

Claims

1. A profile management method comprising:

receiving client data provided by a computing system, the client data comprising device data being descriptive of an audio device in signal communication with the computing system, the device data being further descriptive of the user interactions identifiable by the audio device;

associating one of a plurality of device profiles with the device data, each of the plurality of device profiles having configuration data associated therewith; and

providing the configuration data associated with the one of the plurality of device profiles to the computing system for configuring operation of the audio device with the computing system in response to at least a portion of the user interactions identifiable by the audio device.

2. The profile management method as in claim 1, wherein the audio device being one of a computer peripheral audio device coupled with an interface formed integral with the computing system.

3. The profile management method as in claim 1, wherein the audio device is one of a HRTF-based headset, non-HRTF-based headset or non-HRTF-based earphones.

4. The profile management method as in claim 1, wherein the client data further comprising identifier data being indicative of the user interactions being identifiable by the audio device; and wherein associating one of a plurality of device profiles with the device data comprises:

associating one of a plurality of user identifiers with the identifier data, each of the plurality of identifier data having at least one of the plurality of device profiles associated therewith; and

associating the device data with one of the plurality of device profiles associated with the one of the plurality of user identifiers associated with the identifier data.

5. The profile management method as in claim 4, further comprising:
receiving authentication data from the computing system; and
authenticating the identifier data using the authentication data,
wherein the configuration data is provided to the computing system in
response to the identifier data being authenticated.
6. The profile management method as in claim 1, wherein the configuration data
substantially defining interactions between the audio device and at least one of an
application and an operating platform operating on the computing system.
7. The profile management method as in claim 1, providing the configuration data
associated with the one of the plurality of device profiles to the computing system
comprising:
processing the configuration data for compliance with an operating platform;
the client data comprising a platform data describing the operating platform.
8. A profile management system comprising:
a controller module for receiving client data provided by a computing system,
the client data comprising device data being descriptive of an audio device in signal
communication with the computing system, the device data being further descriptive
of the user interactions identifiable by the audio device;
a storage module having stored thereon a plurality of device profiles, each of
the plurality of device profiles having device configuration data associated therewith;
a processor module for associating one of a plurality of device profiles stored
on the storage module with the device data,
wherein the configuration data associated with the one of the plurality of
device profiles is providable by the controller module to the computing system for
configuring operation of the audio device with the computing system in response to at
least a portion of the user interactions identifiable by the audio device.

9. The profile management system as in claim 8, wherein the audio device being a computer peripheral audio device coupled with an interface formed integral with the computing device.
- 5 10. The profile management system of claim 8, wherein the computer peripheral audio device is one of a HRTF-based headset, non-HRTF-based headset or non-HRTF-based earphones.
- 10 11. The profile management system of claim 8, wherein the user interactions identifiable by the HRTF-based headset device comprise:
- at least one of the connection of the HRTF-based headset device's jack plug to the computing system's jack socket;
 - wireless coupling of the HRTF-based headset device with the computing system;
 - 15 detection of sound input through an audio input interface of the HRTF-based headset device;
 - volume adjustment via volume controls coupled to the HRTF-based device;
 - sound channel adjustment and selection via sound channel adjustment/selection controls coupled to the HRTF-based headset device;
 - 20 volume adjustment of each sound channel via sound channel volume controls attached to the HRTF-based device;
 - selection of at least one of a plurality of virtualized ear pinnae configurations from a database for calibration of the HRTF-based headset device; and
 - inputting of user settings through an interface for calibration of the HRTF-based headset device.
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12. The profile management system as in claim 8, the client data further comprising identifier data being indicative of the user interactions being identifiable by the audio device, and wherein the processor module further for associating one of a plurality of user identifiers with the identifier data, each of the plurality of identifier data having
- 30 at least one of the plurality of device profiles associated therewith; and associating the

device data with one of the plurality of device profiles associated with the one of the plurality of user identifiers associated with the identifier data.

13. The profile management system as in claim 12, further comprising:

5 an authentication module for receiving authentication data from the computing system; and authenticating the identifier data using the authentication data, wherein the configuration data is provided to the computing system in response to the identifier data being authenticated.

10 14. The profile management system as in claim 8, the configuration data substantially defining interactions between the audio device and at least one of an application and an operating platform operating on the computing system.

15 15. The profile management system as in claim 8, the processor module further for processing the configuration data for compliance with an operating platform, the client data comprising a platform data describing the operating platform.

16. A machine readable medium having stored therein a plurality of programming instructions, which when executed, the instructions cause the machine to:

20 receive client data provided by a computing system, the client data comprising device data being descriptive of an audio device in signal communication with the computing system, the device data being further descriptive of the user interactions identifiable by the audio device;

25 associate one of a plurality of device profiles with the device data, each of the plurality of device profiles having configuration data associated therewith; and

30 provide the configuration data associated with the one of the plurality of device profiles to the computing system for configuring operation of the audio device with the computing system in response to at least a portion of the user interactions identifiable by the audio device.

17. The machine readable medium as in claim 16, the audio device being one of a computer peripheral audio device coupled with and an interface formed integral with the computing device.

5 18. The machine readable medium as in claim 16, wherein the client data further comprising identifier data being indicative of the user interactions being identifiable by the audio device, and wherein the plurality of programming instructions, when executed, cause the machine to associate one of a plurality of device profiles with the device data comprising:

10 associating one of a plurality of user identifiers with the identifier data, each of the plurality of identifier data having at least one of the plurality of device profiles associated therewith; and

15 associating the device data with one of the plurality of device profiles associated with the one of the plurality of user identifiers associated with the identifier data.

19. The machine readable medium as in claim 18, further comprising:

receiving authentication data from the computing system; and

20 authenticating the identifier data using the authentication data,

25 wherein the configuration data is provided to the computing system in response to the identifier data being authenticated.

20. The machine readable medium as in claim 16, the configuration data substantially defining interactions between the audio device and at least one of an application and an operating platform operating on the computing system.

21. The machine readable medium as in claim 16, wherein the plurality of programming instructions, when executed, cause the machine to:

30 process the configuration data for compliance with an operating platform, the client data comprising a platform data describing the operating platform.

22. An audio device comprising:

a storage module for storing a control function, the control function being associated with head-related structure of a user;

a processor for receiving audio signals being descriptive of audio sounds and spatial positions corresponding with the audio sounds, the processor for processing the received audio signals into control signals based on the control function; and

a transducer for transducing control signals into the audio sounds for delivery to the user when the audio device is in use thereby, the spatial positions of the audio sounds being processed by the processor to substantially conform with the head-related structure of the user based on the control function.

23. The audio device of claim 22, wherein the audio device further comprises an audio input interface.

24. The audio device of claim 22, wherein the storage module is a built-in flash memory or a removable memory disk.

25. The audio device of claim 24, wherein the storage module stores a plurality of programming instructions.

26. The audio device of claim 25, wherein the processor executes the plurality of programming instructions to cause communication of signals between the audio device, a computing system and a computing cloud, both of which the audio device may be coupled to, during the running of various functions as programmed in the programming instructions.

27. The audio device of claim 22, wherein the audio device is a HRTF-based headset device.

28. The audio device of claim 22, wherein audio output transmitted by the transducer of the audio device comprises audio output based on the user settings of the device.

29. The device of claim 22, wherein the processor processes the source material of the audio output transmitted by the transducer, based on the user settings of the audio device.

5 30. The audio device of claim 22, wherein the user settings further comprise at least one of:

the connection of the HRTF-based headset device's jack plug to the computing system's jack socket;

10 wireless coupling of the HRTF-based headset device with the computing system; detection of sound input through a transducer of the HRTF-base device;

volume adjustment via volume controls coupled to the HRTF-based device;

sound channel adjustment and selection via sound channel adjustment/selection controls coupled to the HRTF-based headset device;

15 volume adjustment of each sound channel via sound channel volume controls attached to the HRTF-based headset device;

selection of at least one of a plurality of virtualized ear pinnae configurations from a database for calibration of the HRTF-based headset device; and

20 inputting of user settings through an interface for calibration of the HRTF-based headset device.

31. The audio device of claim 22, wherein the individual physical configurations in relation to the user's ears comprise at least one of a shape, size and pinnae of each of the user's ears.

25 32. The audio device of claim 30, wherein the plurality of virtualized ear pinnae configurations are indicative of at least a majority of the human population.

33. The audio device of claim 30, wherein the database of virtualized ear pinnae configurations is stored on a storage module within at least one of the HRTF-based headset device, a computing system coupled to the HRTF-based headset device and
30 on a computing cloud which is coupled to the HRTF-based headset device.

Claims

1. A profile management method comprising:

receiving client data provided by a computing system, the client data comprising device data being descriptive of an audio device in signal communication with the computing system, the device data being further descriptive of the user interactions identifiable by the audio device;

associating one of a plurality of device profiles with the device data, each of the plurality of device profiles having configuration data associated therewith; and

providing the configuration data associated with the one of the plurality of device profiles to the computing system for configuring operation of the audio device with the computing system in response to at least a portion of the user interactions identifiable by the audio device;

wherein the audio device being one of a computer peripheral audio device coupled with an interface formed integral with the computing system.

2. A profile management method comprising:

receiving client data provided by a computing system, the client data comprising device data being descriptive of an audio device in signal communication with the computing system, the device data being further descriptive of the user interactions identifiable by the audio device;

associating one of a plurality of device profiles with the device data, each of the plurality of device profiles having configuration data associated therewith; and

providing the configuration data associated with the one of the plurality of device profiles to the computing system for configuring operation of the audio device with the computing system in response to at least a portion of the user interactions identifiable by the audio device;

wherein the audio device is one of a HRTF-based headset, non-HRTF-based headset or non-HRTF-based earphones.

3. A profile management method comprising:

receiving client data provided by a computing system, the client data comprising device data being descriptive of an audio device in signal communication

with the computing system, the device data being further descriptive of the user interactions identifiable by the audio device;

associating one of a plurality of device profiles with the device data, each of the plurality of device profiles having configuration data associated therewith; and

5 providing the configuration data associated with the one of the plurality of device profiles to the computing system for configuring operation of the audio device with the computing system in response to at least a portion of the user interactions identifiable by the audio device;

10 wherein the client data further comprising identifier data being indicative of the user interactions being identifiable by the audio device; and wherein associating one of a plurality of device profiles with the device data comprises:

associating one of a plurality of user identifiers with the identifier data, each of the plurality of identifier data having at least one of the plurality of device profiles associated therewith; and

15 associating the device data with one of the plurality of device profiles associated with the one of the plurality of user identifiers associated with the identifier data.

4. The profile management method as in claim 3, further comprising:

20 receiving authentication data from the computing system; and
authenticating the identifier data using the authentication data,

wherein the configuration data is provided to the computing system in response to the identifier data being authenticated.

25 5. A profile management method comprising:

receiving client data provided by a computing system, the client data comprising device data being descriptive of an audio device in signal communication with the computing system, the device data being further descriptive of the user interactions identifiable by the audio device;

30 associating one of a plurality of device profiles with the device data, each of the plurality of device profiles having configuration data associated therewith; and

providing the configuration data associated with the one of the plurality of device profiles to the computing system for configuring operation of the audio device with the computing system in response to at least a portion of the user interactions identifiable by the audio device;

5 wherein the configuration data substantially defining interactions between the audio device and at least one of an application and an operating platform operating on the computing system.

6. A profile management method comprising:

10 receiving client data provided by a computing system, the client data comprising device data being descriptive of an audio device in signal communication with the computing system, the device data being further descriptive of the user interactions identifiable by the audio device;

15 associating one of a plurality of device profiles with the device data, each of the plurality of device profiles having configuration data associated therewith; and

 providing the configuration data associated with the one of the plurality of device profiles to the computing system for configuring operation of the audio device with the computing system in response to at least a portion of the user interactions identifiable by the audio device;

20 providing the configuration data associated with the one of the plurality of device profiles to the computing system comprising:

 processing the configuration data for compliance with an operating platform, the client data comprising a platform data describing the operating platform.

25 7. A profile management system comprising:

 a controller module for receiving client data provided by a computing system, the client data comprising device data being descriptive of an audio device in signal communication with the computing system, the device data being further descriptive of the user interactions identifiable by the audio device;

30 a storage module having stored thereon a plurality of device profiles, each of the plurality of device profiles having device configuration data associated therewith;

a processor module for associating one of a plurality of device profiles stored on the storage module with the device data,

wherein the configuration data associated with the one of the plurality of device profiles is providable by the controller module to the computing system for configuring operation of the audio device with the computing system in response to at least a portion of the user interactions identifiable by the audio device;

wherein the audio device being a computer peripheral audio device coupled with an interface formed integral with the computing device..

8. A profile management system comprising:

a controller module for receiving client data provided by a computing system, the client data comprising device data being descriptive of an audio device in signal communication with the computing system, the device data being further descriptive of the user interactions identifiable by the audio device;

a storage module having stored thereon a plurality of device profiles, each of the plurality of device profiles having device configuration data associated therewith;

a processor module for associating one of a plurality of device profiles stored on the storage module with the device data,

wherein the configuration data associated with the one of the plurality of device profiles is providable by the controller module to the computing system for configuring operation of the audio device with the computing system in response to at least a portion of the user interactions identifiable by the audio device;

wherein the computer peripheral audio device is one of a HRTF-based headset, non-HRTF-based headset or non-HRTF-based earphones.

9. A profile management system comprising:

a controller module for receiving client data provided by a computing system, the client data comprising device data being descriptive of an audio device in signal communication with the computing system, the device data being further descriptive of the user interactions identifiable by the audio device;

a storage module having stored thereon a plurality of device profiles, each of the plurality of device profiles having device configuration data associated therewith;

a processor module for associating one of a plurality of device profiles stored on the storage module with the device data,

wherein the configuration data associated with the one of the plurality of device profiles is providable by the controller module to the computing system for configuring operation of the audio device with the computing system in response to at least a portion of the user interactions identifiable by the audio device;

wherein the user interactions identifiable by the HRTF-based headset device comprise:

at least one of the connection of the HRTF-based headset device's jack plug to the computing system's jack socket;

wireless coupling of the HRTF-based headset device with the computing system;

detection of sound input through an audio input interface of the HRTF-based headset device;

volume adjustment via volume controls coupled to the HRTF-based headset device;

sound channel adjustment and selection via sound channel adjustment/selection controls coupled to the HRTF-based headset device;

volume adjustment of each sound channel via sound channel volume controls attached to the HRTF-based headset device;

selection of at least one of a plurality of virtualized ear pinnae configurations from a database for calibration of the HRTF-based headset device; and

inputting of user settings through an interface for calibration of the HRTF-based headset device.

10. A profile management system comprising:

a controller module for receiving client data provided by a computing system, the client data comprising device data being descriptive of an audio device in signal communication with the computing system, the device data being further descriptive of the user interactions identifiable by the audio device;

a storage module having stored thereon a plurality of device profiles, each of the plurality of device profiles having device configuration data associated therewith;

a processor module for associating one of a plurality of device profiles stored on the storage module with the device data,

wherein the configuration data associated with the one of the plurality of device profiles is providable by the controller module to the computing system for configuring operation of the audio device with the computing system in response to at least a portion of the user interactions identifiable by the audio device;

the client data further comprising identifier data being indicative of the user interactions being identifiable by the audio device, and wherein the processor module further for associating one of a plurality of user identifiers with the identifier data, each of the plurality of identifier data having at least one of the plurality of device profiles associated therewith; and associating the device data with one of the plurality of device profiles associated with the one of the plurality of user identifiers associated with the identifier data.

11. The profile management system as in claim 10, further comprising:

an authentication module for receiving authentication data from the computing system; and authenticating the identifier data using the authentication data,

wherein the configuration data is provided to the computing system in response to the identifier data being authenticated.

12. A profile management system comprising:

a controller module for receiving client data provided by a computing system, the client data comprising device data being descriptive of an audio device in signal communication with the computing system, the device data being further descriptive of the user interactions identifiable by the audio device;

a storage module having stored thereon a plurality of device profiles, each of the plurality of device profiles having device configuration data associated therewith;

a processor module for associating one of a plurality of device profiles stored on the storage module with the device data,

wherein the configuration data associated with the one of the plurality of device profiles is providable by the controller module to the computing system for

configuring operation of the audio device with the computing system in response to at least a portion of the user interactions identifiable by the audio device;

the configuration data substantially defining interactions between the audio device and at least one of an application and an operating platform operating on the computing system.

13. A profile management system comprising:

a controller module for receiving client data provided by a computing system, the client data comprising device data being descriptive of an audio device in signal communication with the computing system, the device data being further descriptive of the user interactions identifiable by the audio device;

a storage module having stored thereon a plurality of device profiles, each of the plurality of device profiles having device configuration data associated therewith;

a processor module for associating one of a plurality of device profiles stored on the storage module with the device data,

wherein the configuration data associated with the one of the plurality of device profiles is providable by the controller module to the computing system for configuring operation of the audio device with the computing system in response to at least a portion of the user interactions identifiable by the audio device;

the processor module further for processing the configuration data for compliance with an operating platform, the client data comprising a platform data describing the operating platform.

14. A machine readable medium having stored therein a plurality of programming instructions, which when executed, the instructions cause the machine to:

receive client data provided by a computing system, the client data comprising device data being descriptive of an audio device in signal communication with the computing system, the device data being further descriptive of the user interactions identifiable by the audio device;

associate one of a plurality of device profiles with the device data, each of the plurality of device profiles having configuration data associated therewith; and

provide the configuration data associated with the one of the plurality of device profiles to the computing system for configuring operation of the audio device with the computing system in response to at least a portion of the user interactions identifiable by the audio device;

5 the audio device being one of a computer peripheral audio device coupled with and an interface formed integral with the computing device..

15. A machine readable medium having stored therein a plurality of programming instructions, which when executed, the instructions cause the machine to:

10 receive client data provided by a computing system, the client data comprising device data being descriptive of an audio device in signal communication with the computing system, the device data being further descriptive of the user interactions identifiable by the audio device;

15 associate one of a plurality of device profiles with the device data, each of the plurality of device profiles having configuration data associated therewith; and

 provide the configuration data associated with the one of the plurality of device profiles to the computing system for configuring operation of the audio device with the computing system in response to at least a portion of the user interactions identifiable by the audio device;

20 wherein the client data further comprising identifier data being indicative of the user interactions being identifiable by the audio device, and wherein the plurality of programming instructions, when executed, cause the machine to associate one of a plurality of device profiles with the device data comprising:

25 associating one of a plurality of user identifiers with the identifier data, each of the plurality of identifier data having at least one of the plurality of device profiles associated therewith; and

 associating the device data with one of the plurality of device profiles associated with the one of the plurality of user identifiers associated with the identifier data.

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16. The machine readable medium as in claim 15, further comprising:

 receiving authentication data from the computing system; and

authenticating the identifier data using the authentication data,
wherein the configuration data is provided to the computing system in
response to the identifier data being authenticated.

- 5 17. A machine readable medium having stored therein a plurality of programming
instructions, which when executed, the instructions cause the machine to:

receive client data provided by a computing system, the client data comprising
device data being descriptive of an audio device in signal communication with the
computing system, the device data being further descriptive of the user interactions
10 identifiable by the audio device;

associate one of a plurality of device profiles with the device data, each of the
plurality of device profiles having configuration data associated therewith; and

provide the configuration data associated with the one of the plurality of
device profiles to the computing system for configuring operation of the audio device
15 with the computing system in response to at least a portion of the user interactions
identifiable by the audio device;

the configuration data substantially defining interactions between the audio
device and at least one of an application and an operating platform operating on the
computing system.

- 20 18. A machine readable medium having stored therein a plurality of programming
instructions, which when executed, the instructions cause the machine to:

receive client data provided by a computing system, the client data comprising
device data being descriptive of an audio device in signal communication with the
25 computing system, the device data being further descriptive of the user interactions
identifiable by the audio device;

associate one of a plurality of device profiles with the device data, each of the
plurality of device profiles having configuration data associated therewith; and

provide the configuration data associated with the one of the plurality of
30 device profiles to the computing system for configuring operation of the audio device
with the computing system in response to at least a portion of the user interactions
identifiable by the audio device;

wherein the plurality of programming instructions, when executed, cause the machine to:

process the configuration data for compliance with an operating platform, the client data comprising a platform data describing the operating platform.

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19. An audio device comprising:

a storage module for storing a control function, the control function being associated with head-related structure of a user;

10 a processor for receiving audio signals being descriptive of audio sounds and spatial positions corresponding with the audio sounds, the processor for processing the received audio signals into control signals based on the control function; and

15 a transducer for transducing control signals into the audio sounds for delivery to the user when the audio device is in use thereby, the spatial positions of the audio sounds being processed by the processor to substantially conform with the head-related structure of the user based on the control function.

20. The audio device of claim 19, wherein the audio device further comprises an audio input interface.

20 21. The audio device of claim 19, wherein the storage module is a built-in flash memory or a removable memory disk.

22. The audio device of claim 21, wherein the storage module stores a plurality of programming instructions.

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23. The audio device of claim 22, wherein the processor executes the plurality of programming instructions to cause communication of signals between the audio device, a computing system and a computing cloud, both of which the audio device may be coupled to, during the running of various functions as programmed in the programming instructions.

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24. The audio device of claim 19, wherein the audio device is a HRTF-based headset device.

25. The audio device of claim 19, wherein audio output transmitted by the transducer of the audio device comprises audio output based on the user settings of the device.

26. The device of claim 19, wherein the processor processes the source material of the audio output transmitted by the transducer, based on the user settings of the audio device.

27. The audio device of claim 19, wherein the user settings further comprise at least one of:
the connection of the HRTF-based headset device's jack plug to the computing system's jack socket;

10 wireless coupling of the HRTF-based headset device with the computing system;
detection of sound input through a transducer of the HRTF-base device;

volume adjustment via volume controls coupled to the HRTF-based headset device;

sound channel adjustment and selection via sound channel adjustment/selection controls coupled to the HRTF-based headset device;

15 volume adjustment of each sound channel via sound channel volume controls attached to the HRTF-based headset device;

selection of at least one of a plurality of virtualized ear pinnae configurations from a database for calibration of the HRTF-based headset device; and

inputting of user settings through an interface for calibration of the HRTF-based headset device.

28. The audio device of claim 19, wherein the individual physical configurations in relation to the user's ears comprise at least one of a shape, size and pinnae of each of the user's ears.

25 29. The audio device of claim 27, wherein the plurality of virtualized ear pinnae configurations are indicative of at least a majority of the human population.

30. The audio device of claim 27, wherein the database of virtualized ear pinnae configurations is stored on a storage module within at least one of the HRTF-based headset device, a computing system coupled to the HRTF-based headset device and on a computing cloud which is coupled to the HRTF-based headset device.