

skilled in the art will recognize that many changes may be made thereto without departing from the spirit and scope of the present invention. Each of these embodiments and obvious variations thereof is contemplated as falling within the spirit and scope of the claimed invention, which is set forth in the following claims.

What is claimed is:

1. A gaming machine for conducting a wagering game, comprising:

a controller for selecting a game outcome from a plurality of possible outcomes; and

a video display for generating volume-filling imagery defined by a plurality of voxels that displays the game outcome.

2. The gaming machine of claim 1, wherein said video display is a multi-layer video display which includes at least two liquid crystal layers disposed proximate one another such that the layer proximate a viewer is substantially transparent to permit imagery displayed by the layer distal the viewer to be visible through the proximate layer.

3. The gaming machine of claim 2, wherein said multi-layer video display has a resolution of at least about 640x480x2 voxels.

4. The gaming machine of claim 2, wherein said at least two liquid crystal layers are of the color active matrix type.

5. The gaming machine of claim 1, wherein said imagery is perceived to extend along a horizontal plane and a vertical plane relative to a viewer.

6. The gaming machine of claim 1, wherein said video display is a multi-layer video display having at least three display elements, a first one and a second one of said display elements lying in a first plane, said second one and a third one of said display elements lying in a second plane different from said first plane.

7. The gaming machine of claim 1, wherein said video display is a multi-layer video display including at least three substantially transparent liquid crystal layers disposed proximate one another, and further comprising an tracking device for detecting the position or movement of a viewer, said controller causing images on selected ones of said three liquid crystal layers to be altered as corresponding changes in the position or movement of the viewer are detected by said tracking device.

8. The gaming machine of claim 1, wherein said video display is a holographic display.

9. The gaming machine of claim 8, wherein said holographic display includes one of a high-resolution spatial light modulator and a scanned acousto-optic modulator.

10. The gaming machine of claim 1, wherein said video display is a volumetric 3D display that generates said volume-filling imagery by projecting a number of 2D images per second onto a rotating screen.

11. A gaming machine for conducting a wagering game, comprising:

a controller for selecting a game outcome from a plurality of possible outcomes; and

a video display for generating virtual 3D imagery that displays the game outcome.

12. The gaming machine of claim 11, wherein said virtual 3D imagery is autostereoscopic.

13. The gaming machine of claim 12, wherein said video display is a lenticular 3D display.

14. The gaming machine of claim 13, wherein said lenticular 3D display includes lenslets that are approximately semi-cylindrical in shape.

15. The gaming machine of claim 13, wherein said lenticular 3D display includes lenslets that are approximately semi-spherical in shape.

16. The gaming machine of claim 11, wherein said video display includes a substantially transparent LCD layer and an illumination plate generating a plurality of light lines, said illumination plate being separated by a distance from said LCD layer and projecting said light lines through said LCD layer.

17. The gaming machine of claim 11, wherein said virtual 3D imagery is stereoscopic.

18. The gaming machine of claim 11, wherein the wagering game is selected from a group consisting of slots, poker, keno, bingo, blackjack, and roulette.

19. A gaming machine for conducting a wagering game, comprising:

a controller for selecting a game outcome from a plurality of possible outcomes; and

a 3D video display for displaying the game outcome.

20. The gaming machine of claim 19, wherein said 3D video display displays said game outcome in true 3D.

21. The gaming machine of claim 20, wherein said 3D video display is one of a volumetric 3D display, a multi-layer display having at least two liquid crystal layers, and a holographic display.

22. The gaming machine of claim 21, wherein said volumetric 3D display generates volume-filling imagery that displays the game outcome by projecting thousands of 2D images per second onto a rotating screen.

23. The gaming machine of claim 19, wherein said 3D video display displays said game outcome in 2D but is perceived by the viewer to be 3D.

24. The gaming machine of claim 22, wherein said 3D video display is one of a lenticular display having one of generally cylindrical lenslets and generally spherical lenslets disposed over a liquid crystal layer, a parallax illumination display, and a non-autostereoscopic display.

25. A gaming machine for conducting a wagering game, comprising:

a controller for selecting a game outcome from a plurality of possible outcomes; and

a volumetric 3D video display for generating volume-filling imagery that displays the game outcome.

26. The gaming machine of claim 25, wherein the imagery is autostereoscopic.

27. The gaming machine of claim 25, wherein the volumetric 3D display generates the volume-filling imagery by projecting a number of 2D images per second onto a rotating screen.

28. The gaming machine of claim 27, wherein the volumetric 3D display projects thousands of 2D images per second onto the rotating screen.

29. The gaming machine of claim 27, wherein the screen rotates at a rotational speed of at least 500 revolutions per minute.

30. The gaming machine of claim 25, wherein the volumetric 3D display provides at least one slice per degree and a slice resolution of at least 500 pixelx500 pixel.