in **FIG. 8B**. The 3-D textured fonts in this example are defined by a number of triangles. These 3-D fonts may be manipulated in the same manner that any 3-D object is manipulated in the 3-D gaming environment. Once the 3D geometry is created, ActorText may submit this information to the gaming machine operating system where it is drawn on the video display **34**.

[**0205**] Turning to **FIG. 9, a** video gaming machine **2** of the present invention is shown. Machine **2** includes a main cabinet **4**, which generally surrounds the machine interior (not shown) and is viewable by users. The main cabinet includes a main door **8** on the front of the machine, which opens to provide access to the interior of the machine. Attached to the main door are player-input switches or buttons **32**, a coin acceptor **28**, and a bill validator **30**, a coin tray **38**, and a belly glass **40**. Viewable through the main door is a video display monitor **34** and an information panel **36**. The main display monitor **34** will typically be a cathode ray tube, high resolution flat-panel LCD, plasma/LED display or other conventional electronically controlled video monitor. The gaming machine **2** includes a top box **6**, which sits on top of the main cabinet **4**. A second display monitor **42** may be provided in the top box. The second display monitor may also be a cathode ray tube, high resolution flat-panel LCD or other conventional electronically controlled video monitor.

[**0206**] Typically, after a player has initiated a game on the gaming machine, the main display monitor **34** and the second display monitor **42** visually display a game presentation, including one or more bonus games, controlled by a master gaming controller (not shown). The bonus game may be included as a supplement to the primary game outcome presentation on the gaming machine **2**. The video component of the game presentation consists of a sequence of frames refreshed at a sufficient rate on at least one of the displays, **34** and **42**, such that it appears as a continuous presentation to the player playing the game on the gaming machine. Each frame rendered in 2-D on display **34** and/or **42** may correspond to a virtual camera view in a 3-D virtual gaming environment stored in a memory device on gaming machine **2**.

[**0207**] One or more video frames of the sequence of frames used in the game presentation may be captured and stored in a memory device located on the gaming machine. The one or more frames may be used to provide a game history of activities that have occurred on the gaming machine **2**. Details of frame capture for game history applications are provided co-pending U.S. application Ser. No. 09/689,498, filed on Oct. 11, 2000 by LeMay, et al., entitled, "Frame Buffer Capture of Actual Game Play," which is incorporated herein in its entirety and for all purposes.

[**0208**] Returning to the gaming machine in **FIG. 9**, the information panel **36** may be a back-lit, silk screened glass panel with lettering to indicate general game information including, for example, the denomination of bills accepted by the gaming machine (e.g. $1, $20, and $100). The bill validator **30**, player-input switches **32**, video display monitor **34**, and information panel are devices used to play a game on the game machine **2**. The devices are controlled by the master gaming controller (not shown), which is located inside the main cabinet **4** of the machine **2**.

[**0209**] In the example, shown in **FIG. 9**, the top box **6** houses a number of devices, which may be used to input player tracking information or other player identification information into the gaming machine **2**, including the bill validator **30** which may read bar-coded tickets **20**, a key pad **22**, a florescent display **16**, and a camera **44**, and a card reader **24** for entering a magnetic striped cards or smart cards. The camera **44** may be used to generate player images that are integrated into a virtual gaming environment implemented on the gaming machine. The keypad **22**, the florescent display **16** and the card reader **24** may be used to enter and display player-tracking information. In addition, other input devices besides those described above may be used to enter player identification information including a finger print recording device or a retina scanner. Methods and apparatus for capturing a player's image to a video frame is described in co-pending U.S. patent application Ser. No. 09/689,498, by LeMay et al. filed on Oct. 11, 2000 and titled "Frame Buffer Capture of Actual Game Play" is incorporated herein in its entirety and for all purposes.

[**0210**] In addition to the devices described above, the top box **6** may contain different or additional devices than those shown in the **FIG. 9**. For example, the top box may contain a bonus wheel or a backlit silk-screened panel, which may be used to add bonus features to the game being played on the gaming machine. During a game, these devices are controlled and powered, in part, by the master gaming controller circuitry (not shown) housed within the main cabinet **4** of the machine **2**.

[**0211**] Understand that gaming machine **2** is but one example from a wide range of gaming machine designs on which the present invention may be implemented. For example, not all suitable gaming machines have top boxes or player tracking features. Further, some gaming machines have only a single game display—mechanical or video, while others are designed for bar tables and have displays that face upwards. As another example, a game may be generated in on a host computer and may be displayed on a remote terminal or a remote gaming device. The remote gaming device may be connected to the host computer via a network of some type such as a local area network, a wide area network, an intranet or the Internet. The remote gaming device may be a portable gaming device such as but not limited to a cell phone, a personal digital assistant, and a wireless game player. Images rendered from 3-D gaming environments may be displayed on portable gaming devices that are used to play a game of chance. Further a gaming machine or server may include gaming logic for commanding a remote gaming device to render an image from a virtual camera in a 3-D gaming environments stored on the remote gaming device and to display the rendered image on a display located on the remote gaming device. Thus, those of skill in the art will understand that the present invention, as described below, can be deployed on most any gaming machine now available or hereafter developed.

[**0212**] Returning to the example of **FIG. 9**, when a user selects a gaming machine **2**, he or she inserts cash through the coin acceptor **28** or bill validator **30**. Additionally, the bill validator may accept a printed ticket voucher, which may be accepted by the bill validator **30** as indicia of credit. Once the gaming machine has accepted cash, credits or promotional credits, a game of chance may be wagered upon on the gaming machine. Typically, the player may use all or part of the cash entered or credit into the gaming machine to make a wager on a game play. During the course of a game,