DEVICE DISCOVERY METHOD, SYSTEM, AND ELECTRONIC DEVICE

This application claims priority to Chinese Patent Application No. 202110455282.4, filed with the China National Intellectual Property Administration on April 26, 2021 and entitled

5   "DEVICE DISCOVERY METHOD, SYSTEM, AND ELECTRONIC DEVICE", which is incorporated herein by reference in its entirety.

TECHNICAL FIELD

This application relates to the field of electronic technologies, and in particular, to a device discovery method, a system, and an electronic device.

10   ## BACKGROUND

An electronic device such as a mobile phone may access data on another electronic device that is in a same network as the electronic device, for example, browse a picture on the another electronic device.

WO 2016/040721 A1 discloses: Systems and methods cross device application discovery

15   and/or control. Cross device application discovery and/or control can provide for simple detection and activation of applications on remote devices. Cross device application discovery and/or control can provide for the control of remote applications in a master and slave configuration. Responsive to an activation message, an application can execute a task in an application, the task being displayed on a target device. Responsive to an activation message, an application can execute a

20   task in an application on a target device, a task context data for the task being streamed to the source device for presentation on a display. Cross device application discovery and/or control can be enabled on a single operating system, or across a plurality of operating systems.

SUMMARY

This application provides a device discovery method. By implementing the method, an

25   electronic device such as a mobile phone may filter a discovered device based on features of different distributed applications, so that a device obtained after the filtering meets a requirement

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of an application.

According to a first aspect, an embodiment of this application provides a device discovery method. The method includes: A first device displays a first interface provided by a first application. At least one control is displayed in the first interface. The first device detects M second devices. The second device includes a device that is located in a same network as the first device, and/or a device that logs in to a same user account as the first device. The first device displays identifiers of N second devices in response to an operation performed on one of the at least one control. The N second devices include a second device, in the M second devices, on which a second application is installed ~~in the M second devices~~. The second application and the first application provide a same resource, wherein the N second devices specifically comprise a second device on which a second application of preset version is installed in the M second devices; or the N second devices specifically comprise a second device on which the second application and an operating system of preset version are installed in the M second devices. The first device detects a first operation performed on one of the identifiers of the N second devices, and invokes a resource of a second device corresponding to the identifier on which the first operation is performed.

By implementing the method provided in the first aspect, the first device may filter a discovered device based on features of different distributed applications, and then display an icon of a second device that meets a filtering requirement. In this way, a user may select any displayed second device to invoke a resource provided by the second device.

~~With reference to some embodiments of the first aspect, in some embodiments, the N second devices specifically include a second device on which a second application of preset version is installed in the M second devices. Alternatively, the N second devices specifically include a second device on which the second application and an operating system of preset version are installed in the M second devices. Alternatively, the N second devices specifically include a second device on which the second application is installed in the M second devices and that belongs to a first device type.~~ It should be understood that an application of preset version is an application that includes a specific version and a follow-up version, and an operating system of preset version is an operating system that includes a specific version and a follow-up version.

By implementing the method provided in the foregoing embodiment, the first device may filter a discovered device based on features of different distributed applications.

With reference to some embodiments of the first aspect, in some embodiments, before the first device detects the M second devices, the method further includes: The first device detects a second operation.

By implementing the method provided in the foregoing embodiment, the user may enable a distributed function when the distributed function needs to be used, and disable the function when

the function does not need to be used. This helps reduce energy consumption of the first device.

With reference to some embodiments of the first aspect, in some embodiments, that the first device displays the identifiers of the N second devices specifically includes that the first device displays a second interface provided by the first application. The identifiers of the N second devices are displayed in the second interface.

By implementing the method provided in the foregoing embodiment, the first device may display a second device that meets a requirement of the first application. Further, the user may know another electronic device that can be invoked by the application. Then, the user may invoke a resource provided by any displayed second device.

With reference to some embodiments of the first aspect, in some embodiments, the resource includes at least one of an image, a service, a capability, and hardware.

By implementing the method provided in the foregoing embodiment, the first device may invoke an image, a service, a capability, and hardware that are provided by the second device, to meet more requirements of the user.

With reference to some embodiments of the first aspect, in some embodiments, the resource includes an image. Invoking the resource of the second device corresponding to the identifier on which the first operation is performed specifically includes: displaying a third interface provided by the first application, and displaying, in the third interface, an image of the second device corresponding to the identifier of the first operation is performed.

By implementing the method provided in the foregoing embodiment, the first device may invoke a gallery provided by the second device. In this way, the user may access an image such as a picture or a video of the second device on the first device.

With reference to some embodiments of the first aspect, in some embodiments, the resource is a camera. Invoking the resource of the second device corresponding to the identifier on which the first operation is performed specifically includes: displaying a fourth interface provided by the first application, and displaying, in the fourth interface, an image that is captured by a camera of the second device corresponding to the identifier on which the first operation is performed.

By implementing the method provided in the foregoing embodiment, the first device may invoke the camera provided by the second device. In this way, the user may perform photographing on the first device by using the camera of the second device, to obtain richer photographing experience of the user.

With reference to some embodiments of the first aspect, in some embodiments, the method further includes: The first device does not display an identifier of a second device on which the second application is not installed.

By implementing the method provided in the foregoing embodiment, the second device

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displayed by the first device is a second device that can provide a resource for the first device. When selecting any second device, the user may invoke a resource provided by the second device, to avoid a case in which a second device that does not meet a requirement of the application is displayed.

5   According to a second aspect, an embodiment of this application provides an electronic device. The electronic device includes one or more processors and one or more memories. The one or more memories are coupled to the one or more processors. The one or more memories are configured to store computer program code. The computer program code includes computer instructions. When the one or more processors execute the computer instructions, the electronic 10 device is enabled to perform the method described in any one of the first aspect and the possible implementations of the first aspect.

According to a third aspect, an embodiment of this application provides a computer program product including instructions. When the computer program product runs on an electronic device, the electronic device is enabled to perform the method described in any one of the first aspect and 15 the possible implementations of the first aspect.

According to a fourth aspect, an embodiment of this application provides a computer-readable storage medium, including instructions. When the instructions are run on an electronic device, the electronic device is enabled to perform the method described in any one of the first aspect and the possible implementations of the first aspect.

20   It may be understood that the first device provided in the second aspect, the computer program product provided in the third aspect, and the computer storage medium provided in the fourth aspect are all configured to perform the method provided in embodiments of this application. Therefore, for beneficial effects that can be achieved by the first device, the computer program product, and the computer storage medium, refer to beneficial effects in the corresponding method. 25 Details are not described herein again.

BRIEF DESCRIPTION OF DRAWINGS

FIG. 1 is a diagram of a network architecture according to an embodiment of this application;

FIG. 2 is a diagram of a software architecture of a distributed function according to an embodiment of this application;

30   FIG. 3 is a diagram of a software architecture of a distributed function including a filtering policy according to an embodiment of this application;

FIG. 4 is a schematic diagram of a data structure of a filtering policy according to an embodiment of this application;

FIG. 5A is a schematic diagram of filtering processing according to an embodiment of this application;

FIG. 5B is another schematic diagram of filtering processing according to an embodiment of this application;

5   FIG. 6A to FIG. 6H, FIG. 7A to FIG. 7E, and FIG. 8A to FIG. 8C show a group of user interfaces according to an embodiment of this application; and

FIG. 9 is a diagram of a hardware structure of an electronic device according to an embodiment of this application.

DESCRIPTION OF EMBODIMENTS

Terms used in the following embodiments of this application are merely intended to describe specific embodiments, but are not intended to limit this application.

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