

an account associated with a tracking card. A switch 335 allows the gaming device to be shut off. A variety of gaming device systems are possible, and it is understood that the devices illustrated in FIGS. 1A-1E, FIGS. 2A-2B, and FIG. 3 are merely examples.

[0041] FIG. 4A is a schematic illustration of an example of a projected-capacitance sensor system 400 coupled to a processor 425. The sensor system 400 includes a sensor grid 405 and one or more layers of dielectric material 406. The sensor grid 405 includes a plurality of conductors 410. In an example, the sensor grid 405 includes a first group of conductors 415 and a second group of conductors 420 that is separated from the first group of conductors by a layer of dielectric material 430, shown in FIG. 4B. The conductors 410 shown in FIGS. 4A and 4B are schematic illustrations and are not drawn to scale. In an example, the first group of conductors 415 is orthogonal to the second group of conductors 420. In an example, the conductors 410 are assembled in a laminated structure between three layers of dielectric material 430, 435, 440, as shown in FIG. 4B. In an example, the layers 430, 435, 440 are flexible dielectric film, and the layers and conductors together form a flexible sensor film. In another example, one or more of the layers 430, 435, 440 is glass. In an example, the conductors are deposited, embedded, or assembled into a glass structure. In an example, the conductors 410 are made from silver or a metal oxide such as indium oxide.

[0042] A low-voltage AC signal is applied to the conductors 410. The low-voltage AC signal creates an electrostatic field. When a conductive object is placed proximate the sensor grid 405, a capacitance forms between the object and one or more conductors 410 in the sensor grid 405, which disturbs the electric field. The disturbance of the electric field by the conductive object is detectable through two or more of the conductors. A processor circuit 425 that is electrically coupled to the conductors determines the location of the object relative to the conductors 410. In an example, the processor circuit 425 also administers the wagering game.

[0043] FIG. 5A shows a side-view of a proximity-sensitive film 501 that includes a projected capacitance sensor system, such as the system 400 shown in FIGS. 4A-4B. The proximity-sensitive film is coupled to a layer of dielectric material 505. A conductive object 520 is detectable through the layer of dielectric material 505 by the proximity-sensitive film 501. In an example, the conductive object is a finger 520. The proximity-sensitive film 501 is electrically coupled to a processor 540. In an example, the sensor film 501 and one or more layers of dielectric material 530 are mounted in a gaming machine. In an example, the layer of dielectric material protects the proximity-sensitive film by providing a barrier between the sensor film and the outside environment proximate the outer surface 530 of the layer of dielectric material. In an example, the layer of dielectric material is a glass plate. In an example, an optional second layer of dielectric material 510, such as a second glass plate or a front surface of a display, is provided behind the sensor film 501, so that the sensor film is sandwiched between the two layers of dielectric materials. In another example, shown in FIG. 5B, conductors 525, 530 are integrated into the layer of dielectric material 505. The structures shown in FIGS. 4A, 4B, 5A, and 5B are schematic representations and are not necessarily shown to scale.

[0044] FIG. 6 shows a schematic illustration of proximity-sensitive input device 605 assembled with an exemplary volumetric display 610. In an example, the volumetric display 610 includes a hollow transparent sphere 615 and a rotating projection screen 620 inside the sphere. One or more high-speed projectors displays an image on the rotating screen 620 to create the illusion of a three-dimensional object in the sphere 615. In an example, the sphere 615 is made of glass. In an example, the proximity-sensitive device 605 includes a proximity-sensitive film that includes a projected-capacitance sensor grid. In an example, the proximity-sensitive film is attached to the inner surface of the glass, as shown on flat glass in FIG. 5A. In another example, a proximity-sensitive sensor grid is integrated into the glass, as shown in FIG. 5B. A conductive object such as a finger is detectable by the proximity-sensitive device through the glass sphere. The proximity-sensitive input device is coupled to a processor that receives input based upon detection of a conductive object such as a finger at a location proximate the outer surface of the sphere.

[0045] FIG. 7 illustrates a method 700 of receiving input from a projected-capacitance sensor grid. At 705, a projected-capacitance sensor grid detects the location of a conductive object such as a finger. For example, X and Y coordinates of the object are determined based upon disruption of an electric field by the presence of a conductive object proximate conductors at known X and Y coordinates. At 710, a game input is determined based upon the detected location of the conductive object. At 715, a wagering game is played using the input received from the projected-capacitance sensor grid.

[0046] FIG. 8 illustrates a method 800 of making a gaming device. At 805, a slot machine display device is mounted in an interior of a cabinet. In an example, the slot machine display device includes a mechanical stepper reel. In another example, the slot machine display device includes an electronic display device, such as a LCD display, CRT display, or volumetric display. At 810, a projected capacitance sensor grid is coupled to an inner surface of a layer of dielectric material. At 820, the layer of dielectric material is coupled to the cabinet with the inner surface of the layer of dielectric material facing the slot machine display device. The projected capacitance sensor grid is protected by the layer of dielectric material and receives an input through the layer of dielectric material. In an example, the projected capacitance sensor grid is coupled to the layer of dielectric material before the layer of dielectric material is coupled to the cabinet. In another example, the projected capacitance sensor grid is coupled to the layer of dielectric material after the layer of dielectric material is coupled to the cabinet. In an example, at least a portion of the projected capacitance sensor grid is deposited directly on the layer of dielectric material. In another example, the projected capacitance sensor grid includes layers of conductors laminated in layers of dielectric film. In an example, the laminated dielectric film is coupled to the layer of dielectric material.

[0047] Referring now to FIG. 9, in an example, a proximity-sensitive input film 905 is mounted in a cabinet 900 between a protective glass plate 910 and a flat-screen display 915, such as an LCD display. In an example, the proximity-sensitive film 905 is applied to the back side 911 of the glass plate 910. In another example, the proximity-sensitive film 905 is attached to a front surface 916 of the display 915. In