

manner. For instance, the input button may be shown sinking into a surface from which it protrudes as if it were physically depressed. In FIG. 12 D, the input button 159 is shown in a depressed position in the 3-D gaming environment. In FIG. 12 E, the depressed button is rendered in a photograph 162 shown in the game window 161.

[0158] FIG. 13 is a flow chart depicting a method of detecting input button collisions for input buttons modeled in a 3-D gaming environment on a gaming machine. In 1300, one or more 3-D models of input buttons are generated in a 3-D gaming environment. In 1302, a 3-D surface in the 3-D gaming environment is selected that includes at least portion of one or more input buttons modeled in the 3-D gaming environment. In 1304, a two-dimensional projection surface is rendered from the selected 3-D surface in the gaming environment. As noted above, the 3-D surface may be considered a 3-D object and a 2-D projection surface may be considered a 2-D image. In 1306, the rendered two-dimensional projection surface is displayed to at least one display surface on a gaming machine.

[0159] In 1308, at least one or the one or more input buttons modeled in the 3-D gaming environment are activated. In 1310, an input location corresponding to a 2-D coordinate on a display screen is received. In 1311, an input line is generated in the 3-D gaming environment based on the coordinate transformation used to render the two-dimensional projection surface in 1304. In 1312, the input line is compared to 3-D surface locations in the 3-D gaming environment.

[0160] In 1314, when a collision between the input line and an input buttons in the 3-D gaming environment are not detected, the screen input is ignored by the gaming machine. In 1315, when a collision between the input line and an input button has been detected, the gaming machine determines whether the input button is active. When the input button is not active, the screen input is ignored by the gaming machine. In 1316, when the input button is active, the gaming machine may execute the action specified by the input button. For instance, a game of chance may initiated on the gaming machine.

[0161] Although the foregoing invention has been described in some detail for purposes of clarity of understanding, it will be apparent that certain changes and modifications may be practiced within the scope of the appended claims. For instance, while the gaming machines of this invention have been depicted as having top box mounted on top of the main gaming machine cabinet, the use of gaming devices in accordance with this invention is not so limited. For example, gaming machine may be provided without a top box or a secondary display. Both of these types of gaming machines may be modeled in a virtual gaming environment stored on a gaming machine.

What is claimed is:

1. In a gaming machine including a master gaming controller, a display device and a memory device, a method of playing a game of chance, the method comprising:

- receiving a wager for one or more games of chance controlled by the master gaming controller on the gaming machine;
- determining a game outcome for each of the one or more games of chance;

rendering one or more two-dimensional images derived from a three-dimensional object in a three-dimensional gaming environment stored in the memory device on the gaming machine; and

displaying the one or more rendered two-dimensional images to the display device on the gaming machine.

2. The method of claim 1, further comprising:

rendering a game outcome presentation for at least one of the games of chance in the 3-D gaming environment and capturing the game outcome presentation on the one or more two-dimensional images.

3. The method of claim 1, further comprising:

rendering a plurality of game outcome presentations in the 3-D gaming environment and capturing two or more of the game outcome presentations on at least one of the two-dimensional images.

4. The method of claim 1, further comprising:

rendering a gaming machine maintenance operation in the 3-D gaming environment and capturing the gaming machine maintenance operation on the one or more two-dimensional images.

5. The method of claim 1, wherein the gaming machine maintenance operation is replacing printing media in a printer located on the gaming machine.

6. The method of claim 1, further comprising:

rendering a gaming machine operational feature in the 3-D gaming environment and capturing the gaming machine operation feature on the one or more two-dimensional images.

7. The method of claim 6, wherein the gaming machine operational feature is selected from the group consisting of inserting a player tracking card in a card reader on the gaming machine, entering an identification code on the gaming machine, pressing an input button on the gaming machine, inserting a printed ticket in a bill validator on the gaming machine and using an electronic key with a gaming device connected to the gaming machine.

8. The method of claim 1, further comprising:

rendering an attract mode feature in the 3-D gaming environment and capturing the attract mode feature on the one or more two-dimensional images wherein the attract mode feature is at least one of advertising, upcoming events, entertainment services and food services.

9. The method of claim 1, further comprising:

rendering a promotional feature in the 3-D gaming environment and capturing the promotional feature on the one or more two-dimensional images.

10. The method of claim 1, further comprising:

rendering casino information in the 3-D gaming environment and capturing the casino information on the one or more two-dimensional images.

11. The method of claim 1, further comprising:

rendering a bonus game presentation in the 3-D gaming environment and capturing the bonus game presentation on the one or more two-dimensional images.

12. The method of claim 1, wherein the three-dimensional position of the 3-D object is time varying.