

the game of chance. In another embodiment, the portion of indices may comprise a first index from the sequence of indices and the randomly selected index from the sequence of indices where the portion of indices that are drawn include a subset of the indices between the first index and the randomly selected index in the sequence of indices. Again, the first index from the sequence of indices may be determined from a previous game of chance generated on the game of chance.

[0020] In other embodiments, the method may further comprise receiving an input signal from a first input device on the gaming machine where the input signal provides information for altering the game outcome presentation for the game of chance. For example, the input signal may be for one of stopping or starting the motion of the one or more 3-D objects or the input signal may be for altering a motion of the one or more 3-D objects. The input signal may be generated from a touch screen.

[0021] In yet another embodiment, the method may further comprise applying motions to a plurality of 3-D objects in the 3-D gaming environment where the motion of each 3-D object begins at an object source in the 3-D gaming environment. A position of the object source in the 3-D gaming environment may change in time. Further, the motion of first 3-D object may originate at a first object source and the motion of a second 3-D object originates at a second object source at a different position from the first object source. In addition, the method may further comprise 1) applying motions to a plurality of 3-D objects in the 3-D gaming environments wherein two or more objects are capable of colliding and 2) detecting a collision between two or more 3-D objects in the 3-D gaming environment.

[0022] In other embodiments, the method may further comprise 1) determining the award of indicia of credit using the one or more randomly selected indices wherein the gaming machine is capable of the award of the indicia of credit via the output device, 2) 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 and 3) receiving an input signal to initiate one or more games of chance.

[0023] Another aspect of the present invention provides a second method of generating a game of chance in a gaming machine including a master gaming controller, a display device and a memory device. The method may be generally characterized as comprising: 1) receiving a wager for the game of chance controlled by the master gaming controller on the gaming machine where the gaming machine is capable of receiving indicia of credit for the wager from an input device coupled to the gaming machine and outputting indicia of credit from an output device coupled to the gaming machine; 2) determining randomly a final state on each of a plurality of virtual reel strips; 3) rendering a plurality of two-dimensional (2-D) images comprising the surfaces drawn with the symbols from the virtual reel strips as a game outcome presentation for the game of chance where information used to generate the surfaces and the 3-D gaming environment is stored in the memory device on the gaming machine; and 4) displaying the one or more rendered 2-D images to the display device on the gaming machine where the 2-D images display the sequence of symbols from each of the virtual reel strips. In the method for each virtual

reel strip, a sequence of symbols to display from the virtual reel strip may be determined where each of the sequence of symbols comprises at least one of i) a number of symbols prior to the final state on the virtual reel strip; ii) a number of symbols after the final state on the virtual reel strip; or iii) combinations thereof and the sequence of symbols may be drawn over time on a surface defined in a 3-D gaming environment.

[0024] In particular embodiments, the method may further comprise determining a motion for each of the surfaces in the 3-D gaming environment; and, while rendering the plurality of 2-D images, applying the determined motion for each of the surfaces in the 3-D gaming environment where the motion for each of the surfaces is captured in at least a portion of the plurality of the 2-D images. In addition, when the 2-D images are viewed in a sequence, the rendered symbols may appear to move along a linear path from a top of the display screen to the bottom of the display screen. The surface may be one of a planar rectangular surface or a curved portion of an outside of a cylinder. In addition, three virtual reel strips may be mapped to three different surfaces or five virtual reel strips may be mapped to five different surfaces. Further, a number of symbols displayed in each game outcome presentation can be a constant.

[0025] In another embodiment, the method may further comprise 1) generating at least one of a flat surface or a curved surface divided into a total number of segments of equal area at first position in the 3-D gaming environment; 2) drawing in each of the number of segments of the flat surface or the curved surface a first subset of the sequence of symbols; 3) moving the flat surface or the curved surface from the first position by a distance equal to a height of one of the surface segments along surface while rendering the plurality of 2-D images, and next, a) regenerating the flat surface or the curved surface at the first position in the 3-D gaming environment; b) redrawing in each of the number of segments of the flat surface or the curved surface a second subset of the sequence of symbols; c) moving the flat surface or the curved surface from the first position by the distance equal to the height of one of the surface segments while rendering the plurality of 2-D images; where the first subset and the second subset are defined so that when the plurality of 2-D images capturing the movement of the generated surfaces are viewed on the display screen, the symbols appear to enter and to leave the display screen in an order specified by the sequence of symbols for each virtual reel strip.

[0026] In the method of the paragraph above, a sequence in the first subset and a sequence in the second subset may overlap. Further, the rate of movement or the direction of movement of the surfaces may vary over time. In particular, the movement of the flat surface or the curved surface may be specified so that 1) a rate of movement of the symbols appears to increase and then decrease during the game outcome presentation when the plurality of 2-D images capturing the movement of the generated surfaces are viewed on the display screen, 2) the symbols on the display screen appear to oscillate above and below their final positions prior to stopping when the plurality of 2-D images capturing the movement of the generated surfaces are viewed on the display screen, 3) the symbols on the display screen, prior to moving in a first direction appear to move slightly from their initial position in a direction opposite of