

processed by the electronic circuitry of the computer system **650** and used to manipulate navigation or selection actions with respect to a graphical user interface being presented to the user on the display device **656**. The keyboard apparatus **658** can also include a button **664** associated with the rotational input unit **662**. As shown in **FIG. 7A**, the button **664** can be provided at a center region of the rotational input unit **662**. However, the button **664** is not required and, if provided, can be placed elsewhere, such as outside the periphery of the rotational input unit **662**.

[**0064**] **FIG. 7B** is a perspective diagram of a media player **700** in accordance with one embodiment of the present invention. The term "media player" generally refers to computing devices that are dedicated to processing media such as audio, video or other images. In one implementation, the media player is a portable computing device. Examples of media players include music players, game players, video players, video recorders, cameras and the like. These computing devices are generally portable so as to allow a user to listen to music, play games or video, record video or take pictures wherever the user travels. In one embodiment, the media player is a handheld device that is sized for placement into a pocket of the user (i.e., pocket-sized). By being pocket-sized, the user does not have to directly carry the device and therefore the device can be taken almost anywhere the user travels (e.g., the user is not limited by carrying a large, bulky and often heavy device, as in a portable computer). For example, in the case of a music player (e.g., MP3 player), a user may use the device while working out at the gym. In the case of a camera, a user may use the device while mountain climbing. Furthermore, the device may be operated by the user's hands, no reference surface such as a desktop is needed. In one implementation, the music player can be pocket-sized and rather lightweight (e.g., dimensions of 2.43 by 4.02 by 0.78 inches and a weight of 6.5 ounces) for true portability.

[**0065**] The media player **700** typically has connection capabilities that allow a user to upload and download data to and from a host device such as a general purpose computer (e.g., desktop computer or portable computer). For example, in the case of a camera, photo images may be downloaded to the general purpose computer for further processing (e.g., printing). With regard to music players, songs and playlists stored on the general purpose computer may be downloaded into the music player. In one embodiment, the media player **700** can be a pocket-sized handheld MP3 music player that allows a user to store a large collection of music.

[**0066**] As shown in **FIG. 7B**, the media player **700** includes a housing **702** that encloses various electrical components (including integrated circuit chips and other circuitry) to provide computing capabilities for the media player **700**. The integrated circuit chips and other circuitry may include a microprocessor, memory (e.g., ROM or RAM), a power source (e.g., a battery), a circuit board, a hard drive, and various input/output (I/O) support circuitry. In the case of music players, the electrical components may include components for outputting music such as an amplifier and a digital signal processor (DSP). In the case of video recorders or cameras, the electrical components may include components for capturing images such as image sensors (e.g., charge-coupled device (CCD) or complimentary oxide semiconductor (CMOS)) or optics (e.g., lenses, splitters, filters). The housing may also define the shape or form of the

media player. That is, the contour of the housing **702** may embody the outward physical appearance of the media player **700**.

[**0067**] The media player **700** also includes a display screen **704**. The display screen **704** is used to display a Graphical User Interface (GUI) as well as other information to the user (e.g., text, objects, graphics). By way of example, the display screen **704** may be a liquid crystal display (LCD). In one particular embodiment, the display screen corresponds to a high-resolution display with a white LED backlight to give clear visibility in daylight as well as in low-light conditions. Additionally, according to one embodiment, the display screen **704** can be about 2 inches (measured diagonally) and provide a 160-by-128 pixel resolution. The display screen **704** can also operate to simultaneously display characters of multiple languages. As shown in **FIG. 7B**, the display screen **704** is visible to a user of the media player **700** through an opening **705** in the housing **702**, and through a transparent wall **706** that is disposed over the opening **705**. Although transparent, the transparent wall **706** may be considered part of the housing **702** since it helps to define the shape or form of the media player **700**.

[**0068**] The media player **700** includes a rotational input device **710**. The rotational input device **710** receives a rotational input action from a user of the media player **700**. The rotational input action is used to control one or more control functions for controlling or interacting with the media player **700** (or application operating thereon). In one embodiment, the control function corresponds to a scrolling feature. The direction of scrolling can vary depending on implementation. For example, scrolling may be implemented vertically (up or down) or horizontally (left or right). For example, in the case of a music player, the moving finger may initiate a control function for scrolling through a song menu displayed on the display screen **704**. The term "scrolling" as used herein generally pertains to moving displayed data (e.g., text or graphics) across a viewing area on a display screen **704** so that at least one new item of data (e.g., line of text or graphics) is brought into view in the viewing area. In essence, the scrolling function allows a user to view sets of data currently outside of the viewing area. The viewing area may be the entire viewing area of the display screen **704** or it may be only a portion of the display screen **704** (e.g., a window frame).

[**0069**] By way of example, in the case of a music player (e.g., MP3 player), the scrolling feature may be used to help browse through songs stored in the music player. To elaborate, the display screen **704**, during operation, may display a list of media items (e.g., songs). A user of the media player **700** is able to linearly scroll through the list of media items by providing a rotational input action using the rotational input device **710**. The displayed items from the list of media items are varied commensurate with the rotational input action such that the user is able to effectively scroll through the list of media items. However, since the list of media items can be rather lengthy, the invention provides the ability for the user to rapidly traverse (or scroll) through the list of media items. In effect, the user is able to accelerate their traversal of the list of media items by providing the rotational input action at greater speeds. The direction of the rotational input action may be arranged to control the direction of scrolling.