

component within a general-purpose server **60** also preferably includes a connection to a database or other suitable storage medium **70**. Database **70** is preferably adapted to store many or all files containing pertinent data or information for a particular purpose, such as, for example, data regarding visual image data, video clips, other displayable items, and/or related data, among other potential items. Files, data and other information on database **70** can be stored for backup purposes, and are preferably accessible at one or more system locations, such as at a general-purpose server **60**, a special purpose server **61** and/or a cashier station or other sub-network location **80**, as desired.

**[0053]** In some embodiments, one or both of general-purpose server **60** and special purpose server **61** can be adapted to download various games and/or to transmit video, visual images, or other display signals to one or more gaming machines **10**. Such downloaded games can include reel-based slots type games. Such downloads of games or transmission of video, visual images, or other display signals can occur based on a request or command from a player or a casino operator, or can take place in an automated fashion by system **50**, such as via a particular prompt or trigger. In the event that display signals are transmitted, such display signals may include one or more signals intended for use on a multi-layer display.

**[0054]** While gaming system **50** can be a system that is specially designed and created new for use in a casino or gaming establishment, it is also possible that many items in this system can be taken or adopted from an existing gaming system. For example, gaming system **50** could represent an existing cashless gaming system to which one or more of the inventive components or controller arrangements are added, such as controllers, storage media, and/or other components that may be associated with a dynamic display system adapted for use across multiple gaming machines and devices. In addition to new hardware, new functionality via new software, modules, updates or otherwise can be provided to an existing database **70**, specialized server **61** and/or general-purpose server **60**, as desired. Other modifications to an existing system may also be necessary, as might be readily appreciated.

#### Single Plane Spanning Across Multiple Display Screens

**[0055]** As noted above, one problem that can be encountered with a typical multi-layer display device is the difficulty in viewing anything on the combined overall visual presentation whenever the first, second and/or additional graphical or visual displays on each of the individual screens are not coordinated or synchronized, or do not otherwise readily permit the view of displays on each screen. That is, whenever even one of the display screens within a stack of multi-layer display screens presents its own images without regard to what might be on any of the other display screens, it can be difficult or impossible to view anything at all.

**[0056]** FIGS. 4A through 4C illustrate exemplary single plane spanning techniques for the presentation of images displayed on each screen of a multi-layer display device. FIG. 4A illustrates a horizontal spanning mode and FIG. 4B illustrates a vertical spanning mode. A combined in-plane video space **425** may have a first portion **430** that may contain video data or other visual images to be displayed on a corresponding front display screen and a second portion **435** that may contain video data or other display images to be displayed on a corresponding back display screen. In this embodiment, a

horizontal spanning mode is illustrated since the first portion **430** is positioned adjacent the second portion **435** in a side-by-side orientation. Although only two portions representing two multi-layer display screens are shown for purposes of illustration, it will be readily appreciated that images for one or more additional display screens may also be provided on the combined in-plane video space **425**. For example, combined in-plane video space **425** may include a third portion (not shown) positioned in a side-by-side orientation adjacent the second portion **435** that may contain video data or other visual images to be displayed on a corresponding third display screen.

**[0057]** The size of combined in-plane video space **425** may vary. Pixel dimensions or the resolution may be matched to each multi-layer display screen size. For example, if both the front and back display screens each have a 1820×1074 resolution, then combined single plane video space **425** may have a 3640×1074 resolution.

**[0058]** In one embodiment, this may enable the use of a single logic device or controller **402** for the multi-layer displays as illustrated in FIG. 4C. Logic device may be a processor, a programmable logic device, video card having dual output ports, or the like. Screens **18** may be configured to communicate with a single controller **402**. Controller **402** may be configured to communicate with other logic devices, such as processor **332**. The display controller **402** may receive data and/or display signals from the processor **332**. The display controller **402** may also be in communication with a video processor **406** to receive data and/or display signals such as video graphic images to display on the display devices **18a**, **18b**. A more detailed description of the controller **402** is also provided in co-pending patent application Ser. No. 11/858,849, filed Sep. 20, 2007, entitled "Auto-blanking Screen For Devices Having Multi-Layer Displays", which is hereby incorporated by reference in its entirety for all purposes.

**[0059]** In one example, a single graphics chip may be used to drive both the front display screen and the back display screen. In a specific embodiment, the combined in-plane video space **425** may be programmed in Adobe Flash and implemented by an nVIDIA GeForce graphics chipsets that provide "horizontal spanning" or "vertical spanning".

**[0060]** Use of a single logic device or controller reduces cost and complexity for a gaming machine or other electronic devices and may be used on a gaming machine or other electronic device with very limited resources. Furthermore, use of a single controller may allow for better graphic designs, as one single image and/or animation may be designed and programmed to run natively according to the resolution of the combined in-plane video space, which may be at the resolution of the front display and/or the back display rather than designing two or more separate display images for separate controllers to run each individual multi-layer display.

**[0061]** Combined in-plane video space **425** may allow a single video display device (e.g., using a single video card, processor, and the like) to drive a 3-D display device with multiple layer display panels. This combined in-plane video space **425** may assist in the development of the video or other visual image output for front and back multi-layer displays since a single animation may be used. For example, only one timing series or sequence need be created and maintained—rather than two animations that need to be synchronized in time if the two displays were animated using separate video cards, processors, or the like. This also allows games to be