

CLAIMS:

1. A ride system configured to control ride vehicle motion, the ride system comprising:

a platform assembly configured to receive a ride vehicle transporting a ride passenger;

an upward drive pulley system drivingly coupled to the platform assembly and configured to upwardly drive motion of the platform assembly along a vertical axis oriented along a gravity vector; and

a downward drive pulley system drivingly coupled to the platform assembly and configured to downwardly drive motion of the platform assembly along the vertical axis, wherein upwardly and downwardly driving motion of the platform assembly exposes the ride passenger to a plurality of entertainment shows, and wherein entertainment shows of the plurality of entertainment shows are positioned on a different vertical level with respect to one another.

2. The ride system of claim 1, comprising:

a control system communicatively coupled to the platform assembly, the upward drive pulley system, and the downward drive pulley system, wherein the control system comprises processing circuitry and memory circuitry storing instructions thereon, wherein the instructions are configured to be executed by the processing circuitry, and wherein the instructions are configured to cause the processing circuitry to:

instruct a securing device of the platform assembly to secure the ride vehicle to the platform assembly;

selectively actuate an upward drive winch of the upward drive pulley system and selectively actuate a downward drive winch of the downward drive pulley system, thereby controlling motion of the platform assembly and ride vehicle motion, in response to determining that the securing device secures the ride vehicle to the platform assembly; and

allow egression of the ride vehicle out from the platform assembly by disengaging the securing device.

3. The ride system of claim 1, wherein the ride system comprises a clutch system configured to selectively engage the upward drive pulley system and the downward drive pulley system, wherein motion of the platform assembly is restricted to being along an upward direction along the vertical axis when the clutch system engages the upward drive pulley system, and wherein motion of the platform assembly is restricted to being along a downward direction along the vertical axis when the clutch system engages the downward drive pulley system.

4. The ride system of claim 1, wherein:
the upward drive pulley system comprises an upward drive winch drivingly coupled to an upward drive pulley cable, and wherein the upward drive winch is configured to rotate in a first rotational direction to upwardly drive motion of the platform assembly; and
the downward drive pulley system comprises a downward drive winch drivingly coupled to a downward drive pulley cable, and wherein the downward drive winch is configured to rotate in a second rotational direction, opposite the first rotational direction, to downwardly drive motion of the platform assembly.

5. The ride system of claim 1, wherein the plurality of entertainment shows are visible to the ride passenger in response to the upward drive pulley system upwardly driving motion of the platform assembly, the downward drive pulley system downwardly driving motion of the platform assembly, or any combination thereof.

6. The ride system of claim 1, wherein the plurality of entertainment shows comprises a visual projection, a screen configured to display relevant theming content, an experience enhancing visualization, or any combination thereof.

7. The ride system of claim 1, wherein a first entertainment show of the plurality of entertainment shows is positioned on a first level, wherein a second entertainment show of the plurality of entertainment shows is positioned on a second level, and wherein the second level is positioned vertically higher than the first level.

8. The ride system of claim 7, wherein the first entertainment show remains hidden from the ride passenger while the ride passenger is exposed to the second entertainment show, and wherein the second entertainment show remains hidden from the ride passenger while the ride passenger is exposed to the first entertainment show.

9. The ride system of claim 1, wherein the platform assembly is configured to receive the ride vehicle from a first ride path, and wherein the platform assembly is configured to allow egress of the ride vehicle out toward a second ride path.

10. The ride system of claim 9, wherein the second ride path is positioned on a level above the first ride path, wherein the upward drive pulley system is configured to transport the ride vehicle from the first ride path to the second ride path by upwardly driving motion of the platform assembly.

11. A method for controlling ride vehicle motion, comprising:

positioning and securing a ride vehicle on a platform assembly drivingly coupled to a motion drive system, the motion drive system comprising an upward drive pulley system configured to upwardly drive motion of the platform assembly and a downward drive pulley system configured to downwardly drive motion of the platform assembly; and coordinating ride vehicle motion with a plurality of entertainment shows positioned on corresponding levels by vertically displacing the platform assembly;

wherein coordinating ride vehicle motion comprises instructing a first entertainment show of the plurality of entertainment shows to execute a first show in response to the ride vehicle being positioned within a first vertical distance range;

wherein coordinating ride vehicle motion comprises instructing a second entertainment show of the plurality of entertainment shows to execute a second show in response to the ride vehicle being positioned within a second vertical distance range;

wherein the second vertical distance range is above the first vertical distance range;

wherein the ride vehicle is configured to transition from the first vertical distance range to the second vertical distance range in response to the upward drive pulley system upwardly driving motion of the platform assembly; and

wherein the ride vehicle is configured to transition from the second vertical distance range to the first vertical distance range in response to the downward drive pulley system downwardly driving motion of the platform assembly.

12. The method of claim 11, wherein positioning and securing the ride vehicle on the platform assembly comprises receiving the ride vehicle from a first ride path on a first level.

13. The method of claim 11, comprising instructing, via a control system, the ride vehicle to egress out from the platform assembly onto a second ride path on a second level positioned above a first level after upwardly driving motion of the platform assembly from the first level to the second level.

14. The method of claim 11, comprising instructing, via a control system, actuators of the ride vehicle to drive motion of a cab of the ride vehicle relative to a chassis of the ride vehicle, wherein the cab is configured to house a ride passenger, wherein motion of the cab relative to the chassis causes the ride passenger to move relative to the chassis along or about a longitudinal, lateral, or vertical axis.

15. The method of claim 11, comprising instructing a clutch system, via a control system, to selectively engage the upward drive pulley system or the downward drive pulley

system, wherein motion of the platform assembly is restricted to being along an upward direction along a vertical axis when the clutch system engages the upward drive pulley system, and wherein the motion of the platform assembly is restricted to being along a downward direction along the vertical axis when the clutch system engages the downward drive pulley system.

16. A ride system configured to control ride vehicle motion, the ride system comprising:

- a ride vehicle configured to transport a ride passenger; and

- a motion drive system, comprising:

- a platform assembly comprising a roller assembly, the roller assembly configured to enable vertical motion of the platform assembly;

- an upward drive pulley system drivingly coupled to the platform assembly and configured to upwardly drive motion of the platform assembly along a vertical axis oriented along a gravity vector; and

- a downward drive pulley system drivingly coupled to the platform assembly and configured to downwardly drive motion of the platform assembly along the vertical axis, wherein upwardly and downwardly driving motion of the platform assembly exposes the ride passenger to a plurality of entertainment shows, and wherein entertainment shows of the plurality of entertainment shows are positioned on a different vertical level with respect to one another.

17. The ride system of claim 16, comprising:

- a control system communicatively coupled to the platform assembly, the upward drive pulley system, and the downward drive pulley system, wherein the control system comprises processing circuitry and memory circuitry, the memory circuitry configured to have instructions stored thereon, wherein the instructions are configured to be executed by the processing circuitry, and wherein the instructions are configured to cause the processing circuitry to:

instruct the ride vehicle to decelerate onto the platform assembly before stopping at a target position on the platform assembly;

instruct a securing device to secure the ride vehicle to the platform assembly at the target position;

selectively actuate an upward drive winch of the upward drive pulley system and selectively actuate a downward drive winch of the downward drive pulley system, thereby controlling motion of the platform assembly, and ride vehicle motion, in response to determining that the securing device secures the ride vehicle to the platform assembly; and

allow egression of the ride vehicle from the platform assembly by disengaging the securing device after completion of the selective actuation.

18. The ride system of claim 17, wherein the ride system comprises a clutch system configured to selectively engage the upward drive pulley system and the downward drive pulley system, wherein motion of the platform assembly is restricted to being along an upward direction along the vertical axis when the clutch system engages the upward drive pulley system, and wherein motion of the platform assembly is restricted to being along a downward direction along the vertical axis when the clutch system engages the downward drive pulley system.

19. The ride system of claim 16, wherein a first entertainment show of the plurality of entertainment shows is positioned on a first level, wherein a second entertainment show of the plurality of entertainment shows is positioned on a second level, wherein the second level is positioned vertically higher than the first level.

20. The ride system of claim 19, wherein the first entertainment show remains hidden from the ride passenger while the ride passenger is exposed to the second entertainment show, and wherein the second entertainment show remains hidden from the ride passenger while the ride passenger is exposed to the first entertainment show.