CLAIMS:

~~1.~~ 1. A ride control system ~~for controlling a free-roaming ride vehicle of an amusement park ride~~, comprising:

a ~~ride~~ controller ~~configured to maintain~~having a memory storing a plurality of ~~rules indicative of permitted states of the~~ operational rules and a plurality of gameplay rules, wherein the controller comprises a processor configured to:

monitor a free-roaming ride vehicle ~~within~~configured to be directed through a game area of ~~the~~an amusement park ride~~, wherein the plurality of rules comprises a plurality of gameplay rules, and wherein the ride controller is configured to:~~;

receive ~~monitoring data indicative of a current state of the free-roaming ride vehicle within the game area;~~

~~receive a signal indicative of a user~~a rider request to perform ~~a requested~~an action with the free-roaming ride vehicle;

~~model performance of the requested action from the current state to~~ determine ~~a modeled state of the free roaming ride vehicle;~~

~~determine~~, based on the monitoring, whether ~~the modeled state complies with~~a performance of the action follows the plurality of operational rules;

~~and~~

in response to determining that the performance of the action follows the ~~modeled state does not comply with the~~ plurality of operational rules, determine, based on the monitoring, whether the performance of the action follows the plurality of gameplay rules; and

in response to determining that the performance of the action does not follow the plurality of gameplay rules, determine a proximate action ~~that complies with the plurality of rules~~ and provide a control signal ~~to instruct the free roaming ride vehicle to perform~~ indicative of the proximate action~~.~~

~~2. The control system of claim 1~~ to the free-roaming ride vehicle, wherein the

~~ride controller is configured to determine the proximate action by:~~

~~identifying the proximate action as having a proximate modeled state of the free-roaming ride vehicle that is within a threshold from the modeled state within a multi-dimensional logical space defined by the plurality of rules.~~

~~3. The control system of claim 1, wherein the requested action comprises a requested movement in a first direction, and wherein the~~ proximate action comprises a ~~movement in a second direction, different than the first direction.~~

~~4. The control system of claim 1, wherein the requested~~ similar creative intent to a creative intent of the action ~~comprises a requested interaction with a first gameplay station of the amusement park ride, and wherein the proximate action comprises displaying an alert configured to direct a passenger of the free-roaming ride vehicle to interact with a second gameplay station of the amusement park ride~~.

2. The ride control system of claim 1, wherein the processor is configured to:

receive an additional rider request to perform an additional action with the free-roaming ride vehicle; and

in response to determining that an additional performance of the additional action does not follow the plurality of ~~rules comprises a~~ operational rules, determine an additional proximate action that follows the plurality of operational rules~~, wherein the requested action comprises moving the free-roaming ride vehicle in a first direction to contact an additional free-roaming ride vehicle, and wherein the proximate action comprises moving the free-roaming~~ .

~~5.~~ 3. The ride ~~vehicle in a second direction, different than the first direction, to provide movement of the free-roaming ride vehicle without contacting the additional free-roaming ride vehicle.~~

~~The~~ control system of claim 1, wherein the plurality of operational rules ~~comprises a plurality of operational rules comprising~~defines a plurality of normal operating parameters ~~indicative of normal~~ indicating permitted operation of the free-roaming ride vehicle~~, and~~.

~~6.~~ 4. The ride control system of claim 1, wherein the plurality of gameplay rules comprises a plurality of permitted combinations by which gameplay actions are performable within the game area of the amusement park ride.

~~7.~~ 5. The ride control system of claim 1, wherein the ~~ride~~ controller is ~~configured to enable the requested action in response to determining that the modeled state complies with the plurality of rules.~~

~~8. The control system of claim 1, comprising a ride vehicle controller~~ communicatively coupled to ~~the ride controller~~ a rider profile database, and ~~configured to provide the signal indicative of the user request to the ride controller in response to receiving user input indicative of the user request.~~

~~The control system of~~ update the plurality of gameplay rules to correspond to the at least one previous game progression.

~~9.~~ 6. The ride control system of claim 1, comprising a monitoring system ~~communicatively coupled to the ride controller and~~ configured to ~~provide the monitoring data to the ride controller.~~

~~10. An amusement park ride, comprising:~~
detect a ~~ride controller comprising one or more memories storing a plurality~~current occupancy of ~~rules indicative of permitted states~~each game station of a plurality of ~~free-roaming ride vehicles within a game area of the amusement park ride, wherein the~~ game stations defined in the game area, wherein the processor is configured to modify the plurality of gameplay rules to direct the free-roaming ride vehicle to a game station of the plurality of ~~rules~~ game stations that comprises ~~a plurality of operational rules indicative of a plurality of normal operating parameters for the plurality of free-roaming ride vehicles and a plurality of gameplay rules indicative of a plurality of permitted combinations by which gameplay actions are performable~~

~~within the game area, wherein the ride controller is configured to receive sensor data indicative of respective current states of the plurality of free-roaming ride vehicles; and~~fewer than a threshold number of other free-roaming ride vehicles.

~~a~~

7. The ride control system of claim 1, comprising an animated figure positioned within the game area and communicatively coupled to the controller, wherein the processor is configured to instruct the animated figure to interact with the free-roaming ride vehicle ~~of~~, and wherein the plurality of operational rules indicates that physical contact between the animated figure and the free-roaming ride ~~vehicles comprising a ride~~ vehicle ~~controller communicatively coupled to the~~ is not permitted.

8. The ride ~~controller, wherein the~~ control system of claim 1, wherein the rider request is received from a rider input device of the free-roaming ride vehicle, and wherein the rider input device comprises a steering wheel, a brake, a joystick, or a wearable visualization device.

9. A ride control system of an amusement park ride, wherein the ride control system comprises:

a monitoring system configured to detect a current state of a free-roaming ride vehicle moveable within a game area of the amusement park ride;

a controller having a memory storing a primary set of operational rules and a secondary set of gameplay rules, wherein the controller ~~is~~comprises a processor configured to:

~~provide~~receive a first signal indicative of ~~a requested action to the ride controller; and in response to the ride controller modeling performance of the requested~~

~~action from a respective~~the current state of the free-roaming ride vehicle ~~to determine a modeled state of the free-roaming vehicle and determining that the modeled state does not comply with the plurality of rules, receive a control signal from the ride controller~~from the monitoring system;

receive a second signal indicative of a ~~proximate action that does comply with the plurality of rules and perform the proximate action.~~

~~11. The amusement park ride of claim 12, wherein the ride controller is configured to determine the proximate action as an action that, when modeled, produces a proximate modeled state that is within a threshold of the modeled state.~~

~~12. The amusement park ride of claim 12, comprising a first interactive feature disposed within the game area and a second interactive feature disposed within the game area, wherein:~~

~~the plurality of gameplay rules indicate that the first interactive feature is to be activated before the second interactive feature;~~

~~the requested action comprises a~~rider request ~~to activate the second interactive feature before the first interactive feature is activated; and~~

~~the proximate action comprises providing an alert to discourage activation of the second interactive feature before activation of the first interactive feature.~~

~~13. The amusement park ride of claim 12, wherein the requested action comprises a request to move~~for the free-roaming ride vehicle ~~in a first direction, and wherein the proximate action comprises moving the free-roaming ride vehicle in a second direction, different that than first direction and toward an exit of the game area.~~

~~14. A tangible, non transitory, machine readable medium, comprising machine readable instructions that, when executed by one or more processors, cause the one or more processors to:~~

~~receive sensor data indicative of a current state of a free roaming ride vehicle within a game area of an amusement park ride, wherein the current state of the free-roaming ride vehicle comprises a position, an orientation, a speed, or a combination thereof of the free-roaming ride vehicle;~~

~~receive user input indicative of a request to perform a requested action with the free-roaming ride vehicle;~~

~~model performance of the requested action from the current state to determine a modeled state of the free-roaming ride vehicle~~to perform an action;

determine whether ~~the modeled state complies with~~ a ~~plurality~~performance of ~~gameplay rules and a plurality of operational rules; and~~

~~in response to determining that~~the action from the ~~modeled~~current state ~~does not comply with~~follows the ~~plurality of gameplay rules and the plurality~~primary set of operational rules~~, determine a proximate action having a proximate modeled state that complies with the plurality of gameplay rules and the plurality of operational rules and provide a control signal to instruct the free-roaming ride vehicle to perform the proximate action.~~;

~~15. The tangible, non-transitory, machine-readable medium of claim 16, wherein the machine-readable instructions are configured to cause the one or more processors to prevent performance of the requested action~~ in response to determining that the ~~requested~~ performance of the action ~~does not comply with the plurality of gameplay rules or~~follows the ~~plurality~~primary set of operational rules~~.~~

~~16. The tangible, non-transitory, machine-readable medium of claim 16, wherein the machine-readable instructions are configured to cause the one or more processors to,~~ determine ~~the proximate action by modeling the requested action within a multi-dimensional logical space defined by the plurality of gameplay rules and the plurality of operational rules, and identifying an action within a threshold to the requested action within the multi-dimensional logical space as the proximate action.~~whether the performance of the action from the current state follows the secondary set of gameplay rules;

in response to determining that the performance of the action follows the secondary set of gameplay rules, enable the performance of the action; and

in response to determining that that the performance of the action does not follow at least one rule of the primary set of operational rules or the secondary set of gameplay rules, provide a stop signal to block the performance of the action.

~~17.~~ 10. The ~~tangible, non-transitory, machine-readable medium of~~ ride control system of claim ~~16~~9, wherein the ~~plurality of operational rules~~ monitoring system comprises ~~a plurality of normal operating parameters~~at least one sensor configured to provide sensor feedback indicative of ~~normal operation~~a current condition of the ~~free-roaming ride vehicle~~game area, and wherein the ~~plurality~~processor is configured to modify the primary set of operational rules based on the sensor feedback.

~~of gameplay rules comprises a plurality of permitted combinations by which gameplay actions are performable within the game area of the amusement park ride.~~

~~The tangible, non-transitory, machine-readable medium of claim 16~~

11. The ride control system of claim 10, wherein the current condition of the game area comprises a weather condition, a maintenance condition, an occupancy condition, or a combination thereof.

12. The ride control system of claim 10, wherein the processor is configured to:

receive additional sensor feedback from the at least one sensor; and

modify the secondary set of gameplay rules based on the sensor feedback.

13. The ride control system of claim 9, wherein the ~~requested action comprises a first movement through an interactive boundary wall within the game area,~~processor is configured to:

determine a proximate action that follows each rule of the primary set of operational rules and the secondary set of gameplay rules; and

provide a control signal to instruct the free-roaming ride vehicle to perform the proximate action instead of the blocked action.

14. The ride control system of claim 9, wherein the monitoring system comprises at least one sensor configured to track one or more fiducial markers, infrared devices, wearable visualization devices, or a combination thereof associated with the free-roaming ride vehicle.

15. A method of operating a ride control system, the method comprising:

monitoring, via a controller of the ride control system, a free-roaming ride vehicle positioned within a game area of an amusement park ride;

receiving, via the controller, a rider request to perform an action with the free-roaming ride vehicle;

determining, via the controller, whether a performance of the action follows a set of hierarchical rules, wherein the set of hierarchical rules comprises a first-tier set of operational rules and a second-tier set of gameplay rules;

in response to determining that the performance of the action follows the set of hierarchical rules, enabling, via the controller, the performance of the action; and

in response to determining that the performance of the action does not follow at least one rule of the set of hierarchical rules, determining, via the controller, a proximate action ~~comprises a second movement along an outer surface of the interactive boundary wall~~and providing a control signal to the free-roaming ride vehicle to trigger a performance of the proximate action.

16. The method of claim 15, comprising determining the proximate action by:

modeling a predicted state of the free-roaming ride vehicle after the performance of the action; and

selecting the proximate action as a closest intent match from a multi-dimensional space defined by the set of hierarchical rules.

17. The method of claim 15, comprising instructing, via the controller, a robot character positioned within the game area to interact with a rider of the free-roaming ride vehicle.

18. The method of claim 15, comprising modifying the set of hierarchical rules based on a rider profile of a rider of the free-roaming ride vehicle, wherein the rider profile is associated

with a narrower version of the set of hierarchical rules than other rider profiles of the ride control system.

19. The method of claim 15, comprising:

determining that a current game session has concluded; and

updating the set of hierarchical rules to enable the free-roaming ride vehicle to travel toward an exit of the game area and to block the free-roaming ride vehicle from traveling further from the exit.

~~18.~~ 20. The method of claim 19, comprising selecting the exit from a plurality of exits based on progress of the free-roaming ride vehicle through the second-tier set of gameplay rules, before updating the set of hierarchical rules.