

may be used as an interface by casino service personnel to: a) access diagnostic menus, b) display player tracking unit status information and gaming machine status information, c) access gaming machine metering information and d) display player status information. Details of game service interfaces for the game services listed above, such as interface formats, which may be used in the present invention, are described in co-pending U.S. application Ser. No. 09/961,051, filed on Sep. 20, 2001, by Paulsen, et al., and entitled, "Game Service Interfaces For Player Tracking Touch Screen Display" which is incorporated herein in its entirety and for all purposes.

[0106] Some of the input buttons, such as 211, 212, 213 and 214 were also used in the player tracking interface display described with respect to FIGS. 4A and 4B. One advantage of the GSID 250 in FIG. 5 is that it does not have to be connected to a player tracking system or used in conjunction with a player tracking system. Thus, the gaming services usually provided through a player tracking system may be provided through the GSID 250 without the use of a player tracking system.

[0107] Another advantage of the GSID 250 is that it may enable an easier installation of the player tracking unit on the gaming machine. With a traditional player tracking unit, mounting brackets, a cabinet and a faceplate are required that allow the devices in the player tracking interface unit, such as key pad, display and card reader to be secured to the gaming machine. Then, a location must be found on exterior surface of the gaming machine for the player tracking unit that is accessible to the player and that may accommodate the interior footprint of the player tracking unit cabinet.

[0108] The size of the interior foot print of the player tracking cabinet limits the location where it may be placed on the gaming machine. Typically, the gaming machine components are tightly packaged to minimize the foot print of the gaming machine on the casino floor. Therefore, on older gaming machines, a top box (see FIG. 2) that includes additional space may be added to the gaming machine to allow for the installation of the player tracking unit. The GSID 250 may have a small or no interior footprint. For instance, in one embodiment, it may be mounted to an exterior surface or integrated into the exterior surface of an available area on the gaming machine such as the informational panel 36 (see FIG. 2). Since the GSID 250 may be used as a key pad and display for the player tracking unit, the interior footprint of a player tracking unit cabinet may be reduced from a size needed to accommodate the key pad, the display and a card reader to a size needed only to accommodate the card reader. Therefore, with size of the player tracking unit reduced, more locations on the gaming machine may be available that satisfy the interior space requirements needed to install the player tracking unit.

[0109] FIGS. 6A and 6B depicts an electro-luminescent portion 400 of the player tracking interface display 200 shown in FIG. 3A in greater detail. FIG. 6A presents a top view of symbol section 400 with three symbol regions 413, 415 and 417. In this embodiment, the individual light elements on the symbol regions of cross section 400 are electro-luminescent elements. Each electro-luminescent element is defined by a capacitor having two "conductive" plates and an electro-luminescent dielectric sandwiched there between. Each electro-luminescent element in symbol

section 400 are independently controllable. Thus, separate lines are provided to at least one of the conductive plates of each such element.

[0110] In the embodiment depicted, one plate is provided by a continuous strip of conductive material. This strip includes trace segments 405 connecting individual conductive plates 407, 409 and 411 in adjacent symbol regions 413, 415, and 417. While not depicted in FIG. 3A, traces 405 may connect additional conductive plates distributed along the player tracking interface display 200.

[0111] To simplify the illustration, electro-luminescent elements are not explicitly depicted in FIG. 6A. The electro-luminescent material associated with the symbols in regions 413, 415, and 417 define the shape of the symbol items themselves. Thus for example in region 413, the electro-luminescent dielectric element defines the one-key symbol shown. Similarly, in region 415, the electro-luminescent dielectric defines a four-key symbol and in region 417, the electro-luminescent dielectric defines a seven-key symbol.

[0112] The individual electro-luminescent elements in the various symbol regions are independently controlled by separate traces 421A-C. Each of these traces terminates in a conductive plate associated with the electro-luminescent element it controls. For example, trace 421A terminates in a conductive plate 423 which controls illumination of the one-key symbol in region 413. For example, trace 421A terminates in a conductive plate 423 which controls illumination of the one-key symbol in region 413, trace 421B terminates in a conductive plate 426 which controls illumination of the four-key symbol in region 415, and conductive trace 421C terminates in a capacitor plate 427 which controls illumination of the seven-key symbol in region 417. Preferably, the conductive traces 421 and the capacitor plates that they terminate in are made from a conductive yet transparent material. One such material is indium tin oxide.

[0113] FIG. 6B presents a cross-sectional view of symbol section 400. As shown, section 400 includes a polymeric substrate 450 made from a flexible material such as polyester. The total thickness of the cross section may be about 10-50 microns depending on the materials used. A conductive layer such as aluminum is formed on substrate 450. This layer is patterned to comprise traces 405 and lower capacitor plates such as plate 407. Next, an isolation layer 455 is formed over substrate 450 including traces 405 and capacitor plate 407. Isolation layer 455 is then patterned to define electro-luminescent regions. Within these regions, electro-luminescent dielectric elements such as element 453 are formed. On top of this structure, traces 421 and capacitor plates such as plate 423 are formed. Again, this material is preferably a transparent conductor such as indium tin oxide. This layer should be transparent so that light generated from electro-luminescent elements such as element 453 will be visible to the gaming machine player.

[0114] The entire electro-luminescent capacitor structure described until now may be covered with a printed cover strip 457. This cover strip may be transparent except where inked symbol images have been printed. Preferably, such images are silk screened onto cover strip 457. In addition, cover strip 457 may be made from a flexible material such as Mylar. The cover strip is an example of a graphics layer 806 described with respect to FIG. 1A.

[0115] FIG. 7 is a block diagram of an Organic Light Emitting Diode (OLED) 450 that may be used with the