

schematically in **FIGS. 3A and 3B**. Operations performed by the point-of-sale device are generally coordinated by a controller **304**, which is provided in electrical communication with a number of components. Such components include an antenna **312** for transmitting and receiving electromagnetic signals and a wireless chip **316** that provides instructions for implementing a wireless protocol, such as a Wi-Fi protocol. The wireless chip **316** performs a more active role than the antenna **312**, determining what electromagnetic signals to transmit over the antenna **312** and/or interpreting electromagnetic signals that are received by the antenna **312**. A port may be provided to permit the exchange of wired communications with the point-of-sale device **204**, one example of the port being a TCP/IP port that enables the point-of-sale device **204** to engage in Internet communications. A printer interfaced with the controller **304** permits receipts and other documents to be printed by the point-of-sale device **204**. In addition to such components, the controller may be interfaced with a memory **308**, allowing the point-of-sale device **204** to store data in implementing methods of the invention.

[0032] The wireless device **224** similarly includes a controller **340** for coordinating the functions of a variety of components and includes a memory **344** interfaced with the controller **340** for storing data. Several of the components that may be controlled by the controller **340** include components used for standard functionality of the wireless device **224**. For instance, in embodiments where the wireless device **224** is a cellular telephone, the controller may be interfaced with a microphone **352**, a speaker **356**, and an antenna **348**. The microphone **352** and speaker **356** may be used to receive and amplify voice signals that are exchanged by users of the cellular telephone. The antenna **348** may be used to transmit and receive electromagnetic signals that correspond to encoded versions of the voice signals being exchanged.

[0033] Other components may include a global positioning system **360** that may be used to locate a position of the wireless device. Such a global positioning system **360** functions by transmitting an electromagnetic signal to an orbiting satellite that identifies a relative location of the source of the signal and correlates that relative position with a geographical map of a region of the Earth. A radio-frequency identification ("RFID") chip may also be provided to transmit an electromagnetic identification signal that uniquely identifies the wireless device. While an RFID chip operates specifically at radio frequencies, the invention is not limited to operation at such frequencies and may use any electromagnetic identification signal. A wireless chip **364** similar to the wireless chip **316** provided in the point-of-sale device **204** may be provided to encode and decode transmissions sent and received electromagnetically with the antenna **348**. Because transmissions involving the account transaction mechanisms include sensitive financial data such as account numbers, an cryptography chip **372** may also be provided to allow encryption of data sent by the wireless device and decryption of data received by the wireless device. Furthermore, additional security may be provided through use of a biometric system **376** that functions to use biometric data in verifying the identity of a user of the wireless device. The biometric system **376** includes an instruction module that implements an identification technique and may include a number of subcomponents that are used in collecting data to be used in performing such

identifications. For example, the biometric system **376** may comprise a camera that may be used to record optical and other visible features of a user, such as a facial geometry or retinal structure that may be used in identifying the user. Alternatively or in addition, the biometric system **376** may comprise a voice-recognition chip **384** having the capability of analyzing frequency-change patterns in acoustic signals to correlate those patterns with known patterns of the individual to be identified. Similarly, the biometric system **376** may additionally or alternatively comprise a fingerprint scanner **388** that receives fingerprint patterns on a sensor provided on an exterior of the wireless device and correlates those patterns with a recorded pattern known to be associated with a particular user. As described below, in different embodiments the reference biometric patterns may be stored locally on the memory **308** so that identification is performed locally by the wireless device, or may be stored remotely so that the identification is performed remotely.

[0034] The structure described in connection with **FIGS. 2-3B** may thus be used in implementing methods for processing transactions. To use a particular account transaction mechanism, the wireless device may undergo an initiation phase. Such initiation is illustrated with the flow diagram of **FIG. 4A**. After such an initiation, the device may be used to execute transactions using the established account transaction mechanism. Such a process is illustrated with the flow diagram of **FIG. 4B**.

[0035] The initiation of the device may begin at block **404** of **FIG. 4A** with the purchase of the wireless device by customer. Credentials are provided to the financial institution that will maintain an account for the customer at block **408**. Typically such credentials comprise an identification of the wireless device, the name and address of the customer, and the like. In some cases, the credentials may include a biometric identification that is stored by the financial institution as a mechanism for future identifications of the customer. In some instances, the wireless device may be purchased directly from the financial institution or from an affiliate of the financial institution so that credential information is automatically collected at the time of purchase and not separately provided by the customer. Identification of the wireless device may be provided in the form of a code that identifies the GPS chip **360** and/or RFID chip **364**, perhaps in combination with a serial number.

[0036] At block **412**, the customer contacts the financial institution with the wireless device, such as by making a cellular telephone call with the wireless device in embodiments where it comprises a cellular telephone. The customer provides account information at block **416** to identify the account to be added to the wireless device. The financial institution verifies the location of the wireless device during this interaction, such as by checking the GPS signal provided by the GPS chip **360**. A requirement for the initiation to be completed may be that the location of the wireless device during the call from the customer must be at the address identified in the credential information as being the address for the customer. For instance, the address may be the billing address for the customer, with the location verification being performed to ensure that the call is made from that billing address. In addition, in some embodiments the wireless device may collect biometric information from the customer with the biometric system **376** and transmit such biometric information to the financial institution during