

WHAT IS CLAIMED IS:

1. A device configured to play one or more of a plurality of audio streams comprising:
 - a memory configured to store timing information and the plurality of audio streams; and
 - one or more processors coupled to the memory, and configured to control access to at least one of the plurality of audio streams based on the timing information.
2. The device of claim 1, wherein the memory is further configured to store location information associated with coordinates of an acoustical space in which a corresponding one of the plurality of audio streams was captured or synthesized.
3. The device of claim 1, wherein the one or more processors are configured to control access to the at least one of the plurality of audio streams by selecting a subset of the plurality of audio streams, the subset of the plurality of audio streams excluding at least one of the plurality of audio streams.
4. The device of claim 3, wherein the excluded streams are associated with one or more privacy zones.
5. The device of claim 4, wherein the one or more processors are further configured to:
 - determine an authorization level for a user;
 - compare the authorization level for the user to an authorization level of the one or more privacy zones; and
 - select the subset of the plurality of audio streams based on the comparison.
6. The device of claim 3, wherein the one or more processors are further configured to:
 - obtain, from a user, an override request to add at least one excluded audio stream of the plurality of audio streams; and
 - based upon the override request, add the at least one excluded audio stream for a limited time period.

7. The device of claim 1, wherein the one or more processors are configured to control access to the at least one of the plurality of audio streams by not downloading or receiving at least one of the plurality of audio streams based on the timing information.
8. The device of claim 1, wherein the timing information comprises a start time of when at least one of the plurality of audio streams includes audio content.
9. The device of claim 8, wherein the one or more processors are configured to:
compare the start time to a current time; and
select, when the start time is equal to or greater than the current time, a subset of the plurality of audio streams.
10. The device of claim 1, wherein the timing information comprises a duration of at least one of the plurality of audio streams.
11. The device of claim 10, wherein the one or more processors are configured to:
compare the duration to a timer; and
select, when the duration is equal or greater than the timer, a subset of the plurality of audio streams.
12. The device of claim 1, wherein the one or more processors are configured to:
obtain from a user a request for one of a plurality of ambisonic soundfield types;
and
reproduce corresponding soundfields, based on the request for the one of a plurality of ambisonic soundfield types, and the plurality of audio streams or a subset of the plurality of audio streams,
wherein the plurality of ambisonic soundfield types comprises at least two of first order ambisonic soundfield (FOA), higher order ambisonic soundfield (HOA), and mixed order ambisonic soundfield (MOA).

13. The device of claim 1, wherein the timing information comprises a delay and wherein the one or more processors are further configured to:
- detect a trigger;
 - compare the delay to a timer; and
 - wait until the delay is equal to or greater than the timer to select a subset of the plurality of audio streams.
14. The device of claim 1, wherein the one or more processors are further configured to combine at least two of the plurality of audio streams by at least one of mixing or interpolation or another variant of soundfield manipulation.
15. The device of claim 1, wherein the one or more processors are further configured to change a gain of one or more of the plurality of audio streams.
16. The device of claim 1, further comprising a display device.
17. The device of claim 16, further comprising a microphone, wherein the one or more processors are further configured to receive a voice command from the microphone and control the display device based on the voice command.
18. The device of claim 1, further comprising one or more speakers.
19. The device of claim 1, wherein the device comprises an extended reality headset, and
- wherein an acoustical space comprises a scene represented by video data captured by a camera.
20. The device of claim 1, wherein the device comprises an extended reality headset, and wherein an acoustical space comprises a virtual world.
21. The device of claim 1, further comprising a head-mounted display configured to present an acoustical space.

22. The device of claim 1, wherein the device comprises one of a mobile handset or a vehicle.

23. The device of claim 1, further comprising a wireless transceiver, the wireless transceiver being coupled to the one or more processors and being configured to receive a wireless signal.

24. A method of playing one or more of a plurality of audio streams comprising:
storing, by a memory, timing information and the plurality of audio streams; and
controlling access to at least one of the plurality of audio streams based on the timing information.

25. The method of claim 24, further comprising storing location information associated with coordinates of an acoustical space in which a corresponding one of the plurality of audio streams was captured or synthesized.

26. The method of claim 24, wherein the controlling access to the at least one of the plurality of audio streams comprises selecting a subset of the plurality of audio streams, the subset of the plurality of audio streams excluding at least one of the plurality of audio streams.

27. The method of claim 26, wherein the excluded streams are associated with one or more privacy zones.

28. The method of claim 27, further comprising:
determining an authorization level for a user;
comparing the authorization level for the user to an authorization level of the one or more privacy zones; and
selecting the subset of the plurality of audio streams based on the comparison.

29. The method of claim 26, further comprising:
obtaining, from a user, an override request to add at least one excluded audio stream of the plurality of audio streams; and
based upon the override request, adding the at least one excluded audio stream for a limited time period.
30. The method of claim 24, wherein the controlling access to the at least one of the plurality of audio streams comprises not downloading or receiving at least one of the plurality of audio streams based on the timing information.
31. The method of claim 24, wherein the timing information comprises a start time of when at least one of the plurality of audio streams includes audio content.
32. The method of claim 31, further comprising:
comparing the start time to a current time; and
selecting, when the start time is equal to or greater than the current time, a subset of the plurality of audio streams.
33. The method of claim 24, wherein the timing information comprises a duration of at least one of the plurality of audio streams.
34. The method of claim 33, further comprising:
comparing the duration to a timer; and
selecting, when the duration is equal or greater than the timer, a subset of the plurality of audio streams.
35. The method of claim 24, further comprising:
obtaining, from a user, a request for one of a plurality of ambisonic soundfield types; and
reproducing corresponding soundfields, based on the request for the one of a plurality of ambisonic soundfield types, and the plurality of audio streams or a subset of the plurality of audio streams,

wherein the plurality of ambisonic soundfield types comprises at least two of first order ambisonic soundfield (FOA), higher order ambisonic soundfield (HOA), and mixed order ambisonic soundfield (MOA).

36. The method of claim 24, wherein the timing information comprises a delay, further comprising:

detecting a trigger;

comparing the delay to a timer; and

waiting until the delay is equal to or greater than the timer before selecting a subset of the plurality of audio streams.

37. The method of claim 24, further comprising combining at least two of the plurality of audio streams by at least one of mixing or interpolation or another variant of soundfield manipulation.

38. The method of claim 24, further comprising changing a gain of one or more of the plurality of audio streams.

39. The method of claim 24, further comprising receiving, by a microphone, a voice command and controlling a display device based on the voice command.

40. The method of claim 24, further comprising outputting at least one of the plurality of audio streams to one or more speakers.

41. The method of claim 24, wherein an acoustical space comprises a scene represented by video data captured by a camera.

42. The method of claim 24, wherein an acoustical space comprises a virtual world.

43. The method of claim 24, further comprising presenting an acoustical space on a head-mounted device.

44. The method of claim 24, further comprising presenting an acoustical space on a mobile handset or in a vehicle.

45. The method of claim 24, further comprising receiving a wireless signal.

46. A non-transitory computer-readable storage medium having stored thereon instructions that, when executed, cause one or more processors to:

store timing information and a plurality of audio streams; and

control access to at least one of the plurality of audio streams based on the timing information.

47. A device configured to play one or more of a plurality of audio streams comprising:

means for storing timing information and a plurality of audio streams; and

means for controlling access to at least one of the plurality of audio streams based on the timing information.