formed by remote processing devices that are linked through a communications network in a distributed computing environment; programs may be located in both local and remote memory storage devices. To summarize, any computer system having a plurality of environment sensors, a plurality of output elements to provide notifications to a user and a plurality of notification event types may incorporate embodiments of the present invention.

FIG. **6**B is a block diagram illustrating the architecture of one embodiment of a mobile computing device. That is, the mobile computing device **600** can incorporate a system (i.e., an architecture) **602** to implement some embodiments. In one embodiment, the system **602** is implemented as a "smart phone" capable of running one or more applications (e.g., browser, e-mail, calendaring, contact managers, messaging clients, games, and media clients/players). In some embodiments, the system **602** is integrated as a computing device, such as an integrated personal digital assistant (PDA) and wireless phone.

One or more application programs **666** may be loaded into the memory **662** and run on or in association with the operating system **664**. Examples of the application programs include phone dialer programs, e-mail programs, personal information management (PIM) programs, word processing programs, spreadsheet programs, Internet browser programs, messaging programs, diagramming applications, and so forth. The system **602** also includes a non-volatile storage area **668** within the memory **662**. The non-volatile storage area **668** may be used to store persistent information that should not be lost if the system **602** is powered down. The application programs **666** may use and store information in the non-volatile storage area **668**, such as e-mail or other messages used by an e-mail application, and the like. A synchronization application (not shown) also resides on the system **602** and is programmed to interact with a corresponding synchronization application resident on a host computer to keep the information stored in the non-volatile storage area **668** synchronized with corresponding information stored at the host computer. As should be appreciated, other applications may be loaded into the memory **662** and run on the mobile computing device **600**, including the self-describing file, the method of creating a self-describing file, and the method of preserving unknown file contents disclosed herein.

The system **602** has a power supply **670**, which may be implemented as one or more batteries. The power supply **670** might further include an external power source, such as an AC adapter or a powered docking cradle that supplements or recharges the batteries.

The system **602** may also include a radio **672** that performs the function of transmitting and receiving radio frequency communications. The radio **672** facilitates wireless connectivity between the system **602** and the "outside world", via a communications carrier or service provider. Transmissions to and from the radio **672** are conducted under control of the operating system **664**. In other words, communications received by the radio **672** may be disseminated to the application programs **666** via the operating system **664**, and vice versa. The radio **672** allows the system **602** to communicate with other computing devices, such as over a network. The radio **672** is one example of communication media. Communication media may typically be embodied by computer readable instructions, data structures, program modules, or other data in a modulated data signal, such as a carrier wave or other transport mechanism, and includes any information delivery media. The term "modulated data signal" means a signal that has one or more of its characteristics set or changed in such a manner as to encode information in the signal. By way of example, and not limitation, communication media includes wired media such as a wired network or direct-wired connection, and wireless media such as acoustic, RF, infrared and other wireless media. The term computer readable media as used herein includes both storage media and communication media.

This embodiment of the system **602** provides notifications using the visual indicator **620** that can be used to provide visual notifications and/or an audio interface **674** producing audible notifications via the audio transducer **625**. In the illustrated embodiment, the visual indicator **620** is a light emitting diode (LED) and the audio transducer **625** is a speaker. These devices may be directly coupled to the power supply **670** so that when activated, they remain on for a duration dictated by the notification mechanism even though the processor **660** and other components might shut down for conserving battery power. The LED may be programmed to remain on indefinitely until the user takes action to indicate the powered-on status of the device. The audio interface **674** is used to provide audible signals to and receive audible signals from the user. For example, in addition to being coupled to the audio transducer **625**, the audio interface **674** may also be coupled to a microphone to receive audible input, such as to facilitate a telephone conversation. In accordance with embodiments of the present invention, the microphone may also serve as an audio sensor to facilitate control of notifications, as will be described below. The system **602** may further include a video interface **676** that enables an operation of an on-board camera **630** to record still images, video stream, and the like.

A mobile computing device **600** implementing the system **602** may have additional features or functionality. For example, the mobile computing device **600** may also include additional data storage devices (removable and/or non-removable) such as, magnetic disks, optical disks, or tape. Such additional storage is illustrated in FIG. **6**B by the non-volatile storage area **668**. Computer storage media may include volatile and nonvolatile, removable and non-removable media implemented in any method or technology for storage of information, such as computer readable instructions, data structures, program modules, or other data.

Data/information generated or captured by the mobile computing device **600** and stored via the system **602** may be stored locally on the mobile computing device **600**, as described above, or the data may be stored on any number of storage media that may be accessed by the device via the radio **672** or via a wired connection between the mobile computing device **600** and a separate computing device associated with the mobile computing device **600**, for example, a server computer in a distributed computing network, such as the Internet. As should be appreciated such data/information may be accessed via the mobile computing device **600** via the radio **672** or via a distributed computing network. Similarly, such data/information may be readily transferred between computing devices for storage and use according to well-known data/information transfer and storage means, including electronic mail and collaborative data/information sharing systems.

FIG. **7** illustrates one embodiment of the architecture of a system for providing the self-describing file **100** and the methods disclosed herein to one or more client devices, as described above. Content developed, interacted with or edited in association with the self-describing file **100** may be stored in different communication channels or other storage types. For example, various documents may be stored using a directory service **722**, a web portal **724**, a mailbox service **726**, an instant messaging store **728**, or a social networking site **730**.