Embodiments of the present invention are also compatible with legacy wired media content source devices.

In accordance with another aspect of the present invention, the wireless media content and control module can be wirelessly "paired" with one or more target media content presentation devices that share the same wireless communication technology and protocol, such as PurePath™. Where the one or more target media content presentation devices include a surround sound system that includes multiple speakers, the use of wireless technology dispenses with the need for complex wiring schemes, setup and configuration.

In accordance with yet another aspect of the present invention, the wireless media content and control module can act as a master media content source device controller that can control the volume and presentation of media content, even where the media content source devices lack the ability to control the presentation of the media content themselves.

Having thus described several aspects of at least one embodiment of this invention, it is to be appreciated various alterations, modifications, and improvements will readily occur to those skilled in the art. Such alterations, modifications, and improvements are intended to be part of this disclosure, and are intended to be within the scope of the invention. Accordingly, the foregoing description and drawings are by way of example only.

~~What is claimed is:~~

CLAIMS

1. An intermediary wireless device comprising:

a first wireless I/O interface configured to communicate with a media content source device using a first wireless protocol;

a second wireless I/O interface configured to communicate with at least one media presentation device using a second wireless protocol; and

control circuitry coupled to the first wireless I/O interface and to the second wireless I/O interface, and configured to receive media data from the first wireless I/O interface, modify control information associated with the media data, and provide the media data with the modified control information to the at least one media presentation device through the second wireless I/O interface.

2. The intermediary wireless device of claim 1, wherein the control information includes a volume level at which the media data is audibly presented.

3. The intermediary wireless device of claim 1, wherein the control information is received from at least one of a wireless remote control, the media content source device, and the at least one media presentation device.

4. The intermediary wireless device of claim 3, wherein the at least one media presentation device is an audio system that includes a plurality of speakers, and wherein one of the plurality of speakers wirelessly communicates the control information to at least one other speaker of the plurality of speakers.

5. The intermediary wireless device of claim 1, wherein the media source device is a first media source device, and wherein the first wireless I/O interface is further configured to communicate with a second media source device, distinct from the first media source device using a third wireless protocol.

6. The intermediary wireless device of claim 5, wherein the first wireless protocol is different than the third wireless protocol.

7. The intermediary wireless device of claim 6, wherein the first wireless protocol is a UPnP compatible protocol and the third wireless protocol is a DLNA compatible protocol.

8. The intermediary wireless device of claim 1, wherein the first wireless protocol is one of an AIRPLAY compatible protocol, a UPnP compatible protocol, and a DLNA compatible protocol, and wherein the second protocol is a PurePath compatible protocol.

9. The intermediary wireless device of claim 1, wherein the intermediary wireless device is disposed in a housing configured to releasably attach to the at least one media presentation device.

10. The intermediary wireless device of claim 9, wherein at least one of the housing of the intermediary wireless device and a housing of the at least one media presentation device includes a plurality of attachment mechanisms configured to releasably attach the intermediary wireless device to the at least one media presentation device in only a single orientation.

11. The intermediary wireless device of claim 1, where the media content source device is a first media content source device, and wherein the intermediary wireless device further comprises:

a wired connection port configured to receive media content from a second media content source device distinct from the first media content source device over a wired connection.

12. The intermediary wireless device of any of claims 1-11, wherein the first wireless I/O interface is configured to select a first communication frequency channel for operation and to communicate selection of the first communication frequency channel to the control circuitry; and

wherein the control circuitry is configured to instruct the second wireless I/O interface to select, from a plurality of communication frequency channels available to the

second wireless I/O interface for operation, a second communication frequency channel that does not correspond in frequency to the first communication frequency channel.

13. The intermediary wireless device of claim 12, wherein the control circuitry is further configured to detect when the first communication frequency channel selected by the first wireless I/O interface changes, and to instruct the second wireless I/O interface to select, from the plurality of communication frequency channels available to the second wireless I/O interface for operation, a third communication frequency channel that does not correspond in frequency to a frequency of the changed first communication frequency channel.

14. A method of communicating media content from a media content source device to at least one media presentation device, comprising:

wirelessly receiving the media content from the media content source device using a first wireless communication protocol;

storing control information associated with the media content; and

wirelessly transmitting the media content and the control information associated with the media content to the at least one media presentation device using a second wireless protocol that is different that the first wireless protocol.

15. The method of claim 14, further comprising:

receiving the control information from a device that is other than the media content source and the at least one presentation device.

16. The method of claim 15, further comprising:

communicating the control information to at least one other wireless device that is distinct from the media content source, the at least one media presentation device, and the device that is other than the media content source and the at least one presentation device.

17. The method of claim 14, wherein the at least one media presentation device is an audio presentation device that includes a plurality of speakers, and wherein the control

information controls at least one of a volume level, a tone, and a balance of the plurality of speakers.

18. The method of claim 14, further comprising:

selecting a first communication frequency channel for the first wireless communication protocol;

determining interfering frequency channels that would interfere with the first communication frequency channel; and

selecting, from among a plurality of communication frequency channels available for use by the second wireless protocol, a second communication frequency channel that does not include any one of the interfering frequency channels.

19. The method of any of claims 14-18, wherein wirelessly receiving the media content includes wirelessly receiving the media content over a first wireless I/O interface, and wherein wireless transmitting the media content and the control information associated with the media content includes wirelessly transmitting the media content and the control information associated with the media content over a second wireless I/O interface that is distinct from the first wireless I/O interface.

CLAIMS

1. An intermediary wireless device comprising:

a first wireless I/O interface configured to wirelessly communicate with a media content source device using a first wireless protocol;

a second wireless I/O interface configured to wirelessly communicate with a plurality of media presentation devices using a second wireless protocol that is different than the first wireless protocol;

control circuitry coupled to the first wireless I/O interface and to the second wireless I/O interface, and configured to:

receive media data and associated control information from the media content source device via the first wireless I/O interface,

transmit the media data and the associated control information via the second wireless I/O interface to a plurality of media presentation devices to present the media data according to the associated control information;

receive from one of the plurality of media presentation devices a control signal to change the control information;

modify the control information associated with the media data according to the control signal,

transmit the modified control information to the plurality of media presentation devices via the second wireless I/O interface to present the media data according to the modified control information, and

transmit the modified control information to the media content source device via the first wireless I/O interface.

2. The intermediary wireless device of claim 1, wherein the modified control information includes a volume level at which the media data is audibly presented.

3. The intermediary wireless device of claim 1, wherein the one media source device is a first media content source device, and wherein the first wireless I/O interface is further configured to wirelessly communicate with a second media content source device, distinct from the first media content source device, using a third wireless protocol that is different than the first wireless protocol.

4. The intermediary wireless device of claim 1, wherein the first wireless protocol is a UPnP compatible protocol and the second wireless protocol is a proprietary wireless protocol.

5. The intermediary wireless device of claim 4, wherein the second protocol is a PurePath compatible protocol.

6. The intermediary wireless device of claim 1, wherein at least one media presentation device has an external surface, and the intermediary wireless device is disposed in a housing having an

external surface, wherein the external surface of the housing configured to releasably attach to the external surface of the at least one media presentation device.

7. The intermediary wireless device of claim 6, wherein the external surface of the housing of the intermediary wireless device includes a plurality of attachment mechanisms configured to releasably attach the intermediary wireless device to the external surface of at least one media presentation device in only a single orientation.

8. The intermediary wireless device of claim 1, wherein the intermediary wireless device further comprises:

a wired connection port configured to receive media content over a wired connection.

9. A method of communicating media content from a media content source device to a plurality of media presentation devices, comprising:

wirelessly receiving, in an intermediary wireless device that is physically distinct from the at least one media content source device and the plurality of media presentation devices, the media content and associated control information received from the media content source device using a first wireless communication protocol;

transmitting from the intermediary device, using a second wireless protocol that is different than the first wireless protocol, the media data and the associated control information to a plurality of media presentation devices to present the media data according to the associated control information;

receiving in the intermediary device from one of the plurality of media presentation devices using the second wireless protocol, a control signal to change the control information;

modifying the control information associated with the media content in the intermediary wireless device according to the control signal and storing the modified control information in the intermediary wireless device;

wirelessly transmitting the media content and the modified control information associated with the media content from the intermediary wireless device to the plurality of media presentation devices using the second wireless protocol to present the media data according to the modified control information; and

wirelessly transmitting the modified control information from the intermediary wireless device to the media content source device using the first wireless communication protocol.

10. The method of claim 9, wherein the plurality of media presentation devices comprises a plurality of speakers, and wherein the modified control information controls at least one of a volume level, a tone, and a balance of the plurality of speakers.

11. The method of claim 9, further comprising wirelessly transmitting the modified control information from the intermediary wireless device to each of a plurality of media content source devices.

12. The method of claim 9, further comprising:

wirelessly receiving, in the intermediary wireless device, an acknowledgement of receipt of the modified control information from the at least one media presentation device; and

wirelessly transmitting the modified control information from the intermediary wireless device to each of a plurality of media content source devices.

13. The method of claim 9, wherein the media content includes audio media content and video media content, the method further comprising demultiplexing, in the intermediary wireless device, the audio media content from the video media content prior to wirelessly transmitting the media content and the modified control information from the wireless intermediary device to the at least one media presentation device.

14. The intermediary wireless device of claim 1, wherein the control circuitry is further configured to provide the modified control information to each of a plurality of media content source devices via the first wireless I/O interface.

15. The intermediary wireless device of claim 1, further comprising an audio/video multiplexer coupled to the first wireless I/O interface and the second wireless I/O interface, the audio/video multiplexer being configured to receive the media data, and demultiplex audio media data from video media data.