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Device with screen as remote controller for Camera, Camcorder or other picture/video capture device

Abstract

A device with screen is used to remotely display the content captured by a picture/video capture device, and control the operation of the picture/video capture device through wired or wireless connection. A device with screen can be a remote controller with LCD screen come with a camera/camcorder, a hand-phone, a PDA, a laptop, etc. A picture/video capture device can be a camera, a camcorder, a camera phone, etc. Wireless connection can be any available wireless technique, such as Bluetooth, wi-fi, 3G, etc. Wired connection can be a cable which connects the two devices. With such a remote controller, the user can not only check the content/status of a picture/video capture device, but also control the behaviour of the device, such as zooming, taking picture, recording, etc. This will make take picture for self much easier than current.

Description

The Camera and camcorder are becoming much cheaper and more popular nowadays. Almost each traveller carries a camera. However, it's quite inconvenient to self-take pictures/videos. Currently, a timer is used for self-taking pictures. The drawbacks of using a timer are obvious: a) the user has to run to the chosen position immediately after press the shutter button, which is difficult for disables, children and elders, sometimes even adults; b) It is quite normal to get imperfect photos/videos, likely because of fuzzy focus or wrong position; c) it takes time to self-take pictures.

This patent targets to remove such inconveniences by using a device with screen as remote controller. Two main entities are involved in the patent: the device with screen as the remote controller, and the picture/video capture device to take picture/video.

The device with screen including: 1) a screen to display the picture/video captured and sent by the picture/video capture device; 2) buttons and/or lever to control the zoom, shutter and other operations of the capture device; 3) wireless transceiver and/or data terminal plus cable to receive picture/video from and send commands to the capture device through wireless or wired connection.

The picture/video capture device should be able to 1) communicate with the remote controller through either wireless or wired connection, 2) send content it captured to the remote controller, and 3) operate according to the commands received from the remote controller.

Using such a remote controller and picture/video capture device, a user can self-take picture/video very easily. At the place to take picture/video, the user at first



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puts the picture/video capture device somewhere within communication range from the selected position and points the lens towards the position properly by checking the monitor or viewfinder of the capture device, then he moves to the position, connects the remote controller with the capture device, checks the content captured by the capture device through the screen of the remote controller, changes his position a little or changes the capture device's behaviours (e.g. zoom, focus) accordingly. After make sure that everything is fine through the remote controller's screen, the user can take a perfect picture/video by pressing shutter button on the remote controller.

A device with screen can be a LCD screen remote controller, a hand-phone, a PDA, a laptop, or any other device which can communicate with the picture/video capture device, has a screen to display picture/video received from capture device to the user, and send command to capture device.

A picture/video capture device can be a camera, camcorder, 3G-phone, etc.

If a manufacturer provides a remote controller with a screen for a camera/camcorder, since a screen may be costly, and the screen of the camera/camcorder is useless when it is operated remotely, the camera/camcorder can share the same screen unit with remote controller to lower the cost.

The wireless connection can be any wireless technique available and meets the traffic bandwidth requirement, such as Bluetooth, Wi-Fi, 3G, etc. Since the size of the screen is usually small, the bandwidth required for transmitting the picture/video streaming is not very high. If using wireless connection, an authentication process may be needed before the remote controller get connected with the capture device. The traffic between the remote controller and the capture device can be encrypted if the user wants high security level.

Claims

1. A method of using a device with screen to remotely a) display the content captured by a picture/video capture device, and b) to control the operation of the picture/video capture device through wired or wireless connection. The device with screen including: 1) a screen to display the picture/video captured and sent by the picture/video capture device; 2) buttons and/or lever to control the zoom, shutter and other operations of the capture device; 3) wireless transceiver and/or data terminal plus cable to receive picture/video from and send commands to the capture device through wireless or wired connection. The method comprising: i) the device with screen connects to a picture/video capture device wireless or wired (authentication process may be incurred first to establish wireless connection); ii) the picture/video capture device sends the content it captured to the device with screen through the connection; iii) the device with screen display the picture/video received from the capture device to the user; iv) the user issue operations according to the display; v) the device with screen send commands to the capture device according to the user's operation; vi) the capture device acts according to the commands received and sends result back to the device with screen.
2. The method of claim 1 wherein the device with screen is a remote controller with screen comes with the capture device. The remote controller has a display screen such as LCD screen.
3. The method of claim 2 wherein the remote control shares the same display unit with the camera/camcorder to lower cost
4. The method of claim 1 wherein the device with screen is a hand-phone.
5. The method of claim 1 wherein the device with screen is a PDA.
6. The method of claim 1 wherein the device with screen is a laptop.
7. The method of claim 1 wherein the device with screen is any device which meets the definition in claim 1.
8. The method of claim 1 wherein the picture/video capture device is a camera.
9. The method of claim 1 wherein the picture/video capture device is a camcorder.
10. The method of claim 1 wherein the picture/video capture device is any device which meets the definition in claim 1.