

WHAT IS CLAIMED IS:**CLAIMS**

1.——_A device configured to process one or more audio streams, the device comprising:

——_a memory configured to store the one or more audio streams; and

_one or more processors coupled to the memory, and configured to:

_receive unrestricted audio streams and restricted audio streams of the one or more audio streams based on privacy restrictions associated with a password, wherein the one or more audio streams are from audio elements represented in an acoustic environment that comprises one or more sub-acoustic spaces, each of the one or more audio streams representative of a respective soundfield; ~~and receive data indicating restricted playback of the restricted audio streams based on the privacy restrictions associated with the password; restrict playback of the respective soundfields of a first subset of the restricted audio streams based on the data indicating the restricted playback; generate the respective soundfields of the unrestricted audio streams; and generate the respective soundfields of a second subset of the restricted audio streams based on the data indicating that playback is not restricted.~~

~~generate the respective soundfields of the unrestricted audio streams.~~

2.——_The device of claim 1, further comprising a modem coupled to the one or more processors, wherein the one or more processors are further configured to:—

——_send the password to a host device via the modem; and

_obtain, from the host device via the modem, only the unrestricted audio streams of the one or more audio streams based on privacy restrictions associated with the password.

3.——_The device of claim 2, wherein the modem is configured to:

transmit a data packet that includes a representation of the password over a wireless link; and

receive a different data packet that includes a representation of only the unrestricted audio streams of the one or more audio streams based on privacy restrictions associated with the password.

4.——_The device of claim 1, further comprising a modem coupled to the one or more processors, wherein the one or more processors are further configured to:— send the password to a host device via the modem; and receive data, from the host device and in response to sending the password, indicating the restricted playback of the restricted audio streams based on the privacy restrictions associated with the password.

——_~~send the password to a host device via the modem;~~

~~obtain, from the host device via the modem, unrestricted audio streams of the one or more audio streams, and restricted audio streams of the one or more audio streams;~~

~~receive data indicating restricted playback of the restricted audio streams based on privacy restrictions associated with the password; and~~

~~restrict playback of the respective soundfields of the restricted audio streams based on the data indicating the restricted playback.~~

5. —The device of claim 4, wherein the modem is configured to:

transmit a data packet that includes a representation of the password over a wireless link; and

receive a different data packet that includes a representation of the unrestricted audio streams and the restricted audio streams.

6. —The device of claim 4, wherein to restrict playback of the respective soundfields of the restricted audio streams based on the data indicating the restricted playback, the one or more processors are further configured to:

mask, toggle, or null the restricted audio streams.

7. —The device of claim 4, wherein to restrict playback of the respective soundfields of the restricted audio streams based on the data indicating the restricted playback, the one or more processors are further configured to: apply an acoustic occluder to the restricted audio streams.

~~apply an acoustic occluder to the restricted audio streams.~~

8. —The device of claim 1, further comprising a modem coupled to the one or more processors, wherein the one or more processors are further configured to:—

~~obtain, from a host device via the modem, unrestricted audio streams of the one or more audio streams, and restricted audio streams of the one or more audio streams;~~

~~receive data indicating restricted playback of the restricted audio streams;~~

associate the password with the data indicating the restricted playback; and

restrict playback of the respective soundfields of the restricted audio streams based on the data indicating the restricted playback associated with the password.

9. —The device of claim 8, wherein the modem is configured to:

receive one or more data packets that include a representation of the unrestricted audio streams of the one or more audio streams and the restricted audio streams of the one or more audio streams.

10. The device of claim 8, wherein to restrict playback of the respective soundfields of the restricted audio streams based on the data indicating the restricted playback associated with the password, the one or more processors are further configured to: mask, toggle, or null the restricted audio streams.

10.—~~11.~~ The device of claim 8, wherein to restrict playback of the respective soundfields of the restricted audio streams based on the data indicating the restricted playback associated with the password, the one or more processors are further configured to: apply an acoustic occluder to the restricted audio streams.

~~mask, toggle, or null the restricted audio streams.~~

11.—~~The device of claim 8, wherein to restrict playback of the respective soundfields of the restricted audio streams based on the data indicating the restricted playback associated with the password, the one or more processors are further configured to:~~

~~apply an acoustic occluder to the restricted audio streams.~~

12.— The device of claim 1, wherein the password is a master password associated with unrestricted privacy restrictions, and wherein to receive the unrestricted audio streams of the one or more audio streams based on privacy restrictions associated with the password, the one or more processors are further configured to: receive each of the one or more audio streams.

~~receive each of the one or more audio streams.~~

13.—~~The device of claim 1, wherein the password is a permanent password associated with conditional privacy restrictions, and wherein to receive the unrestricted audio streams of the one or more audio streams based on privacy restrictions associated with the password, the one or more processors are further configured to:~~

~~receive the unrestricted audio streams of the one or more audio streams based on the conditional privacy restrictions associated with the permanent password, wherein the permanent password remains valid until a reset.~~

14.—~~The device of claim 13, wherein the conditional privacy restrictions are associated with one or more audio elements, with one or more clusters of audio elements, or with one or more respective sub-acoustic spaces of the one or more sub-acoustic spaces.~~

15.—~~The device of claim 1, wherein the password is a temporary password associated with conditional privacy restrictions, and wherein to receive the unrestricted audio streams of the one or more audio streams based on privacy restrictions associated with the password, the one or more processors are further configured to:~~

~~receive the unrestricted audio streams of the one or more audio streams based on the conditional privacy restrictions associated with the temporary password, wherein the temporary password remains valid for a fixed duration and expires after the fixed duration.~~

16.—~~The device of claim 15, wherein the conditional privacy restrictions are associated with one or more audio elements, with one or more clusters of audio elements, or with one or more respective sub-acoustic spaces of the one or more sub-acoustic spaces.~~

17.—_The device of claim 1, wherein the one or more processors are further configured to:
_receive the password from a host.

18.—_A method for processing one or more audio streams, the method comprising:
_receiving unrestricted audio streams and restricted audio streams of the one or more audio streams based on privacy restrictions associated with a password, wherein the one or more audio streams are from audio elements represented in an acoustic environment that comprises one or more sub-acoustic spaces, each of the one or more audio streams representative of a respective soundfield; and receiving data indicating restricted playback of the restricted audio streams based on the privacy restrictions associated with the password; restricting playback of the respective soundfields of a first subset of the restricted audio streams based on the data indicating the restricted playback; generating the respective soundfields of the unrestricted audio streams; and generating the respective soundfields of a second subset of the restricted audio streams based on the data indicating that playback is not restricted.
~~generating the respective soundfields of the unrestricted audio streams.~~

19.—_The method of claim 18, further comprising:——
——_sending the password to a host device; and
_receiving, from the host device, only the unrestricted audio streams of the one or more audio streams based on privacy restrictions associated with the password.

20.—_The method of claim 18, further comprising:——
——_sending the password to a host device;
and receiving data, from the host device, unrestricted audio streams of the one or more audio streams, and restricted audio streams of the one or more audio streams;
~~receiving data and in response to sending the password, indicating the restricted playback of the restricted audio streams based on the privacy restrictions associated with the password; and,~~
~~restricting playback of the respective soundfields of the restricted audio streams based on the data indicating the restricted playback.~~

21.—_The method of claim 20, wherein restricting playback of the respective soundfields of the restricted audio streams based on the data indicating the restricted playback comprises:
masking, toggling, or nulling the restricted audio streams.
~~masking, toggling, or nulling the restricted audio streams.~~

22.—_The method of claim 20, wherein restricting playback of the respective soundfields of the restricted audio streams based on the data indicating the restricted playback comprises:
applying an acoustic occluder to the restricted audio streams.
~~applying an acoustic occluder to the restricted audio streams.~~

23.—_The method of claim 18, further comprising:

~~receiving, from the host device, unrestricted audio streams of the one or more audio streams, and restricted audio streams of the one or more audio streams;~~

~~receiving data indicating restricted playback of the restricted audio streams;~~

~~_associating the password with the data indicating the restricted playback; and~~

~~_restricting playback of the respective soundfields of the restricted audio streams based on the data indicating the restricted playback associated with the password.~~

24.—_The method of claim 23, wherein restricting playback of the respective soundfields of the restricted audio streams based on the data indicating the restricted playback associated with the password comprises:

~~_toggling the restricted audio streams.~~

25.—_The method of claim 23, wherein restricting playback of the respective soundfields of the restricted audio streams based on the data indicating the restricted playback associated with the password comprises: applying an acoustic occluder to the restricted audio streams.

~~applying an acoustic occluder to the restricted audio streams.~~

26.—_The method of claim 18, wherein the password is a permanent password associated with conditional privacy restrictions, and wherein receiving the unrestricted audio streams of the one or more audio streams based on privacy restrictions associated with the password comprises:

~~_receiving the unrestricted audio streams of the one or more audio streams based on the conditional privacy restrictions associated with the permanent password, wherein the permanent password remains valid until a reset.~~

27.—_The method of claim 26, wherein the conditional privacy restrictions are associated with one or more audio elements, with one or more clusters of audio elements, or with one or more respective sub-acoustic spaces of the one or more sub-acoustic spaces.

28.—_The method of claim 18, wherein the password is a temporary password associated with conditional privacy restrictions, and wherein receiving the unrestricted audio streams of the one or more audio streams based on privacy restrictions associated with the password comprises:

~~_receiving the unrestricted audio streams of the one or more audio streams based on the conditional privacy restrictions associated with the temporary password, wherein the temporary password remains valid for a fixed duration and expires after the fixed duration.~~

29.—_The method of claim 28, wherein the conditional privacy restrictions are associated with one or more audio elements, with one or more clusters of audio elements, or with one or more respective sub-acoustic spaces of the one or more sub-acoustic spaces.

30.—_The method of claim 28, further comprising:

_receiving the password from a host.