WIRELESS CONNECTION METHOD, DEVICE GROUP, SYSTEM AND STORAGE MEDIUM

TECHNICAL FIELD

The present disclosure relates to the technology field of electronics and, in particular, to a wireless connection method, a device group, a system and a storage medium.

BACKGROUND

In a data transceiving system of a wireless device, data exchange between a data source device and various forms of wireless transceiving devices can be realized.

At present, with an increasing of user demand, wireless transceiving devices that a data source device connected to turn gradually from single wireless transceiving device to dual wireless transceiving devices or even multiple wireless transceiving devices. In many application scenarios, data of the data source device needs to be synchronized to multiple wireless transceiving devices. For example, for data transmission between an audio data source device and a wireless audio device group, a problem of music and voice synchronization between various wireless audio devices within the wireless audio devices groups is involved.

SUMMARY

The present disclosure provides a wireless connection method, a device group, a system and a storage medium to solve a technical problem of synchronizing data of a data source device to multiple wireless transceiving devices.

According to a first aspect, the present disclosure provides a wireless connection method, including:

establishing, by a wireless transceiving device group, a bidirectional connection to a

data source device via a device group identifier, where the wireless transceiving device group includes at least two wireless transceiving devices, the wireless transceiving device group is configured with the device group identifier, and the device group identifier is used for identifying the wireless transceiving device group.

In a possible design, any two wireless transceiving devices in the wireless transceiving device group are connected via a preset physical identifier, where the device group identifier and the physical identifier are used in a time-division manner in accordance with a preset air interface protocol.

In a possible design, before the establishing, by the wireless transceiving device group, the bidirectional connection to the data source device via the device group identifier, further including:

pairing at least two wireless transceiving devices to form the wireless transceiving device group, and configuring the device group identifier of the wireless transceiving device group.

In a possible design, where the configuring the device group identifier of the wireless transceiving device group includes:

configuring the device group identifier of the wireless transceiving device group in accordance with a preset addressing rule.

In a possible design, after the configuring the device group identifier of the wireless transceiving device group, further including:

storing, by each wireless transceiving device in the wireless transceiving device group, the device group identifier.

In a possible design, after the establishing, by the wireless transceiving device group, the bidirectional connection to the data source device via the device group identifier, further including:

pairing a newly added wireless transceiving device with any wireless transceiving device in the wireless transceiving device group; and

synchronizing, by the paired wireless transceiving device, the device group identifier to the newly added wireless transceiving device, so as to add the newly added wireless transceiving device to the wireless transceiving device group.

In a possible design, the wireless transceiving devices in the wireless transceiving device group are connected via a wireless link.

In a possible design, unidirectional or bidirectional data transmission is performed between the wireless transceiving devices in the wireless transceiving device group through the wireless link.

In a possible design, where the establishing, by the wireless transceiving device group, the bidirectional connection to the data source device via the device group identifier includes:

establishing, by a first wireless transceiving device in the wireless transceiving device group, a first bidirectional connection to the data source device via the device group identifier.

In a possible design, after the establishing, by the first wireless transceiving device in the wireless transceiving device group, the first bidirectional connection to the data source device via the device group identifier, further including:

synchronizing, by the first wireless transceiving device, link information of the first bidirectional connection to a second wireless transceiving device in the wireless transceiving device group to cause the second wireless transceiving device to establish a second bidirectional connection to the data source device.

In a possible design, after the establishing, by the wireless transceiving device group, the bidirectional connection to the data source device via the device group identifier, further including:

receiving, by the wireless transceiving device group, data source data of the data source device; and

transmitting, by a wireless transceiving device in the wireless transceiving device group, data to the data source device.

In a possible design, where the transmitting, by the wireless transceiving device in the wireless transceiving device group, the data to the data source device includes:

transmitting, by the wireless transceiving device in the wireless transceiving device group, the data to the data source device in accordance with a preset feedback manner.

In a possible design, the transmitted data includes response data for successful reception or response data for failed reception.

In a possible design, after the transmitting, by the wireless transceiving device in the wireless transceiving device group, the data to the data source device, further including:

confirming, by the first wireless transceiving device and the second wireless transceiving device in the wireless transceiving device group, data information; and

if the second wireless transceiving device fails to receive the data source data, sending, by the second wireless transceiving device, a retransmission request to the first wireless transceiving device to cause the first wireless transceiving device to determine whether to retransmit the data source data to the second wireless transceiving device in accordance with a preset response rule;

or,

if the first wireless transceiving device fails to receive the data source data, sending, by the first wireless transceiving device, a retransmission request to the second wireless transceiving device to cause the second wireless transceiving device to determine whether to retransmit the data source data to the first wireless transceiving device in accordance with the preset response rule.

In a possible design, increasing, by a wireless transceiving device failing to receive the data source data in the wireless transceiving device group, transmission power.

In a possible design, after the establishing, by the wireless transceiving device group, the bidirectional connection to the data source device via the device group identifier, further including:

synchronizing control data between the wireless transceiving device group and the data source device.

In a possible design, the bidirectional connection is a bidirectional connection based on a Bluetooth protocol.

In a possible design, the wireless transceiving device is a Bluetooth audio device.

In a possible design, the Bluetooth audio device is a Bluetooth earphone or a Bluetooth speaker.

According to a second aspect, the present disclosure provides a wireless transceiving device group, including: at least two wireless transceiving devices;

the wireless transceiving device group establishes a bidirectional connection to a data source device via a device group identifier, where the wireless transceiving device group is configured with the device group identifier, and the device group identifier is used for identifying the wireless transceiving device group.

In a possible design, any two wireless transceiving devices in the wireless transceiving device group are connected via a preset physical identifier, where the device group identifier and the physical identifier are used in a time-division manner in accordance with a preset air interface protocol.

In a possible design, at least two wireless transceiving devices are paired to form the wireless transceiving device group, and the device group identifier of the wireless transceiving device group is configured.

In a possible design, the wireless transceiving device group is configured with the device group identifier in accordance with a preset addressing rule.

In a possible design, each wireless transceiving device in the wireless transceiving device group stores the device group identifier.

In a possible design, the wireless transceiving device group further includes: a newly added wireless transceiving device;

the newly added wireless transceiving device is paired with any wireless transceiving device in the wireless transceiving device group, where paired wireless transceiving device synchronizes the device group identifier to the newly added wireless transceiving device, so as to add the newly added wireless transceiving device to the wireless transceiving device group.

In a possible design, the wireless transceiving devices in the wireless transceiving device group are connected via a wireless link.

In a possible design, unidirectional or bidirectional data transmission is performed

between the wireless transceiving devices in the wireless transceiving device group through the wireless link.

In a possible design, a first wireless transceiving device in the wireless transceiving device group establishes a first bidirectional connection to the data source device via the device group identifier.

In a possible design, the first wireless transceiving device synchronizes link information of the first bidirectional connection to a second wireless transceiving device in the wireless transceiving device group to cause the second wireless transceiving device to establish a second bidirectional connection to the data source device.

In a possible design, a wireless transceiving device in the wireless transceiving device group receives data source data of the data source device; and

the wireless transceiving device in the wireless transceiving device group transmits data to the data source device.

In a possible design, the wireless transceiving device in the wireless transceiving device group transmits the data to the data source device in accordance with a preset feedback manner.

In a possible design, the transmitted data includes response data for successful reception or response data for failed reception.

In a possible design, the first wireless transceiving device and the second wireless transceiving device in the wireless transceiving device group confirm data information; and

if the second wireless transceiving device fails to receive the data source data, the second wireless transceiving device sends a retransmission request to the first wireless transceiving device to cause the first wireless transceiving device to determine whether to retransmit the data source data to the second wireless transceiving device in accordance with a preset response rule;

or,

if the first wireless transceiving device fails to receive the data source data, the first wireless transceiving device sends a retransmission request to the second wireless transceiving device to cause the second wireless transceiving device to determine whether to

retransmit the data source data to the first wireless transceiving device in accordance with the preset response rule.

In a possible design, a wireless transceiving device failing to receive the data source data in the wireless transceiving device group increases transmission power.

In a possible design, the wireless transceiving device group and the data source device synchronize control data.

In a possible design, the bidirectional connection is a bidirectional connection based on a Bluetooth protocol.

In a possible design, the wireless transceiving device is a Bluetooth audio device.

In a possible design, the Bluetooth audio device is a Bluetooth earphone or a Bluetooth speaker.

According to a third aspect, the present disclosure further provides a wireless transceiving system, including: a data source device and a wireless transceiving device group; where

the wireless transceiving device group includes at least two wireless transceiving devices;

the wireless transceiving device group establishes a bidirectional connection to the data source device via a device group identifier, where the wireless transceiving device group is configured with the device group identifier, and the device group identifier is used for identifying the wireless transceiving device group.

In a possible design, any two wireless transceiving devices in the wireless transceiving device group are connected via a preset physical identifier, where the device group identifier and the physical identifier are used in a time-division manner in accordance with a preset air interface protocol.

In a possible design, at least two wireless transceiving devices are paired to form the wireless transceiving device group, and the device group identifier of the wireless transceiving device group is configured.

In a possible design, the wireless transceiving device group is configured with the device group identifier in accordance with a preset addressing rule.

In a possible design, each wireless transceiving device in the wireless transceiving device group stores the device group identifier.

In a possible design, the wireless transceiving device group further includes: a newly added wireless transceiving device;

the newly added wireless transceiving device is paired with any wireless transceiving device in the wireless transceiving device group, where paired wireless transceiving device synchronizes the device group identifier to the newly added wireless transceiving device, so as to add the newly added wireless transceiving device to the wireless transceiving device group.

In a possible design, the wireless transceiving devices in the wireless transceiving device group are connected via a wireless link.

In a possible design, unidirectional or bidirectional data transmission is performed between the wireless transceiving devices in the wireless transceiving device group through the wireless link.

In a possible design, a first wireless transceiving device in the wireless transceiving device group establishes a first bidirectional connection to the data source device via the device group identifier.

In a possible design, the first wireless transceiving device synchronizes link information of the first bidirectional connection to a second wireless transceiving device in the wireless transceiving device group to cause the second wireless transceiving device to establish a second bidirectional connection to the data source device.

In a possible design, a wireless transceiving device in the wireless transceiving device group receives data source data of the data source device; and

the wireless transceiving device in the wireless transceiving device group transmits data to data source device.

In a possible design, the wireless transceiving device in the wireless transceiving device group transmits the data to the data source device in accordance with a preset feedback manner.

In a possible design, the transmitted data includes response data for successful reception

or response data for failed reception.

In a possible design, the first wireless transceiving device and the second wireless transceiving device in the wireless transceiving device group confirm data information; and

if the second wireless transceiving device fails to receive the data source data, the second wireless transceiving device sends a retransmission request to the first wireless transceiving device to cause the first wireless transceiving device to determine whether to retransmit the data source data to the second wireless transceiving device in accordance with a preset response rule;

or,

if the first wireless transceiving device fails to receive the data source data, the first wireless transceiving device sends a retransmission request to the second wireless transceiving device to cause the second wireless transceiving device to determine whether to retransmit the data source data to the first wireless transceiving device in accordance with the preset response rule.

In a possible design, a wireless transceiving device failing to receive the data source data in the wireless transceiving device group increases transmission power.

In a possible design, the wireless transceiving device group and the data source device synchronize control data.

In a possible design, the bidirectional connection is a bidirectional connection based on a Bluetooth protocol.

In a possible design, the wireless transceiving device is a Bluetooth audio device.

In a possible design, the Bluetooth audio device is a Bluetooth earphone or a Bluetooth speaker.

According to a fourth aspect, the present disclosure further provides a computer-readable storage medium, including: instructions which, when running on a wireless transceiving device group according to the second aspect, cause the wireless transceiving device group to execute the wireless connection method according to the first aspect.

The present disclosure provides a wireless connection method, a device group, a system

and a storage medium, in which a wireless transceiving device group is established and the wireless transceiving device group is configured with the device group identifier, so that an external data source device and the wireless transceiving device group form a bidirectional connection via the device group identifier. The bidirectional connection between the data source device and the wireless transceiving device can cause the data source data to be synchronized to a wireless transceiving device in the wireless transceiving device group, so that data synchronization between the wireless transceiving devices in the wireless transceiving device group can be achieved; and since the wireless transceiving device in the wireless transceiving device group forms the bidirectional connection to the data source device via a uniform device group identifier, each wireless transceiving device in the wireless transceiving device group has a characteristic of having an equal status, when any one of the wireless transceiving devices in the group undergoes a connection failure, communication connections between other wireless transceiving devices in the group and the data source device will not be affected. In addition, power consumption of each wireless transceiving device in the group is made to be more equalized.

BRIEF DESCRIPTION OF DRAWINGS

In order to explain the technical solutions in the embodiments of the present disclosure or the prior art more clearly, the accompanying drawings that need to be used in the description of the embodiments or the prior art will be briefly introduced below. Obviously, the accompanying drawings in the following description are some embodiments of the present disclosure. For those of ordinary skill in the art, other drawings can be obtained based on these drawings without paying creative efforts.

FIG. 1 is a schematic structural diagram of a wireless transceiving device group shown according to an exemplary embodiment of the present disclosure;

FIG. 2 is a schematic diagram of an application scenario of a wireless connection method shown according to an exemplary embodiment of the present disclosure;

FIG. 3 is a schematic flowchart of a wireless connection method shown according to an exemplary embodiment of the present disclosure;

FIG. 4 is a schematic diagram of a communication scenario of a wireless connection method shown according to an exemplary embodiment of the present disclosure;

FIG. 5 is a schematic diagram of another communication scenario of a wireless connection method shown according to an exemplary embodiment of the present disclosure;

FIG. 6 is a schematic diagram of yet another communication scenario of a wireless connection method shown according to an exemplary embodiment of the present disclosure;

FIG. 7 is a schematic diagram of sequence of data transmission between a wireless transceiving device group and a data source device;

FIG. 8 is a schematic diagram of device extension of a wireless transceiving device in a wireless connection method shown according to an exemplary embodiment of the present disclosure; and

FIG. 9 is a schematic structural diagram of a wireless connection system shown according to an exemplary embodiment of the present disclosure.

DESCRIPTION OF EMBODIMENTS

In order to make the objectives, technical solutions and advantages of the embodiments of the present disclosure clearer, the technical solutions in the embodiments of the present disclosure will be described clearly and completely below in conjunction with the accompanying drawings in the embodiments of the present disclosure. Obviously, the described embodiments are part of the embodiments of the present disclosure, but not all of the embodiments. Based on the embodiments of the present disclosure, all other embodiments obtained by those of ordinary skill in the art without paying creative efforts shall fall within the protection scope of the present disclosure.

The terms "first", "second", "third", "fourth" and the like (if any) in the description, the claims and the above-mentioned accompanying drawings of the present disclosure are used to distinguish similar objects, and do not need to be used to describe a specific order or sequence. It should be understood that the data used in this way can be interchanged under appropriate circumstances, so that the embodiments of the present disclosure described herein can be implemented in a sequence other than those illustrated or described herein. In addition,

the terms "including" and "having" and any of their variations are intended to cover non-exclusive inclusions. For example, a process, a method, a system, a product, or a device that includes a series of steps or units is not necessary to be limited to those steps or units clearly listed, but may include other steps or units that are not clearly listed or are inherent to these process, method, product, or device.

The technical solutions of the present disclosure and how the technical solutions of the present disclosure solve the above technical problems will be described in detail below with specific embodiments. The following specific embodiments can be combined with each other, and the same or similar concepts or processes may not be repeated in some embodiments. The embodiments of the present disclosure will be described below in conjunction with the accompanying drawings.

FIG. 1 is a schematic structural diagram of a wireless transceiving device group shown according to an exemplary embodiment of the present disclosure, and FIG. 2 is a schematic diagram of an application scenario of a wireless connection method shown according to an exemplary embodiment of the present disclosure. As shown in FIG. 1 to FIG. 2, the wireless connection method provide by the present embodiment is applied to a wireless transceiving device group 10, where the wireless transceiving device group 10 includes at least two wireless transceiving devices, which, for example, can be a first wireless transceiving device 101 and a second wireless transceiving device 102, and the wireless transceiving devices in the wireless transceiving device group 10 communicate with each other via a first wireless link 104. It is worth noting that, a communication connection between the wireless transceiving devices in the wireless transceiving device group 10 can be bidirectional, or can be unidirectional, which is not specifically limited herein. In addition, it is understandable that the above-mentioned wireless transceiving device is a device that can communicate in accordance with a standard wireless protocol, where the standard wireless protocol can be a Bluetooth protocol or a Wifi protocol. In the present embodiment, no specific wireless protocol forms are limited for it specifically. In order to specifically describe the application scenario of the wireless connection method provided in the present embodiment, an example can be taken where the standard wireless protocol is a Bluetooth protocol, and then in this

case, the wireless transceiving device is a Bluetooth transceiving device, and more specifically, can be a Bluetooth audio device, such as a Bluetooth earphone, a Bluetooth speaker or other devices.

In view of various problems existed in the above-mentioned prior art, in the wireless connection method provided by the present embodiment, the wireless transceiving device group 10 is established, and a device group identifier 103 is configured for the wireless transceiving device group 10. It is understandable that the device group identifier 103 is used for identifying the wireless transceiving device group 10, where the device group identifier 103 can be a communication address, and the device group identifier 103 can be understood as a public physical media access control address (MAC for short) of the wireless transceiving device group 10, and an external data source device 20 and the wireless transceiving device group 10 establish a bidirectional connection via the device group identifier 103. For example, the bidirectional connection may be a bidirectional connection based on the Bluetooth protocol. By means of the bidirectional connection between the data source device 20 and the wireless transceiving device group 10, data source data can be synchronized to the wireless transceiving devices in the wireless transceiving device group 10, thereby realizing data synchronization between the wireless transceiving devices within the group of the wireless transceiving device group 10, and since the wireless transceiving devices in the wireless transceiving device group 10 are connected bidirectionally to the data source device 20 via the uniform device group identifier 103, each wireless transceiving device in the wireless transceiving device group 10 has a characteristic of having an equal status. For example, when any one of the wireless transceiving devices in the group undergoes a connection failure, the communication connections between other wireless transceiving devices in the group and the data source device will not be affected. And since each wireless transceiving device in the group has an equal status, power consumption of each wireless transceiving device will also be more equalized.

Optionally, any two wireless transceiving devices in the wireless transceiving device group 10 are connected via a physical identifier. For example, the first wireless transceiving device 101 and the second wireless transceiving device 102 are connected via a physical

identifier preset in each of them. It is understandable that the physical identifier can be a physical address, which, for example, can be a MAC address, and the device group identifier and the physical identifier can be used in a time-division manner in accordance with a preset air interface protocol.

With the development of technology, at present, Bluetooth audio devices gradually turn from single audio devices to dual audio devices or even multi-audio devices. For example, for Bluetooth earphones, at present various forms of Bluetooth earphones for a pair of ears have emerged. Please continue referring to FIG. 1, Bluetooth earphones usually includes a first Bluetooth earphone and a second Bluetooth earphone, which respectively corresponds to the first wireless transceiving device and the second wireless transceiving device in the present embodiment. Specifically, for implementations of Bluetooth earphones for a pair of ears, there are usually two implementations in prior art:

in one implementation, one of the Bluetooth earphones for a pair of ears is selected as the fixed main ear earphone, and the other earphone is selected as the fixed secondary ear earphone, where the main ear earphone is responsible for communication interaction with the data source device. It can be seen that, the main ear earphone of this form is overloaded, and load of the main ear and load of the secondary ear are uneven, which causes power of the main ear earphone to be exhausted easily;

or, both earphones of the Bluetooth earphones for a pair of ears establish standard Bluetooth connections with the data source device via MAC addresses, and then the data source device sends data information to both of the earphones respectively. It can be seen that in this implementation, the data source device, such as a smart phone, needs to double send data information, which will take up twice Bluetooth time. In a complex environment, there is usually not a lot of time slices for retransmission, or in a scenario where WIFI and Bluetooth in a smart phone coexist, there are also not many time slices for retransmission.

The principle of the wireless connection method provided by the present embodiment can be exemplified by continuing taking that the wireless transceiving device group 10 is Bluetooth earphones for a pair of ears as an example. It is possible to form both earphones of the Bluetooth earphones for a pair of ears as a wireless transceiving device group, and assign

a uniform device group identifier to them. The step of forming both earphones of the Bluetooth earphones for a pair of ears as a wireless transceiving device group can be completed at the time the earphones leave the factory and are paired. Or the earphones can be paired by a user through a pairing device in a later stage, and the device group identifier can be generated in accordance with a Bluetooth core specification, where a manner of generating a Bluetooth communication address in accordance with the Bluetooth core specification is a conventional technical means in this field and is not repeated in the present embodiment. In addition, the device group identifier can also be generated in accordance with other specifications according to actual needs. In the present embodiment, a generation rule of the device group identifier is not specifically limited. When the Bluetooth earphones are connected to or synchronize music with a smart terminal, such as a smart phone, an MP3, a notebook computer and any Bluetooth data source device that can be used as an audio source, the smart phone sends audio data to the device group identifier, and both earphones of the Bluetooth earphones can acquire the audio data by respectively monitoring an audio link between the smart phone and the device group identifier. Compared with the prior art, loads of the two earphones of the Bluetooth earphones to which the method of the present embodiment is applied are similar, and power consumption is more equalized, and there is no need for the data source device to perform multiple data transmission operations. In addition, the form of forming a wireless transceiving device group first, and then assigning it a uniform device group identifier can make both earphones of the Bluetooth earphones have a characteristic of having an equal status. For example, when any Bluetooth earphone undergoes a connection failure, the communication connection between the other Bluetooth earphone and the data source device will not be affected. And the wireless transceiving device group can be made to have a better device extension characteristic. For example, according to different scenarios, an existing manner of grouping two earphones can be extended to a manner of grouping more earphones. It is understandable that the number of wireless transceiving devices included in the wireless transceiving device group 10 is not specifically limited in the present embodiment. In addition, since the wireless transceiving devices in the wireless transceiving device group 10 are connected bidirectionally with the

data source device 20 via the uniform device group identifier 103, each wireless transceiving device in the wireless transceiving device group 10 has a characteristic of having an equal status. For example, when any wireless transceiving device in the group undergoes a connection failure, the communication connections between other wireless transceiving devices in the group and the data source device will not be affected. And since each wireless transceiving device in the group has an equal status, the power consumption of each wireless transceiving device is also more equalized.

In addition, the wireless transceiving device group 10 can also be a paired Bluetooth speaker, and its implementation principle is similar to that of the above-mentioned Bluetooth earphones for a pair of ears, which will not be repeated in the present embodiment.

FIG. 3 is a schematic flowchart of a wireless connection method according to an exemplary embodiment shown by the present disclosure. As shown in FIG. 3, the wireless connection method provided by the present embodiment includes:

step 301, pairing at least two wireless transceiving devices to form a wireless transceiving device group, and configuring a device group identifier of the wireless transceiving device group.

Specifically, multiple wireless transceiving devices can be paired at the time of leaving a factory to form the wireless transceiving device group, or it is also possible to pair the multiple wireless transceiving devices by a user through a pairing device in a later stage to form the wireless transceiving device group. It is understandable that the manner of forming the wireless transceiving device group is not specifically limited in the present embodiment, as long as it can be ensured that after pairing, the device group identifier can be configured for the wireless transceiving device group, and the device group identifier can be used for establishing a bidirectional connection to an external data source device. In a possible implementation, the above-mentioned device group identifier may be a communication address, it is possible to configure the device group identifier of the wireless transceiving device group in accordance with a preset addressing rule.

Bluetooth earphones for a pair of ears can be used as an example. Establish both earphones of the Bluetooth earphones for a pair of ears as a wireless transceiving device

group, where the steps of establishing both of the earphones of the Bluetooth earphones for a pair of ears as a wireless transceiving device group can be completed when the earphones leave the factory and are paired, or the pairing can also performed by the user through a pairing device in a later stage, and the device group identifier can be generated in accordance with a Bluetooth core specification, where a manner of generating a Bluetooth communication address in accordance with the Bluetooth core specification is a conventional technical means in this field, which will not be repeated in the present embodiment. In addition, the device group identifier can also be generated in accordance with other specifications according to actual needs. In the present embodiment, a generation rule of the device group identifier is not specifically limited.

In addition, after the wireless transceiving device group is established, each wireless transceiving device in the wireless transceiving device group can also store the device group identifier.

Step 302, a first wireless transceiving device in the wireless transceiving device group establishes a first bidirectional connection to the data source device via the device group identifier.

After the wireless transceiving device group is formed, the data source device can establish a connection to the wireless transceiving device group by acquiring the device group identifier. FIG. 4 is a schematic diagram of a communication scenario of a wireless connection method show according to an exemplary embodiment of the present disclosure. As shown in FIG. 4, the wireless transceiving devices in the wireless transceiving device group 10 have stored the device group identifier 103. During a specific connection process, one of the wireless transceiving devices in the wireless transceiving device group 10, such as the first wireless transceiving device 101, establishes the first bidirectional connection to the data source device 20, that is, the first wireless transceiving device 101 in the wireless transceiving device group 10 performs bidirectional data transmission via the device group identifier 103 with the data source device 20 through a second wireless link 105. It is understandable that the selection of the first wireless transceiving device 101 in the wireless transceiving device group 10 to first establish a connection to the data source device 20 can

be determined according to current status of each wireless transceiving device in the group. For example, select a wireless transceiving device having the most battery power, or select a wireless transceiving device with the strongest signal strength. In the present embodiment, a selection principle of a wireless transceiving device that first establishes a connection to the data source device is not specifically limited.

Bluetooth earphones for a pair of ears can be used as an example for description. After two Bluetooth earphones form Bluetooth earphones for a pair of ears, a smart terminal can establish a connection to the Bluetooth earphones for a pair of ears by acquiring the device group identifier. The Bluetooth earphones in the Bluetooth earphones for a pair of ears have stored the device group identifier. In a specific connection, one of the Bluetooth earphones in the Bluetooth earphones for a pair of ears, i.e. a first Bluetooth earphone, first establishes a first bidirectional connection to the smart terminal, that is, the first Bluetooth earphone in the Bluetooth earphones for a pair of ears performs bidirectional data transmission via the device group identifier with the smart terminal through the second wireless link. It is understandable that the selection of the first Bluetooth earphone in the Bluetooth earphones for a pair of ears to first establish the connection with the smart terminal can be determined according to current status of each Bluetooth earphone in the group. For example, select the Bluetooth earphone having the most battery power or the Bluetooth earphone with the strongest signal strength to perform connection first. In the present embodiment, the selection principle of a Bluetooth earphone that first establishes a connection to the smart terminal is not specifically limited.

Step 303, the first wireless transceiving device synchronizes link information of the first bidirectional connection to a second wireless transceiving device in the wireless transceiving device group to cause the second wireless transceiving device to establish a second bidirectional connection to the data source device.

After establishing the first bidirectional connection to the data source device 20 via the device group identifier 103, the first wireless transceiving device 101 further synchronizes link information of the first bidirectional connection via the first wireless link 104 to a second wireless transceiving device 102 in the wireless transceiving device group 10 to cause the

second wireless transceiving device 102 to establish a second bidirectional connection to the data source device. That is, the second wireless transceiving device 102 in the wireless transceiving device group 10 may perform bidirectional data transmission via the device group identifier 103 with the data source device 20 through a third wireless link 106.

Bluetooth earphones for a pair of ears can be used as an example for description. After establishing the first bidirectional connection to the smart terminal via the device group identifier, the first Bluetooth earphone further synchronizes the link information of the first bidirectional connection via the first wireless link to a second Bluetooth earphone in the Bluetooth earphones for a pair of ears to cause the second Bluetooth earphone to establish a second bidirectional connection to the smart terminal. That is, the second Bluetooth earphone in the Bluetooth earphones for a pair of ears may perform bidirectional data transmission via the device group identifier with the data source device through a third wireless link.

Step 304, the wireless transceiving device group receives data source data of the data source device.

After the wireless transceiving device group 10 establishes a bidirectional connection to the data source device 20 via the device group identifier 103, the data source device 20 may transmit data source data 201 to the device group identifier 103 corresponding to the wireless transceiving device group 10. It is understandable the data source data 201 may be audio data, video data, text data, or other data. The present embodiment does not have limitation on the specific form of the data source data. For example, when the wireless transceiving devices are Bluetooth audio devices, the data source data may be corresponding audio data.

It is understandable that in a possible implementation, the first wireless transceiving device 101 and the second wireless transceiving device 102 may respectively acquire data by respectively monitoring the data source data 201 transmitted by the data source device 20 to the device group identifier 103.

Bluetooth earphones for a pair of ears can be used as an example for description. After the Bluetooth earphones for a pair of ears establish a bidirectional connection to the smart terminal via the device group identifier, the smart terminal may transmit audio data to the device group identifier corresponding to the Bluetooth earphones for a pair of ears. In a

possible implementation, the first Bluetooth earphone and the second Bluetooth earphone may respectively acquire data by respectively monitoring the audio data transmitted by the smart terminal to the device group identifier.

In addition, for enabling both of the Bluetooth earphones of the Bluetooth earphones for a pair of ears to play the audio synchronously, it is possible to further set a time label in the audio data to cause both of the Bluetooth earphones to play the same audio data according to the time label.

Step 305, the wireless transceiving devices in the wireless transceiving device group transmit data to the data source device.

After the wireless transceiving device group 10 receives the data source data 201 of the data source device 20, the wireless transceiving devices in the wireless transceiving device group 10, for example, the first wireless transceiving device 101 and the second wireless transceiving device 102, may respectively transmit data 107 to the data source device 20.

Optionally, the above-mentioned transmitted data 107 may include response data for successful reception or response data for failed reception. For example, when successfully receiving the data source data 201, a wireless transceiving device may return response data for successful reception to the data source device 20, where the response data for successful reception may be acknowledgment (ACK for short) data. When failing to receive the data source data 201, a wireless transceiving device may return response data for failed reception to the data source device 20, where the response data for failed reception may be negative acknowledgment (NACK for short) data. It is worth noting that the wireless transceiving devices in the wireless transceiving device group 10 may also return other data to the data source device 20 according to needs of actual working conditions. A specific form of the data source device is not specifically limited in the present embodiment.

Bluetooth earphones for a pair of ears can be used as an example for description. When successfully receiving the audio data, a Bluetooth earphone in the Bluetooth earphones for a pair of ears may return response data for successful reception to the smart terminal, and when failing to receive the audio data, the Bluetooth earphone device may return response data for failed reception to the smart terminal. It is worth noting that the wireless transceiving devices

in the wireless transceiving device group 10 may also return other data to the data source device 20 according to needs of actual working conditions. A specific form of the data source device is not specifically limited in the present embodiment.

FIG. 5 is a schematic diagram of another communication scenario of a wireless connection method shown according to an exemplary embodiment of the present disclosure. As shown in FIG. 5, a certain wireless transceiving device in the wireless transceiving device group 10 may lose a data packet. However, once a reception time node has been missed, the data source device 20 may not retransmit the data source data 201. In order to avoid data asymmetry in each of the wireless transceiving devices caused by data packet loss of the wireless transceiving devices in the wireless transceiving device group 10, it is also possible to confirm data information within the group after the wireless transceiving device group 10 receives the data source data 201. For example, confirm data information for the first wireless transceiving device 101 and the second wireless transceiving device 102 in the wireless transceiving device group 10. The specific manner of confirming can be, for example, confirming whether the numbers of data packets of the first wireless transceiving device 101 and the second wireless transceiving device 102 are the same. However, the specific confirmation form is not specifically limited in the present embodiment.

When the second wireless transceiving device 102 fails to receive the data source data 201, the second wireless transceiving device 102 may send a retransmission request 1041 to the first wireless transceiving device 101 to cause the first wireless transceiving device 101 to determine, in accordance with a preset response rule, whether to perform data retransmission 1042 to the second wireless transceiving device 102. In addition, when the first wireless transceiving device 101 fails to receive the data source data 201, similarly, the first wireless transceiving device 101 can also send a retransmission request to the second wireless transceiving device 102 to cause the second wireless transceiving device 102 to determine, in accordance with the preset response rule, whether to perform data retransmission to the first wireless transceiving device 101.

Bluetooth earphones for a pair of ears can be used as an example for description here. When the second Bluetooth earphone fails to receive the audio data, the second Bluetooth

earphone sends a retransmission request to the first Bluetooth earphone to cause the first Bluetooth earphone to determine, in accordance with a preset response rule, whether to perform data retransmission to the second Bluetooth earphone. In addition, when the first Bluetooth earphone fails to receive the audio data, similarly, the first Bluetooth earphone can also send a retransmission request to the second Bluetooth earphone to cause the second Bluetooth earphone to determine, in accordance with the preset response rule, whether to retransmit the audio data to the first Bluetooth earphone.

FIG. 6 is a schematic diagram of yet another communication scenario of a wireless connection method according to an exemplary embodiment of the present disclosure. As shown in FIG. 6, when a certain wireless transceiving device in the wireless transceiving device group 10 experiences abnormality, for example, it may be that the first wireless transceiving device 101 malfunctions or has a power failure, then in this case, the transmission between the first wireless transceiving device 101 and the data source device 20 is abnormal, and the transmission between the first wireless transceiving device 101 and the second wireless transceiving device 102 is also abnormal. However, since the wireless transceiving devices in the wireless transceiving device group 10 are connected bidirectionally to the data source device 20 via the uniform group identifier 103, each wireless transceiving device in the wireless transceiving device group 10 has a characteristic of having an equal status. When any wireless transceiving device in the group undergoes a connection failure, the communication connections between the other wireless transceiving devices in the group and the data source device 20 would not be affected.

FIG. 7 is a schematic diagram of a time sequence of data transmission between a wireless transceiving device group and a data source device. As shown in FIG. 7, a time slot N and a time slot N+1 are two adjacent time slots, and one data reception-or-transmission (transceiving) event exists between every two adjacent time slots. Continue to refer to FIG. 4, the second wireless link 105 is used for realizing bidirectional data transmission between the first wireless transceiving device 101 and the data source device 20, and similarly, the third wireless link 106 is used for realizing bidirectional data transmission between the second wireless transceiving device 102 and the data source device 20.

For an event 401, in the time slot N, both the first wireless transceiving device 101 and the second wireless transceiving device 102 miss reception of the data source data 201, and in the time slot N+1, neither the first wireless transceiving device 101 nor the second wireless transceiving device 102 sends feedback data to the data source device 20.

For an event 402, in the time slot N, the first wireless transceiving device 101 misses reception of the data source data 201, while the second wireless transceiving device 102 successfully receives the data source data 201. In the time slot N+1, neither the first wireless transceiving device 101 nor the second wireless transceiving device 102 sends feedback data to the data source device 20.

For an event 403, in the time slot N, the first wireless transceiving device 101 misses reception of the data source data 201, while the second wireless transceiving device 102 fails to receive the data source data 201. In the time slot N+1, the first wireless transceiving device 101 does not send feedback data to the data source device 20, while the second wireless transceiving device 102 sends response data for failed reception to the data source device 20.

For an event 404, in the time slot N, the first wireless transceiving device 101 fails to receive the data source data 201. In the time slot N+1, the second wireless transceiving device 102 misses reception of the data source data 201. In the time slot N+1, the first wireless transceiving device 101 sends response data for failed reception to the data source device 20, while the second wireless transceiving device 102 does not send feedback data to the data source device 20.

For an event 405, in the time slot N, both the first wireless transceiving device 101 and the second wireless transceiving device 102 fail to receive the data source data 201. In the time slot N+1, both the first wireless transceiving device 101 and the second wireless transceiving device 102 send response data for failed reception to the data source device 20.

For an event 406, in the time slot N, the first wireless transceiving device 101 fails to receive the data source data 201, while the second wireless transceiving device 102 successfully receives the data source data 201. In the time slot N+1, the first wireless transceiving device 101 sends response data for failed reception to the data source device 20, while the second wireless transceiving device 102 does not send feedback data to the data

source device 20.

For an event 407, in the time slot N, both the first wireless transceiving device 101 and the second wireless transceiving device 102 successfully receive the data source data 201. In the time slot N+1, the first wireless transceiving device 101 sends response data for successful reception to the data source device 20, while the second wireless transceiving device 102 does not send feedback data to the data source device 20.

For an event 408, in the time slot N, the first wireless transceiving device 101 successfully receives the data source data 201, while the second wireless transceiving device 102 misses reception of the data source data 201. In the time slot N+1, the first wireless transceiving device 101 sends response data for successful reception to the data source device 20, while the second wireless transceiving device 102 does not send feedback data to the data source device 20.

For an event 409, in the time slot N, the first wireless transceiving device 101 successfully receives the data source data 201, and the second wireless transceiving device 102 fails to receive the data source data 201. In the time slot N+1, the first wireless transceiving device 101 sends response data for successful reception to the data source device 20, while the second wireless transceiving device 102 sends response data for failed reception to the data source device 20.

In addition, for raising a transmission success rate for response data for failed reception, it is possible to increase transmission power of the wireless transceiving device that fails to receive the data source data in the wireless transceiving device group.

In addition, in order to realize collaborative control over the wireless transceiving device group 10 and the data source device 20, after the wireless transceiving device group 10 establishes the bidirectional connection to the data source device 20 via the device group identifier 103, it is also possible to synchronize control data between the wireless transceiving device group 10 and the data source device 20.

Bluetooth earphones for a pair of ears can be used as an example for description here. The above-mentioned control data may be a play command or a pause command when a song is played. When a user triggers the play command or the pause command on the smart

terminal or the Bluetooth earphones for a pair of ears, it is possible to synchronize control data between the Bluetooth earphones for a pair of ears and the smart terminal to achieve collaborative control over the Bluetooth earphones for a pair of ears and the smart terminal.

In the present embodiment, a wireless transceiving device group is established and a device group identifier is configured for the wireless transceiving device group to establish a bidirectional connection between an external data source device and the wireless transceiving device group via the device group identifier. The data source data can be caused to be synchronized to the wireless transceiving devices in the wireless transceiving device group via the bidirectional connection between the data source device and the wireless transceiving device group, thereby data synchronization between the wireless transceiving devices in the wireless transceiving device group may be realized. Also, since the wireless transceiving devices in the wireless transceiving device group are connected bidirectionally to the data source device via the uniform device group identifier, each wireless transceiving device within the group of the wireless transceiving device group has a characteristic of having an equal status. When any of the wireless transceiving devices within the group undergoes a connection failure, communication connections between the other wireless transceiving devices within the group and the data source device would not be affected. In addition, power consumption of each wireless transceiving device within the group can also be made to be more equalized.

FIG. 8 is a schematic diagram of device extension of a wireless transceiving device group in a wireless connection method shown according to an exemplary embodiment of the present disclosure. As shown in FIG. 8, based on the aforementioned embodiments, in order to make the wireless transceiving device group have more excellent extendibility in terms of the number of devices, for example, the wireless transceiving device group can be easily expanded from two wireless transceiving devices to a larger number, a mechanism for a wireless transceiving device to join an established wireless transceiving device group may be configured. Specifically, when a first wireless transceiving device 101 and a second wireless transceiving device 102 have formed a wireless transceiving device group 10, a newly added wireless transceiving device 108 establishes a communication connection to any of the

wireless transceiving devices in the wireless transceiving device group 10, then the device group identifier 103 is synchronized to the newly added wireless transceiving device 108, so as to add the newly added wireless transceiving device 108 to the wireless transceiving device group 10. Specifically, after the newly added wireless transceiving device 108 and any of the wireless transceiving devices in the wireless transceiving device group 10 perform an authentication via a preset condition, which can be, for example, a preset standard wireless protocol or a preset private protocol, the newly added wireless transceiving device 108 can join the wireless transceiving device group 10 and obtain the device group identifier 103.

Optionally, a paired wireless transceiving device in the wireless transceiving device group 10 can synchronize the device group identifier 103 to the newly added wireless transceiving device 108 by means of broadcasting or a wireless connection link. The above-mentioned wireless connection link may be through Bluetooth, or Wi-Fi, etc. which is not limited herein.

For explanation of the extendibility of the wireless connection method provided by the present embodiment, a detailed description can be made using a specific application scenario, which is, for example, a group audio conference scenario. Within a certain range of a work area, a pair of Bluetooth earphones can be configured for each employee, and all of the Bluetooth earphones are used for forming a wireless transceiving device group, to form a conference audio device group. Via a smart terminal, such as a smart phone, a group conference can be implemented through one smart terminal. When new Bluetooth earphones need to join the conference audio device group, they only have to go through authentication in accordance with a preset condition to join the conference audio device group. It can be seen that the conference audio device group has a convenient device extension performance.

Continue to refer to FIG. 1, the present embodiment further provides a wireless transceiving device group 10, including: at least two wireless transceiving devices.

The wireless transceiving device group 10 establishes a bidirectional connection to a data source device via a device group identifier 103. The wireless transceiving device group 10 is configured with the device group identifier 103 and the device group identifier 103 is used for identifying the wireless transceiving device group 10.

In a possible design, any two wireless transceiving devices in the wireless transceiving device group are connected via a preset physical identifier, where the device group identifier and the physical identifier are used in a time-division manner in accordance with a preset air interface protocol.

In a possible design, at least two wireless transceiving devices are paired to form the wireless transceiving device group 10, and the device group identifier 103 of the wireless transceiving device group 10 is configured.

In a possible design, the wireless transceiving device group 10 is configured with the device group identifier 103 in accordance with a preset addressing rule.

In a possible design, each wireless transceiving device in the wireless transceiving device group 10 stores the device group identifier 103.

In a possible design, the wireless transceiving device group 10 further includes: a newly added wireless transceiving device;

the newly added wireless transceiving device is paired with any wireless transceiving device in the wireless transceiving device group 10, where paired wireless transceiving device synchronizes the device group identifier 103 to the newly added wireless transceiving device, so as to add the newly added wireless transceiving device to the wireless transceiving device group 10.

In a possible design, the wireless transceiving devices in the wireless transceiving device group 10 are connected via a wireless link.

In a possible design, bidirectional or unidirectional data transmission is performed between the wireless transceiving devices in the wireless transceiving device group 10 through the wireless link.

In a possible design, a first wireless transceiving device 101 in the wireless transceiving device group 10 establishes a first bidirectional connection to the data source device via the device group identifier 103.

In a possible design, the first wireless transceiving device 101 synchronizes link information of the first bidirectional connection to a second wireless transceiving device 102 in the wireless transceiving device group 10 to cause the second wireless transceiving device

102 to establish a second bidirectional connection to the data source device.

In a possible design, a wireless transceiving device in the wireless transceiving device group 10 receives data source data of the data source device; and

the wireless transceiving device in the wireless transceiving device group 10 transmits data to the data source device.

In a possible design, the wireless transceiving device in the wireless transceiving device group 10 transmits the data to the data source device in accordance with a preset feedback manner.

In a possible design, the transmitted data includes response data for successful reception or response data for failed reception.

In a possible design, the first wireless transceiving device 101 and the second wireless transceiving device 102 in the wireless transceiving device group 10 confirm data information; and

if the second wireless transceiving device 102 fails to receive the data source data, the second wireless transceiving device 102 sends a retransmission request to the first wireless transceiving device 101 to cause the first wireless transceiving device 101 to determine whether to retransmit the data source data to the second wireless transceiving device 102 in accordance with a preset response rule;

or,

if the first wireless transceiving device 101 fails to receive the data source data, the first wireless transceiving device 101 sends a retransmission request to the second wireless transceiving device 102 to cause the second wireless transceiving device 102 to determine whether to retransmit the data source data to the first wireless transceiving device 101 in accordance with the preset response rule.

In a possible design, a wireless transceiving device failing to receive the data source data in the wireless transceiving device group increases transmission power.

In a possible design, the wireless transceiving device group 10 and the data source device synchronize control data.

In a possible design, the bidirectional connection is a bidirectional connection based on

a Bluetooth protocol.

In a possible design, the wireless transceiving device is a Bluetooth audio device.

In a possible design, the Bluetooth audio device is a Bluetooth earphone or a Bluetooth speaker.

The wireless transceiving device group provided by the above-mentioned embodiments can be used to execute the method provided by the above-mentioned method embodiments. The implementations and technical effects are similar, which will not be detailed herein.

In addition, FIG. 9 is a schematic structural diagram of a wireless connection system shown according to an embodiment of the present disclosure. As shown in FIG. 9, the present embodiment provides a wireless transceiving system, including a data source device 20 and a wireless transceiving device group 10;

the wireless transceiving device group 10 includes at least two wireless transceiving devices; and

the wireless transceiving device group 10 establishes a bidirectional connection to the data source device 20 via a device group identifier 103. The wireless transceiving device group 10 is configured with the device group identifier 103. The device group identifier 103 is used for identifying the wireless transceiving device group 10.

In a possible design, any two wireless transceiving devices in the wireless transceiving device group are connected via a preset physical identifier, where the device group identifier and the physical identifier are used in a time-division manner in accordance with a preset air interface protocol.

In a possible design, at least two wireless transceiving devices are paired to form the wireless transceiving device group 10, and the device group identifier 103 of the wireless transceiving device group 10 is configured.

In a possible design, the wireless transceiving device group 10 is configured with the device group identifier 103 in accordance with a preset addressing rule.

In a possible design, each wireless transceiving device in the wireless transceiving device group 10 stores the device group identifier 103.

In a possible design, the wireless transceiving system further includes: a newly added

wireless transceiving device;

the newly added wireless transceiving device is paired with any wireless transceiving device in the wireless transceiving device group 10, where paired wireless transceiving device synchronizes the device group identifier 103 to the newly added wireless transceiving device, so as to add the newly added wireless transceiving device to the wireless transceiving device group 10.

In a possible design, the wireless transceiving devices in the wireless transceiving device group 10 are connected via a wireless link.

In a possible design, bidirectional or unidirectional data transmission is performed between the wireless transceiving devices in the wireless transceiving device group 10 through the wireless link.

In a possible design, a first wireless transceiving device 101 in the wireless transceiving device group 10 establishes a first bidirectional connection to the data source device 20 via the device group identifier 103.

In a possible design, the first wireless transceiving device 101 synchronizes link information of the first bidirectional connection to a second wireless transceiving device 102 in the wireless transceiving device group 10 to cause the second wireless transceiving device 102 to establish a second bidirectional connection to the data source device 20.

In a possible design, a wireless transceiving device in the wireless transceiving device group 10 receives data source data of the data source device 20; and

the wireless transceiving device in the wireless transceiving device group 10 transmits data to the data source device 20.

In a possible design, the wireless transceiving device in the wireless transceiving device group 10 transmits the data to the data source device 20 in accordance with a preset feedback manner.

In a possible design, the transmitted data includes response data for successful reception or response data for failed reception.

In a possible design, the first wireless transceiving device 101 and the second wireless transceiving device 102 in the wireless transceiving device group 10 confirm data

information; and

if the second wireless transceiving device 102 fails to receive the data source data, the second wireless transceiving device 102 sends a retransmission request to the first wireless transceiving device 101 to cause the first wireless transceiving device 101 to determine whether to retransmit the data source data to the second wireless transceiving device 102 in accordance with a preset response rule;

or,

if the first wireless transceiving device 101 fails to receive the data source data, the first wireless transceiving device 101 sends a retransmission request to the second wireless transceiving device 102 to cause the second wireless transceiving device 102 to determine whether to retransmit the data source data to the first wireless transceiving device 101 in accordance with the preset response rule.

In a possible design, a wireless transceiving device failing to receive the data source data in the wireless transceiving device group increases transmission power.

In a possible design, the wireless transceiving device group 10 and the data source device 20 synchronize control data.

In a possible design, the bidirectional connection is a bidirectional connection based on a Bluetooth protocol.

In a possible design, the wireless transceiving device is a Bluetooth audio device.

In a possible design, the Bluetooth audio device is a Bluetooth earphone or a Bluetooth speaker.

An embodiment of the present disclosure also provides a computer-readable storage medium, including: instructions which, when running on the wireless transceiving device group, cause the wireless transceiving device group to execute any of the above-mentioned method embodiments.

The computer-readable medium may include a computer storage medium or a communication medium. The communication medium includes any medium that is easy to transmit a computer program from one place to another. The storage medium can be any usable medium that may be accessed by a general-purpose or special-purpose computer. An

exemplary storage medium is coupled to a processor to enable the processor to read information from and write information to the storage medium. Of course, the storage medium can also be a component of the processor. The processor and the storage medium can be located on an application-specific integrated circuit (ASIC). Additionally, the application-specific integrated circuit can be located in a user device. Of course, the processor and the storage medium can also exist in a communication device as discrete components.

Finally, it should be noted that the embodiments above are merely used to explain the technical solutions of the present disclosure, not to limit them; although, the present disclosure has been described in detail with reference to the foregoing embodiments, those of ordinary skill in the art should understand: they can also make changes to the technical solutions described in the foregoing various embodiments or replace some or all of the technical features equivalently. Those changes or replacements do not cause the nature of the corresponding technical solutions to depart from the scope of the technical solutions according to various embodiments of the present disclosure.

CLAIMS

1. A wireless connection method, comprising:

establishing, by a wireless transceiving device group, a bidirectional connection to a data source device via a device group identifier, wherein the wireless transceiving device group comprises at least two wireless transceiving devices, the wireless transceiving device group is configured with the device group identifier, and the device group identifier is used for identifying the wireless transceiving device group.

2. The wireless connection method according to claim 1, wherein any two wireless transceiving devices in the wireless transceiving device group are connected via a preset physical identifier, wherein the device group identifier and the physical identifier are used in a time-division manner in accordance with a preset air interface protocol.

3. The wireless connection method according to claim 1, before the establishing, by the wireless transceiving device group, the bidirectional connection to the data source device via the device group identifier, further comprising:

pairing at least two wireless transceiving devices to form the wireless transceiving device group, and configuring the device group identifier of the wireless transceiving device group.

4. The wireless connection method according to claim 3, wherein the configuring the device group identifier of the wireless transceiving device group comprises:

configuring the device group identifier of the wireless transceiving device group in accordance with a preset addressing rule.

5. The wireless connection method according to claim 3 or 4, after the configuring the device group identifier of the wireless transceiving device group, further comprising:

storing, by each wireless transceiving device in the wireless transceiving device group, the device group identifier.

6. The wireless connection method according to any one of claims 1 to 4, after the establishing, by the wireless transceiving device group, the bidirectional connection to the data source device via the device group identifier, further comprising:

pairing a newly added wireless transceiving device with any wireless transceiving device in the wireless transceiving device group; and

synchronizing, by the paired wireless transceiving device, the device group identifier to the newly added wireless transceiving device, so as to add the newly added wireless transceiving device to the wireless transceiving device group.

7. The wireless connection method according to any one of claims 1 to 4, wherein the wireless transceiving devices in the wireless transceiving device group are connected via a wireless link.

8. The wireless connection method according to claim 7, wherein unidirectional or bidirectional data transmission is performed between the wireless transceiving devices in the wireless transceiving device group through the wireless link.

9. The wireless connection method according to claim 1, wherein the establishing, by the wireless transceiving device group, the bidirectional connection to the data source device via the device group identifier comprises:

establishing, by a first wireless transceiving device in the wireless transceiving device group, a first bidirectional connection to the data source device via the device group identifier.

10. The wireless connection method according to claim 9, after the establishing, by the first wireless transceiving device in the wireless transceiving device group, the first bidirectional connection to the data source device via the device group identifier, further comprising:

synchronizing, by the first wireless transceiving device, link information of the first bidirectional connection to a second wireless transceiving device in the wireless transceiving device group to cause the second wireless transceiving device to establish a second bidirectional connection to the data source device.

11. The wireless connection method according to any one of claims 1 to 4, after the establishing, by the wireless transceiving device group, the bidirectional connection to the data source device via the device group identifier, further comprising:

receiving, by the wireless transceiving device group, data source data of the data source device; and

transmitting, by a wireless transceiving device in the wireless transceiving device group, data to the data source device.

12. The wireless connection method according to claim 11, wherein the transmitting, by the wireless transceiving device in the wireless transceiving device group, the data to the data source device comprises:

transmitting, by the wireless transceiving device in the wireless transceiving device group, the data to the data source device in accordance with a preset feedback manner.

13. The wireless connection method according to claim 12, wherein the transmitted data comprises response data for successful reception or response data for failed reception.

14. The wireless connection method according to claim 10, after the transmitting, by the wireless transceiving device in the wireless transceiving device group, the data to the data source device, further comprising:

confirming, by the first wireless transceiving device and the second wireless transceiving device in the wireless transceiving device group, data information; and

if the second wireless transceiving device fails to receive the data source data, sending, by the second wireless transceiving device, a retransmission request to the first wireless transceiving device to cause the first wireless transceiving device to determine whether to retransmit the data source data to the second wireless transceiving device in accordance with a preset response rule;

or,

if the first wireless transceiving device fails to receive the data source data, sending, by the first wireless transceiving device a retransmission request to the second wireless transceiving device to cause the second wireless transceiving device to determine whether to retransmit the data source data to the first wireless transceiving device in accordance with the preset response rule.

15. The wireless connection method according to claim 14, further comprising: increasing, by a wireless transceiving device failing to receive the data source data in the wireless transceiving device group, transmission power.

16. The wireless connection method according to any one of claims 1 to 4, after the establishing, by the wireless transceiving device group, the bidirectional connection to the data source device via the device group identifier, further comprising:

synchronizing control data between the wireless transceiving device group and the data source device.

17. The wireless connection method according to any one of claims 1 to 4, and 9, wherein the bidirectional connection is a bidirectional connection based on a Bluetooth protocol.

18. The wireless connection method according to claim 17, wherein the wireless transceiving device is a Bluetooth audio device.

19. The wireless connection method according to claim 18, wherein the Bluetooth audio device is a Bluetooth earphone or a Bluetooth speaker.

20. A wireless transceiving device group, comprising: at least two wireless transceiving devices;

the wireless transceiving device group establishes a bidirectional connection to a data source device via a device group identifier, wherein the wireless transceiving device group is configured with the device group identifier, and the device group identifier is used for identifying the wireless transceiving device group.

21. The wireless transceiving device group according to claim 20, wherein any two wireless transceiving devices in the wireless transceiving device group are connected via a preset physical identifier, wherein the device group identifier and the physical identifier are used in a time-division manner in accordance with a preset air interface protocol.

22. The wireless transceiving device group according to claim 20, wherein at least two wireless transceiving devices are paired to form the wireless transceiving device group, and the device group identifier of the wireless transceiving device group is configured.

23. The wireless transceiving device group according to claim 22, wherein the wireless transceiving device group is configured with the device group identifier in accordance with a preset addressing rule.

24. The wireless transceiving device group according to any one of claims 20 to 23, wherein each wireless transceiving device in the wireless transceiving device group stores the device group identifier.

25. The wireless transceiving device group according to any one of claims 20 to 23, further comprising: a newly added wireless transceiving device;

the newly added wireless transceiving device is paired with any wireless transceiving device in the wireless transceiving device group, wherein paired wireless transceiving device synchronizes the device group identifier to the newly added wireless transceiving device, so as to add the newly added wireless transceiving device to the wireless transceiving device group.

26. The wireless transceiving device group according to any one of claims 20 to 23, wherein the wireless transceiving devices in the wireless transceiving device group are connected via a wireless link.

27. The wireless transceiving device group according to claim 26, wherein unidirectional or bidirectional data transmission is performed between the wireless transceiving devices in the wireless transceiving device group through the wireless link.

28. The wireless transceiving device group according to claim 20, wherein a first wireless transceiving device in the wireless transceiving device group establishes a first bidirectional connection to the data source device via the device group identifier.

29. The wireless transceiving device group according to claim 28, wherein the first wireless transceiving device synchronizes link information of the first bidirectional connection to a second wireless transceiving device in the wireless transceiving device group to cause the second wireless transceiving device to establish a second bidirectional connection to the data source device.

30. The wireless transceiving device group according to any one of claims 20 to 23, wherein:

a wireless transceiving device in the wireless transceiving device group receives data source data of the data source device; and

the wireless transceiving device in the wireless transceiving device group transmits data to the data source device.

31. The wireless transceiving device group according to claim 30, wherein the wireless transceiving device in the wireless transceiving device group transmits the data to the data source device in accordance with a preset feedback manner.

32. The wireless transceiving device group according to claim 31, wherein the transmitted data comprises response data for successful reception or response data for failed reception.

33. The wireless transceiving device group according to claim 29, wherein the first wireless transceiving device and the second wireless transceiving device in the wireless transceiving device group confirm data information; and

if the second wireless transceiving device fails to receive the data source data, the second wireless transceiving device sends a retransmission request to the first wireless transceiving device to cause the first wireless transceiving device to determine whether to retransmit the data source data to the second wireless transceiving device in accordance with a preset response rule;

or,

if the first wireless transceiving device fails to receive the data source data, the first wireless transceiving device sends a retransmission request to the second wireless transceiving device to cause the second wireless transceiving device to determine whether to retransmit the data source data to the first wireless transceiving device in accordance with the preset response rule.

34. The wireless transceiving device group according to claim 33, wherein a wireless transceiving device failing to receive the data source data in the wireless transceiving device group increases transmission power.

35. The wireless transceiving device group according to any one of claims 20 to 23, wherein the wireless transceiving device group and the data source device synchronize control data.

36. The wireless transceiving device group according to any one of claims 20 to 23, and 28, wherein the bidirectional connection is a bidirectional connection based on a Bluetooth protocol.

37. The wireless transceiving device group according to claim 36, wherein the wireless transceiving device is a Bluetooth audio device.

38. The wireless transceiving device group according to claim 37, wherein the Bluetooth audio device is a Bluetooth earphone or a Bluetooth speaker.

39. A wireless transceiving system, comprising: a data source device and a wireless transceiving device group;

the wireless transceiving device group comprises at least two wireless transceiving devices;

the wireless transceiving device group establishes a bidirectional connection to the data source device via a device group identifier, wherein the wireless transceiving device group is configured with the device group identifier, and the device group identifier is used for identifying the wireless transceiving device group.

40. The wireless transceiving system according to claim 39, wherein any two wireless transceiving devices in the wireless transceiving device group are connected via a preset physical identifier, wherein the device group identifier and the physical identifier are used in a time-division manner in accordance with a preset air interface protocol.

41. The wireless transceiving system according to claim 39, wherein at least two wireless transceiving devices are paired to form the wireless transceiving device group, and the device group identifier of the wireless transceiving device group is configured.

42. The wireless transceiving system according to claim 41, wherein the wireless transceiving device group is configured with the device group identifier in accordance with a preset addressing rule.

43. The wireless transceiving system according to any one of claims 39 to 42, wherein each wireless transceiving device in the wireless transceiving device group stores the device group identifier.

44. The wireless transceiving system according to any one of claims 39 to 42, further comprising: a newly added wireless transceiving device;

the newly added wireless transceiving device is paired with any wireless transceiving device in the wireless transceiving device group, wherein paired wireless transceiving device synchronizes the device group identifier to the newly added wireless transceiving device, so as to add the newly added wireless transceiving device to the wireless transceiving device group.

45. The wireless transceiving system according to any one of claims 39 to 42, wherein the wireless transceiving devices in the wireless transceiving device group are connected via a wireless link.

46. The wireless transceiving system according to claim 45, wherein unidirectional or bidirectional data transmission is performed between the wireless transceiving devices in the wireless transceiving device group through the wireless link.

47. The wireless transceiving system according to claim 39, wherein a first wireless transceiving device in the wireless transceiving device group establishes a first bidirectional connection to the data source device via the device group identifier.

48. The wireless transceiving system according to claim 47, wherein the first wireless transceiving device synchronizes link information of the first bidirectional connection to a second wireless transceiving device in the wireless transceiving device group to cause the second wireless transceiving device to establish a second bidirectional connection to the data source device.

49. The wireless transceiving system according to any one of claims 39 to 42, wherein a wireless transceiving device in the wireless transceiving device group receives data source data of the data source device; and

the wireless transceiving device in the wireless transceiving device group transmits data to the data source device.

50. The wireless transceiving system according to claim 49, wherein the wireless transceiving device in the wireless transceiving device group transmits the data to the data source device in accordance with a preset feedback manner.

51. The wireless transceiving system according to claim 50, wherein the transmitted data comprises response data for successful reception or response data for failed reception.

52. The wireless transceiving system according to claim 48, wherein the first wireless transceiving device and the second wireless transceiving device in the wireless transceiving device group confirm data information; and

if the second wireless transceiving device fails to receive the data source data, the second wireless transceiving device sends a retransmission request to the first wireless transceiving device to cause the first wireless transceiving device to determine whether to retransmit the data source data to the second wireless transceiving device in accordance with a preset response rule;

or,

if the first wireless transceiving device fails to receive the data source data, the first wireless transceiving device sends a retransmission request to the second wireless transceiving device to cause the second wireless transceiving device to determine whether to retransmit the data source data to the first wireless transceiving device in accordance with the preset response rule.

53. The wireless transceiving system according to claim 52, wherein a wireless transceiving device failing to receive the data source data in the wireless transceiving device group increases transmission power.

54. The wireless transceiving system according to any one of claims 39 to 42, wherein the wireless transceiving device group and the data source device synchronize control data.

55. The wireless transceiving system according to any one of claims 39 to 42 and 48, wherein the bidirectional connection is a bidirectional connection based on a Bluetooth protocol.

56. The wireless transceiving system according to claim 55, wherein the wireless transceiving device is a Bluetooth audio device.

57. The wireless transceiving system according to claim 56, wherein the Bluetooth audio device is a Bluetooth earphone or a Bluetooth speaker.

58. A computer-readable storage medium, comprising: a computer program stored thereon, wherein when the program is executed by a processor, the wireless connection method according to any one of claims 1 to 19 is implemented.