CLAIMS:

1. A special effects system comprising:

a ground controller;

an unmanned aerial vehicle;

communications circuitry of the unmanned aerial vehicle configured to transmit signals to and receive signals from the ground controller;

a vehicle controller of the unmanned aerial vehicle configured to execute a flight plan;

at least one special effects module of the unmanned aerial vehicle; and

a special effects module controller of the at least one special effects module, the special effects module controller configured to instruct the special effects module to activate the special effect in response to an activation signal from the ground controller.

2. The special effects system of claim 1, comprising a special effects material disposed within the at least one special effects module, and wherein the special effects module controller is configured to cause the special effects material to be released in response to the activation signal from the ground controller.

3. The special effects system of claim 2, wherein the special effects material comprises a smoke effect fluid.

4. The special effects system of claim 2, wherein the special effects material comprises a scented fluid.

5. The special effects system of claim 2, wherein the special effects material comprises glitter or confetti.

6. The special effects system of claim 2, wherein the special effects material comprises water.

7. The special effects system of claim 1, comprising a guest device configured to transmit a guest signal to the ground controller to cause the ground controller to send the activation signal to the unmanned aerial vehicle.

8. The special effects system of claim 7, wherein the ground controller is configured to select the unmanned aerial vehicle from a fleet of unmanned aerial vehicles based on a proximity to the guest device.

9. The special effects system of claim 7, wherein the ground controller is configured to select the unmanned aerial vehicle from a fleet of unmanned aerial vehicles based on a proximity to an associated device linked to the guest device, wherein the associated device is associated with the guest device via a family or group association.

10. The special effects system of claim 7, wherein the guest device is configured to wirelessly transmit the guest signal.

11. The special effects system of claim 1, wherein the ground controller is configured to select the unmanned aerial vehicle from a fleet of unmanned aerial vehicles based on a presence of a desired special effects material in the special effects module.

12. The special effects system of claim 11, wherein the ground controller is configured to select the desired special effects material based on a previous guest achievement.

13. The special effects system of claim 11, wherein the ground controller is configured to select the desired special effects material based on a guest permission or a guest status.

14. The special effects system of claim 1, wherein the special effects module comprises a nozzle or sprayer oriented away from the special effects vehicle and configured to dispense a special effects material.

15. The special effects system of claim 1, comprising a second special effects module, wherein the first special effects module comprises a first special effects material and wherein the second special effects module comprises a second special effects material.

16. The special effects system of claim 15, wherein the second special effects material is configured to be released together with the first special effects material via the activation signal.

17. The special effects system of claim 15, wherein the second special effects material is configured to be released in response to a confirmation signal that the first special effects material has been released.

18. The special effects system of claim 1, wherein the at least one special effects module comprises a directional speaker, and wherein the special effects module controller is configured to activate the speaker to create an audio special effect in response to the activation signal from the ground controller.

19. The special effects system of claim 17, wherein the activation signal causes the special effects system to access an audio file stored in a memory.

20. The special effects system of claim 17, wherein the activation signal comprises audio data.

21. The special effects system of claim 1, wherein the at least one special effects module comprises a camera, and wherein the special effects module controller is configured to activate the camera to capture one or both of an image or video in response to the activation signal from the ground controller.

22. The special effects system of claim 1, wherein the special effects module controller is configured to receive a feedback signal related to activation of the special effect.

23. The special effects system of claim 22, wherein the feedback signal comprises an error or maintenance signal when the special effect has not been properly activated.

24. The special effects system of claim 1, wherein the at least one special effects module is detachable from the unmanned aerial vehicle by operator.

25. A special effects system comprising:

a ground controller;

a plurality of unmanned aerial vehicles respectively comprising:

communications circuitry configured to transmit signals to and receive signals from the ground controller;

a vehicle controller configured to execute a flight plan; and

at least one special effects module comprising:

a special effects material; and

a special effects module controller configured to cause the special effects material to be released in response to an activation signal from the ground controller,

wherein the respective flight plans of the unmanned aerial vehicles are independent of one another and are configured to be executed within a running time of a theme park show; and

wherein the ground controller is configured to generate respective activation signals to the respective unmanned aerial vehicles to activate respective special effects during the running time of the theme park show.

26. The special effects system of claim 25, wherein the ground controller is configured to receive position information for a respective unmanned aerial vehicle relative to a theme park show live actor or set piece and to release the special effects material if the position information confirms that the respective flight plan has been correctly executed.

27. The special effects system of claim 25, wherein the ground controller is configured to receive a signal from a device worn by a live actor, wherein the signal cause the ground controller to generate the activation signal to release the special effects material of one of the plurality of unmanned aerial vehicles.

28. The special effects system of claim 25, comprising an unmanned aerial vehicle comprising at least one special effects module comprising a directional speaker.

29. The special effects system of claim 25, wherein the directional speaker is activated to play an audio special effect at a predetermined time.

30. A special effects system comprising:

a ground controller;

a plurality of unmanned aerial vehicles respectively comprising:

communications circuitry configured to transmit signals to and receive signals from the ground controller;

a vehicle controller configured to execute a flight plan; and

at least one special effects module comprising:

a special effects material; and

at least one special effects module controller configured to cause the special effects material to be released in response to a release signal from the ground controller, wherein the ground controller is configured to generate respective maintenance signals to the respective unmanned aerial vehicles to return for service.

31. The special effects system of claim 30, wherein a maintenance signal for an individual unmanned aerial vehicle is generated based on data from an on-board sensor that is communicated to the ground controller.

32. The special effects system of claim 31, wherein the data from the on-board sensor comprises data related to a release error of the special effects material.

33. The special effects system of claim 30, wherein the maintenance signal is cancelled based on updated data from the on-board sensor related to a fill level of the special effects material in the special effects module.

34. The special effects system of claim 30, comprising a maintenance station configured to auto-fill the special effects module in response to the respective maintenance signals.

CLAIMS

1. A special effects system comprising:

a ground controller;

an unmanned aerial vehicle;

communications circuitry of the unmanned aerial vehicle configured to transmit signals to and receive signals from the ground controller;

a vehicle controller of the unmanned aerial vehicle configured to execute a flight plan;

at least one special effects module of the unmanned aerial vehicle;

a special effects module controller of the at least one special effects module, the special effects module controller configured to instruct the special effects module to activate the special effect in response to an activation signal from the ground controller; and

a special effects material disposed within the at least one special effects module, and wherein the special effects module controller is configured to cause the special effects material to be released in response to the activation signal from the ground controller; and a guest device configured to transmit a guest signal to the ground controller to cause the ground controller to send the activation signal to the unmanned aerial vehicle.

2. The special effects system of claim 1, wherein the special effects material comprises a smoke effect fluid.

3. The special effects system of claim 1, wherein the special effects material comprises a scented fluid.

4. The special effects system of claim 1, wherein the special effects material comprises glitter or confetti.

5. The special effects system of claim 1, wherein the special effects material comprises water.

6. The special effects system of claim 1, wherein the ground controller is configured to select the unmanned aerial vehicle from a fleet of unmanned aerial vehicles based on a proximity to the guest device.

7. The special effects system of claim 1, wherein the ground controller is configured to select the unmanned aerial vehicle from a fleet of unmanned aerial vehicles based on a proximity to an associated device linked to the guest device, wherein the associated device is associated with the guest device via a family or group association.

8. The special effects system of claim 1, wherein the guest device is configured to wirelessly transmit the guest signal.

9. The special effects system of claim 1, wherein the ground controller is configured to select the unmanned aerial vehicle from a fleet of unmanned aerial vehicles based on a presence of a desired special effects material in the special effects module.

10. The special effects system of claim 9, wherein the ground controller is configured to select the desired special effects material based on a previous guest achievement.

11. The special effects system of claim 9, wherein the ground controller is configured to select the desired special effects material based on a guest permission or a guest status.

12. The special effects system of claim 1, wherein the special effects module comprises a nozzle or sprayer oriented away from the special effects vehicle and configured to dispense a special effects material.

13. The special effects system of claim 1, comprising a second special effects module, wherein the first special effects module comprises a first special effects material and wherein the second special effects module comprises a second special effects material.

14. The special effects system of claim 13, wherein the second special effects material is configured to be released together with the first special effects material via the activation signal.

15. The special effects system of claim 13, wherein the second special effects material is configured to be released in response to a confirmation signal that the first special effects material has been released.

16. The special effects system of claim 15, wherein the activation signal causes the special effects system to access an audio file stored in a memory.

17. The special effects system of claim 15, wherein the activation signal comprises audio data.

18. The special effects system of claim 1, wherein the at least one special effects module comprises a directional speaker, and wherein the special effects module controller is configured to activate the speaker to create an audio special effect in response to the activation signal from the ground controller.

19. The special effects system of claim 1, wherein the at least one special effects module comprises a camera, and wherein the special effects module controller is configured to activate the camera to capture one or both of an image or video in response to the activation signal from the ground controller.

20. The special effects system of claim 1, wherein the special effects module controller is configured to receive a feedback signal related to activation of the special effect.

21. The special effects system of claim 20, wherein the feedback signal comprises an error or maintenance signal when the special effect has not been properly activated.

22. The special effects system of claim 1, wherein the at least one special effects module is detachable from the unmanned aerial vehicle by operator.

23. A special effects system comprising:

a ground controller;

a plurality of unmanned aerial vehicles respectively comprising: communications circuitry configured to transmit signals to and receive signals from the ground controller;

a vehicle controller configured to execute a flight plan; and

at least one special effects module comprising:

a special effects material; and

a special effects module controller configured to cause the special effects material to be released in response to an activation signal from the ground controller, wherein the respective flight plans of the unmanned aerial vehicles are independent of one another and are configured to be executed within a running time of a theme park show; and

wherein the ground controller is configured to generate respective activation signals to the respective unmanned aerial vehicles to activate respective special effects during the running time of the theme park show.

24. The special effects system of claim 23, wherein the ground controller is configured to receive position information for a respective unmanned aerial vehicle relative to a theme park show live actor or set piece and to release the special effects material if the position information confirms that the respective flight plan has been correctly executed.

25. The special effects system of claim 23, wherein the ground controller is configured to receive a signal from a device worn by a live actor, wherein the signal cause the ground controller to generate the activation signal to release the special effects material of one of the plurality of unmanned aerial vehicles.

26. The special effects system of claim 23, comprising an unmanned aerial vehicle comprising at least one special effects module comprising a directional speaker.

27. The special effects system of claim 23, wherein the directional speaker is activated to play an audio special effect at a predetermined time.

28. A special effects system comprising:

a ground controller;

a plurality of unmanned aerial vehicles respectively comprising:

communications circuitry configured to transmit signals to and receive signals from the ground controller;

a vehicle controller configured to execute a flight plan; and

at least one special effects module comprising:

a special effects material; and

at least one special effects module controller configured to cause the special effects material to be released in response to a release signal from the ground controller, wherein the ground controller is configured to generate respective maintenance signals to the respective unmanned aerial vehicles to return for service.

29. The special effects system of claim 28, wherein a maintenance signal for an individual unmanned aerial vehicle is generated based on data from an on-board sensor that is communicated to the ground controller.

30. The special effects system of claim 29, wherein the data from the on-board sensor comprises data related to a release error of the special effects material.

31. The special effects system of claim 28, wherein the maintenance signal is cancelled based on updated data from the on-board sensor related to a fill level of the special effects material in the special effects module.

32. The special effects system of claim 28, comprising a maintenance station configured to auto-fill the special effects module in response to the respective maintenance signals.