

CLAIMS:

1. A ride vehicle system comprising:
a ride vehicle comprising:
a plurality of seats;
a plurality of directional speakers configured to provide a plurality of audio output signals, wherein each directional speaker of the plurality of directional speakers is configured to output a respective audio output signal of the plurality of audio output signals at a respective seat of the plurality of seats; and
a plurality of haptic devices configured to provide a plurality of haptic output signals, wherein each haptic device of the plurality of haptic devices is configured to output a respective haptic output signal of the plurality of haptic output signals at the respective seat; and
a control system comprising:
audio adjustment logic configured to generate each audio output signal of the plurality of audio output signals based on input audio data, a vehicle location, and seat location data associated with the respective seat, wherein the seat location data is indicative of respective distances between an object of interest and respective seats of the plurality of seats ; and
haptic adjustment logic configured to generate each haptic output signal of the plurality of haptic output signals based on

input haptic data, the vehicle location, the seat location data, or a combination thereof.

2. The ride vehicle system of claim 1, wherein at least some directional speakers of the plurality of directional speakers are disposed in at least some seats of the plurality of seats of the ride vehicle.
3. The ride vehicle system of claim 1, wherein at least some haptic devices of the plurality of haptic devices are disposed in at least some seats or restraints of the plurality of seats of the ride vehicle.
4. The ride vehicle system of claim 1, wherein each haptic device of the plurality of haptic devices is configured to apply a force, vibration, motion, or any combination thereof, to a guest disposed in a respective seat of the plurality of seats of the ride vehicle.
5. The ride vehicle system of claim 1, wherein each haptic device of the plurality of haptic devices comprises an actuator, a motor, an air vortex ring, an ultrasound speaker, a water jet, a heater, a chiller, a cooler, or any combination thereof.
6. The ride vehicle system of claim 1, comprising a vehicle location sensor configured to determine the vehicle location of the ride vehicle.
7. The ride vehicle system of claim 1, comprising the object of interest, wherein

the object of interest comprises a physical or a virtual character at a portion of a ride experience, wherein the input audio data stimulates sounds made by the object of interest, wherein the input haptic data comprises haptic feedback associated with the object of interest.

8. A control system comprising:

audio adjustment logic configured to generate each audio output signal of a plurality of audio output signals based on audio adjustment data comprising input audio data, a vehicle location of a ride vehicle, seat location data associated with a plurality of seats of the ride vehicle, or a combination thereof, wherein the seat location data comprises respective distances between an object of interest and respective seats of the plurality of seats;

haptic adjustment logic configured to generate each haptic output signal of a plurality of haptic output signals based on haptic adjustment data comprising input haptic data, the vehicle location, the seat location data, or a combination thereof; and

a controller comprising a processor and a memory device, wherein the processor is configured to:

receive the audio adjustment data and the haptic adjustment data;

instruct the audio adjustment logic to generate the plurality of audio output signals based on the audio adjustment data;

instruct the haptic adjustment logic to generate the plurality of haptic output signals based on the haptic adjustment data;

output a respective audio output signal of the plurality of audio output signals to a respective directional speaker of a plurality of directional

speakers directed at a respective seat of the plurality of seats of the ride vehicle; and

output the plurality of haptic output signals to a plurality of haptic devices directed at the plurality of seats of the ride vehicle.

9. The control system of claim 8, wherein the audio adjustment logic is configured to generate each audio output signal based on adjusting a volume level associated with the input audio data, wherein the volume level is adjusted based on the vehicle location.
10. The control system of claim 8, wherein the haptic adjustment logic is configured to generate each haptic output signal based on adjusting an intensity associated with the input haptic data, wherein the intensity is adjusted based on the vehicle location.
11. The control system of claim 8, wherein the audio adjustment logic is configured to generate the respective audio output signal based on adjusting a volume level associated with the input audio data a respective distance between the object of interest and the respective seat of the plurality of seats of the ride vehicle.
12. The control system of claim 8, wherein the seat location data comprises respective preferred volume levels input by respective guests of the respective

seats of the plurality of seats, wherein the audio adjustment logic is configured to generate the respective audio output signal based on adjusting a volume level associated with the input audio data based on respective preferred volume level and a respective distance between the object of interest and the respective seat of the plurality of seats of the ride vehicle.

13. The control system of claim 8, wherein the seat location data comprises respective preferred languages for respective guests of the respective seats of the plurality of seats, wherein the input audio data comprises a plurality of streams of audio data corresponding to different languages, wherein the audio adjustment logic is configured to generate the respective audio output signal based on selecting a stream of audio data of the plurality of streams of audio data corresponding to a respective preferred language.
14. The control system of claim 8, wherein the seat location data comprises respective content ratings for respective guests of the respective seats of the plurality of seats, wherein the input audio data comprises a plurality of streams of audio data corresponding to different content ratings, wherein the audio adjustment logic is configured to generate the respective audio output signal based on selecting a stream of audio data of the plurality of streams of audio data corresponding to a respective content rating.
15. The control system of claim 11, wherein the processor is configured to output a respective haptic output signal of the plurality of haptic output signals to a

respective haptic device of the plurality of haptic devices directed at the respective seat of the plurality of seats of the ride vehicle, wherein the haptic adjustment logic is configured to generate the respective haptic output signal based on adjusting an intensity associated with the input haptic data, based on the respective distance between the object of interest and the respective seat of the plurality of seats of the ride vehicle.

16. The control system of claim 11, wherein the audio adjustment logic is configured to generate an additional audio output signal of the plurality of audio output signals based on adjusting the volume level associated with the input audio data based on a respective distance between the object of interest and an additional seat of the plurality of seats of the ride vehicle, wherein the processor is configured to output the additional audio output signal of the plurality of audio output signals to an additional directional speaker of the plurality of directional speakers directed at the additional seat of the plurality of seats of the ride vehicle.
17. A method for providing an immersive ride vehicle environment comprising:
receiving, at one or more processors, audio data, haptic data, a vehicle location of a ride vehicle, and seat location data associated with a plurality of seats of the ride vehicle, wherein the seat location data is indicative of respective distances between an object of interest and respective seats of the plurality of seats;
generating, using the one or more processors, each audio output signal of a plurality of audio output signals based on the audio data, the vehicle location, and the

seat location data;

generating, using the one or more processors, each haptic output signal of a plurality of haptic output signals based on the haptic data and at least the vehicle location or the seat location data;

outputting, using the one or more processors, a respective audio output signal of the plurality of audio output signals to respective directional speaker of a plurality of directional speakers of the ride vehicle directed at a respective seat of the plurality of seats; and

outputting the plurality of haptic output signals to a plurality of haptic devices of the ride vehicle directed at the plurality of seats.

18. The method of claim 17, comprising:

receiving, using the one or more processors, a target vehicle location; and
outputting, using the one or more processors the plurality of audio output signals to the plurality of directional speakers and outputting the plurality of haptic output signals to the plurality of haptic devices occurs in response to determining that the vehicle location is approximately the same as the target vehicle location.

19. The method of claim 17, wherein generating, using the one or more processors, the respective audio output signal comprises adjusting a volume level associated with the audio data based on a respective distance between the object of interest and the respective seat of the plurality of seats.

20. The method of claim 19, wherein outputting, using the one or more processors, the plurality of haptic output signals comprises outputting a respective haptic output signal of the plurality of haptic outputs signals to a respective haptic device of the plurality of haptic devices directed at the respective seat of the plurality of seats, wherein generating, using the one or more processors, the respective haptic output signal comprises adjusting an intensity associated with the haptic data based on the respective distance between the object of interest and the respective seat of the plurality of seats.