CLAIMS

1. A visual effects system, comprising:

a display configured to present a series of image frames;

a mirror positioned to reflect the series of image frames to generate reflected image frames; and

a drive system coupled to the mirror, wherein the drive system is configured to:

drive movement of the mirror to oscillate along a first portion of a track with a reflective surface of the mirror facing toward the display to adjust a perceived depth of the reflected image frames to produce volumetric imagery in a first visualization region for visualization by a guest;

drive a gross movement of the mirror to position the mirror along a second portion of the track; and

drive the movement of the mirror to oscillate along the second portion of the track with the reflective surface of the mirror facing toward the display to adjust the perceived depth of the reflected image frames to produce the volumetric imagery in a second visualization region for visualization by the guest.

2. The visual effects system of claim 1, wherein the display is configured to present the series of image frames at a refresh rate, and the drive system is configured to drive the movement of the mirror based on the refresh rate to produce the volumetric imagery.

3. The visual effects system of claim 1, wherein the drive system is configured to move the mirror along a first axis toward and away from the display.

4. The visual effects system of claim 3, comprising a beam splitter positioned to direct the reflected image frames to a visualization area and to enable the guest to view the volumetric imagery in the visualization area through the beam splitter.

5. The visual effects system of claim 4, wherein the beam splitter is positioned to direct the reflected image frames along a second axis to the visualization area.

6. The visual effects system of claim 4, comprising a compact lens configured to concentrate the series of image frames and the reflected image frames between the beam splitter and the mirror.

7. The visual effects system of claim 1, wherein the drive system comprises:

a motor;

at least one rotatable structure coupled to the motor and the mirror; and

wherein the motor is configured to drive the at least one rotatable structure to oscillate about a rotational axis to drive the movement of the mirror with the reflective surface of the mirror facing toward the display to adjust the perceived depth of the reflected image frames to produce the volumetric imagery.

8. The visual effects system of claim 1, wherein the display is stationary relative to a ground surface, and the drive system is configured to drive the movement of the mirror relative to the display and the ground surface.

9. The visual effects system of claim 1, wherein the display is transparent and is configured to enable the visualization of the volumetric imagery through the display.

10. The visual effects system of claim 1, comprising a controller configured to instruct the drive system to drive the movement of the mirror.

11. A method of operating a visual effects system, the method comprising:

generating, at one or more processors, image data for a display;

transmitting, via the one or more processors, the image data to the display, wherein the display is configured to display a series of image frames based on the image data;

reflecting, via a mirror, the series of image frames to generate reflected image frames;

moving, via a drive system, the mirror to oscillate along a first portion of a track with a reflective surface of the mirror facing toward the display to adjust a perceived depth of the reflected image frames to produce volumetric imagery in a first visualization region for visualization by a guest;

moving, via the drive system, the mirror to position the mirror along a second portion of the track; and

moving, via the drive system, the mirror to oscillate along the second portion of the track with the reflective surface of the mirror facing toward the display to adjust the perceived depth of the reflected image frames to produce the volumetric imagery in a second visualization region for visualization by the guest.

12. The method of claim 11, comprising moving, via the drive system, the mirror at an oscillation rate based on a refresh rate of the series of image frames to produce the volumetric imagery.

13. The method of claim 11, comprising transmitting, via the one or more processors, an instruction to the drive system to move the mirror to adjust the perceived depth of the reflected image frames to produce the volumetric imagery.

14. The method of claim 13, comprising transmitting, via the one or more processors, the instruction to the drive system to move the mirror to produce an appearance of movement of the volumetric imagery.

15. A visual effects system, comprising:

a display configured to present a series of image frames;

a mirror positioned to reflect the series of image frames to generate reflected image frames;

a beam splitter positioned to direct the reflected image frames to a visualization area; and

a drive system coupled to the mirror, wherein the drive system is configured to:

drive movement of the mirror to oscillate along a first portion of a track with a reflective surface of the mirror facing toward the display to adjust a perceived depth of the reflected image frames to produce volumetric imagery in a first visualization region of the visualization area for visualization by a guest;

drive a gross movement of the mirror to position the mirror along a second portion of the track; and

drive the movement of the mirror to oscillate along the second portion of the track with the reflective surface of the mirror facing toward the display to adjust the perceived depth of the reflected image frames to produce the volumetric imagery in a second visualization region of the visualization area for visualization by the guest.

16. The visual effects system of claim 15, comprising a controller, wherein the display is configured to present the series of image frames at a refresh rate, and the controller is

configured to instruct the drive system to drive the movement of the mirror based on the refresh rate to combine the reflected image frames to form the volumetric imagery.

17. The visual effects system of claim 15, wherein the reflective surface of the mirror is spaced apart from and faces the display along a first axis, and the drive system is configured to move the mirror along the first axis toward and away from the display with the reflective surface continuing to face the display along the first axis to adjust the perceived depth of the reflected image frames in the visualization area for visualization by the guest.

18. The visual effects system of claim 17, wherein the beam splitter is positioned to direct the reflected image frames along a second axis to the visualization area.

19. The visual effects system of claim 15, comprising a compact lens configured to concentrate the series of image frames and the reflected image frames between the beam splitter and the mirror.