

CLAIMS:

1. A queue control system configured to control a queue structure of a queue in an amusement park, the queue control system comprising:

a controller configured to:

receive, from an input device that monitors a queue characteristic of the queue, data feedback indicative of the queue characteristic, wherein the queue characteristic is indicative of a queue length, queue wait time, queue rate, or queue throughput; and

output a control command based on the data feedback; and

a queue structure control associated with the queue structure and configured to:

receive the control command; and

change at least one aspect of the queue structure based on the control command.

2. The queue control system of claim 1, wherein the queue structure control comprises an actuator configured to control at least one aspect of a light, and wherein the control command comprises an instructed value of the at least one aspect of the light.

3. The queue control system of claim 2, wherein the instructed value is indicative of a frequency or an intensity of the light.

4. The queue control system of claim 1, wherein the queue structure control comprises a plurality of actuators configured to control at least one aspect of a plurality of lights, and wherein the control command comprises a plurality of instructed values of the at least one aspect of the plurality of lights.

5. The queue control system of claim 4, wherein the plurality of instructed values comprises, for each light of the plurality of lights, an activation instruction, a deactivation instruction, and a time period between activation corresponding to the activation instruction and deactivation corresponding to the deactivation instruction.

6. The queue control system of claim 5, wherein the activation instruction, the deactivation instruction, and the time period between the activation corresponding to the activation instruction and the deactivation corresponding to the deactivation instruction are unique for each light of a set of lights within the plurality of lights.

7. The queue control system of claim 4, wherein the plurality of lights comprises a first light and a second light, and wherein the plurality of instructed values comprises:

a first activation instruction corresponding to activation of the first light at a first moment in time and a first deactivation instruction corresponding to deactivation of the first light at a second moment in time following the first moment in time; and

a second activation instruction corresponding to activation of the second light at a third moment in time and a second deactivation instruction corresponding to deactivation of the second light at a fourth moment in time after the third moment in time.

8. The queue control system of claim 7, wherein the third moment in time is after the first moment in time.

9. The queue control system of claim 1, comprising a plurality of lights configured to be driven by the queue structure control to provide a wave-like effect at a rate correlative to a value of the queue characteristic.

10. The queue control system of claim 1, wherein the queue structure control is configured to operate an effect, wherein the controller is configured to:

determine a queue wait time corresponding to at least one person in the queue based on the data feedback; and

output the control command based on the queue wait time such that the effect is only presented once by the queue structure control during the queue wait time.

11. The queue control system of claim 1, wherein the queue structure control comprises an actuator configured to change at least one aspect of an energy-consuming component.

12. The queue control system of claim 1, wherein the queue structure control comprises an actuator configured to change at least one aspect of a facilities component, wherein the facilities component comprises a wall, gate, or door.

13. The queue control system of claim 1, wherein the queue structure control is part of a television, a speaker, a mister, or a fan.

14. The queue control system of claim 1, comprising the input device, wherein the input device comprises a sensor or camera.

15. One or more non-transitory computer-readable media storing instructions which, when executed by at least one processor, cause the at least one processor to perform operations comprising:

receiving, from an input device that monitors a queue characteristic in a queue structure, data feedback indicative of the queue characteristic, wherein the queue characteristic is indicative of a queue length, queue wait time, queue rate, or queue throughput;

determining if the data feedback corresponds to a current operation of an aspect of the queue structure;

in response to determining that the data feedback does not correspond to the current operation of the aspect of the queue structure, determine a control command based on the data feedback; and

outputting, to a queue structure control, the control command, wherein the control command, when executed by the queue structure control, causes the aspect of the queue structure to change to correspond to the data feedback.

16. The one or more non-transitory computer-readable media of claim 15, wherein the data feedback is indicative of the queue wait time, wherein the queue structure control corresponds to a television, and wherein the control command comprises instructions, which, when executed, cause the television to display a video with video characteristics based on the queue wait time.

17. The one or more non-transitory computer-readable media of claim 16, storing instructions which, when executed by the at least one processor, cause the at least one processor to perform operations comprising:

determining a frequency by which a particular video segment of the video is played based on the queue wait time.

18. The one or more non-transitory computer-readable media of claim 17, storing instructions which, when executed by the at least one processor, cause the at least one processor to perform operations comprising:

in response to the queue wait time exceeding a threshold queue wait time, playing the particular video segment at least twice during a timeframe corresponding to the queue wait time; and

in response to the queue wait time being less than a threshold queue wait time, playing the particular video segment only once during the timeframe corresponding to the queue wait time.

19. The one or more non-transitory computer-readable media of claim 15, storing instructions which, when executed by the at least one processor, cause the at least one processor to perform operations comprising:

when the queue characteristic is indicative of the queue wait time and the queue length, determining if the queue wait time and the queue length exceed respective threshold values, wherein the control command is outputted to the queue structure control in response to determining that the queue wait time and the queue length exceed the respective threshold values, wherein the queue structure control corresponds to a heating, ventilation, and/or air conditioning (HVAC) component, and wherein the control command comprises instructions configured to cause the HVAC component to activate or deactivate.

20. The one or more non-transitory computer-readable media of claim 15, wherein the data feedback is indicative of the queue flow rate, wherein the queue structure control corresponds to a speaker, and wherein the control command comprises instructions, which, when executed, causes the speaker to play music corresponding to the queue wait time, wherein fast-paced music is played on the speaker when the queue rate exceeds a threshold queue rate.