consumed calories. The preset event may alternatively be a health monitoring event, and data corresponding to the health monitoring event may include parameters such as a heart rate, blood pressure, and a sleeping status of a user, but is not limited thereto. Specifically, different preset events may be implemented by configuring different sensors on the microprocessor control unit 01.

[0019] The wearable device 001 provided in this embodiment of the present invention may establish a connection to a terminal device by using the Bluetooth module 03. The terminal device may be a mobile terminal such as a mobile phone or a tablet computer. An application program (Application Program, APP for short) corresponding to the wearable device 001 may be installed on the terminal device. In this way, the user can control the wearable device 001 by using the terminal device, or data can be synchronized between the wearable device 001 and the terminal device. The corresponding APP on the terminal device may analyze data obtained by the wearable device 001, for example, analyze various parameters such as exercise information and health information of the user. The wearable device 001 may also share some data of the terminal device, for example, play a multimedia file stored on the terminal device.

[0020] The Bluetooth module 03 may receive a scenario notification sent by the terminal device by using a Bluetooth connection or a scenario notification sent by another module in the wearable device 001, identify a

corresponding scenario according to the scenario notification, and generate a corresponding switch request. For example, in some scenarios, if data in the multimedia module needs to be obtained, the first switch module 02 is requested to establish a connection between the Bluetooth module 03 and the multimedia module 04. In some scenarios, if data in the microprocessor control unit 01 needs to be obtained or the microprocessor control unit 01 needs to perform some operations, a connection between the Bluetooth module 03 and the microprocessor control unit 01 is established. Examples of scenarios are not enumerated herein.

[0021] Because the wearable device provided in this embodiment includes the Bluetooth module and the multimedia module, the wearable device not only can be connected to another terminal device by using the Bluetooth module to exchange data, but also can use data locally stored in the multimedia module, as well as monitor data corresponding to a preset event by using the microprocessor control unit. That is, the wearable device integrates multiple functions, providing more extensive experience for a user. In addition, the Bluetooth module sends a switch request to the first switch module according to a received scenario notification, and the first switch module establishes a data transmission connection between the Bluetooth module and the multimedia module, or establishes a data transmission connection between the Bluetooth module and the microprocessor control unit, according to a switch request. That is, connections between the internal modules can be dynamically switched according to a specific application scenario of the wearable device, thereby implementing a quick transition between the functions. This greatly improves intelligence of man-machine interaction, and better satisfies a user requirement.

[0022] Referring to FIG. 1, based on the foregoing embodiment, a first general purpose input/output (General Purpose Input Output, GPIO for short) connection is further established between the Bluetooth module 03 and the first switch module 02. The Bluetooth module 03 sends the switch request to the first switch module 02 by using the first GPIO connection.

[0023] Based on the foregoing embodiment, there may be a variety of scenario notifications. Specifically, the following scenarios may be included:

- (1) The scenario notification is a multimedia module viewing request sent by a terminal device, and the switch request is a first switch request.

[0024] Correspondingly, the Bluetooth module 03 is specifically configured to: receive the multimedia module viewing request sent by the terminal device, and send the first switch request to the first switch module 02 according to the multimedia module viewing request.

[0025] The first switch module 02 establishes the data transmission connection between the Bluetooth module 03 and the multimedia module 04 according to the first

switch request. In this way, the Bluetooth module 03 can read data in the multimedia module 04, and feed back related data to the terminal device.

[0026] Specifically, by using the Bluetooth module 03, the terminal device may view a file directory in the multimedia module 04, or may view various information such as a file name and a file type.

[0027] (2) The scenario notification is a microprocessor-control-unit data synchronization request sent by a terminal device, and the switch request is a second switch request.

[0028] Correspondingly, the Bluetooth module 03 is specifically configured to: receive the microprocessor-control-unit data synchronization request sent by the terminal device, and send the second switch request to the first switch module 02 according to the microprocessor-control-unit data synchronization request.

[0029] The first switch module 02 is configured to establish the data transmission connection between the Bluetooth module 03 and the microprocessor control unit 01 according to the second switch request. In this way, the Bluetooth module 03 can read data from the microprocessor control unit 01, and feed back the data to the terminal device for synchronization.

[0030] (3) The scenario notification is a preset-event occurrence notification sent by the microprocessor control unit, and the switch request is a third switch request.

[0031] Correspondingly, a second GPIO connection is further established between the Bluetooth module 03 and the microprocessor control unit 01. The microprocessor control unit 01 may send some notification messages to the Bluetooth module 03 by using the second GPIO connection.

[0032] Specifically, the microprocessor control unit 01 sends the preset-event occurrence notification to the Bluetooth module 03 by using the second GPIO connection when detecting that a preset event occurs. Specifically, the microprocessor control unit 01 may be preset to monitor at least one preset event.

[0033] The Bluetooth module 03 is specifically configured to: receive the preset-event occurrence notification sent by the microprocessor control unit 01, and send the third switch request to the first switch module 02 according to the preset-event occurrence notification.

[0034] The first switch module 02 is configured to establish the data transmission connection between the Bluetooth module 03 and the microprocessor control unit 01 according to the third switch request.

[0035] Specifically, the preset-event occurrence notification may be an exercise goal achievement notification, an exercise parameter monitoring notification, a device status notification, or the like. The user may preset an exercise goal to "walking 1500 steps every day" by using the APP on the connected terminal. In this case, when the microprocessor control unit 01 detects that the user have walked 1500 steps that day, indicating that the exercise goal is achieved, the microprocessor control unit 01 sends an exercise goal achievement notification to

the Bluetooth module 03.

[0036] Certainly, the present invention is not limited to the foregoing scenarios. Various application scenarios may be specifically configured, and connections between the modules may be dynamically switched according to different scenario requirements.

[0037] FIG. 2 is a schematic structural diagram of Embodiment 2 of a wearable device according to the present invention. As shown in FIG. 2, based on FIG. 1, a wearable device 001 may further include a sound module 05 and a second switch module 06.

[0038] The sound module 05 is connected to the second switch module 06. The second switch module 06 is connected to the Bluetooth module 03, the multimedia module 04, and the microprocessor control unit 01.

[0039] The microprocessor control unit 01 is further configured to: receive selection information entered by a user, and send a control signal to the second switch module 06 according to the selection information.

[0040] The second switch module 06 is configured to connect the Bluetooth module 03 to the sound module 05, or connect the multimedia module 04 to the sound module 05, according to the control signal.

[0041] The selection information may be information about selection of a multimedia file play mode by the user. For example, the user may select a Bluetooth mode or a local multimedia mode.

[0042] During specific implementation, a mode selection switch 10 may be disposed on the wearable device 001, for the user to select the Bluetooth mode or the local multimedia mode. Alternatively, the Bluetooth mode or the local multimedia mode may be selected by using the APP on the terminal device that is connected to the wearable device 001 by means of Bluetooth.

[0043] If the user selects the local multimedia mode, the multimedia module 04 plays the locally stored multimedia file, and the user can enjoy the multimedia file that is locally stored in the multimedia module 04. If the user selects the Bluetooth mode, the user uses the Bluetooth module 03 to enjoy a multimedia file stored on the connected terminal device. This enables the user to freely select the multimedia file play mode according to a requirement and preferences of the user, and connections between the internal modules can be quickly switched.

[0044] The sound module 05 may include a speaker and a headset jack, and play a sound of an audio multimedia file by using a headset or the speaker according to whether there is a headset plugged in.

[0045] Still referring to FIG. 2, based on the foregoing embodiment, the sound module 05 may include a first channel unit 51 and a second channel unit 52. Correspondingly, the second switch unit 06 may include a first channel switch unit 61 and a second channel switch unit 62. The first channel unit 51 is connected to the first channel switch unit 61, and the second channel unit 52 is connected to the second channel switch unit 62. The first channel unit 51 is connected to the Bluetooth module 03, the multimedia module 04, and the microprocessor control

trol unit 01, and the second channel switch unit 62 is connected to the Bluetooth module 03, the multimedia module 04, and the microprocessor control unit 01.

[0046] The microprocessor control unit 01 is configured to: receive the selection information entered by the user, and send the control signal to the first channel switch unit 61 and the second channel switch unit 62 according to the selection information.

[0047] The selection information may be information about selection of a multimedia file play mode by the user. For example, the user may select a Bluetooth mode or a local multimedia mode.

[0048] Correspondingly, the first channel switch unit 61 is configured to connect the Bluetooth module 03 to the first channel unit 51, or connect the multimedia module 04 to the first channel unit 51, according to the control signal.

[0049] The second channel switch unit 62 is configured to connect the Bluetooth module 03 to the second channel switch unit 62, or connect the multimedia module 04 to the second channel switch unit 62, according to the control signal.

[0050] It should be noted that, the first channel switch unit 61 and the second channel switch unit 62 perform a same action according to a same control signal. That is, when the first channel switch unit 61 connects the Bluetooth module 03 to the first channel unit 51, the second channel switch unit 62 connects the Bluetooth module 03 to the second channel switch unit 62; when the first channel switch unit 61 connects the multimedia module 04 to the first channel unit 51, the second channel switch unit 62 connects the multimedia module 04 to the second channel switch unit 62.

[0051] Specifically, for example, when the user selects the Bluetooth mode, the microprocessor control unit 01 sends a first control signal to the first channel switch unit 61 and the second channel switch unit 62; the first channel switch unit 61 connects the Bluetooth module 03 to the first channel unit 51 according to the first control signal, and the second channel switch unit 62 connects the Bluetooth module 03 to the second channel switch unit 62 according to the first control signal.

[0052] When the user selects the local multimedia mode, the microprocessor control unit 01 sends a second control signal to the first channel switch unit 61 and the second channel switch unit 62; the first channel switch unit 61 connects the multimedia module 04 to the first channel unit 51 according to the second control signal, and the second channel switch unit 62 connects the multimedia module 04 to the second channel switch unit 62 according to the second control signal.

[0053] The wearable device 001 provided in this embodiment includes two channels, allowing the user to better enjoy an audio multimedia file.

[0054] FIG. 3 is a schematic structural diagram of Embodiment 3 of a wearable device according to the present invention. As shown in FIG. 3, a wearable device 001 further includes an interface module 07 and a third switch

module 08.

[0055] The interface module 07 is connected to the third switch module 08, and the third switch module 08 is connected to the Bluetooth module 03, the multimedia module 04, and the microprocessor control unit 01. The third switch module 08 initially establishes a connection between the Bluetooth module 03 and the interface module 07. That is, during power-on, an initial state is that the third switch module 08 switches to a state in which the Bluetooth module 03 is connected to the interface module 07, so that the terminal device connected to the wearable device 001 by using Bluetooth sends information to the wearable device.

[0056] A second GPIO connection is further established between the Bluetooth module 03 and the microprocessor control unit 01.

[0057] The Bluetooth module 03 receives upgrade information sent by the terminal device by using the interface module 07, determines an upgrade type of the upgrade information, and sends the upgrade type to the microprocessor control unit 01 by using the second GPIO connection.

[0058] The microprocessor control unit 01 controls, according to the upgrade type, the third switch module 03 whether to switch "the connection between the Bluetooth module 03 and the interface module 07" to "a connection between the multimedia module 04 and the interface module 07".

[0059] The upgrade type includes: upgrading the Bluetooth module, upgrading the microprocessor control unit, or upgrading the multimedia module.

[0060] Generally, if the upgrade type is upgrading the Bluetooth module or upgrading the microprocessor control unit, the switching is not performed. That is, the connection between the Bluetooth module 03 and the interface module 07 is maintained.

[0061] If the upgrade type is upgrading the multimedia module, the microprocessor control unit 01 controls the third switch module 08 to switch "the connection between the Bluetooth module 03 and the interface module 07" to "the connection between the multimedia module 04 and the interface module 07". In this way, the multimedia module 04 receives the upgrade information by using the interface module 07, and is upgraded according to the upgrade information.

[0062] The upgrade information carries an upgrade package. The upgrade package may be provided by the APP corresponding to the wearable device 001 on the terminal device, and more specifically, is provided by a background server of the APP.

[0063] Based on the foregoing embodiment, a third GPIO connection is further established between the multimedia module 04 and the microprocessor control unit 01.

[0064] The microprocessor control unit 01 receives upgrade completion information sent by the multimedia module 04 by using the third GPIO connection, and controls, according to the upgrade completion information,

the third switch module 08 to switch the connection between the multimedia module 04 and the interface module 07 to the connection between the Bluetooth module 03 and the interface module 07, that is, to restore the initial connection state.

[0065] In another embodiment, the Bluetooth module 03 may be connected to the sound module 05. The Bluetooth module 03 converts to-be-played information of the wearable device 001 into voice information in a preset language, and sends the voice information in the preset language to the sound module 05. The sound module 05 plays the voice information in the preset language to the user.

[0066] In a specific implementation process, the Bluetooth module 03 may integrate a text to speech (Text To Speech, TTS for short) algorithm and a multilingual voice package. The user may select in advance, on the wearable device 001, a play language as the preset language by using a button, or select a play language as the preset language by using the corresponding APP on the terminal device. The Bluetooth module 03 converts to-be-played information of the wearable device 001 into the voice information in the preset language by using the TTS algorithm according to the preset language and the multilingual voice package, for playing by the sound module 05.

[0067] The to-be-played information may include status information of the wearable device 001, for example, a Bluetooth-connected state, a Bluetooth-disconnected state, a power-on/power-off state, and a battery level, and may further include user exercise information, user health information, and the like that are monitored by the wearable device 001, for example, information about calories consumed by the user, exercise duration information, blood pressure information, and heart rate information.

[0068] FIG. 4 is a schematic structural diagram of Embodiment 4 of a wearable device according to the present invention. FIG. 4 is a schematic circuit diagram of a complete wearable device 001. Certainly, the present invention is not limited thereto. As shown in FIG. 4, the wearable device may further include an event reminder unit 09, configured to remind a user of different states of the wearable device.

[0069] More specifically, the event reminder unit 09 may include an indicator light 91, a motor 92, and a Hall (Hall) component 93.

[0070] The indicator light 91 is connected to the Bluetooth module 03 and the microprocessor control unit 01, and may remind the user of different states by using different colors or different flickering frequencies. For example, different colors are used to remind the user that the wearable device is at a low battery level, that the wearable device is already Bluetooth-connected, and so on. The indicator light may be a light emitting diode (Light Emitting Diode, LED for short) light.

[0071] The motor 92 is connected to the Bluetooth module 03, and can cause the wearable device 001 to

vibrate, to remind the user of some preset events by means of vibration, for example, a call reminder, an alarm clock reminder, or an exercise goal achievement reminder.

[0072] The Hall component 93 is connected to the Bluetooth module 03, and may be configured to detect whether headsets connected to the wearable device 001 are in a contact state. If the headsets are in the contact state, the device is on stand-by, and only monitors a call and/or records an exercise state, with other functions being disabled, so as to reduce power consumption of the device. If the headsets are in a separate state, functions such as answering a call and listening to music can be performed.

[0073] Further, the wearable device 001 may be a necklace-type wearable device or a wristband-type wearable device, but is not limited thereto. The wearable device 001 may alternatively be a glasses-type wearable device, an earring-type wearable device, or the like.

[0074] For the necklace-type wearable device, two ends of the necklace-type wearable device may be respectively connected to a first channel headset and a second channel headset. In a specific implementation process, the first channel headset and the second channel headset may be respectively connected to the corresponding first channel unit and second channel unit, to exploit the advantage that the wearable device provided in the present invention includes two channels. Compared with a wristband, headsets are directly disposed at two ends of the necklace, and the necklace is easier to wear and use for a user, without affecting exercise of the user. A wristband is usually provided with a monaural Bluetooth headset, so as not to affect exercise of the user.

[0075] Further, referring to FIG. 4, the wearable device 001 may further include an adjustment button 11. The adjustment button 11 is connected to the microprocessor control unit 01. By operating the adjustment button 11, the user can control power on/off of the wearable device 001, and can adjust a volume level during playing of a multimedia file by the wearable device 001.

[0076] The wearable device 001 may further include a sensor 12. The sensor 12 is connected to the microprocessor control unit 01, and is configured to monitor a preset event under the control of the microprocessor control unit 01. During specific implementation, the microprocessor control unit 01 may be connected to multiple different sensors, to implement monitoring of different events.

[0077] The wearable device 001 may further include a program storage module 13, which is connected to the Bluetooth module 03 and is configured to store a program necessary for the wearable device 001.

[0078] The wearable device 001 may further include a battery 14, which may be connected to the Bluetooth module 04 and is configured to supply power to the wearable device 001.

[0079] To connect to a device from Apple Inc., an MFI (Made for iOS) module 15 may be further disposed on the wearable device 001. The MFI module 15 is connect-

ed to the Bluetooth module 03, and is configured to connect the wearable device to a device from Apple Inc., such as an iPhone, an iPad, or an iPod.

[0080] Certainly, according to the wearable device provided in this embodiment of the present invention, connections between modules can be flexibly switched, thereby achieving integration of multiple functions of the wearable device. However, the wearable device is not limited to the foregoing functions, and another component may be added according to a specific requirement. For example, to expand storage space of the multimedia module 04, a memory card slot connected to the multimedia module 04 may be further provided. In this way, a memory card may be installed according to a user requirement to expand storage space.

[0081] Finally, it should be noted that, the foregoing embodiments are merely intended for describing the technical solutions of the present invention other than limiting the present invention. Although the present invention is described in detail with reference to the foregoing embodiments, persons of ordinary skill in the art should understand that they may still make modifications to the technical solutions described in the foregoing embodiments or make equivalent replacements to some technical features thereof, without departing from the scope of the technical solutions of the embodiments of the present invention.

Claims

1. A wearable device (001), comprising: a microprocessor control unit (01), a first switch module (02), a Bluetooth module (03), and a multimedia module (04), wherein the Bluetooth module (03), the multimedia module, and the microprocessor control unit (01) are all connected to the first switch module (02); the Bluetooth module (03) is configured to send a switch request to the first switch module (02) according to a received scenario notification, wherein the Bluetooth module (03) is configured to receive the scenario notification sent by a terminal device or sent by another module in the wearable device, wherein the scenario notification is a multimedia module viewing request sent by a terminal device; or the scenario notification is a microprocessor-control-unit data synchronization request sent by a terminal device; or the scenario notification is a preset-event occurrence notification sent by the microprocessor control unit (01); the first switch module (02) is configured to establish a data transmission connection between the Bluetooth module (03) and the multimedia module (04), or establish a data transmission connection between the Bluetooth module (03) and the microprocessor control unit (01), according to the switch request; and the multimedia module (04) is configured to store and play a multimedia file, and the microprocessor

control unit (01) is configured to monitor and store data corresponding to a preset event; wherein a first general purpose input/output, GPIO connection is further established between the Bluetooth module (03) and the first switch module (02), and the Bluetooth module is configured to send the switch request to the first switch module (02) by using the first GPIO connection; wherein when the scenario notification is a multimedia module viewing request sent by a terminal device, and the switch request is a first switch request:

the Bluetooth module (03) is specifically configured to: receive the multimedia module viewing request sent by the terminal device, and send the first switch request to the first switch module (02) according to the multimedia module viewing request; and

the first switch module (02) is configured to establish the data transmission connection between the Bluetooth module (03) and the multimedia module (04) according to the first switch request;

and

wherein when the scenario notification is a microprocessor-control-unit data synchronization request sent by a terminal device, and the switch request is a second switch request;

the Bluetooth module (03) is specifically configured to: receive the microprocessor-control-unit data synchronization request sent by the terminal device, and send the second switch request to the first switch module (02) according to the microprocessor-control-unit data synchronization request; and

the first switch module (02) is configured to establish the data transmission connection between the Bluetooth module (03) and the microprocessor control unit (01) according to the second switch request

and

wherein when the scenario notification is a preset-event occurrence notification sent by the microprocessor control unit (01), and the switch request is a third switch request;

a second GPIO connection is established between the Bluetooth module (03) and the microprocessor control unit (01);

the microprocessor control unit (01) is configured to send the preset-event occurrence notification to the Bluetooth module (03) by using the second GPIO connection when detecting that a preset event occurs;

the Bluetooth module (03) is specifically config-

- ured to: receive the preset-event occurrence notification sent by the microprocessor control unit (01), and send the third switch request to the first switch module (02) according to the preset-event occurrence notification; and the first switch module (02) is configured to establish the data transmission connection between the Bluetooth module (03) and the microprocessor control unit (01) according to the third switch request.
2. The wearable device according to claims 1, further comprising a sound module (05) and a second switch module (06), wherein the sound module (05) is connected to the second switch module (06), and the second switch module (06) is connected to the Bluetooth module (03), the multimedia module (04), and the microprocessor control unit (01); the microprocessor control unit (01) is configured to: receive selection information entered by a user, and send a control signal to the second switch module (06) according to the selection information; and the second switch module (06) is configured to establish a connection between the Bluetooth module (03) and the sound module (05), or establish a connection between the multimedia module (04) and the sound module (05), according to the control signal.
 3. The wearable device according to claim 2, wherein the sound module (05) comprises a first channel unit (51) and a second channel unit (52), and the second switch module (06) comprises a first channel switch unit (61) and a second channel switch unit (62); the first channel unit (51) is connected to the first channel switch unit (61), and the second channel unit (52) is connected to the second channel switch unit (62); the first channel switch unit (61) is connected to the Bluetooth module (03), the multimedia module (04), and the microprocessor control unit (01), and the second channel switch unit (62) is connected to the Bluetooth module (03), the multimedia module (04), and the microprocessor control unit (01); the microprocessor control unit (01) is configured to: receive the selection information entered by the user, and send the control signal to the first channel switch unit (61) and the second channel switch unit (62) according to the selection information; the first channel switch unit (61) is configured to establish a connection between the Bluetooth module (03) and the first channel unit (51), or establish a connection between the multimedia module (04) and the first channel unit (51), according to the control signal; and the second channel switch unit (62) is configured to establish a connection between the Bluetooth module (03) and the second channel unit (52), or establish a connection between the multimedia module (04) and the second channel unit (52), according to the control signal.
 4. The wearable device according to claim 1, further comprising an interface module (07) and a third switch module (08), wherein the interface module (07) is connected to the third switch module (08), and the third switch module (08) is connected to the Bluetooth module (03), the multimedia module (04), and the microprocessor control unit (01), wherein the third switch module (08) initially is configured to establish a connection between the Bluetooth module (03) and the interface module (07); the Bluetooth module (03) is configured to: receive upgrade information sent by a terminal device by using the interface module (07), determine an upgrade type of the upgrade information, and send the upgrade type to the microprocessor control unit (01) by using the second GPIO connection; and the microprocessor control unit (01) is configured to control, according to the upgrade type, the third switch module (08) whether to switch the connection between the Bluetooth module (03) and the interface module (07) to a connection between the multimedia module (04) and the interface module (07), wherein the upgrade type comprises: upgrading the Bluetooth module (03), upgrading the microprocessor control unit (01), or upgrading the multimedia module (04).
 5. The wearable device according to claim 4, wherein if the upgrade type is upgrading the multimedia module (04), the microprocessor control unit (01) is specifically configured to control the third switch module (08) to switch the connection between the Bluetooth module (03) and the interface module (07) to the connection between the multimedia module (04) and the interface module (07).
 6. The wearable device according to claim 5, wherein a third GPIO connection is further established between the multimedia module (04) and the microprocessor control unit (01); and the microprocessor control unit (01) is configured to: receive upgrade completion information sent by the multimedia module (04) by using the third GPIO connection, and control, according to the upgrade completion information, the third switch module (08) to switch the connection between the multimedia module (04) and the interface module (07) to the connection between the Bluetooth module (03) and the interface module (07).
 7. The wearable device according to claim 2 or 3, wherein the Bluetooth module (03) is connected to the sound module (05); the Bluetooth module (03) integrates a text to speech

algorithm and a multilingual voice package and the Bluetooth module (03) is configured to: convert to-be-played information of the wearable device into voice information in a preset language, and send the voice information in the preset language to the sound module (05); and the sound module (05) is configured to play the voice information in the preset language to the user.

8. The wearable device according to any one of claims 1 to 7, wherein the wearable device is a necklace-type wearable device or a wristband-type wearable device.
9. The wearable device according to claim 8, wherein two ends of the necklace-type wearable device are respectively connected to a first channel headset and a second channel headset.

Patentansprüche

1. Am Körper tragbare Einrichtung (001), umfassend: eine Mikroprozessor-Steuereinheit (01), ein erstes Schaltmodul (02), ein Bluetooth-Modul (03) und ein Multimodul (04), wobei das Bluetooth-Modul (03), das Multimodul und das Mikroprozessor-Steuermodule (01) alle mit dem ersten Schaltmodul (02) verbunden sind; das Bluetooth-Modul (03) ausgelegt ist zum Senden einer Schaltanforderung zum ersten Schaltmodul (02) entsprechend einer empfangenen Benachrichtigung über ein Szenario, wobei das Bluetooth-Modul (03) ausgelegt ist zum Empfangen der von einer Endgeräteeinrichtung versandten oder von einem anderen Modul in der am Körper tragbaren Einrichtung versandten Benachrichtigung über das Szenario, wobei die Benachrichtigung über das Szenario eine durch eine Endgeräteeinrichtung versandte Einsichtanforderung eines Multimoduls ist; oder die Benachrichtigung über das Szenario eine durch eine Endgeräteeinrichtung versandte Synchronisationsanforderung der Daten der Mikroprozessor-Steuereinheit ist; oder die Benachrichtigung über das Szenario eine durch die Mikroprozessor-Steuereinheit (01) versandte Benachrichtigung über das Auftreten eines vorgegebenen Ereignisses ist; das erste Schaltmodul (02) ausgelegt ist zum Herstellen einer Datenübertragungsverbindung zwischen dem Bluetooth-Modul (03) und dem Multimodul (04) oder zum Herstellen einer Datenübertragungsverbindung zwischen dem Bluetooth-Modul (03) und der Mikroprozessor-Steuereinheit (01) entsprechend der Schaltanforderung; und das Multimodul (04) ausgelegt ist zum Speichern und Abspielen einer Multimediadatei und die Mikroprozessor-Steuereinheit (01) ausgelegt ist zum Überwachen und Speichern von Daten entspre-

chend einem vorgegebenen Ereignis; wobei ferner eine erste Allzweckeingabe/-ausgabe-GPIO-Verbindung zwischen dem Bluetooth-Modul (03) und dem ersten Schaltmodul (02) hergestellt wird und das Bluetooth-Modul ausgelegt ist zum Senden der Schaltanforderung zu dem ersten Schaltmodul (02) unter Verwendung der ersten GPIO-Verbindung; wobei, wenn die Benachrichtigung über das Szenario eine durch eine Endgeräteeinrichtung versandte Einsichtanforderung für das Multimodul ist und die Schaltanforderung eine erste Schaltanforderung ist:

das Bluetooth-Modul (03) im Einzelnen ausgelegt ist zum Empfangen der durch die Endgeräteeinrichtung versandten Einsichtanforderung für das Multimodul und Senden der ersten Schaltanforderung zum ersten Schaltmodul (02) entsprechend der Einsichtanforderung für das Multimodul; und

das erste Schaltmodul (02) ausgelegt ist zum Herstellen der Datenübertragungsverbindung zwischen dem Bluetooth-Modul (03) und dem Multimodul (04) entsprechend der ersten Schaltanforderung;

und

wobei, wenn die Benachrichtigung über das Szenario eine durch eine Endgeräteeinrichtung versandte Synchronisationsanforderung für Daten einer Mikroprozessor-Steuereinheit ist und die Schaltanforderung eine zweite Schaltanforderung ist:

das Bluetooth-Modul (03) im Einzelnen ausgelegt ist zum Empfangen der durch die Endgeräteeinrichtung versandten Synchronisationsanforderung für Daten einer Mikroprozessor-Steuereinheit und Senden der zweiten Schaltanforderung zum ersten Schaltmodul (02) entsprechend der Synchronisationsanforderung für Daten der Mikroprozessor-Steuereinheit; und

das erste Schaltmodul (02) ausgelegt ist zum Herstellen der Datenübertragungsverbindung zwischen dem Bluetooth-Modul (03) und der Mikroprozessor-Steuereinheit (01) entsprechend der zweiten Schaltanforderung und

wobei, wenn die Benachrichtigung über das Szenario eine durch die Mikroprozessor-Steuereinheit (01) versandte Benachrichtigung des Auftretens eines vorgegebenen Ereignisses ist und die Schaltanforderung eine dritte Schaltanforderung ist;

eine zweite GPIO-Verbindung zwischen dem Bluetooth-Modul (03) und der Mikroprozessor-Steuereinheit (01) hergestellt wird;

- die Mikroprozessor-Steuereinheit (01) ausgelegt ist zum Senden der Benachrichtigung über das Auftreten des vorgegebenen Ereignisses zum Bluetooth-Modul (03) unter Verwendung der zweiten GPIO-Verbindung, wenn das Auftreten eines vorgegebenen Ereignisses detektiert wird; das Bluetooth-Modul (03) im Einzelnen konfiguriert ist zum Empfangen der durch die Mikroprozessor-Steuereinheit (01) versandten Benachrichtigung über das Auftreten des vorgegebenen Ereignisses und Senden der dritten Schaltanforderung zum ersten Schaltmodul (02) entsprechend der Benachrichtigung über das Auftreten des vorgegebenen Ereignisses; und das erste Schaltmodul (02) ausgelegt ist zum Herstellen der Datenübertragungsverbindung zwischen dem Bluetooth-Modul (03) und der Mikroprozessor-Steuereinheit (01) entsprechend der dritten Schaltanforderung.
2. Am Körper tragbare Einrichtung nach Anspruch 1, ferner umfassend ein Schallmodul (05) und ein zweites Schaltmodul (06), wobei das Schallmodul (05) mit dem zweiten Schaltmodul (06) verbunden ist und das zweite Schaltmodul (06) mit dem Bluetooth-Modul (03), dem Multimodul (04) und der Mikroprozessor-Steuereinheit (01) verbunden ist; die Mikroprozessor-Steuereinheit (01) ausgelegt ist zum Empfangen von durch einen Benutzer eingegebener Auswahlinformation und Senden eines Steuersignals zum zweiten Schaltmodul (06) entsprechend der Auswahlinformation; und das zweite Schaltmodul (06) ausgelegt ist zum Herstellen einer Verbindung zwischen dem Bluetooth-Modul (03) und dem Schallmodul (05) oder zum Herstellen einer Verbindung zwischen dem Multimodul (04) und dem Schallmodul (05) entsprechend dem Steuersignal.
3. Am Körper tragbare Einrichtung nach Anspruch 2, wobei das Schallmodul (05) eine erste Kanaleinheit (51) und eine zweite Kanaleinheit (52) umfasst und das zweite Schaltmodul (06) eine erste Kanalschalteinheit (61) und eine zweite Kanalschalteinheit (62) umfasst; die erste Kanaleinheit (51) mit der ersten Kanalschalteinheit (61) verbunden ist und die zweite Kanaleinheit (52) mit der zweiten Kanalschalteinheit (62) verbunden ist; die erste Kanalschalteinheit (61) mit dem Bluetooth-Modul (03), dem Multimodul (04) und der Mikroprozessor-Steuereinheit (01) verbunden ist und die zweite Kanalschalteinheit (62) mit dem Bluetooth-Modul (03), dem Multimodul (04) und der Mikroprozessor-Steuereinheit (01) verbunden ist;
- (01) verbunden ist; die Mikroprozessor-Steuereinheit (01) ausgelegt ist zum Empfangen der durch den Benutzer eingegebenen Auswahlinformation und Senden des Steuersignals zur ersten Kanalschalteinheit (61) und zur zweiten Kanalschalteinheit (62) entsprechend der Auswahlinformation; die erste Kanalschalteinheit (61) ausgelegt ist zum Herstellen einer Verbindung zwischen dem Bluetooth-Modul (03) und der ersten Kanaleinheit (51) oder Herstellen einer Verbindung zwischen dem Multimodul (04) und der ersten Kanaleinheit (51) entsprechend dem Steuersignal; und die zweite Kanalschalteinheit (62) ausgelegt ist zum Herstellen einer Verbindung zwischen dem Bluetooth-Modul (03) und der zweiten Kanaleinheit (52) oder Herstellen einer Verbindung zwischen dem Multimodul (04) und der zweiten Kanaleinheit (52) entsprechend dem Steuersignal.
4. Am Körper tragbare Einrichtung nach Anspruch 1, ferner umfassend ein Schnittstellenmodul (07) und ein drittes Schaltmodul (08), wobei das Schnittstellenmodul (07) mit dem dritten Schaltmodul (08) verbunden ist und das dritte Schaltmodul (08) verbunden ist mit dem Bluetooth-Modul (03), dem Multimodul (04) und der Mikroprozessor-Steuereinheit (01), wobei das dritte Schaltmodul (08) anfänglich ausgelegt ist zum Herstellen einer Verbindung zwischen dem Bluetooth-Modul (03) und dem Schnittstellenmodul (07); das Bluetooth-Modul (03) ausgelegt ist zum Empfangen von unter Verwendung des Schnittstellenmoduls (07) durch eine Endgeräteeinrichtung versandter Upgrade-Information, Ermitteln eines Upgrade-Typs der Upgrade-Information und Senden des Upgrade-Typs zur Mikroprozessor-Steuereinheit (01) unter Verwendung der zweiten GPIO-Verbindung; und die Mikroprozessor-Steuereinheit (01) ausgelegt ist zum Anweisen des dritten Schaltmoduls (08) entsprechend dem Upgrade-Typ, ob die Verbindung zwischen dem Bluetooth-Modul (03) und dem Schnittstellenmodul (07) zu einer Verbindung zwischen dem Multimodul (04) und dem Schnittstellenmodul (07) geschaltet werden soll, wobei der Upgrade-Typ umfasst: Upgrade des Bluetooth-Moduls (03), Upgrade der Mikroprozessor-Steuereinheit (01) oder Upgrade des Multimoduls (04).
5. Am Körper tragbare Einrichtung nach Anspruch 4, wobei, falls der Upgrade-Typ das Multimodul (04) aktualisiert, die Mikroprozessor-Steuereinheit (01) im Einzelnen ausgelegt ist zum Steuern des dritten Schaltmoduls (08) zum Umschalten der Verbindung zwischen dem Bluetooth-Modul (03) und dem Schnittstellenmodul (07) zur Verbindung zwischen

dem Multimodulmodul (04) und dem Schnittstellenmodul (07).

6. Am Körper tragbare Einrichtung nach Anspruch 5, wobei ferner eine dritte GPIO-Verbindung hergestellt wird zwischen dem Multimodulmodul (04) und der Mikroprozessor-Steuereinheit (01); und die Mikroprozessor-Steuereinheit (01) ausgelegt ist zum Empfangen von durch das Multimodulmodul (04) versandter Information zum Abschluss des Upgrades unter Verwendung der dritten GPIO-Verbindung und Steuern des dritten Schaltmoduls (08) entsprechend der Information zum Abschluss des Upgrades, um die Verbindung zwischen dem Multimodulmodul (04) und dem Schnittstellenmodul (07) zur Verbindung zwischen dem Bluetooth-Modul (03) und dem Schnittstellenmodul (07) umzuschalten. 5 10 15
7. Am Körper tragbare Einrichtung nach Anspruch 2 oder 3, wobei das Bluetooth-Modul (03) mit dem Schallmodul (05) verbunden ist; das Bluetooth-Modul (03) einen Text-zu-Sprache-Algorithmus und ein mehrsprachiges Sprachpaket integriert und das Bluetooth-Modul (03) ausgelegt ist zum Umwandeln von abzuspielender Information der am Körper tragbare Einrichtung in Sprachinformation in einer vorgegebenen Sprache und Senden der Sprachinformation in der vorgegebenen Sprache zum Schallmodul (05); und das Schallmodul (05) ausgelegt ist zum Abspielen der Sprachinformation in der vorgegebenen Sprache für den Benutzer. 20 25 30
8. Am Körper tragbare Einrichtung nach einem der Ansprüche 1 bis 7, wobei die am Körper tragbare Einrichtung eine nach Art eines Halsbands tragbare Einrichtung oder eine nach Art eines Armbands tragbare Einrichtung ist. 35
9. Am Körper tragbare Einrichtung nach Anspruch 8, wobei zwei Enden der nach Art eines Halsbands tragbaren Einrichtung mit einem Kopfhörer des ersten Kanals bzw. einem Kopfhörer des zweiten Kanals verbunden sind. 40 45

Revendications

1. Dispositif portable (001), comprenant : 50
 - une unité de commande de microprocesseur (01), un premier module de commutation (02), un module Bluetooth (03) et un module multimédia (04), le module Bluetooth (03), le module multimédia et l'unité de commande de microprocesseur (01) étant tous connectés au premier module de commutation (02) ; 55
 - le module Bluetooth (03) étant configuré pour

envoyer une demande de commutation au premier module de commutation (02) selon une notification de scénario reçue, le module Bluetooth (03) étant configuré pour recevoir la notification de scénario envoyée par un dispositif terminal ou envoyée par un autre module dans le dispositif portable, la notification de scénario étant une demande de visualisation de module multimédia envoyée par un dispositif terminal ; ou la notification de scénario étant une demande de synchronisation de données d'unité de commande de microprocesseur envoyée par un dispositif terminal ; ou la notification de scénario étant une notification d'occurrence d'événement prédéfini envoyée par l'unité de commande de microprocesseur (01) ; le premier module de commutation (02) étant configuré pour établir une connexion de transmission de données entre le module Bluetooth (03) et le module multimédia (04), ou établir une connexion de transmission de données entre le module Bluetooth (03) et l'unité de commande de microprocesseur (01), en fonction de la demande de commutation ; et le module multimédia (04) étant configuré pour stocker et lire un fichier multimédia, et l'unité de commande de microprocesseur (01) étant configurée pour surveiller et stocker des données correspondant à un événement prédéfini :

une première connexion d'entrée/sortie d'usage général, GPIO, étant en outre établie entre le module Bluetooth (03) et le premier module de commutation (02), et le module Bluetooth étant configuré pour envoyer la demande de commutation au premier module de commutation (02) à l'aide de la première connexion GPIO ; lorsque la notification de scénario est une demande de visualisation de module multimédia envoyée par un dispositif terminal, et que la demande de commutation est une première demande de commutation :

le module Bluetooth (03) est spécifiquement configuré pour : recevoir la demande de visualisation de module multimédia envoyée par le dispositif terminal, et envoyer la première demande de commutation au premier module de commutation (02) en fonction de la demande de visualisation de module multimédia ; et le premier module de commutation (02) est configuré pour établir la connexion de transmission de données entre le module Bluetooth (03) et le module multimédia (04) en fonction de la pre-

mière demande de commutation ;
 et
 lorsque la notification de scénario est une demande de synchronisation de données d'unité de commande de microprocesseur envoyée par un dispositif terminal, et que la demande de commutation est une deuxième demande de commutation ;
 le module Bluetooth (03) est spécifiquement configuré pour : recevoir la demande de synchronisation de données d'unité de commande de microprocesseur envoyée par le dispositif terminal, et envoyer la deuxième demande de commutation au premier module de commutation (02) en fonction de la demande de synchronisation de données d'unité de commande de microprocesseur ; et
 le premier module de commutation (02) est configuré pour établir la connexion de transmission de données entre le module Bluetooth (03) et l'unité de commande de microprocesseur (01) en fonction de la deuxième demande de commutation
 et
 lorsque la notification de scénario est une notification d'occurrence d'événement prédéfini envoyée par l'unité de commande de microprocesseur (01), et que la demande de commutation est une troisième demande de commutation ;
 une deuxième connexion GPIO est établie entre le module Bluetooth (03) et l'unité de commande de microprocesseur (01) ;
 l'unité de commande de microprocesseur (01) est configurée pour envoyer la notification d'occurrence d'événement prédéfini au module Bluetooth (03) à l'aide de la deuxième connexion GPIO lorsqu'il est détecté qu'un événement prédéfini se produit ;
 le module Bluetooth (03) est spécifiquement configuré pour : recevoir la notification d'occurrence d'événement prédéfini envoyée par l'unité de commande de microprocesseur (01), et envoyer la troisième demande de commutation au premier module de commutation (02) en fonction de la notification d'occurrence d'événement prédéfini ;
 et
 le premier module de commutation (02) est configuré pour établir la connexion

de transmission de données entre le module Bluetooth (03) et l'unité de commande de microprocesseur (01) en fonction de la troisième demande de commutation.

2. Dispositif portable selon la revendication 1, comprenant en outre un module sonore (05) et un deuxième module de commutation (06), le module sonore (05) étant connecté au deuxième module de commutation (06), et le deuxième module de commutation (06) étant connecté au module Bluetooth (03), au module multimédia (04) et à l'unité de commande de microprocesseur (01) ;
 l'unité de commande de microprocesseur (01) étant configurée pour : recevoir des informations de sélection entrées par un utilisateur, et envoyer un signal de commande au deuxième module de commutation (06) en fonction des informations de sélection ; et
 le deuxième module de commutation (06) étant configuré pour établir une connexion entre le module Bluetooth (03) et le module sonore (05), ou établir une connexion entre le module multimédia (04) et le module sonore (05), en fonction du signal de commande.

3. Dispositif portable selon la revendication 2, le module sonore (05) comprenant une première unité de canal (51) et une deuxième unité de canal (52), et le deuxième module de commutation (06) comprenant une première unité de commutation de canal (61) et une deuxième unité de commutation de canal (62) ;
 la première unité de canal (51) étant connectée à la première unité de commutation de canal (61), et la deuxième unité de canal (52) étant connectée à la deuxième unité de commutation de canal (62) ;
 la première unité de commutation de canal (61) étant connectée au module Bluetooth (03), au module multimédia (04) et à l'unité de commande de microprocesseur (01), et la deuxième unité de commutation de canal (62) étant connectée au module Bluetooth (03), au module multimédia (04) et à l'unité de commande de microprocesseur (01) ;
 l'unité de commande de microprocesseur (01) étant configurée pour :

recevoir les informations de sélection entrées par l'utilisateur, et envoyer le signal de commande à la première unité de commutation de canal (61) et à la deuxième unité de commutation de canal (62) en fonction des informations de sélection ;
 la première unité de commutation de canal (61) étant configurée pour établir une connexion entre le module Bluetooth (03) et la première unité de canal (51), ou établir une connexion entre le module multimédia (04) et la première unité de

- canal (51), en fonction du signal de commande ;
et
la deuxième unité de commutation de canal (62) étant configurée pour établir une connexion entre le module Bluetooth (03) et la deuxième unité de canal (52), ou établir une connexion entre le module multimédia (04) et la deuxième unité de canal (52), en fonction du signal de commande.
4. Dispositif portable selon la revendication 1, comprenant en outre un module d'interface (07) et un troisième module de commutation (08), le module d'interface (07) étant connecté au troisième module de commutation (08), et le troisième module de commutation (08) étant connecté au module Bluetooth (03), au module multimédia (04) et à l'unité de commande de microprocesseur (01), le troisième module de commutation (08) étant initialement configuré pour établir une connexion entre le module Bluetooth (03) et le module d'interface (07) ;
le module Bluetooth (03) étant configuré pour :
- recevoir des informations de mise à niveau envoyées par un dispositif terminal à l'aide du module d'interface (07), déterminer un type de mise à niveau des informations de mise à niveau, et envoyer le type de mise à niveau à l'unité de commande de microprocesseur (01) à l'aide de la deuxième connexion GPIO ; et
l'unité de commande de microprocesseur (01) étant configurée pour commander, en fonction du type de mise à niveau, le troisième module de commutation (08) s'il faut commuter la connexion entre le module Bluetooth (03) et le module d'interface (07) à une connexion entre le module multimédia (04) et le module d'interface (07),
le type de mise à niveau comprenant : la mise à niveau du module Bluetooth (03), la mise à niveau de l'unité de commande de microprocesseur (01), ou la mise à niveau du module multimédia (04).
5. Dispositif portable selon la revendication 4, si le type de mise à niveau met à niveau le module multimédia (04), l'unité de commande de microprocesseur (01) étant spécifiquement configurée pour commander le troisième module de commutation (08) pour commuter la connexion entre le module Bluetooth (03) et le module d'interface (07) à la connexion entre le module multimédia (04) et le module d'interface (07).
6. Dispositif portable selon la revendication 5, une troisième connexion GPIO étant en outre établie entre le module multimédia (04) et l'unité de commande de microprocesseur (01) ; et
l'unité de commande de microprocesseur (01) étant configurée pour: recevoir des informations d'achèvement de mise à niveau envoyées par le module multimédia (04) à l'aide de la troisième connexion GPIO, et commander, en fonction des informations d'achèvement de mise à niveau, le troisième module de commutation (08) pour commuter la connexion entre le module multimédia (04) et le module d'interface (07) à la connexion entre le module Bluetooth (03) et le module d'interface (07).
7. Dispositif portable selon la revendication 2 ou 3, le module Bluetooth (03) étant connecté au module sonore (05) ;
le module Bluetooth (03) intégrant un algorithme de texte à parole et un paquet vocal multilingue et le module Bluetooth (03) étant configuré pour : convertir des informations devant être lues du dispositif portable en informations vocales dans une langue prédéfinie, et envoyer les informations vocales dans la langue prédéfinie au module sonore (05) ; et
le module sonore (05) étant configuré pour lire les informations vocales dans la langue prédéfinie à l'utilisateur.
8. Dispositif portable selon l'une quelconque des revendications 1 à 7, le dispositif portable étant un dispositif portable de type collier ou un dispositif portable de type bracelet.
9. Dispositif portable selon la revendication 8, deux extrémités du dispositif portable de type collier étant respectivement connectées à un premier casque d'écoute de canal et à un deuxième casque d'écoute de canal.

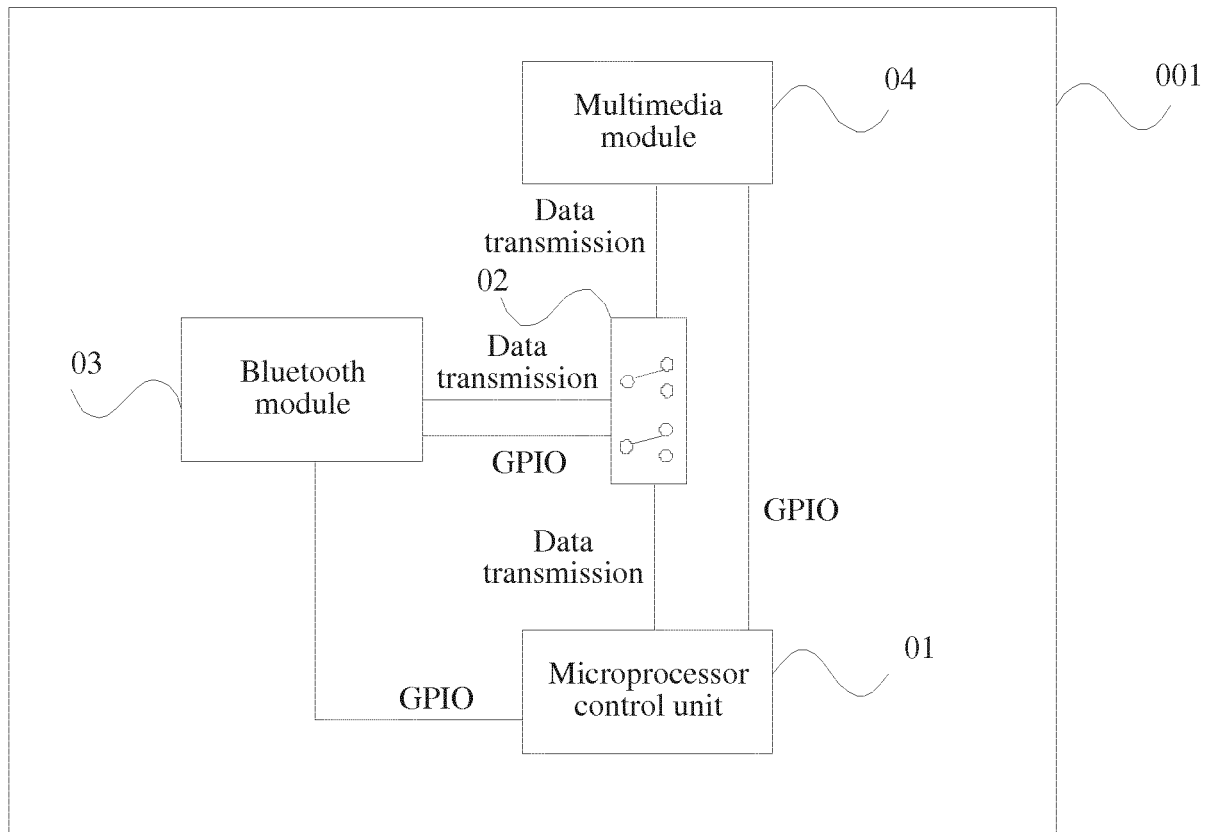


FIG. 1

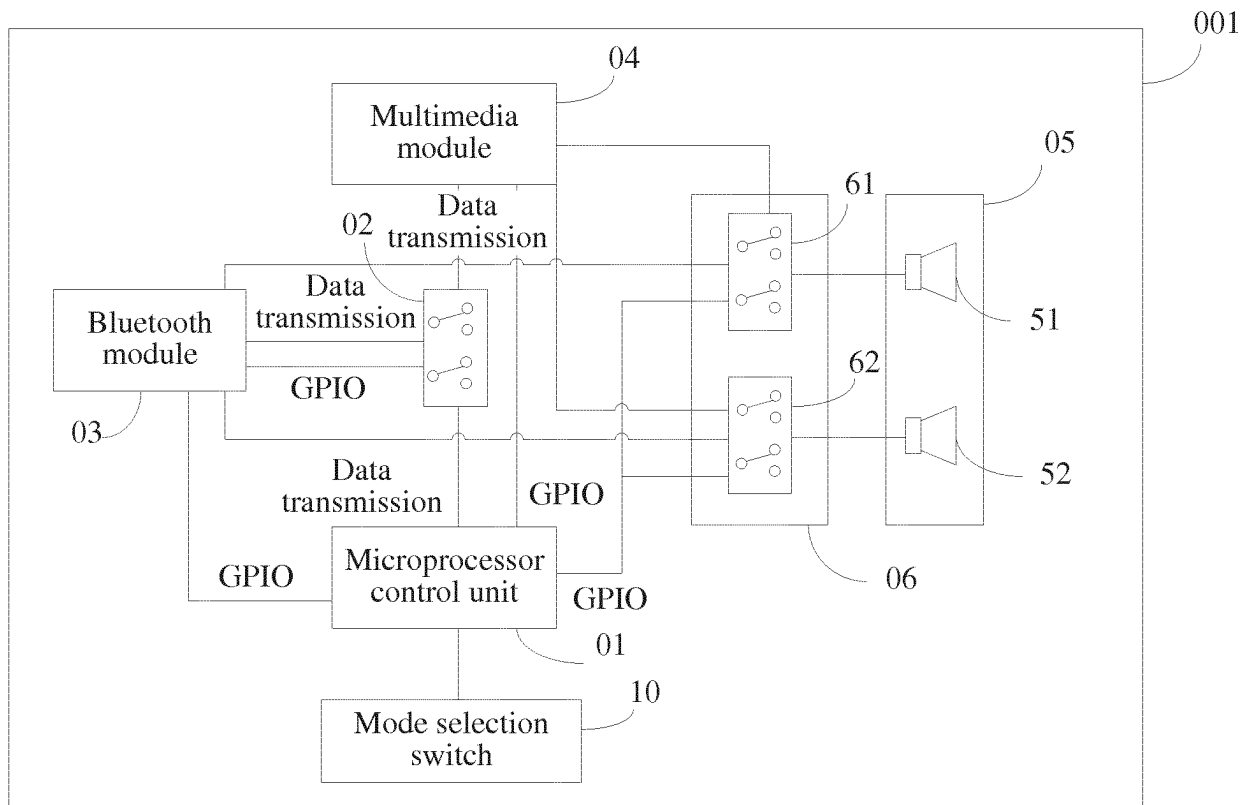


FIG. 2

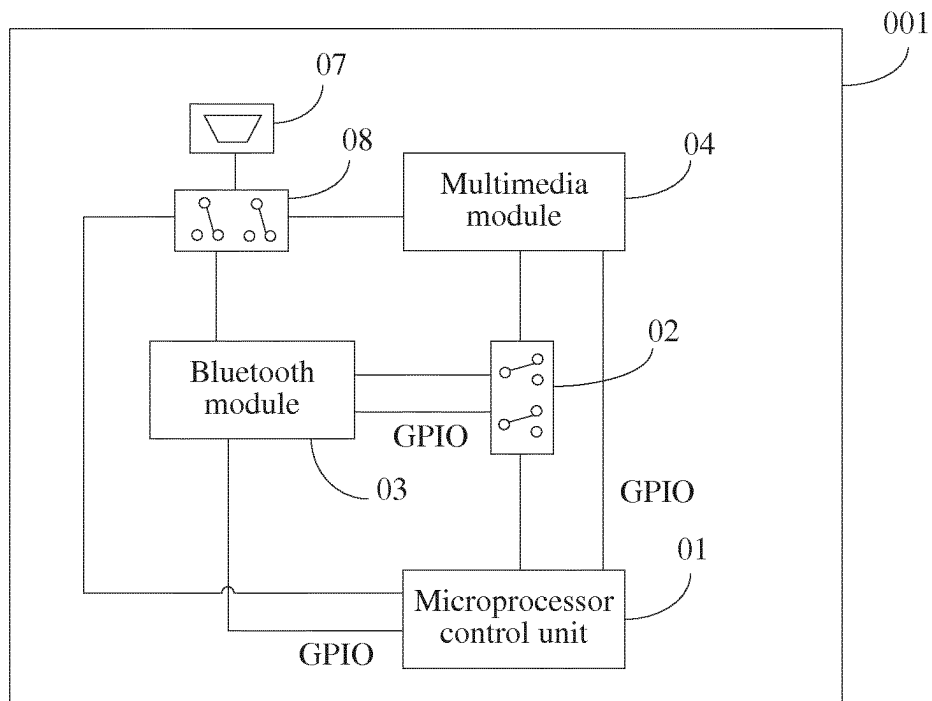


FIG. 3

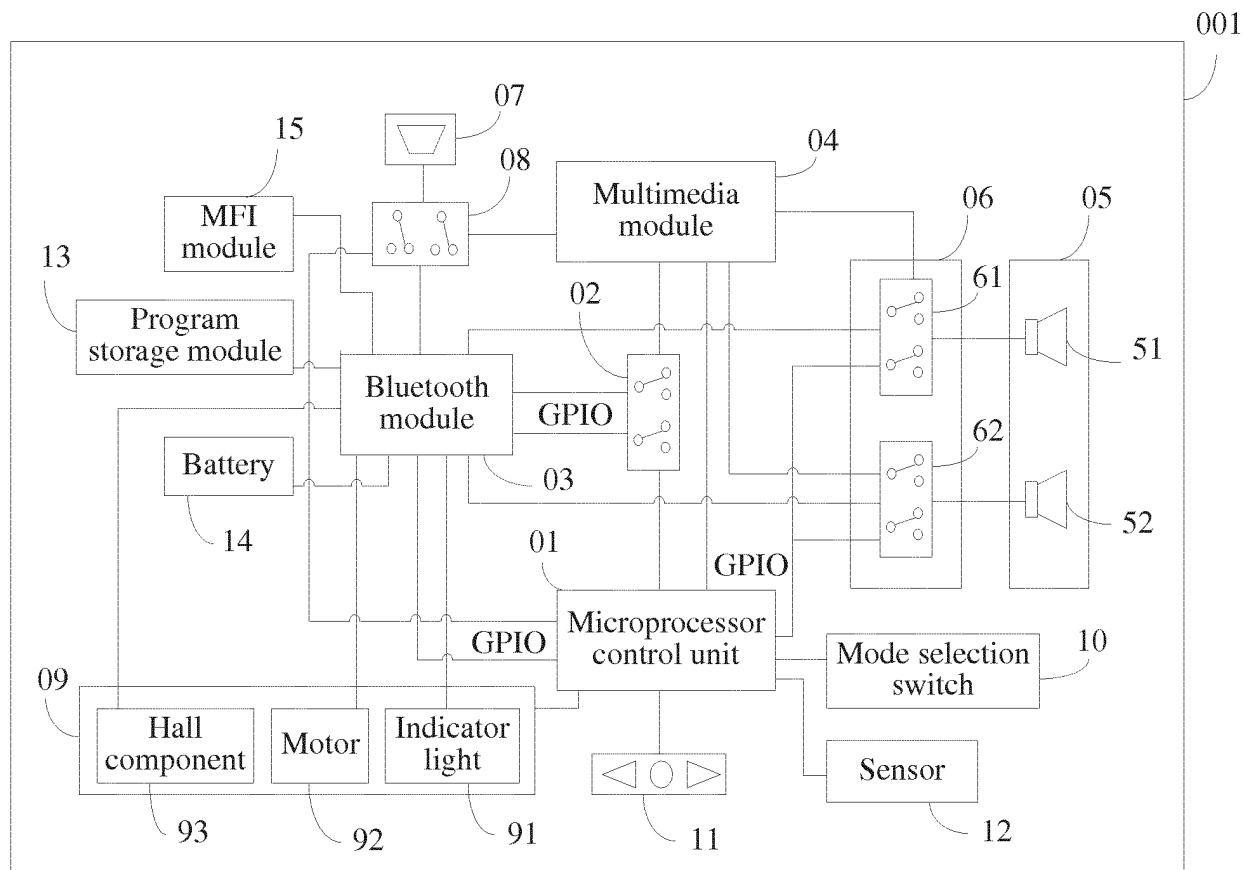


FIG. 4

REFERENCES CITED IN THE DESCRIPTION

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Patent documents cited in the description

- US 20140249760 A1 [0005]
- US 20140273858 A1 [0006]
- US 20140070957 A1 [0007]

专利名称(译)	可穿戴设备		
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CPC分类号	G06F1/163 G08B21/18 G08C17/02 H04B1/385 H04M1/7253 H04M2250/02 H04B5/00 A61B5/0004 A61B5/681 G06F1/1694 G06F1/3206 G06F3/048		
其他公开文献	EP3255810A1 EP3255810A4		
外部链接	Espacenet		

摘要(译)

公开了一种可穿戴设备（001），包括微处理器控制单元（01），第一开关模块（02），蓝牙模块（03）和多媒体模块（04）。可穿戴设备（001）可以通过使用蓝牙模块（03）来共享数据，使用本地存储在多媒体模块（04）中的数据，并通过使用微处理器控制来监视与预设事件相对应的数据，从而连接到终端设备。单位（01）。可穿戴设备（001）集成了多种功能，可以根据可穿戴设备（001）的应用场景切换模块之间的连接，实现功能之间的快速转换，提高人机交互的智能。

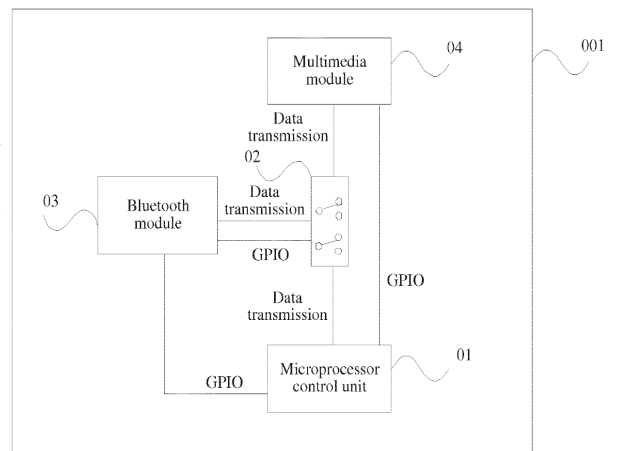


FIG. 1