

Instead, the top surface **57** may be reserved for buttons that have limited action and generic functions that are cross-functional, for example, power and hold switches. The top and bottom surfaces **57** are also well suited for placement of I/O and communication ports. The top surface **57** may, for example, include a headset/microphone jack and an antenna, and the bottom surface **57** may include power and data ports.

[0043] In some cases, it may be desirable to place buttons in the upper or lower regions of the side surfaces **56** out of the way of the grasping hand of the user. This may be particularly well suited when the housing **52** of the device **50** is elongated more than the standard width of a user's grasping hand. As shown in **FIG. 3B**, the hand-held device **50** includes a button **53** in the upper region on the right side surface **54** of the housing **52**. Because the button **53** is in the upper region, it tends to be out of the way of the grasping hand and therefore accidental activation is substantially eliminated. In one embodiment, the upper button **53** may be configured to switch the functionality of the multi-functional device **50**. For example, by pressing the button **53**, a new device functionality is activated, and the current device functionality is deactivated. Although the term "button" is used, it should be appreciated that the button **53** may correspond to a dial, wheel, switch, or the like.

[0044] As discussed above, the touch screen display **60** typically works in conjunction with a GUI presented on the display **50**. The GUI shows user controls on the touch screen display **60**, which in turn responds to user touches made in regions of the touch screen display **60** corresponding to the displayed user controls. The entire touch screen display **60** or only a portion may be used to show the user controls. Referring to **FIG. 3C**, for example, a GUI **70** for the electronic device **50** of **FIG. 3A** is separated into a standard region **72** and a control region **74** on the touch screen display **60**. The standard region **72** represents what would normally be displayed on the display **60** when using the electronic device **50**. That is, any standard GUI screens associated with the device **50** are displayed in the standard region **72**. For example, when the device **50** is operated with a PDA functionality, a main menu (window with a set of icons), calendar, address book or date book may be displayed in the standard region **72**.

[0045] On the other hand, the control region **74** virtually represents those physical controls **76** that would normally be physically placed on a particular type of electronic device. That is, the virtual controls **76** displayed in the control region **74** essentially mimic physical controls for a particular type of device. For example, when the device **50** is operated with a PDA functionality, the control region **74** may include virtual representations of a hand writing recognition area, a navigation pad, and the standard function buttons. The standard and control regions **72** and **74** can be positioned at any position on the display **60** (top, bottom, sides, center, etc.). For example, as shown in **FIG. 3C**, the control regions **72** and **74** may be positioned vertically relative to one another (one on top of the other) on the display **60**.

[0046] In another example, **FIG. 3D** is a diagram of a GUI **80** that can be used with the electronic device **50** when operated in a music player functionality. Again, the GUI **80** is divided into a standard region **82** and a control region **84**. Located inside the control region **84** are a virtual scroll wheel **86** and five virtual buttons **88**. Additional details on a

virtual scroll wheel **86** are provided in U.S. patent application Ser. No. 11/038,590, entitled "Mode-Based Graphical User Interfaces for Touch Sensitive Input Devices," filed on Jan. 18, 2005, which has been incorporated herein by reference.

[0047] In the embodiments of **FIGS. 3A-3D**, the electronic device **50** includes the touch screen display **60**. In additional embodiments, the electronic device **50** according to certain teachings of the present disclosure may incorporate one or more touch sensitive surfaces (not shown) on the housing **52** of the electronic device **50** itself. These touch sensitive surfaces (not shown) can provide a large surface for tracking touch inputs or can provide small-dedicated areas, such as touch buttons, for performing dedicated functions. Furthermore, the one or more touch sensitive surfaces can be used in addition to or in the alternative to the touch screen display **60** discussed in the embodiment of **FIGS. 3A-3D**.

[0048] The touch sensitive surfaces may be located on any surface of the housing **52**, any side of the housing **52**, any portion of any side of the housing **52**, or at dedicated locations on the surface of the housing **52**. For example, the touch sensitive surfaces may be located on the sides **56** or back surface **58** of the housing **52** and may even be located at the bezel (**55**; **FIGS. 3A-3B**) located at the front surface **54** of the housing **52**. In all of these cases, a large portion of the front surface **54** of the housing **52** is saved for the display **60** so that the viewing area of the hand-held electronic device **50** can be maximized.

[0049] The touch sensitive surfaces of the housing **52** may take the form of one or more touch panels that are positioned within the housing **52**. The touch sensitive surfaces may be alternatively or additionally be provided directly by the housing **52**. That is, the touch sensing components of the touch sensitive surfaces may be integrated into, incorporated into, or disposed underneath the housing **52** such that the housing **52** itself is touch sensitive and forms part of the touch sensitive surfaces (rather than using a separate touch panel). Similar to a touch screen, such touch sensitive surfaces recognize touches and the positions of the touches on the surfaces. The electronic device **50** has circuitry (not shown), which can include a controller or the like, and the circuitry interprets the touches and thereafter performs actions based on the touch events. Touch sensitive surfaces can be constructed in the same manner as a touch screen, except the surfaces need not be substantially transparent. By way of example, the touch sensitive surfaces for the electronic device **50** may generally correspond to the touch sensitive housing described in detail in U.S. patent application Ser. No. 11/115,539, entitled "Hand-Held Electronic Device with Multiple Touch Sensing Devices," filed Apr. 26, 2005, which has been incorporated herein by reference in its entirety.

[0050] Having a display **60** that encompasses almost the entire front surface **54** of the housing **52** of the electronic device **50** has several advantages discussed herein. In addition, having one or more touch sensitive surfaces on various portions of the housing **52** that allow a user to control the electronic device **50** can also provide several advantages discussed herein. As alluded to above, one or more touch sensitive surfaces can be located on the bezel **55** (i.e., the portion of the front surface **54** of the housing **52** that