can be implemented on a single-chip, multiple chips or multiple electrical components. For example, various architectures can be used for the processor **56**, including dedicated or embedded processor, single purpose processor, controller, ASIC, and so forth.

[**0021**] In most cases, the processor **56** together with an operating system operates to execute computer code and produce and use data. Operating systems are generally well known and will not be described in greater detail. By way of example, the operating system may correspond to Mac OS X, OS/2, DOS, Unix, Linux, Palm OS, and the like. The operating system can also be a special purpose operating system, such as may be used for limited purpose appliance-type computing devices. The operating system, other computer code and data may reside within a memory block **58** that is operatively coupled to the processor **56**. Memory block **58** generally provides a place to store computer code and data that are used by the computer system **50**. By way of example, the memory block **58** may include Read-Only Memory (ROM), Random-Access Memory (RAM), hard disk drive and/or the like. The information could also reside on a removable storage medium and loaded or installed onto the computer system **50** when needed. Removable storage mediums include, for example, CD-ROM, PC-CARD, memory card, floppy disk, magnetic tape, and a network component.

[**0022**] The computer system **50** also includes a display device **68** that is operatively coupled to the processor **56**. The display device **68** may be a liquid crystal display (LCD) (e.g., active matrix, passive matrix and the like). Alternatively, the display device **68** may be a monitor such as a monochrome display, color graphics adapter (CGA) display, enhanced graphics adapter (EGA) display, variable-graphics-array (VGA) display, super VGA display, cathode ray tube (CRT), and the like. The display device may also correspond to a plasma display or a display implemented with electronic inks.

[**0023**] The display device **68** is generally configured to display a graphical user interface (GUI) **69** that provides an easy to use interface between a user of the computer system and the operating system or application running thereon. Generally speaking, the GUI **69** represents, programs, files and operational options with graphical images. The graphical images may include windows, fields, dialog boxes, menus, icons, buttons, cursors, scroll bars, etc. Such images may be arranged in predefined layouts, or may be created dynamically to serve the specific actions being taken by a user. During operation, the user can select and activate various graphical images in order to initiate functions and tasks associated therewith. By way of example, a user may select a button that opens, closes, minimizes, or maximizes a window, or an icon that launches a particular program. The GUI **69** can additionally or alternatively display information, such as non interactive text and graphics, for the user on the display device **68**.

[**0024**] The computer system **50** also includes an input device **70** that is operatively coupled to the processor **56**. The input device **70** is configured to transfer data from the outside world into the computer system **50**. The input device **70** may for example be used to perform tracking and to make selections with respect to the GUI **69** on the display **68**. The input device **70** may also be used to issue commands in the computer system **50**. The input device **70** may include a touch sensing device configured to receive input from a user's touch and to send this information to the processor **56**.

[**0025**] By way of example, the touch-sensing device may correspond to a touchpad or a touch screen. In many cases, the touch-sensing device recognizes touches, as well as the position and magnitude of touches on a touch sensitive surface. The touch sensing means reports the touches to the processor **56** and the processor **56** interprets the touches in accordance with its programming. For example, the processor **56** may initiate a task in accordance with a particular touch. A dedicated processor can be used to process touches locally and reduce demand for the main processor of the computer system. The touch sensing device may be based on sensing technologies including but not limited to capacitive sensing, resistive sensing, surface acoustic wave sensing, pressure sensing, optical sensing, and/or the like. Furthermore, the touch sensing means may be based on single point sensing or multipoint sensing. Single point sensing is capable of only distinguishing a single touch, while multipoint sensing is capable of distinguishing multiple touches that occur at the same time.

[**0026**] The input device **70** may be a touch screen that is positioned over or in front of the display **68**. The touch screen **70** may be integrated with the display device **68** or it may be a separate component. The touch screen **70** has several advantages over other input technologies such as touchpads, mice, etc. For one, the touch screen **70** is positioned in front of the display **68** and therefore the user can manipulate the GUI **69** directly. For example, the user can simply place their finger over an object to be controlled. In touch pads, there is no one-to-one relationship such as this. With touchpads, the touchpad is placed away from the display typically in a different plane. For example, the display is typically located in a vertical plane and the touchpad is typically located in a horizontal plane. In addition to being a touch screen, the input device **70** can be a multipoint input device. Multipoint input devices have advantages over conventional singlepoint devices in that they can distinguish more than one object (finger). Singlepoint devices are simply incapable of distinguishing multiple objects. By way of example, a multipoint touch screen, which can be used herein, is shown and described in greater detail in copending and commonly assigned U.S. patent application Ser. No. 10/840,862, which is hereby incorporated herein by reference.

[**0027**] The computer system **50** also includes capabilities for coupling to one or more I/O devices **80**. By way of example, the I/O devices **80** may correspond to keyboards, printers, scanners, cameras, speakers, and/or the like. The I/O devices **80** may be integrated with the computer system **50** or they may be separate components (e.g., peripheral devices). In some cases, the I/O devices **80** may be connected to the computer system **50** through wired connections (e.g., cables/ports). In other cases, the I/O devices **80** may be connected to the computer system **80** through wireless connections. By way of example, the data link may correspond to PS/2, USB, IR, RF, Bluetooth or the like.

[**0028**] Particular processing within a touch-screen based computer is now described, where the processing accomplishes execution of an application as well as providing a display on the touch screen of the computer. The display