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(54) Title: TOUCH SCREEN DEVICE, METHOD, AND GRAPHICAL USER INTERFACE FOR PROVIDING MAPS, DIRECTIONS, AND LOCATION-BASED INFORMATION

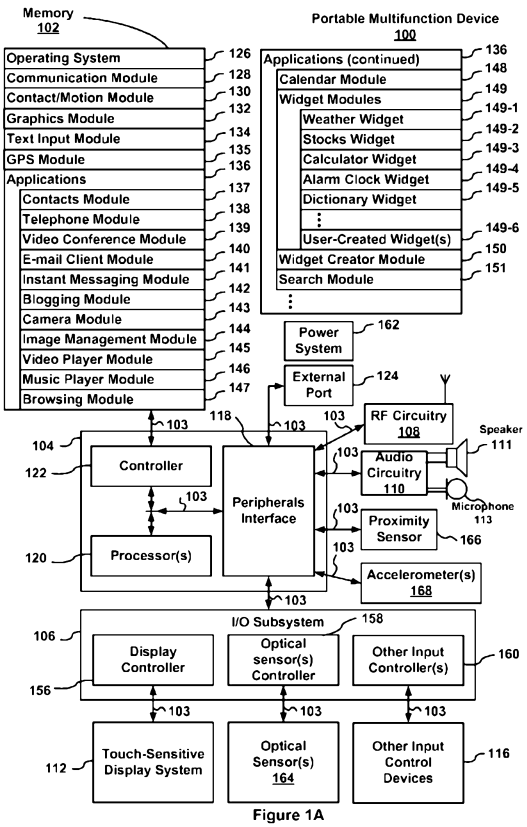

Figure 1A

(57) Abstract: A device, method, and graphical user interface for providing maps, directions, location-based information, and/or other applications on a touch screen display are disclosed.

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Touch Screen Device, Method, and Graphical User Interface for Providing Maps, Directions, and Location-Based Information

TECHNICAL FIELD

[0001] The disclosed embodiments relate generally to computing devices with touch screen displays, and more particularly, to devices with touch screen displays that provide maps, directions, location-based information, and/or other applications.

BACKGROUND

[0002] As portable electronic devices become more compact, and the number of functions performed by a given device increase, it has become a significant challenge to design a user interface that allows users to easily interact with a multifunction device. This challenge is particular significant for handheld portable devices, which have much smaller screens than desktop or laptop computers. This situation is unfortunate because the user interface is the gateway through which users receive not only content but also responses to user actions or behaviors, including user attempts to access a device's features, tools, and functions. Some portable communication devices (e.g., mobile telephones, sometimes called mobile phones, cell phones, cellular telephones, and the like) have resorted to adding more pushbuttons, increasing the density of push buttons, overloading the functions of pushbuttons, or using complex menu systems to allow a user to access, store and manipulate data. These conventional user interfaces often result in complicated key sequences and menu hierarchies that must be memorized by the user.

[0003] Many conventional user interfaces, such as those that include physical pushbuttons, are also inflexible. This is unfortunate because it may prevent a user interface from being configured and/or adapted by either an application running on the portable device or by users. When coupled with the time consuming requirement to memorize multiple key sequences and menu hierarchies, and the difficulty in activating a desired pushbutton, such inflexibility is frustrating to most users.

[0004] For example, mapping applications are available for mobile phones (e.g., Google maps for mobile, available at www.google.com/gmm). But navigating in such applications using physical push buttons (e.g., the number keys on a hard keyboard) or touch

screens in existing mobile phones is cumbersome for most users. Thus, at present, relatively few people use mapping applications in mobile phones and other portable devices. Similar problems arise in selecting application options in other applications on computing devices with touch screen displays.

[0005] Accordingly, there is a need for devices with touch screen displays that have more transparent and intuitive user interfaces for providing maps, directions, and location-based information. Such interfaces increase the effectiveness, efficiency and user satisfaction with such devices.

[0006] Additionally, there is a need for computing devices with touch screen displays that have more transparent and intuitive user interfaces for displaying and selecting application options. Such interfaces increase the effectiveness, efficiency and user satisfaction with such devices.

SUMMARY

[0007] The above deficiencies and other problems associated with user interfaces for devices with touch screen displays are reduced or eliminated by the disclosed multifunction device. In some embodiments, the device is portable. In some embodiments, the device has a touch-sensitive display (also known as a "touch screen") with a graphical user interface (GUI), one or more processors, memory and one or more modules, programs or sets of instructions stored in the memory for performing multiple functions. In some embodiments, the user interacts with the GUI primarily through finger contacts and gestures on the touch-sensitive display. In some embodiments, the functions may include providing maps and directions, telephoning, video conferencing, e-mailing, instant messaging, blogging, digital photographing, digital videoing, web browsing, digital music playing, and/or digital video playing. Instructions for performing these functions may be included in a computer readable storage medium or other computer program product configured for execution by one or more processors.

[0008] In accordance with some embodiments, a device having a touch screen display is configured to display a map application, which is configured to separately display a list of bookmarked locations, a list of recent queries by a user, and a list of contacts for the user. In response to detecting a finger gesture on an input icon associated with a search term input area, the map application displays at least one of the list of bookmarked locations, the list of

recent queries by a user, and the list of contacts for the user. In response to detecting a finger gesture on a bookmarked location in the list of bookmarked locations, an area corresponding to the bookmarked location is displayed on a digital map. In response to detecting a finger gesture on a recent query in the list of recent queries by the user, one or more results corresponding to the recent query are displayed on a digital map. And in response to detecting a finger gesture on a contact in the list of contacts, an area associated with the contact is displayed on a digital map.

[0009] In accordance with some embodiments, a device having a touch screen display is configured to display a map application. The map application is configured to simultaneously display a bookmark list display icon, a recent query list display icon, and a contact list display icon, and is also configured to separately display a list of bookmarked locations, a list of recent queries by a user, and a list of contacts for the user. In response to detecting a finger gesture on the bookmark list display icon, the map application displays the list of bookmarked locations. In response to detecting a finger gesture on a bookmarked location in the list of bookmarked locations, the map application displays an area corresponding to the bookmarked location on a digital map. In response to detecting a finger gesture on the recent query list display icon, the map application displays the list of recent queries by the user. And in response to detecting a finger gesture on a recent query in the list of recent queries by the user, the map application displays one or more results corresponding to the recent query on a digital map.

[0010] In accordance with some embodiments, a computing device having a touch screen display is configured to operate as follows. In response to detecting a finger gesture on a route search initiation icon, the device sends a first location and a second location to a remote computer, receives routing information between the first location and the second location, and displays at least some of the routing information between the first location and the second location on a digital map. In response to detecting a finger gesture on a list icon, the device displays an itemized list of the routing information, and in response to detecting a finger gesture on a particular item in the itemized list of the routing information, the device shows a corresponding portion of routing information on the digital map.

[0011] In accordance with some embodiments, a computer-implemented method is performed at a computing device with a touch screen display. In the method, a map

application is displayed. The map application is configured to display a map. A first finger gesture on an icon for adding a user-moveable location marker to the map is detected. The user-moveable location marker is displayed on the map. In response to detecting a second finger gesture on the user-moveable location marker, the user-moveable location marker is moved on the map in accordance with the second finger gesture. While displaying the map and the user-moveable location marker, a user-selectable region for obtaining information associated with a current location of the user-moveable location marker is displayed on the map. In response to detecting a third finger gesture on the user-selectable region for obtaining information, the display of the map and the user-moveable location marker is replaced with a display of a plurality of option icons. The plurality of option icons includes a first icon, a second icon, and a third icon. In response to detection of a finger gesture on the first icon, the display of the plurality of icons is replaced with a display of a user interface for adding an entry to a set of bookmarked locations, the added entry corresponding to the current location of the user-moveable location marker on the map. In response to detection of a finger gesture on the second icon, the display of the plurality of icons is replaced with a display of a user interface for getting directions to the current location of the user-moveable location marker on the map from another location. In response to detection of a finger gesture on the third icon, the display of the plurality of icons is replaced with a display of a user interface for getting directions from the current location of the user-moveable location marker on the map to another location.

[0012] In accordance with some embodiments, a computing device comprises a touch screen display, one or more processors, memory; and one or more programs. The one or more programs are stored in the memory and configured to be executed by the one or more processors. The one or more programs include instructions for displaying a map application. The map application is configured to display a map. The programs also instructions for detecting a first finger gesture on an icon for adding a user-moveable location marker to the map and for displaying the user-moveable location marker on the map. The programs further include instructions for moving the user-moveable location marker on the map in response to detecting a second finger gesture on the user-moveable location marker, in accordance with the second finger gesture. The programs further include instructions for, while displaying the map and the user-moveable location marker, displaying a user-selectable region for obtaining information associated with a current location of the user-moveable location marker on the

map. The programs further include instructions for, in response to detecting a third finger gesture on the user-selectable region for obtaining information, replacing the display of the map and the user-moveable location marker with a display of a plurality of option icons. The plurality of option icons include a first icon, a second icon, and a third icon. In response to detection of a finger gesture on the first icon, the display of the plurality of icons is replaced with a display of a user interface for adding an entry to a set of bookmarked locations, the added entry corresponding to the current location of the user-moveable location marker on the map. In response to detection of a finger gesture on the second icon, the display of the plurality of icons is replaced with a display of a user interface for getting directions to the current location of the user-moveable location marker on the map from another location. In response to detection of a finger gesture on the third icon, the display of the plurality of icons is replaced with a display of a user interface for getting directions from the current location of the user-moveable location marker on the map to another location.

[0013] In accordance with some embodiments, a computer readable storage medium has stored instructions, which when executed by a device with a touch screen display cause the device to display a flat version of an application interface. The instructions also cause the device to display a map application. The map application is configured to display a map. The instructions also cause the device to detect first finger gesture on an icon for adding a user-moveable location marker to the map and display the user-moveable location marker on the map. The instructions also cause the device to, in response to detecting a second finger gesture on the user-moveable location marker, move the user-moveable location marker on the map in accordance with the second finger gesture. The instructions also cause the device to, while displaying the map and the user-moveable location marker, display a user-selectable region for obtaining information associated with a current location of the user-moveable location marker on the map. In response to detecting a third finger gesture on the user-selectable region for obtaining information, the instructions cause the device to replace the display of the map and the user-moveable location marker with a display of a plurality of option icons. The plurality of option icons include a first icon, a second icon, and a third icon. In response to detection of a finger gesture on the first icon, the instructions cause the device to replace the display of the plurality of icons with a display of a user interface for adding an entry to a set of bookmarked locations, the added entry corresponding to the current location of the user-moveable location marker on the map. In response to detection of

a finger gesture on the second icon, the instructions cause device to replace the display of the plurality of icons with a display of a user interface for getting directions to the current location of the user-moveable location marker on the map from another location. In response to detection of a finger gesture on the third icon, the instructions cause the device to replace the display of the plurality of icons with a display of a user interface for getting directions from the current location of the user-moveable location marker on the map to another location.

[0014] In accordance with some embodiments, a graphical user interface (GUI) on a device with a touch screen display comprises a map application, wherein the map application is configured to display a map, an icon for adding a user-moveable location marker to the map, a user-selectable region for obtaining information associated with a current location of the user-moveable location marker, a plurality of option icons, including a first icon, a second icon, and a third icon. When a first finger gesture is detected on the icon for adding a user-moveable location marker to the map, the user-moveable location marker on the map is displayed on the map. In response to detecting a second finger gesture on the user-moveable location marker, the user-moveable location marker on the map is moved in accordance with the second finger gesture. While displaying the map and the user-moveable location marker, the user-selectable region for obtaining information associated with a current location of the user-moveable location marker is displayed on the map. In response to detecting a third finger gesture on the user-selectable region for obtaining information, the display of the map and the user-moveable location marker is replaced with a display of the plurality of option icons: the first icon, the second icon, and the third icon. In response to detection of a finger gesture on the first icon, the display of the plurality of icons is replaced with a display of a user interface for adding an entry to a set of bookmarked locations, the added entry corresponding to the current location of the user-moveable location marker on the map. In response to detection of a finger gesture on the second icon, the display of the plurality of icons is replaced with a display of a user interface for getting directions to the current location of the user-moveable location marker on the map from another location. In response to detection of a finger gesture on the third icon, the display of the plurality of icons is replaced with a display of a user interface for getting directions from the current location of the user-moveable location marker on the map to another location.

[0015] In accordance with some embodiments, a device with a touch screen display comprises means for displaying a map application, wherein the map application is configured to display a map, and means for detecting a first finger gesture on an icon for adding a user-moveable location marker to the map. The device also comprises means for displaying the user-moveable location marker on the map and means for, in response to detecting a second finger gesture on the user-moveable location marker, moving the user-moveable location marker on the map in accordance with the second finger gesture. The device further comprises means for, while displaying the map and the user-moveable location marker, displaying a user-selectable region for obtaining information associated with a current location of the user-moveable location marker on the map, and means for, in response to detecting a third finger gesture on the user-selectable region for obtaining information, replacing the display of the map and the user-moveable location marker with a display of a plurality of option icons. The plurality of option icons include a first icon, a second icon, and a third icon. In response to detection of a finger gesture on the first icon, the display of the plurality of icons is replaced with a display of a user interface for adding an entry to a set of bookmarked locations, the added entry corresponding to the current location of the user-moveable location marker on the map. In response to detection of a finger gesture on the second icon, the display of the plurality of icons is replaced with a display of a user interface for getting directions to the current location of the user-moveable location marker on the map from another location; and in response to detection of a finger gesture on the third icon, the display of the plurality of icons is replaced with a display of a user interface for getting directions from the current location of the user-moveable location marker on the map to another location.

[0016] In accordance with some embodiments, a computer-implemented method is performed at a computing device with a touch screen display. In the method, in response to detecting a first finger gesture on a marker on a digital map on the touch screen display, the digital map on the touch screen display is moved. The first finger gesture moves a finger contact area more than a first predetermined distance in a first predetermined time when a finger in the first finger gesture initially touches the touch screen display. In response to detecting a second finger gesture on the marker on the digital map on the touch screen display, a user-selectable region for obtaining information associated with the marker is displayed on the touch screen display. The second finger gesture is a single tap gesture that

moves a finger contact area less than a second predetermined distance and lasts less than a second predetermined time. In response to detecting a third finger gesture on a user-moveable location marker on the digital map on the touch screen display, the user-moveable location marker is moved on the digital map in accordance with the third finger gesture. The third finger gesture includes a substantially stationary contact. The substantially stationary contact moves a finger contact area less than a third predetermined distance and lasts more than the second predetermined time, followed by translation of the finger contact area on the touch screen display after the second predetermined time ends.

[0017] In accordance with some embodiments, a computing device comprises a touch screen display, one or more processors, memory, and one or more programs. The one or more programs are stored in the memory and configured to be executed by the one or more processors. The one or more programs include instructions for moving the digital map on the touch screen display in response to detecting a first finger gesture on a marker on a digital map on the touch screen display. The first finger gesture moves a finger contact area more than a first predetermined distance in a first predetermined time when a finger in the first finger gesture initially touches the touch screen display. The programs also include instructions for, in response to detecting a second finger gesture on the marker on the digital map on the touch screen display, displaying a user-selectable region for obtaining information associated with the marker on the touch screen display. The second finger gesture is a single tap gesture that moves a finger contact area less than a second predetermined distance and lasts less than a second predetermined time. The one or more programs also include instructions for, in response to detecting a third finger gesture on a user-moveable location marker on the digital map on the touch screen display, moving the user-moveable location marker on the digital map in accordance with the third finger gesture. The third finger gesture includes a substantially stationary contact. The substantially stationary contact moves a finger contact area less than a third predetermined distance and lasts more than the second predetermined time, followed by translation of the finger contact area on the touch screen display after the second predetermined time ends.

[0018] In accordance with some embodiments, a computer readable storage medium has stored instructions, which when executed by a device with a touch screen display cause the device to, in response to detecting a first finger gesture on a marker on a digital map on the touch screen display, move the digital map on the touch screen display. The first finger

gesture moves a finger contact area more than a first predetermined distance in a first predetermined time when a finger in the first finger gesture initially touches the touch screen display. The instructions when executed by the device also cause the device to, in response to detecting a second finger gesture on the marker on the digital map on the touch screen display, display a user-selectable region for obtaining information associated with the marker on the touch screen display. The second finger gesture is a single tap gesture that moves a finger contact area less than a second predetermined distance and lasts less than a second predetermined time. The instructions when executed by the device also cause the device to in response to detecting a third finger gesture on a user-moveable location marker on the digital map on the touch screen display, move the user-moveable location marker on the digital map in accordance with the third finger gesture. The third finger gesture includes a substantially stationary contact. The substantially stationary contact moves a finger contact area less than a third predetermined distance and lasts more than the second predetermined time, followed by translation of the finger contact area on the touch screen display after the second predetermined time ends.

[0019] In accordance with some embodiments, a graphical user interface (GUI) on a device with a touch screen display comprises a marker on a digital map, and a user-selectable region for obtaining information associated with the marker on the touch screen display. In response to detecting a first finger gesture on the marker on the digital map on the touch screen display, the digital map on the touch screen display is moved. The first finger gesture moves a finger contact area more than a first predetermined distance in a first predetermined time when a finger in the first finger gesture initially touches the touch screen display. In response to detecting a second finger gesture on the marker on the digital map on the touch screen display, the user-selectable region for obtaining information associated with the marker is displayed on the touch screen display. The second finger gesture is a single tap gesture that moves a finger contact area less than a second predetermined distance and lasts less than a second predetermined time. In response to detecting a third finger gesture on a user-moveable location marker on the digital map on the touch screen display, the user-moveable location marker is moved on the digital map in accordance with the third finger gesture. The third finger gesture includes a substantially stationary contact. The substantially stationary contact moves a finger contact area less than a third predetermined

distance and lasts more than the second predetermined time, followed by translation of the finger contact area on the touch screen display after the second predetermined time ends.

[0020] In accordance with some embodiments, a device with a touch screen display comprises means for, in response to detecting a first finger gesture on a marker on a digital map on the touch screen display, moving the digital map on the touch screen display, wherein the first finger gesture moves a finger contact area more than a first predetermined distance in a first predetermined time when a finger in the first finger gesture initially touches the touch screen display. The device also comprises means for, in response to detecting a second finger gesture on the marker on the digital map on the touch screen display, displaying a user-selectable region for obtaining information associated with the marker on the touch screen display, wherein the second finger gesture is a single tap gesture that moves a finger contact area less than a second predetermined distance and lasts less than a second predetermined time. The device further comprises means for, in response to detecting a third finger gesture on a user-moveable location marker on the digital map on the touch screen display, moving the user-moveable location marker on the digital map in accordance with the third finger gesture, wherein the third finger gesture includes a substantially stationary contact. The substantially stationary contact moves a finger contact area less than a third predetermined distance and lasts more than the second predetermined time, followed by translation of the finger contact area on the touch screen display after the second predetermined time ends.

[0021] In accordance with some embodiments, a computer-implemented method is performed at a computing device with a touch screen display. In the method, a map application is displayed, wherein the map application is configured to display a map. Location information for the computing device is received. In response to detecting a user gesture on a view location icon while the map application is displayed, a first visual indicator is displayed on a portion of the displayed map that indicates an approximate region in which the computing device is located in accordance with the received location information when the approximate region lies within the displayed map, and a second visual indicator is displayed around a perimeter of the displayed map when the approximate region includes the displayed map and also extends beyond the displayed map. The displayed first visual indicator is changed to the second visual indicator in response to magnifying an area of the map that includes the approximate region in which the computing device is located. The displayed second visual indicator is changed to the first visual indicator in response to

demagnifying an area of the map that includes the approximate region in which the computing device is located.

[0022] In accordance with some embodiments, a computing device comprises a touch screen display, one or more processors, memory, and one or more programs. The one or more programs are stored in the memory and configured to be executed by the one or more processors. The one or more programs include instructions for displaying a map application, wherein the map application is configured to display a map. The one or more programs also include instructions for receiving location information for the computing device, and instructions for, in response to detecting a user gesture on a view location icon while the map application is displayed, displaying a first visual indicator on a portion of the displayed map that indicates an approximate region in which the computing device is located in accordance with the received location information when the approximate region lies within the displayed map, and displaying a second visual indicator around a perimeter of the displayed map when the approximate region includes the displayed map and also extends beyond the displayed map. The one or more programs also include instructions for changing from displaying the first visual indicator to displaying the second visual indicator in response to magnifying an area of the map that includes the approximate region in which the computing device is located, and instructions for changing from displaying the second visual indicator to displaying the first visual indicator in response to demagnifying an area of the map that includes the approximate region in which the computing device is located.

[0023] In accordance with some embodiments, a computer readable storage medium has stored instructions, which when executed by a device with a touch screen display cause the device to display a map application, wherein the map application is configured to display a map. The instructions, when executed by the device also cause the device to receive location information for the computing device, and in response to detecting a user gesture on a view location icon while the map application is displayed, display a first visual indicator on a portion of the displayed map that indicates an approximate region in which the computing device is located in accordance with the received location information when the approximate region lies within the displayed map, and display a second visual indicator around a perimeter of the displayed map when the approximate region includes the displayed map and also extends beyond the displayed map. The instructions, when executed by the device also cause the device to change from displaying the first visual indicator to displaying the second visual

indicator in response to magnifying an area of the map that includes the approximate region in which the computing device is located, and change from displaying the second visual indicator to displaying the first visual indicator in response to demagnifying an area of the map that includes the approximate region in which the computing device is located.

[0024] In accordance with some embodiments, a graphical user interface (GUI) on a device with a touch screen display comprises a map application. The map application is configured to display a map. The GUI also comprises a view location icon, a first visual indicator, and a second visual indicator. Location information for the computing device is received. In response to detecting a user gesture on the view location icon while the map application is displayed, the first visual indicator is displayed on a portion of the displayed map that indicates an approximate region in which the computing device is located in accordance with the received location information when the approximate region lies within the displayed map. Also in response to detecting a user gesture on the view location icon while the map application is displayed, a second visual indicator is displayed around a perimeter of the displayed map when the approximate region includes the displayed map and also extends beyond the displayed map. In response to magnifying an area of the map that includes the approximate region in which the computing device is located, the displayed first visual indicator is changed to the second visual indicator. In response to demagnifying an area of the map that includes the approximate region in which the computing device is located, the displayed second visual indicator is changed to the first visual indicator.

[0025] In accordance with some embodiments, a device with a touch screen display comprises means for displaying a map application. The map application is configured to display a map. The device also comprises means for receiving location information for the computing device. The device also comprises means for, in response to detecting a user gesture on a view location icon while the map application is displayed, displaying a first visual indicator on a portion of the displayed map that indicates an approximate region in which the computing device is located in accordance with the received location information when the approximate region lies within the displayed map, and displaying a second visual indicator around a perimeter of the displayed map when the approximate region includes the displayed map and also extends beyond the displayed map. The device further comprises means for changing from displaying the first visual indicator to displaying the second visual indicator in response to magnifying an area of the map that includes the approximate region

in which the computing device is located, and means for changing from displaying the second visual indicator to displaying the first visual indicator in response to demagnifying an area of the map that includes the approximate region in which the computing device is located.

[0026] In accordance with some embodiments, a computer-implemented method is performed at a computing device with a touch screen display. In the method, a map application is displayed, wherein the map application is configured to separately display: a list of bookmarked locations, wherein a current location of the device is displayed at the top of the list of bookmarked locations; a list of recent queries by a user; a list of contacts for the user; and a keyboard with a route search initiation icon. A first area for entering a first location is displayed. A second area for entering a second location is also displayed. In response to detecting a finger gesture on an input icon associated with the first area, the device displays: the list of bookmarked locations, wherein in response to detecting a finger gesture on a bookmarked location in the list of bookmarked locations, the map application receives an address or name, corresponding to the bookmarked location, when the address or name is entered in the first area; the list of recent queries by the user, wherein in response to detecting a finger gesture on a location in the list of recent queries by the user, the map application receives an address corresponding to the location when the address is entered in the first area; or the list of contacts for the user, wherein in response to detecting a finger gesture on a contact in the list of contacts for the user, the map application receives an address associated with the contact when the address is entered in the first area. In response to detecting a finger gesture on an input icon associated with the second area, the device displays: the list of bookmarked locations, wherein in response to detecting a finger gesture on a bookmarked location in the list of bookmarked locations, the map application receives an address or name, corresponding to the bookmarked location, when the address or name corresponding to the bookmarked location is entered in the second area; the list of recent queries by the user, wherein in response to detecting a finger gesture on a location in the list of recent queries by the user, the map application receives an address corresponding to the location when the address corresponding to the location is entered in the second area; or the list of contacts for the user, wherein in response to detecting an finger gesture on a contact in the list of contacts for the user, the map application receives an address associated with the contact when the address associated with the contact is entered in the second area. In response to detecting a finger gesture on the route search initiation icon: the device sends the

first location and the second location to a remote computer; receives routing information between the first location and the second location; and displays at least some of the routing information between the first location and the second location on a digital map.

[0027] In accordance with some embodiments, a computing device comprises a touch screen display, one or more processors, memory, and one or more programs. The one or more programs are stored in the memory and configured to be executed by the one or more processors. The one or more programs include instructions for displaying a map application. The map application is configured to separately display: a list of bookmarked locations, wherein a current location of the device is displayed at the top of the list of bookmarked locations; a list of recent queries by a user; a list of contacts for the user; and a keyboard with a route search initiation icon. The one or more programs also include instructions for: displaying a first area for entering a first location; displaying a second area for entering a second location; in response to detecting a finger gesture on an input icon associated with the first area, displaying: the list of bookmarked locations, wherein in response to detecting a finger gesture on a bookmarked location in the list of bookmarked locations, the map application receives an address or name, corresponding to the bookmarked location, when the address or name is entered in the first area; the list of recent queries by the user, wherein in response to detecting a finger gesture on a location in the list of recent queries by the user, the map application receives an address corresponding to the location when the address is entered in the first area; or the list of contacts for the user, wherein in response to detecting a finger gesture on a contact in the list of contacts for the user, the map application receives an address associated with the contact when the address is entered in the first area; in response to detecting a finger gesture on an input icon associated with the second area, displaying: the list of bookmarked locations, wherein in response to detecting a finger gesture on a bookmarked location in the list of bookmarked locations, the map application receives an address or name, corresponding to the bookmarked location, when the address or name corresponding to the bookmarked location is entered in the second area; the list of recent queries by the user, wherein in response to detecting a finger gesture on a location in the list of recent queries by the user, the map application receives an address corresponding to the location when the address corresponding to the location is entered in the second area; or the list of contacts for the user, wherein in response to detecting an finger gesture on a contact in the list of contacts for the user, the map application receives an address associated with the contact when the

address associated with the contact is entered in the second area; and in response to detecting a finger gesture on the route search initiation icon: sending the first location and the second location to a remote computer; receiving routing information between the first location and the second location; and displaying at least some of the routing information between the first location and the second location on a digital map.

[0028] In accordance with some embodiments, a computer readable storage medium has stored therein instructions, which when executed by a device with a touch screen display, cause the device to display a map application. The map application is configured to separately display: a list of bookmarked locations, wherein a current location of the device is displayed at the top of the list of bookmarked locations; a list of recent queries by a user; a list of contacts for the user; and a keyboard with a route search initiation icon. the instructions also cause the device to: display a first area for entering a first location; display a second area for entering a second location; in response to detecting a finger gesture on an input icon associated with the first area, display: the list of bookmarked locations, wherein in response to detecting a finger gesture on a bookmarked location in the list of bookmarked locations, the map application receives an address or name, corresponding to the bookmarked location, when the address or name is entered in the first area; the list of recent queries by the user, wherein in response to detecting a finger gesture on a location in the list of recent queries by the user, the map application receives an address corresponding to the location when the address is entered in the first area; or the list of contacts for the user, wherein in response to detecting a finger gesture on a contact in the list of contacts for the user, the map application receives an address associated with the contact when the address is entered in the first area; in response to detecting a finger gesture on an input icon associated with the second area, display: the list of bookmarked locations, wherein in response to detecting a finger gesture on a bookmarked location in the list of bookmarked locations, the map application receives an address or name, corresponding to the bookmarked location, when the address or name corresponding to the bookmarked location is entered in the second area; the list of recent queries by the user, wherein in response to detecting a finger gesture on a location in the list of recent queries by the user, the map application receives an address corresponding to the location when the address corresponding to the location is entered in the second area; or the list of contacts for the user, wherein in response to detecting an finger gesture on a contact in the list of contacts for the user, the map application receives an address associated with the

contact when the address associated with the contact is entered in the second area; and in response to detecting a finger gesture on the route search initiation icon: send the first location and the second location to a remote computer; receive routing information between the first location and the second location; and display at least some of the routing information between the first location and the second location on a digital map.

[0029] In accordance with some embodiments, a graphical user interface for a map application on a device with a touch screen display, includes: a digital map; a list of bookmarked locations, wherein a current location of the device is displayed at the top of the list of bookmarked locations; a list of recent queries by a user; a list of contacts for the user; a keyboard with a route search initiation icon; a first area for entering a first location; an input icon associated with the first area; a second area for entering a second location; and an input icon associated with the second area. In response to detecting a finger gesture on the input icon associated with the first area: the list of bookmarked locations is displayed, wherein in response to detecting a finger gesture on a bookmarked location in the list of bookmarked locations, the map application receives an address or name, corresponding to the bookmarked location, when the address or name is entered in the first area; the list of recent queries by the user is displayed, wherein in response to detecting a finger gesture on a location in the list of recent queries by the user, the map application receives an address corresponding to the location when the address is entered in the first area; or the list of contacts for the user is displayed, wherein in response to detecting a finger gesture on a contact in the list of contacts for the user, the map application receives an address associated with the contact when the address is entered in the first area. In response to detecting a finger gesture on the input icon associated with the second area: the list of bookmarked locations is displayed, wherein in response to detecting a finger gesture on a bookmarked location in the list of bookmarked locations, the map application receives an address or name, corresponding to the bookmarked location, when the address or name corresponding to the bookmarked location is entered in the second area; the list of recent queries by the user is displayed, wherein in response to detecting a finger gesture on a location in the list of recent queries by the user, the map application receives an address corresponding to the location when the address corresponding to the location is entered in the second area; or the list of contacts for the user is displayed, wherein in response to detecting an finger gesture on a contact in the list of contacts for the user, the map application receives an address associated with the contact when the address

associated with the contact is entered in the second area. In response to detecting a finger gesture on the route search initiation icon: the first location and the second location is sent to a remote computer; routing information between the first location and the second location is received; and at least some of the routing information between the first location and the second location is displayed on the digital map.

[0030] In accordance with some embodiments, a device includes: a touch screen display; means for displaying a map application. The map application is configured to separately display: a list of bookmarked locations, wherein a current location of the device is displayed at the top of the list of bookmarked locations; a list of recent queries by a user; a list of contacts for the user; and a keyboard with a route search initiation icon. The device also includes: means for displaying a first area for entering a first location; means for displaying a second area for entering a second location; means for, in response to detecting a finger gesture on an input icon associated with the first area, displaying: the list of bookmarked locations, wherein in response to detecting a finger gesture on a bookmarked location in the list of bookmarked locations, the map application receives an address or name, corresponding to the bookmarked location, when the address or name is entered in the first area; the list of recent queries by the user, wherein in response to detecting a finger gesture on a location in the list of recent queries by the user, the map application receives an address corresponding to the location when the address is entered in the first area; or the list of contacts for the user, wherein in response to detecting a finger gesture on a contact in the list of contacts for the user, the map application receives an address associated with the contact when the address is entered in the first area; means for, in response to detecting a finger gesture on an input icon associated with the second area, displaying: the list of bookmarked locations, wherein in response to detecting a finger gesture on a bookmarked location in the list of bookmarked locations, the map application receives an address or name, corresponding to the bookmarked location, when the address or name corresponding to the bookmarked location is entered in the second area; the list of recent queries by the user, wherein in response to detecting a finger gesture on a location in the list of recent queries by the user, the map application receives an address corresponding to the location when the address corresponding to the location is entered in the second area; or the list of contacts for the user, wherein in response to detecting an finger gesture on a contact in the list of contacts for the user, the map application receives an address associated with the contact when the address

associated with the contact is entered in the second area; and means for, in response to detecting a finger gesture on the route search initiation icon: sending the first location and the second location to a remote computer; receiving routing information between the first location and the second location; and displaying at least some of the routing information between the first location and the second location on a digital map.

[0031] In accordance with some embodiments, a computer-implemented method is performed at a computing device with a touch screen display. In the method, a map application is displayed. The map application is configured to display a map. In response to detecting a stationary first finger gesture on the displayed map for greater than a predetermined time, a user-moveable location marker is displayed on the map. In response to detecting a second finger gesture on the user-moveable location marker, the user-moveable location marker is moved on the map in accordance with the second finger gesture. While displaying the map and the user-moveable location marker, a user-selectable region for obtaining information associated with a current location of the user-moveable location marker is displayed on the map. In response to detecting a third finger gesture on the user-selectable region for obtaining information, the display of the map and the user-moveable location marker is replaced with a display of a plurality of option icons. The plurality of option icons include a first icon, a second icon, and a third icon. In response to detection of a finger gesture on the first icon, the display of the plurality of icons is replaced with a display of a user interface for adding an entry to a set of bookmarked locations, the added entry corresponding to the current location of the user-moveable location marker on the map. In response to detection of a finger gesture on the second icon, the display of the plurality of icons is replaced with a display of a user interface for getting directions to the current location of the user-moveable location marker on the map from another location. In response to detection of a finger gesture on the third icon, the display of the plurality of icons is replaced with a display of a user interface for getting directions from the current location of the user-moveable location marker on the map to another location.

[0032] In accordance with some embodiments, a computing device comprises a touch screen display, one or more processors, memory, and one or more programs. The one or more programs are stored in the memory and configured to be executed by the one or more processors. The one or more programs include instructions for displaying a map application. The map application is configured to display a map. The programs also include instructions

for, in response to detecting a stationary first finger gesture on the displayed map for greater than a predetermined time, displaying a user-moveable location marker on the map. The programs also include instructions for, in response to detecting a second finger gesture on the user-moveable location marker, moving the user-moveable location marker on the map in accordance with the second finger gesture. The programs also include instructions for, while displaying the map and the user-moveable location marker, displaying a user-selectable region for obtaining information associated with a current location of the user-moveable location marker on the map. The programs also include instructions for, in response to detecting a third finger gesture on the user-selectable region for obtaining information, replacing the display of the map and the user-moveable location marker with a display of a plurality of option icons. The plurality of option icons include a first icon, a second icon, and a third icon. The programs also include instructions for, in response to detection of a finger gesture on the first icon, replacing the display of the plurality of icons with a display of a user interface for adding an entry to a set of bookmarked locations, the added entry corresponding to the current location of the user-moveable location marker on the map. The programs also include instructions for, in response to detection of a finger gesture on the second icon, replacing the display of the plurality of icons with a display of a user interface for getting directions to the current location of the user-moveable location marker on the map from another location. The programs further include instructions for, in response to detection of a finger gesture on the third icon, replacing the display of the plurality of icons with a display of a user interface for getting directions from the current location of the user-moveable location marker on the map to another location.

[0033] In accordance with some embodiments, a computer readable storage medium has stored instructions, which when executed by a device with a touch screen display cause the device to display a map application, wherein the map application is configured to display a map. The instructions, when executed by the device also cause the device to, in response to detecting a stationary first finger gesture on the displayed map for greater than a predetermined time, display a user-moveable location marker on the map. The instructions, when executed by the device also cause the device to, in response to detecting a second finger gesture on the user-moveable location marker, move the user-moveable location marker on the map in accordance with the second finger gesture. The instructions, when executed by the device also cause the device to, while displaying the map and the user-moveable location

marker, display a user-selectable region for obtaining information associated with a current location of the user-moveable location marker on the map. The instructions, when executed by the device also cause the device to, in response to detecting a third finger gesture on the user-selectable region for obtaining information, replace the display of the map and the user-moveable location marker with a display of a plurality of option icons. The plurality of option icons include a first icon, a second icon, and third icon. The instructions, when executed by the device also cause the device to, in response to detection of a finger gesture on the first icon, replace the display of the plurality of icons with a display of a user interface for adding an entry to a set of bookmarked locations, the added entry corresponding to the current location of the user-moveable location marker on the map. The instructions, when executed by the device also cause the device to, in response to detection of a finger gesture on the second icon, replace the display of the plurality of icons with a display of a user interface for getting directions to the current location of the user-moveable location marker on the map from another location. The instructions, when executed by the device also cause the device to, in response to detection of a finger gesture on the third icon, replace the display of the plurality of icons with a display of a user interface for getting directions from the current location of the user-moveable location marker on the map to another location.

[0034] In accordance with some embodiments, a graphical user interface (GUI) on a device with a touch screen display comprises a map application, wherein the map application is configured to display a map. The GUI also comprises a user-moveable location marker, a user-selectable region for obtaining information associated with a current location of the user-moveable location marker on the map, and a plurality of option icons, wherein the plurality of option icons include a first icon, a second icon, and a third icon. In response to detecting a stationary first finger gesture on the displayed map for greater than a predetermined time, the user-moveable location marker is displayed on the map. In response to detecting a second finger gesture on the user-moveable location marker, the user-moveable location marker is moved on the map in accordance with the second finger gesture. While displaying the map and the user-moveable location marker, the user-selectable region is displayed on the map. In response to detecting a third finger gesture on the user-selectable region for obtaining information, the display of the map and the user-moveable location marker is replaced with a display of the plurality of option icons. In response to detection of a finger gesture on the first icon, the display of the plurality of icons is replaced with a display of a user interface for

adding an entry to a set of bookmarked locations, the added entry corresponding to the current location of the user-moveable location marker on the map. In response to detection of a finger gesture on the second icon, the display of the plurality of icons is replaced with a display of a user interface for getting directions to the current location of the user-moveable location marker on the map from another location. In response to detection of a finger gesture on the third icon, the display of the plurality of icons is replaced with a display of a user interface for getting directions from the current location of the user-moveable location marker on the map to another location.

[0035] In accordance with some embodiments, a device with a touch screen display comprises means for displaying a map application, wherein the map application is configured to display a map. The device also comprises means for, in response to detecting a stationary first finger gesture on the displayed map for greater than a predetermined time, displaying a user-moveable location marker on the map, and means for, in response to detecting a second finger gesture on the user-moveable location marker, moving the user-moveable location marker on the map in accordance with the second finger gesture. The device also comprises means for, while displaying the map and the user-moveable location marker, displaying a user-selectable region for obtaining information associated with a current location of the user-moveable location marker on the map. The device also comprises means for, in response to detecting a third finger gesture on the user-selectable region for obtaining information, replacing the display of the map and the user-moveable location marker with a display of a plurality of option icons, wherein the plurality of option icons include a first icon, a second icon, and a third icon. The device also comprises, means for in response to detection of a finger gesture on the first icon, replacing the display of the plurality of icons with a display of a user interface for adding an entry to a set of bookmarked locations, the added entry corresponding to the current location of the user-moveable location marker on the map. The device also comprises means for, in response to detection of a finger gesture on the second icon, replacing the display of the plurality of icons with a display of a user interface for getting directions to the current location of the user-moveable location marker on the map from another location. The device also comprises means for, in response to detection of a finger gesture on the third icon, replacing the display of the plurality of icons with a display of a user interface for getting directions from the current location of the user-moveable location marker on the map to another location.

[0036] In accordance with some embodiments, a computer-implemented method is performed at a computing device with a touch screen display. In the method, a flat version of an application interface is displayed. In response to detecting a user gesture on a view options icon while the flat version of the application interface is displayed, a curled version of the application interface is displayed. The curled version of the application interface includes an image of a curled page that obscures a first portion of the flat version of the application interface, and a roll-up region in a display region formerly occupied by a second portion of the flat version of the application interface, wherein the roll-up region includes a plurality of option icons, each respective option icon in the plurality of option icons responsive to a user selection gesture on the respective option icon. When a user selection gesture on one or more of the plurality of option icons is detected, the flat version of the application interface is redisplayed with information corresponding to the one or more option icons upon which user selection gestures were detected.

[0037] In accordance with some embodiments, a computing device comprises a touch screen display, one or more processors, memory, and one or more programs. The one or more programs are stored in the memory and configured to be executed by the one or more processors. The one or more programs include instructions for displaying a flat version of an application interface and instructions for in response to detecting a user gesture on a view options icon while the flat version of the application interface is displayed, displaying a curled version of the application interface. The curled version of the application interface includes an image of a curled page that obscures a first portion of the flat version of the application interface and a roll-up region in a display region formerly occupied by a second portion of the flat version of the application interface. The roll-up region includes a plurality of option icons, each respective option icon in the plurality of option icons responsive to a user selection gesture on the respective option icon. The programs also include instructions for detecting a user selection gesture on one or more of the plurality of option icons and instructions for redisplaying the flat version of the application interface with information corresponding to the one or more option icons upon which user selection gestures were detected.

[0038] In accordance with some embodiments, a computer readable storage medium has stored instructions, which when executed by a device with a touch screen display cause the device to display a flat version of an application interface. The instructions also cause the

device to display a curled version of the application interface in response to detecting a user gesture on a view options icon while the flat version of the application interface is displayed. The curled version of the application interface includes an image of a curled page that obscures a first portion of the flat version of the application interface, and a roll-up region in a display region formerly occupied by a second portion of the flat version of the application interface. The roll-up region includes a plurality of option icons, each respective option icon in the plurality of option icons responsive to a user selection gesture on the respective option icon. The instructions also cause the device to detect a user selection gesture on one or more of the plurality of option icons and redisplay the flat version of the application interface with information corresponding to the one or more option icons upon which user selection gestures were detected.

[0039] In accordance with some embodiments, a graphical user interface (GUI) on a device with a touch screen display comprises a flat version of an application interface, a view options icon, and a curled version of the application interface. The curled version of the application interface includes an image of a curled page that obscures a first portion of the flat version of the application interface, and a roll-up region in a display region formerly occupied by a second portion of the flat version of the application interface. The roll-up region includes a plurality of option icons, each respective option icon in the plurality of option icons responsive to a user selection gesture on the respective option icon. In response to detecting a user gesture on the view options icon while the flat version of the application interface is displayed, the curled version of the application interface is displayed. When user selection gestures are detected on one or more of the plurality of option icons, the flat version of the application interface is redisplayed with information corresponding to the one or more of the plurality of option icons upon which user selection gestures were detected.

[0040] In accordance with some embodiments, an electronic device comprises: a touch screen display; means for displaying a flat version of an application interface; and means for, in response to detecting a user gesture on a view options icon while the flat version of the application interface is displayed, displaying a curled version of the application interface. The curled version of the application interface includes an image of a curled page that obscures a first portion of the flat version of the application interface, and a roll-up region in a display region formerly occupied by a second portion of the flat version of the application interface. The roll-up region includes a plurality of option icons, each respective

option icon in the plurality of option icons responsive to a user selection gesture on the respective option icon. The device further comprises means for detecting a user selection gesture on one or more of the plurality of option icons, and means for redisplaying the flat version of the application interface with information corresponding to the one or more option icons upon which user selection gestures were detected.

BRIEF DESCRIPTION OF THE DRAWINGS

[0041] For a better understanding of the aforementioned embodiments of the invention as well as additional embodiments thereof, reference should be made to the Description of Embodiments below, in conjunction with the following drawings in which like reference numerals refer to corresponding parts throughout the figures.

[0042] Figures 1A and 1B are block diagrams illustrating portable multifunction devices with touch-sensitive displays in accordance with some embodiments.

[0043] Figure 2 illustrates a portable multifunction device having a touch screen in accordance with some embodiments.

[0044] Figure 3 illustrates an exemplary user interface for unlocking a portable electronic device in accordance with some embodiments.

[0045] Figures 4A and 4B illustrate exemplary user interfaces for a menu of applications on a portable multifunction device in accordance with some embodiments.

[0046] Figures 5A-5AA illustrate exemplary user interfaces for a map application in accordance with some embodiments.

[0047] Figures 6A-6C illustrate exemplary user interfaces for displaying an approximate location of a computing device on a map in accordance with some embodiments.

[0048] Figure 7 is flow diagram illustrating a method of displaying an approximate location of a computing device on a map in accordance with some embodiments.

[0049] Figure 8A illustrates an exemplary user interface for displaying and selecting application options in accordance with some embodiments.

[0050] Figures 8B illustrates an exemplary user interface with user-requested information overlaid on a map in accordance with some embodiments.

[0051] Figure 9 is a flow diagram illustrating a method of displaying and selecting application options in accordance with some embodiments.

[0052] Figure 10A illustrates an exemplary user interface for displaying a map application with a user-moveable location marker in accordance with some embodiments.

[0053] Figure 10B illustrates an exemplary user interface for displaying user-selectable option icons associated with a user-moveable location marker in accordance with some embodiments.

[0054] Figure 10C illustrates an exemplary user interface for obtaining directions to a location corresponding to a user-moveable location marker in accordance with some embodiments.

[0055] Figure 10D illustrates an exemplary user interface for obtaining directions from a location corresponding to a user-moveable location marker in accordance with some embodiments.

[0056] Figure 10E illustrates an exemplary user interface for adding a location marker to a set of bookmarks in accordance with some embodiments.

[0057] Figure 10F illustrates an exemplary user interface with a current location of a computing device included in a list of bookmarks in accordance with some embodiments.

[0058] Figure 11 is a flow diagram illustrating a method for displaying and moving a user-moveable location marker on a map in accordance with some embodiments.

[0059] Figures 12A-12E illustrate examples of user interactions with a displayed map, a user-moveable location marker, and information associated with the location marker via finger gestures in accordance with some embodiments.

[0060] Figure 13 is a flow diagram illustrating a method for interacting with a displayed map and a location marker in accordance with some embodiments.

[0061] Figure 14 is a flow diagram illustrating a method for obtaining directions in accordance with some embodiments.

[0062] Figure 15 is a flow diagram illustrating a method for displaying and moving a user-moveable location marker on a map in accordance with some embodiments.

DESCRIPTION OF EMBODIMENTS

[0063] Reference will now be made in detail to embodiments, examples of which are illustrated in the accompanying drawings. In the following detailed description, numerous specific details are set forth in order to provide a thorough understanding of the present invention. However, it will be apparent to one of ordinary skill in the art that the present invention may be practiced without these specific details. In other instances, well-known methods, procedures, components, circuits, and networks have not been described in detail so as not to unnecessarily obscure aspects of the embodiments.

[0064] It will also be understood that, although the terms first, second, etc. may be used herein to describe various elements, these elements should not be limited by these terms. These terms are only used to distinguish one element from another. For example, a first gesture could be termed a second gesture, and, similarly, a second gesture could be termed a first gesture, without departing from the scope of the present invention.

[0065] The terminology used in the description of the invention herein is for the purpose of describing particular embodiments only and is not intended to be limiting of the invention. As used in the description of the invention and the appended claims, the singular forms “a”, “an” and “the” are intended to include the plural forms as well, unless the context clearly indicates otherwise. It will also be understood that the term "and/or" as used herein refers to and encompasses any and all possible combinations of one or more of the associated listed items. It will be further understood that the terms "comprises" and/or "comprising," when used in this specification, specify the presence of stated features, integers, steps, operations, elements, and/or components, but do not preclude the presence or addition of one or more other features, integers, steps, operations, elements, components, and/or groups thereof.

[0066] As used herein, the term "if" may be construed to mean "when" or "upon" or "in response to determining" or "in response to detecting," depending on the context. Similarly, the phrase "if it is determined" or "if [a stated condition or event] is detected" may be construed to mean "upon determining" or "in response to determining" or "upon detecting [the stated condition or event]" or "in response to detecting [the stated condition or event]," depending on the context.

[0067] Embodiments of a portable multifunction device, user interfaces for such devices, and associated processes for using such devices are described. In some embodiments, the device is a portable communications device such as a mobile telephone that also contains other functions, such as PDA and/or music player functions.

[0068] The user interface may include a physical click wheel in addition to a touch screen or a virtual click wheel displayed on the touch screen. A click wheel is a user-interface device that may provide navigation commands based on an angular displacement of the wheel or a point of contact with the wheel by a user of the device. A click wheel may also be used to provide a user command corresponding to selection of one or more items, for example, when the user of the device presses down on at least a portion of the wheel or the center of the wheel. Alternatively, breaking contact with a click wheel image on a touch screen surface may indicate a user command corresponding to selection. For simplicity, in the discussion that follows, a portable multifunction device that includes a touch screen is used as an exemplary embodiment. It should be understood, however, that some of the user interfaces and associated processes may be applied to other devices, such as personal computers and laptop computers, which may include one or more other physical user-interface devices, such as a physical click wheel, a physical keyboard, a mouse and/or a joystick.

[0069] The device supports a variety of applications, such as one or more of the following: a telephone application, a video conferencing application, an e-mail application, an instant messaging application, a blogging application, a photo management application, a digital camera application, a digital video camera application, a web browsing application, a digital music player application, and/or a digital video player application.

[0070] The various applications that may be executed on the device may use at least one common physical user-interface device, such as the touch screen. One or more functions of the touch screen as well as corresponding information displayed on the device may be adjusted and/or varied from one application to the next and/or within a respective application. In this way, a common physical architecture (such as the touch screen) of the device may support the variety of applications with user interfaces that are intuitive and transparent.

[0071] The user interfaces may include one or more soft keyboard embodiments. The soft keyboard embodiments may include standard (QWERTY) and/or non-standard

configurations of symbols on the displayed icons of the keyboard, such as those described in U.S. Patent Applications 11/459,606, "Keyboards For Portable Electronic Devices," filed July 24, 2006, and 11/459,615, "Touch Screen Keyboards For Portable Electronic Devices," filed July 24, 2006, the contents of which are hereby incorporated by reference in their entirety. The keyboard embodiments may include a reduced number of icons (or soft keys) relative to the number of keys in existing physical keyboards, such as that for a typewriter. This may make it easier for users to select one or more icons in the keyboard, and thus, one or more corresponding symbols. The keyboard embodiments may be adaptive. For example, displayed icons may be modified in accordance with user actions, such as selecting one or more icons and/or one or more corresponding symbols. One or more applications on the portable device may utilize common and/or different keyboard embodiments. Thus, the keyboard embodiment used may be tailored to at least some of the applications. In some embodiments, one or more keyboard embodiments may be tailored to a respective user. For example, one or more keyboard embodiments may be tailored to a respective user based on a word usage history (lexicography, slang, individual usage) of the respective user. Some of the keyboard embodiments may be adjusted to reduce a probability of a user error when selecting one or more icons, and thus one or more symbols, when using the soft keyboard embodiments.

[0072] Attention is now directed towards embodiments of the device. Figures 1A and 1B are block diagrams illustrating portable multifunction devices 100 with touch-sensitive displays 112 in accordance with some embodiments. The touch-sensitive display 112 is sometimes called a "touch screen" for convenience, and may also be known as or called a touch-sensitive display system. The device 100 may include a memory 102 (which may include one or more computer readable storage mediums), a memory controller 122, one or more processing units (CPU's) 120, a peripherals interface 118, RF circuitry 108, audio circuitry 110, a speaker 111, a microphone 113, an input/output (I/O) subsystem 106, other input or control devices 116, and an external port 124. The device 100 may include one or more optical sensors 164. These components may communicate over one or more communication buses or signal lines 103.

[0073] It should be appreciated that the device 100 is only one example of a portable multifunction device 100, and that the device 100 may have more or fewer components than shown, may combine two or more components, or a may have a different configuration or

arrangement of the components. The various components shown in Figures 1A and 1B may be implemented in hardware, software or a combination of both hardware and software, including one or more signal processing and/or application specific integrated circuits.

[0074] Memory 102 may include high-speed random access memory and may also include non-volatile memory, such as one or more magnetic disk storage devices, flash memory devices, or other non-volatile solid-state memory devices. Access to memory 102 by other components of the device 100, such as the CPU 120 and the peripherals interface 118, may be controlled by the memory controller 122.

[0075] The peripherals interface 118 couples the input and output peripherals of the device to the CPU 120 and memory 102. The one or more processors 120 run or execute various software programs and/or sets of instructions stored in memory 102 to perform various functions for the device 100 and to process data.

[0076] In some embodiments, the peripherals interface 118, the CPU 120, and the memory controller 122 may be implemented on a single chip, such as a chip 104. In some other embodiments, they may be implemented on separate chips.

[0077] The RF (radio frequency) circuitry 108 receives and sends RF signals, also called electromagnetic signals. The RF circuitry 108 converts electrical signals to/from electromagnetic signals and communicates with communications networks and other communications devices via the electromagnetic signals. The RF circuitry 108 may include well-known circuitry for performing these functions, including but not limited to an antenna system, an RF transceiver, one or more amplifiers, a tuner, one or more oscillators, a digital signal processor, a CODEC chipset, a subscriber identity module (SIM) card, memory, and so forth. The RF circuitry 108 may communicate with networks, such as the Internet, also referred to as the World Wide Web (WWW), an intranet and/or a wireless network, such as a cellular telephone network, a wireless local area network (LAN) and/or a metropolitan area network (MAN), and other devices by wireless communication. The wireless communication may use any of a plurality of communications standards, protocols and technologies, including but not limited to Global System for Mobile Communications (GSM), Enhanced Data GSM Environment (EDGE), high-speed downlink packet access (HSDPA), wideband code division multiple access (W-CDMA), code division multiple access (CDMA), time division multiple access (TDMA), Bluetooth, Wireless Fidelity (Wi-Fi) (e.g., IEEE 802.11a,

IEEE 802.11b, IEEE 802.11g and/or IEEE 802.11n), voice over Internet Protocol (VoIP), Wi-MAX, a protocol for email (e.g., Internet message access protocol (IMAP) and/or post office protocol (POP)), instant messaging (e.g., extensible messaging and presence protocol (XMPP), Session Initiation Protocol for Instant Messaging and Presence Leveraging Extensions (SIMPLE), and/or Instant Messaging and Presence Service (IMPS)), and/or Short Message Service (SMS)), or any other suitable communication protocol, including communication protocols not yet developed as of the filing date of this document.

[0078] The audio circuitry 110, the speaker 111, and the microphone 113 provide an audio interface between a user and the device 100. The audio circuitry 110 receives audio data from the peripherals interface 118, converts the audio data to an electrical signal, and transmits the electrical signal to the speaker 111. The speaker 111 converts the electrical signal to human-audible sound waves. The audio circuitry 110 also receives electrical signals converted by the microphone 113 from sound waves. The audio circuitry 110 converts the electrical signal to audio data and transmits the audio data to the peripherals interface 118 for processing. Audio data may be retrieved from and/or transmitted to memory 102 and/or the RF circuitry 108 by the peripherals interface 118. In some embodiments, the audio circuitry 110 also includes a headset jack (e.g. 212, Figure 2). The headset jack provides an interface between the audio circuitry 110 and removable audio input/output peripherals, such as output-only headphones or a headset with both output (e.g., a headphone for one or both ears) and input (e.g., a microphone).

[0079] The I/O subsystem 106 couples input/output peripherals on the device 100, such as the touch screen 112 and other input/control devices 116, to the peripherals interface 118. The I/O subsystem 106 may include a display controller 156 and one or more input controllers 160 for other input or control devices. The one or more input controllers 160 receive/send electrical signals from/to other input or control devices 116. The other input/control devices 116 may include physical buttons (e.g., push buttons, rocker buttons, etc.), dials, slider switches, joysticks, click wheels, and so forth. In some alternate embodiments, input controller(s) 160 may be coupled to any (or none) of the following: a keyboard, infrared port, USB port, and a pointer device such as a mouse. The one or more buttons (e.g., 208, Figure 2) may include an up/down button for volume control of the speaker 111 and/or the microphone 113. The one or more buttons may include a push button (e.g., 206, Figure 2). A quick press of the push button may disengage a lock of the touch

screen 112 or begin a process that uses gestures on the touch screen to unlock the device, as described in U.S. Patent Application 11/322,549, "Unlocking a Device by Performing Gestures on an Unlock Image," filed December 23, 2005, which is hereby incorporated by reference in its entirety. A longer press of the push button (e.g., 206) may turn power to the device 100 on or off. The user may be able to customize a functionality of one or more of the buttons. The touch screen 112 is used to implement virtual or soft buttons and one or more soft keyboards.

[0080] The touch-sensitive touch screen 112 provides an input interface and an output interface between the device and a user. The display controller 156 receives and/or sends electrical signals from/to the touch screen 112. The touch screen 112 displays visual output to the user. The visual output may include graphics, text, icons, video, and any combination thereof (collectively termed "graphics"). In some embodiments, some or all of the visual output may correspond to user-interface objects, further details of which are described below.

[0081] A touch screen 112 has a touch-sensitive surface, sensor or set of sensors that accepts input from the user based on haptic and/or tactile contact. The touch screen 112 and the display controller 156 (along with any associated modules and/or sets of instructions in memory 102) detect contact (and any movement or breaking of the contact) on the touch screen 112 and converts the detected contact into interaction with user-interface objects (e.g., one or more soft keys, icons, web pages or images) that are displayed on the touch screen. In an exemplary embodiment, a point of contact between a touch screen 112 and the user corresponds to a finger of the user.

[0082] The touch screen 112 may use LCD (liquid crystal display) technology, or LPD (light emitting polymer display) technology, although other display technologies may be used in other embodiments. The touch screen 112 and the display controller 156 may detect contact and any movement or breaking thereof using any of a plurality of touch sensing technologies now known or later developed, including but not limited to capacitive, resistive, infrared, and surface acoustic wave technologies, as well as other proximity sensor arrays or other elements for determining one or more points of contact with a touch screen 112.

[0083] A touch-sensitive display in some embodiments of the touch screen 112 may be analogous to the multi-touch sensitive tablets described in the following U.S. Patents: 6,323,846 (Westerman et al.), 6,570,557 (Westerman et al.), and/or 6,677,932 (Westerman),

and/or U.S. Patent Publication 2002/0015024A1, each of which is hereby incorporated by reference in its entirety. However, a touch screen 112 displays visual output from the portable device 100, whereas touch sensitive tablets do not provide visual output.

[0084] A touch-sensitive display in some embodiments of the touch screen 112 may be as described in the following applications: (1) U.S. Patent Application No. 11/381,313, "Multipoint Touch Surface Controller," filed May 2, 2006; (2) U.S. Patent Application No. 10/840,862, "Multipoint Touchscreen," filed May 6, 2004; (3) U.S. Patent Application No. 10/903,964, "Gestures For Touch Sensitive Input Devices," filed July 30, 2004; (4) U.S. Patent Application No. 11/048,264, "Gestures For Touch Sensitive Input Devices," filed January 31, 2005; (5) U.S. Patent Application No. 11/038,590, "Mode-Based Graphical User Interfaces For Touch Sensitive Input Devices," filed January 18, 2005; (6) U.S. Patent Application No. 11/228,758, "Virtual Input Device Placement On A Touch Screen User Interface," filed September 16, 2005; (7) U.S. Patent Application No. 11/228,700, "Operation Of A Computer With A Touch Screen Interface," filed September 16, 2005; (8) U.S. Patent Application No. 11/228,737, "Activating Virtual Keys Of A Touch-Screen Virtual Keyboard," filed September 16, 2005; and (9) U.S. Patent Application No. 11/367,749, "Multi-Functional Hand-Held Device," filed March 3, 2006. All of these applications are incorporated by reference herein in their entirety.

[0085] The touch screen 112 may have a resolution in excess of 100 dpi. In an exemplary embodiment, the touch screen has a resolution of approximately 160 dpi. The user may make contact with the touch screen 112 using any suitable object or appendage, such as a stylus, a finger, and so forth. In some embodiments, the user interface is designed to work primarily with finger-based contacts and gestures, which are much less precise than stylus-based input due to the larger area of contact of a finger on the touch screen. In some embodiments, the device translates the rough finger-based input into a precise pointer/cursor position or command for performing the actions desired by the user.

[0086] In some embodiments, in addition to the touch screen, the device 100 may include a touchpad (not shown) for activating or deactivating particular functions. In some embodiments, the touchpad is a touch-sensitive area of the device that, unlike the touch screen, does not display visual output. The touchpad may be a touch-sensitive surface that is

separate from the touch screen 112 or an extension of the touch-sensitive surface formed by the touch screen.

[0087] In some embodiments, the device 100 may include a physical or virtual click wheel as an input control device 116. A user may navigate among and interact with one or more graphical objects (henceforth referred to as icons) displayed in the touch screen 112 by rotating the click wheel or by moving a point of contact with the click wheel (e.g., where the amount of movement of the point of contact is measured by its angular displacement with respect to a center point of the click wheel). The click wheel may also be used to select one or more of the displayed icons. For example, the user may press down on at least a portion of the click wheel or an associated button. User commands and navigation commands provided by the user via the click wheel may be processed by an input controller 160 as well as one or more of the modules and/or sets of instructions in memory 102. For a virtual click wheel, the click wheel and click wheel controller may be part of the touch screen 112 and the display controller 156, respectively. For a virtual click wheel, the click wheel may be either an opaque or semitransparent object that appears and disappears on the touch screen display in response to user interaction with the device. In some embodiments, a virtual click wheel is displayed on the touch screen of a portable multifunction device and operated by user contact with the touch screen.

[0088] The device 100 also includes a power system 162 for powering the various components. The power system 162 may include a power management system, one or more power sources (e.g., battery, alternating current (AC)), a recharging system, a power failure detection circuit, a power converter or inverter, a power status indicator (e.g., a light-emitting diode (LED)) and any other components associated with the generation, management and distribution of power in portable devices.

[0089] The device 100 may also include one or more optical sensors 164. Figures 1A and 1B show an optical sensor coupled to an optical sensor controller 158 in I/O subsystem 106. The optical sensor 164 may include charge-coupled device (CCD) or complementary metal-oxide semiconductor (CMOS) phototransistors. The optical sensor 164 receives light from the environment, projected through one or more lens, and converts the light to data representing an image. In conjunction with an imaging module 143 (also called a camera module), the optical sensor 164 may capture still images or video. In some embodiments, an

optical sensor is located on the back of the device 100, opposite the touch screen display 112 on the front of the device, so that the touch screen display may be used as a viewfinder for either still and/or video image acquisition. In some embodiments, an optical sensor is located on the front of the device so that the user's image may be obtained for videoconferencing while the user views the other video conference participants on the touch screen display. In some embodiments, the position of the optical sensor 164 can be changed by the user (e.g., by rotating the lens and the sensor in the device housing) so that a single optical sensor 164 may be used along with the touch screen display for both video conferencing and still and/or video image acquisition.

[0090] The device 100 may also include one or more proximity sensors 166. Figures 1A and 1B show a proximity sensor 166 coupled to the peripherals interface 118. Alternately, the proximity sensor 166 may be coupled to an input controller 160 in the I/O subsystem 106. The proximity sensor 166 may perform as described in U.S. Patent Application Nos. 11/241,839, "Proximity Detector In Handheld Device," filed September 30, 3005; 11/240,788, "Proximity Detector In Handheld Device," filed September 30, 3005; 11/620,702, "Using Ambient Light Sensor To Augment Proximity Sensor Output"; 11/586,862, "Automated Response To And Sensing Of User Activity In Portable Devices," filed October 24, 2006; and 11/638,251, "Methods And Systems For Automatic Configuration Of Peripherals," which are hereby incorporated by reference in their entirety. In some embodiments, the proximity sensor turns off and disables the touch screen 112 when the multifunction device is placed near the user's ear (e.g., when the user is making a phone call). In some embodiments, the proximity sensor keeps the screen off when the device is in the user's pocket, purse, or other dark area to prevent unnecessary battery drainage when the device is a locked state.

[0091] The device 100 may also include one or more accelerometers 168. Figures 1A and 1B show an accelerometer 168 coupled to the peripherals interface 118. Alternately, the accelerometer 168 may be coupled to an input controller 160 in the I/O subsystem 106. The accelerometer 168 may perform as described in U.S. Patent Publication No. 20050190059, "Acceleration-based Theft Detection System for Portable Electronic Devices," and U.S. Patent Publication No. 20060017692, "Methods And Apparatuses For Operating A Portable Device Based On An Accelerometer," both of which are which are incorporated by reference herein in their entirety. In some embodiments, information is displayed on the touch screen

display in a portrait view or a landscape view based on an analysis of data received from the one or more accelerometers.

[0092] In some embodiments, the software components stored in memory 102 may include an operating system 126, a communication module (or set of instructions) 128, a contact/motion module (or set of instructions) 130, a graphics module (or set of instructions) 132, a text input module (or set of instructions) 134, a Global Positioning System (GPS) module (or set of instructions) 135, and applications (or set of instructions) 136.

[0093] The operating system 126 (e.g., Darwin, RTXC, LINUX, UNIX, OS X, WINDOWS, or an embedded operating system such as VxWorks) includes various software components and/or drivers for controlling and managing general system tasks (e.g., memory management, storage device control, power management, etc.) and facilitates communication between various hardware and software components.

[0094] The communication module 128 facilitates communication with other devices over one or more external ports 124 and also includes various software components for handling data received by the RF circuitry 108 and/or the external port 124. The external port 124 (e.g., Universal Serial Bus (USB), FIREWIRE, etc.) is adapted for coupling directly to other devices or indirectly over a network (e.g., the Internet, wireless LAN, etc.). In some embodiments, the external port is a multi-pin (e.g., 30-pin) connector that is the same as, or similar to and/or compatible with the 30-pin connector used on iPod (trademark of Apple Computer, Inc.) devices.

[0095] The contact/motion module 130 may detect contact with the touch screen 112 (in conjunction with the display controller 156) and other touch sensitive devices (e.g., a touchpad or physical click wheel). The contact/motion module 130 includes various software components for performing various operations related to detection of contact, such as determining if contact has occurred, determining if there is movement of the contact and tracking the movement across the touch screen 112, and determining if the contact has been broken (i.e., if the contact has ceased). Determining movement of the point of contact may include determining speed (magnitude), velocity (magnitude and direction), and/or an acceleration (a change in magnitude and/or direction) of the point of contact. These operations may be applied to single contacts (e.g., one finger contacts) or to multiple simultaneous contacts (e.g., "multitouch"/multiple finger contacts). In some embodiments,

the contact/motion module 130 and the display controller 156 also detects contact on a touchpad. In some embodiments, the contact/motion module 130 and the controller 160 detects contact on a click wheel.

[0096] The graphics module 132 includes various known software components for rendering and displaying graphics on the touch screen 112, including components for changing the intensity of graphics that are displayed. As used herein, the term "graphics" includes any object that can be displayed to a user, including without limitation text, web pages, icons (such as user-interface objects including soft keys), digital images, videos, animations and the like.

[0097] The text input module 134, which may be a component of graphics module 132, provides soft keyboards for entering text in various applications (e.g., contacts 137, e-mail 140, IM 141, blogging 142, browser 147, and any other application that needs text input).

[0098] The GPS module 135 determines the location of the device and provides this information for use in various applications (e.g., to telephone 138 for use in location-based dialing, to camera 143 and/or blogger 142 as picture/video metadata, and to applications that provide location-based services such as weather widgets, local yellow page widgets, and map/navigation widgets).

[0099] The applications 136 may include the following modules (or sets of instructions), or a subset or superset thereof:

- a contacts module 137 (sometimes called an address book or contact list);
- a telephone module 138;
- a video conferencing module 139;
- an e-mail client module 140;
- an instant messaging (IM) module 141;
- a blogging module 142;
- a camera module 143 for still and/or video images;
- an image management module 144;
- a video player module 145;

- a music player module 146;
- a browser module 147;
- a calendar module 148;
- widget modules 149, which may include weather widget 149-1, stocks widget 149-2, calculator widget 149-3, alarm clock widget 149-4, dictionary widget 149-5, and other widgets obtained by the user, as well as user-created widgets 149-6;
- widget creator module 150 for making user-created widgets 149-6;
- search module 151;
- video and music player module 152, which merges video player module 145 and music player module 146;
- notes module 153;
- map module 154; and/or
- online video module 155.

[00100] Examples of other applications 136 that may be stored in memory 102 include other word processing applications, JAVA-enabled applications, encryption, digital rights management, voice recognition, and voice replication.

[00101] In conjunction with touch screen 112, display controller 156, contact module 130, graphics module 132, and text input module 134, the contacts module 137 may be used to manage an address book or contact list, including: adding name(s) to the address book; deleting name(s) from the address book; associating telephone number(s), e-mail address(es), physical address(es) or other information with a name; associating an image with a name; categorizing and sorting names; providing telephone numbers or e-mail addresses to initiate and/or facilitate communications by telephone 138, video conference 139, e-mail 140, or IM 141; and so forth.

[00102] In conjunction with RF circuitry 108, audio circuitry 110, speaker 111, microphone 113, touch screen 112, display controller 156, contact module 130, graphics module 132, and text input module 134, the telephone module 138 may be used to enter a sequence of characters corresponding to a telephone number, access one or more telephone

numbers in the address book 137, modify a telephone number that has been entered, dial a respective telephone number, conduct a conversation and disconnect or hang up when the conversation is completed. As noted above, the wireless communication may use any of a plurality of communications standards, protocols and technologies.

[00103] In conjunction with RF circuitry 108, audio circuitry 110, speaker 111, microphone 113, touch screen 112, display controller 156, optical sensor 164, optical sensor controller 158, contact module 130, graphics module 132, text input module 134, contact list 137, and telephone module 138, the videoconferencing module 139 may be used to initiate, conduct, and terminate a video conference between a user and one or more other participants.

[00104] In conjunction with RF circuitry 108, touch screen 112, display controller 156, contact module 130, graphics module 132, and text input module 134, the e-mail client module 140 may be used to create, send, receive, and manage e-mail. In conjunction with image management module 144, the e-mail module 140 makes it very easy to create and send e-mails with still or video images taken with camera module 143.

[00105] In conjunction with RF circuitry 108, touch screen 112, display controller 156, contact module 130, graphics module 132, and text input module 134, the instant messaging module 141 may be used to enter a sequence of characters corresponding to an instant message, to modify previously entered characters, to transmit a respective instant message (for example, using a Short Message Service (SMS) or Multimedia Message Service (MMS) protocol for telephony-based instant messages or using XMPP, SIMPLE, or IMPS for Internet-based instant messages), to receive instant messages and to view received instant messages. In some embodiments, transmitted and/or received instant messages may include graphics, photos, audio files, video files and/or other attachments as are supported in a MMS and/or an Enhanced Messaging Service (EMS). As used herein, "instant messaging" refers to both telephony-based messages (e.g., messages sent using SMS or MMS) and Internet-based messages (e.g., messages sent using XMPP, SIMPLE, or IMPS).

[00106] In conjunction with RF circuitry 108, touch screen 112, display controller 156, contact module 130, graphics module 132, text input module 134, image management module 144, and browsing module 147, the blogging module 142 may be used to send text, still images, video, and/or other graphics to a blog (e.g., the user's blog).

[00107] In conjunction with touch screen 112, display controller 156, optical sensor(s) 164, optical sensor controller 158, contact module 130, graphics module 132, and image management module 144, the camera module 143 may be used to capture still images or video (including a video stream) and store them into memory 102, modify characteristics of a still image or video, or delete a still image or video from memory 102.

[00108] In conjunction with touch screen 112, display controller 156, contact module 130, graphics module 132, text input module 134, and camera module 143, the image management module 144 may be used to arrange, modify or otherwise manipulate, label, delete, present (e.g., in a digital slide show or album), and store still and/or video images.

[00109] In conjunction with touch screen 112, display controller 156, contact module 130, graphics module 132, audio circuitry 110, and speaker 111, the video player module 145 may be used to display, present or otherwise play back videos (e.g., on the touch screen or on an external, connected display via external port 124).

[00110] In conjunction with touch screen 112, display system controller 156, contact module 130, graphics module 132, audio circuitry 110, speaker 111, RF circuitry 108, and browser module 147, the music player module 146 allows the user to download and play back recorded music and other sound files stored in one or more file formats, such as MP3 or AAC files. In some embodiments, the device 100 may include the functionality of an MP3 player, such as an iPod (trademark of Apple Computer, Inc.).

[00111] In conjunction with RF circuitry 108, touch screen 112, display system controller 156, contact module 130, graphics module 132, and text input module 134, the browser module 147 may be used to browse the Internet, including searching, linking to, receiving, and displaying web pages or portions thereof, as well as attachments and other files linked to web pages.

[00112] In conjunction with RF circuitry 108, touch screen 112, display system controller 156, contact module 130, graphics module 132, text input module 134, e-mail module 140, and browser module 147, the calendar module 148 may be used to create, display, modify, and store calendars and data associated with calendars (e.g., calendar entries, to do lists, etc.).

[00113] In conjunction with RF circuitry 108, touch screen 112, display system controller 156, contact module 130, graphics module 132, text input module 134, and

browser module 147, the widget modules 149 are mini-applications that may be downloaded and used by a user (e.g., weather widget 149-1, stocks widget 149-2, calculator widget 149-3, alarm clock widget 149-4, and dictionary widget 149-5) or created by the user (e.g., user-created widget 149-6). In some embodiments, a widget includes an HTML (Hypertext Markup Language) file, a CSS (Cascading Style Sheets) file, and a JavaScript file. In some embodiments, a widget includes an XML (Extensible Markup Language) file and a JavaScript file (e.g., Yahoo! Widgets).

[00114] In conjunction with RF circuitry 108, touch screen 112, display system controller 156, contact module 130, graphics module 132, text input module 134, and browser module 147, the widget creator module 150 may be used by a user to create widgets (e.g., turning a user-specified portion of a web page into a widget).

[00115] In conjunction with touch screen 112, display system controller 156, contact module 130, graphics module 132, and text input module 134, the search module 151 may be used to search for text, music, sound, image, video, and/or other files in memory 102 that match one or more search criteria (e.g., one or more user-specified search terms).

[00116] In conjunction with touch screen 112, display controller 156, contact module 130, graphics module 132, and text input module 134, the notes module 153 may be used to create and manage notes, to do lists, and the like.

[00117] In conjunction with RF circuitry 108, touch screen 112, display system controller 156, contact module 130, graphics module 132, text input module 134, GPS module 135, and browser module 147, the map module 154 may be used to receive, display, modify, and store maps and data associated with maps (e.g., driving directions; data on stores and other points of interest at or near a particular location; and other location-based data).

[00118] In conjunction with touch screen 112, display system controller 156, contact module 130, graphics module 132, audio circuitry 110, speaker 111, RF circuitry 108, text input module 134, e-mail client module 140, and browser module 147, the online video module 155 allows the user to access, browse, receive (e.g., by streaming and/or download), play back (e.g., on the touch screen or on an external, connected display via external port 124), send an e-mail with a link to a particular online video, and otherwise manage online videos in one or more file formats, such as H.264. In some embodiments, instant messaging module 141, rather than e-mail client module 140, is used to send a link to a particular online

video. Additional description of the online video application can be found in U.S. Provisional Patent Application No. 60/936,562, "Portable Multifunction Device, Method, and Graphical User Interface for Playing Online Videos," filed June 20, 2007, and U.S. Patent Application No. 11/968,067, "Portable Multifunction Device, Method, and Graphical User Interface for Playing Online Videos," filed December 31, 2007, the content of which is hereby incorporated by reference in its entirety.

[00119] Each of the above identified modules and applications correspond to a set of instructions for performing one or more functions described above. These modules (i.e., sets of instructions) need not be implemented as separate software programs, procedures or modules, and thus various subsets of these modules may be combined or otherwise re-arranged in various embodiments. For example, video player module 145 may be combined with music player module 146 into a single module (e.g., video and music player module 152, Figure 1B). In some embodiments, memory 102 may store a subset of the modules and data structures identified above. Furthermore, memory 102 may store additional modules and data structures not described above.

[00120] In some embodiments, the device 100 is a device where operation of a predefined set of functions on the device is performed exclusively through a touch screen 112 and/or a touchpad. By using a touch screen and/or a touchpad as the primary input/control device for operation of the device 100, the number of physical input/control devices (such as push buttons, dials, and the like) on the device 100 may be reduced.

[00121] The predefined set of functions that may be performed exclusively through a touch screen and/or a touchpad include navigation between user interfaces. In some embodiments, the touchpad, when touched by the user, navigates the device 100 to a main, home, or root menu from any user interface that may be displayed on the device 100. In such embodiments, the touchpad may be referred to as a "menu button." In some other embodiments, the menu button may be a physical push button or other physical input/control device instead of a touchpad.

[00122] Figure 2 illustrates a portable multifunction device 100 having a touch screen 112 in accordance with some embodiments. The touch screen may display one or more graphics within user interface (UI) 200. In this embodiment, as well as others, a user may select one or more of the graphics by making contact or touching the graphics, for example,

with one or more fingers 202 (not drawn to scale in the figure). In some embodiments, selection of one or more graphics occurs when the user breaks contact with the one or more graphics. In some embodiments, the contact may include a gesture, such as one or more taps, one or more swipes (from left to right, right to left, upward and/or downward) and/or a rolling of a finger (from right to left, left to right, upward and/or downward) that has made contact with the device 100. In some embodiments, inadvertent contact with a graphic may not select the graphic. For example, a swipe gesture that sweeps over an application icon may not select the corresponding application when the gesture corresponding to selection is a tap.

[00123] The device 100 may also include one or more physical buttons, such as "home" or menu button 204. As described previously, the menu button 204 may be used to navigate to any application 136 in a set of applications that may be executed on the device 100. Alternatively, in some embodiments, the menu button is implemented as a soft key in a GUI in touch screen 112.

[00124] In one embodiment, the device 100 includes a touch screen 112, a menu button 204, a push button 206 for powering the device on/off and locking the device, volume adjustment button(s) 208, a Subscriber Identity Module (SIM) card slot 210, a head set jack 212, and a docking/charging external port 124. The push button 206 may be used to turn the power on/off on the device by depressing the button and holding the button in the depressed state for a predefined time interval; to lock the device by depressing the button and releasing the button before the predefined time interval has elapsed; and/or to unlock the device or initiate an unlock process. In an alternative embodiment, the device 100 also may accept verbal input for activation or deactivation of some functions through the microphone 113.

[00125] Attention is now directed towards embodiments of user interfaces ("UI") and associated processes that may be implemented on a portable multifunction device 100.

[00126] Figure 3 illustrates an exemplary user interface for unlocking a portable electronic device in accordance with some embodiments. In some embodiments, user interface 300 includes the following elements, or a subset or superset thereof:

- Unlock image 302 that is moved with a finger gesture to unlock the device;
- Arrow 304 that provides a visual cue to the unlock gesture;

- Channel 306 that provides additional cues to the unlock gesture;
- Time 308;
- Day 310;
- Date 312; and
- Wallpaper image 314.

[00127] In some embodiments, the device detects contact with the touch-sensitive display (e.g., a user's finger making contact on or near the unlock image 302) while the device is in a user-interface lock state. The device moves the unlock image 302 in accordance with the contact. The device transitions to a user-interface unlock state if the detected contact corresponds to a predefined gesture, such as moving the unlock image across channel 306. Conversely, the device maintains the user-interface lock state if the detected contact does not correspond to the predefined gesture. As noted above, processes that use gestures on the touch screen to unlock the device are described in U.S. Patent Applications 11/322,549, "Unlocking A Device By Performing Gestures On An Unlock Image," filed December 23, 2005, and 11/322,550, "Indication Of Progress Towards Satisfaction Of A User Input Condition," filed December 23, 2005, which are hereby incorporated by reference in their entirety.

[00128] Figures 4A and 4B illustrate exemplary user interfaces for a menu of applications on a portable multifunction device in accordance with some embodiments. In some embodiments, user interface 400A includes the following elements, or a subset or superset thereof:

- Signal strength indicator(s) 402 for wireless communication(s), such as cellular and Wi-Fi signals;
- Time 404;
- Battery status indicator 406;
- Tray 408 with icons for frequently used applications, such as:
- Phone 138, which may include an indicator 414 of the number of missed calls or voicemail messages;

- E-mail client 140, which may include an indicator 410 of the number of unread e-mails;
- Browser 147; and
- Music player 146; and
- Icons for other applications, such as:
- IM 141;
- Image management 144;
- Camera 143;
- Video player 145;
- Weather 149-1;
- Stocks 149-2;
- Blog 142;
- Calendar 148;
- Calculator 149-3;
- Alarm clock 149-4;
- Dictionary 149-5; and
- User-created widget 149-6.

[00129] In some embodiments, user interface 400B includes the following elements, or a subset or superset thereof:

- 402, 404, 406, 141, 148, 144, 143, 149-3, 149-2, 149-1, 149-4, 410, 414, 138, 140, and 147, as described above;
- Bluetooth indicator 405;
- Map 154;
- Notes 153;

- Settings 412, which provides access to settings for the device 100 and its various applications 136, as described further below;
- Video and music player module 152, also referred to as iPod (trademark of Apple Computer, Inc.) module 152; and
- Online video module 155, also referred to as YouTube (trademark of Google, Inc.) module 155.

[00130] In some embodiments, UI 400A or 400B displays all of the available applications 136 on one screen so that there is no need to scroll through a list of applications (e.g., via a scroll bar). In some embodiments, as the number of applications increase, the icons corresponding to the applications may decrease in size so that all applications may be displayed on a single screen without scrolling. In some embodiments, having all applications on one screen and a menu button enables a user to access any desired application with at most two inputs, such as activating the menu button 204 and then activating the desired application (e.g., by a tap or other finger gesture on the icon corresponding to the application).

[00131] In some embodiments, UI 400A or 400B provides integrated access to both widget-based applications and non-widget-based applications. In some embodiments, all of the widgets, whether user-created or not, are displayed in UI 400A or 400B. In other embodiments, activating the icon for user-created widget 149-6 may lead to another UI that contains the user-created widgets or icons corresponding to the user-created widgets.

[00132] In some embodiments, a user may rearrange the icons in UI 400A or 400B, e.g., using processes described in U.S. Patent Application No. 11/459,602, "Portable Electronic Device With Interface Reconfiguration Mode," filed July 24, 2006, which is hereby incorporated by reference in its entirety. For example, a user may move application icons in and out of tray 408 using finger gestures.

[00133] In some embodiments, UI 400A or 400B includes a gauge (not shown) that displays an updated account usage metric for an account associated with usage of the device (e.g., a cellular phone account), as described in U.S. Patent Application 11/322,552, "Account Information Display For Portable Communication Device," filed December 23, 2005, which is hereby incorporated by reference in its entirety.

[00134] Figures 5A-5AA illustrate exemplary user interfaces for a map application in accordance with some embodiments.

[00135] In some embodiments, a computer-implemented method is performed at a portable electronic device (e.g., 100) with a touch screen display 112.

[00136] In some embodiments, in response to detecting a finger gesture 5230 (e.g., a finger tap gesture) on a search icon 5232 (Figure 5C), the device displays a search term input area 5202 (e.g., text input box, Figure 5A) for entering one or more search terms.

[00137] In some embodiments, in response to detecting a finger gesture 5234 (e.g., a finger tap gesture) on the search term input area, the device displays a keyboard 5236 for entering the one or more search terms.

[00138] In some embodiments, in response to detecting a finger gesture 5238 (e.g., a finger tap gesture) on an input icon 5204 (Figure 5A) associated with the search term input area 5202, the device displays a list 5240 (Figure 5F) of bookmarked locations 5242. In response to detecting a finger gesture 5244 (e.g., a finger tap gesture) on a bookmarked location (e.g., 5242-3) in the list 5240 of bookmarked locations, an area corresponding to the bookmarked location is displayed on a digital map (not shown).

[00139] In some embodiments, in response to detecting a finger gesture 5238 (e.g., a finger tap gesture) on an input icon 5204 associated with the search term input area 5202, the device displays a list 5246 (Figure 5H) of recent queries 5248 by a user. In response to detecting a finger gesture 5250 (e.g., a finger tap gesture) on a recent query (e.g., 5248-6) in the list 5246 of recent queries by a user, results corresponding to the recent query are displayed on a digital map (not shown).

[00140] In some embodiments, in response to detecting a finger gesture 5238 (e.g., a finger tap gesture) on an input icon 5204 (Figure 5A) associated with the search term input area 5202, the device displays a list 5252 (Figure 5J) of contacts 5254. In response to detecting a finger gesture 5256 (e.g., a finger tap gesture) on a contact (e.g., 5254-3) in the list of contacts, an area associated with the contact (e.g., an area that includes an address associated with the contact 5254-3 in the contact list) is displayed on a digital map (not shown).

[00141] In some embodiments, in response to detecting a finger gesture 5238 (e.g., a finger tap gesture) on an input icon 5204 (Figure 5A) associated with the search term input area 5202, the device displays either:

- a list 5240 (Figure 5F) of bookmarked locations 5242, wherein in response to detecting a finger gesture 5244 (e.g., a finger tap gesture) on a bookmarked location (e.g., 5242-3) in the list 5240 of bookmarked locations, an area corresponding to the bookmarked location is displayed on a digital map (not shown);
- a list 5246 (Figure 5H) of recent queries 5248 by a user, wherein in response to detecting a finger gesture 5250 (e.g., a finger tap gesture) on a recent query (e.g., 5248-6) in the list 5246 of recent queries by a user, results corresponding to the recent query are displayed on a digital map (not shown); or
- a list 5252 (Figure 5J) of contacts 5254, wherein in response to detecting a finger gesture 5256 (e.g., a finger tap gesture) on a contact (e.g., 5254-3) in the list of contacts, an area associated with the contact (e.g., an area that includes an address associated with the contact 5254-3 in the contact list) is displayed on a digital map (not shown).

In some embodiments, the list (i.e., 5240, 5246, or 5252) which is displayed in response to finger gesture 5238 (e.g., a finger tap gesture) on input icon 5204 corresponds to the list (i.e., 5240, 5246, or 5252) that was most recently displayed prior to finger gesture 5238.

[00142] In some embodiments, in response to detecting a finger gesture 5258 (e.g., a finger tap gesture) on a search initiation icon 5260 (Figure 5B), the device: sends one or more entered search terms 5262 (e.g., Cupertino Starbucks) to a remote computer (e.g., a map application server), receives one or more search results, and displays at least some of the search results 5264 on a digital map 5266 (Figure 5C). In some embodiments, the digital map comprises a graphic image, a satellite image, or a hybrid combination of a graphic image and a satellite image. For example, the search results may be displayed on a graphical map if map icon 5206 is selected (Figure 5C), whereas the search results may be displayed on a satellite image if satellite icon 5208 is selected.

[00143] In some embodiments, in response to detecting a single finger tap gesture 5268 (Figure 5C) on the digital map, the device magnifies the area near the single finger tap gesture 5268. In some embodiments, the tap gesture is a single tap. In some embodiments, the

tap gesture is a double tap. In some embodiments, the magnification includes a zoom-in animation.

[00144] In some embodiments, in response to detecting a finger down gesture 5270 and a finger drag gesture 5272 on the digital map 5266 (Figure 5C), the device translates the digital map 5266 on the touch screen display in accordance with the finger drag gesture 5272.

[00145] In some embodiments, in response to detecting a two finger tap gesture 5274 (Figure 5C) on the digital map, the device demagnifies the area near the two finger tap gesture 5274. In some embodiments, the tap gesture is a single tap. In some embodiments, the tap gesture is a double tap. In some embodiments, the demagnification includes a zoom-out animation.

[00146] In some embodiments, a first respective icon (e.g., 5264-3, Figure 5C) is displayed for a respective search result, wherein in response to detecting a finger gesture 5280 on the first respective icon, a second respective icon 5276 for the respective search result is displayed. In some embodiments, in response to detecting a finger gesture 5282 on the second respective icon, an interface 5200L (Figure 5D) for the respective search result is displayed.

[00147] In some embodiments, a first respective icon (e.g., 5264-3, Figure 5C) is displayed for a respective search result, wherein in response to detecting a finger gesture 5280 on the first respective icon, a second respective icon 5276 and a third respective icon 5278 for the respective search result are displayed. In some embodiments, in response to detecting a finger gesture 5280 on the second respective icon, the second respective icon and the third respective icon cease to be displayed. In some embodiments, in response to detecting a finger gesture 5284 on the third respective icon, an interface 5200L (Figure 5D) for the respective search result is displayed.

[00148] In some embodiments, a respective icon (e.g., 5278) is displayed for a respective search result, wherein in response to detecting a finger gesture 5284 on the respective icon, an interface 5200L (Figure 5D) is displayed for the respective search result.

[00149] In some embodiments, the interface 5200L (Figure 5D) for the respective search result includes:

[00150] a name for the respective search result;

[00151] a local map of the respective search result;

[00152] an electronic address for the respective search result (e.g., a URL);

[00153] a physical address for the respective search result;

[00154] a phone number associated with the respective search result, which when activated by a finger gesture initiates a phone call to the phone number;

[00155] an icon that when activated by a finger gesture enters the physical address as an end point in a request for directions (e.g., "Directions to here" icon);

[00156] an icon that when activated by a finger gesture enters the physical address as a starting point in a request for directions (e.g., "Directions from here" icon);

[00157] an icon that when activated by a finger gesture initiates creation of a bookmark for the respective search result (e.g., "Add to bookmarks" icon initiates creation of a bookmark via interface 5200M, Figure 5E);

[00158] an icon that when activated by a finger gesture initiates creation of a contact list entry for the respective search result (e.g., "Create new contact" icon); and/or

[00159] an icon that when activated by a finger gesture initiates addition of the respective search result to an existing contact (e.g., "Add to existing contact" icon).

[00160] In some embodiments, a bookmarks user interface 5200N (Figure 5F) includes a list 5240 of locations bookmarked by a user. In some embodiments, in response to detecting a finger gesture 5286 on a configuration icon 5290 (e.g., Edit icon, Figure 5F) for a list of bookmarks, the device displays respective deletion icons and/or respective moving-affordance icons for respective bookmarks in the list of bookmarks (Figure 5G). Use of the deletion and moving-affordance icons is described in U.S. Provisional Patent Application Nos. 60/883,814, “Deletion Gestures on a Portable Multifunction Device,” filed January 7, 2007, and 60/883,808, “System and Method for Managing Lists," filed January 7, 2007, which applications are incorporated by reference herein in their entirety in their entirety.

[00161] In some embodiments, a user interface 5200P (Figure 5H) includes a list of recent location, search, and/or route queries (collectively, a list of recent queries) by a user. In some embodiments, in response to a finger gesture (e.g., a finger tap gesture) on a recent location query, the location is displayed on a digital map or entered as a start or end point in a

route search query, depending on context. In some embodiments, in response to a finger gesture (e.g., a finger tap gesture) on a recent search query, the results of the recent search query are displayed on a digital map. In some embodiments, in response to a finger gesture (e.g., a finger tap gesture) on a recent route query, at least a portion of the corresponding routing instructions (e.g., driving directions) are displayed.

[00162] In some embodiments, a contacts UI 5200P (Figure 5J) includes a list of individual contacts 5254 and an icon 5298 that when activated by a finger gesture 5201 displays a list of groups of contacts (e.g., UI 5200S, Figure 5K) In some embodiments, in response to detecting a finger gesture 5256 on a contact in the list of contacts, an area associated with the contact (e.g., an area that includes an address associated with the contact in the contact list) is displayed on a digital map.

[00163] In some embodiments, a respective icon (e.g., icon 5203, Figure 5M) is displayed for a contact, wherein in response to detecting a finger gesture 5205 on the respective icon, an interface 5200V (figure 5N) is displayed for the contact.

[00164] In some embodiments, the interface 5200V for the contact includes:

- a name for the contact (e.g., Craig Buhler);
- a physical address for the contact;
- an image associated with the contact;
- an electronic address for the contact (e.g., a URL);
- a phone number associated with the contact;
- an icon that when activated by a finger gesture enters the physical address for the contact as an end point in a request for directions (e.g., "Directions to here" icon);
- an icon that when activated by a finger gesture enters the physical address for the contact as a starting point in a request for directions (e.g., "Directions from here" icon); and/or
- an icon that when activated by a finger gesture initiates creation of a bookmark for the contact (e.g., "Add to bookmarks" icon initiates creation of a bookmark via interface 5200W, Figure 5O).

[00165] In some embodiments, in response to finger contacts on icons 5292, 5294, and 5296 in the user interfaces for bookmarks (UI 5200N, Figure 5F), recent queries (UI 5200P,

Figure 5H), and contacts (UI 5200R, Figure 5J), the device displays the corresponding user interface, which makes navigating between these interfaces simple and intuitive.

[00166] In some embodiments, in response to detecting a finger gesture on a route search icon 5207 (Figure 5A), the device displays an endpoints area 5209 (Figure 5P) comprising:

a first area 5213 for entering a first location;

a second area 5215 for entering a second location;

and an icon 5211 for swapping information in the first area 5213 with information in the second area 5215.

[00167] In some embodiments, in response to detecting a finger gesture 5239 (Figure 5Q) (e.g., a finger tap gesture) on the first area ("Start:"), the device displays a keyboard for entering the first location (Figure 5Q). In some embodiments, in response to detecting a finger gesture 5241 (e.g., a finger tap gesture) on the second area ("End:"), the device displays a keyboard for entering the second location.

[00168] In some embodiments, in response to detecting a finger gesture 5217 (Figure 5P) (e.g., a finger tap gesture) on an input icon 5219 associated with the first area 5213, the device displays:

a list 5240 (Figure 5F) of bookmarked locations, wherein in response to detecting a finger gesture (e.g., 5244) on a bookmarked location (e.g., 5242-3) in the list of bookmarked locations, an address or name corresponding to the bookmarked location (e.g., 5242-3) is entered in the first area;

a list 5246 (Figure 5H) of recent searches, wherein in response to detecting a finger gesture on a location in the list of recent searches, an address corresponding to the location is entered in the first area; or

a list 5252 (Figure 5J) of contacts, wherein in response to detecting an finger gesture on a contact 5254 in the list of contacts, an address associated with the contact (e.g., an address associated with the contact in the contact list) is entered in the first area.

[00169] In some embodiments, in response to detecting a finger gesture 5221 (Figure 5P) (e.g., a finger tap gesture) on an input icon 5223 associated with the second area 5215, the device displays:

a list 5240 (Figure 5F) of bookmarked locations, wherein in response to detecting a finger gesture (e.g., 5244) on a bookmarked location (e.g., 5242-3) in the list of bookmarked locations, an address or name corresponding to the bookmarked location (e.g., 5242-3) is entered in the second area;

a list 5246 (Figure 5H) of recent searches, wherein in response to detecting a finger gesture on a location in the list of recent searches, an address corresponding to the location is entered in the second area; or

a list 5252 (Figure 5J) of contacts, wherein in response to detecting an finger gesture on a contact 5254 in the list of contacts, an address associated with the contact (e.g., an address associated with the contact in the contact list) is entered in the second area.

[00170] In some embodiments, in response to detecting a finger gesture 5225 (Figure 5R) on a route search initiation icon 5227, the device: sends the first location (e.g., 2 Infinite Loop, Cupertino, CA) and the second location (e.g., 100 Main St., Seattle, WA) to a remote computer (e.g., a map application server, such as Google maps); receives routing information between the first location and the second location; and displays at least some of the routing information between the first location and the second location on a digital map (e.g., Figures 5S-5AA)

[00171] In some embodiments, the received routing information includes all of the digital map information needed to display the waypoints in the route between the first location and the second location. In some embodiments, the received routing information is stored (e.g., cached) so that the device can display the routing information even if the device loses access to the remote computer.

[00172] In some embodiments, in response to detecting a finger gesture 5231 (e.g., a finger tap gesture) on a start icon 5229 (Figure 5S), the device displays the first location and the first portion of the routing information (Figure 5T). Similarly, in some embodiments, in response to detecting a finger gesture (e.g., a finger tap gesture) on a next waypoint icon 5237, the device displays the next waypoint and the corresponding map information (Figures 5T-5Z). In some embodiments, in response to detecting a finger gesture (e.g., a finger tap

gesture) on a previous waypoint icon 5239, the device displays the previous waypoint and the corresponding map information.

[00173] In some embodiments, if the distance to the next waypoint is large relative to the area displayed around a waypoint on the digital map, the user interface may zoom out, display an animated movement to the next waypoint, and then zoom back in to the next waypoint, as illustrated in Figures 5U-5Y.

[00174] In some embodiments, in response to detecting a finger gesture 5235 (e.g., a finger tap gesture) on a list icon 5233 (Figure 5S), the device displays an itemized list of the routing information (e.g., turn-by-turn driving directions), as shown in UI 5200II (Figure 5AA). In some embodiments, in response to detecting a finger gesture 5237 (e.g., a finger tap gesture) on a particular item in the list (Figure 5AA), the corresponding portion of routing information is shown on a digital map (e.g., UI 5200LL, Figure 5U).

[00175] Figures 6A-6C illustrate exemplary user interfaces for displaying an approximate location of a computing device on a map in accordance with some embodiments. Figure 6A shows an example of a map application including a view location icon 602, a view options icon 608, a search mode icon 604, and a directions mode icon 606.

[00176] Figure 6B shows a visual indicator 614 on a displayed map 5266 indicating an approximate region in which a computing device (e.g., portable multifunction device 100) is located. Figure 6C shows a second visual indicator 618 on the displayed map 5266 that is displayed when the displayed map is entirely within the approximate region in which the device is located.

[00177] In some embodiments, the user interfaces UI 600A (Figure 6A), UI 600B (Figure 6B), and UI 600C (Figure 6C) include the following elements, or a subset or superset thereof:

- 402, 404, 406, 5202, and 5266, as described above;
- an input icon 5204 that when activated (e.g., by a finger tap on the icon) initiates display of a UI for accessing bookmarks, recent queries, or contacts.
- a view location icon 602 that when activated (e.g., by a finger tap on the icon) initiates a process that displays the approximate region in which a computing device is located on a map;

- a search mode icon 604 that when activated (e.g., by a finger tap on the icon) initiates display of a UI for entering search terms (e.g., UI 600A);
- a directions mode icon 606 that when activated (e.g., by a finger tap on the icon) initiates display of a UI for entering start and end points for a route search (e.g., UI 1000C, Figure 10C);
- a view options icon 608 that when activated (e.g., by a finger tap on the icon) initiates display of a UI for displaying and selecting applications options (e.g., UI 800A, Figure 8A);
- a first visual indicator 614 (Figure 6B) that indicates an approximate region in which the computing device is located in accordance with the received location information when the approximate region lies within the displayed map 5266; and
- a second visual indicator 618 (Figure 6C) around a perimeter of the displayed map 5266 that is displayed when the approximate region in which the computing device is located includes the displayed map 5266 and also extends beyond the displayed map.

[00178] The user interfaces in Figures 6A-6C are used to illustrate the process 700 described below with respect to Figure 7.

[00179] Figure 7 is flow diagram illustrating a method of displaying an approximate location of a computing device on a map in accordance with some embodiments. The method is performed at a computing device with a touch screen display (e.g., portable multifunction device 100). The method 700 provides a simple way for a user to view the device's present location along with a visual indication of the accuracy with which the device's location is known.

[00180] A map application (e.g., 154, Figure 1B) is displayed (702). The map application is configured to display a map (e.g., map 5266, Figure 6A).

[00181] Location information for the computing device is received (704). In some embodiments, the location information corresponds to one or more terrestrial transmitting devices (e.g., cell towers, Wi-Fi sources, or other computing devices) from which the computing device receives signals.

[00182] In some embodiments, the device receives signals from a plurality of services capable of providing the location information, and selects location information from one of

the plurality of services in accordance with location information selection criteria. For example, the location information received by the device may be GPS information, Wi-Fi information, or information from cell towers. After receiving this information, the device may select the GPS information (if available) rather than Wi-Fi or cell tower information. If GPS information is not available, the device may choose to use either Wi-Fi or cell tower information or a combination thereof. In some embodiments, the device may use Wi-Fi information only if the Wi-Fi information is consistent with the information from cell tower sources.

[00183] In response to detecting a user gesture on a view location icon (e.g., gesture 610 on view location icon 602, Figure 6A) while the map application is displayed, the device displays (706) a first visual indicator on a portion of the displayed map that indicates an approximate region in which the computing device is located in accordance with the received location information when the approximate region lies within the displayed map. For example, in Figure 6B, the displayed map includes a cross-hair circle 614 as a first visual indicator on a portion of the displayed map 5266. The area within the indicator's perimeter represents an approximate region on the map in which the computing device is located. In some embodiments, the first visual indicator 614 includes a circle displayed on the displayed map 5266.

[00184] In some embodiments, detecting the user gesture on the view location icon initiates (708) a request for the location information for the computing device. In some embodiments, the device receives (710) location information from a transmitting device that is located within the region corresponding to the displayed first visual indicator (e.g., cross-hair circle 614, Figure 6B).

[00185] In response to detecting a user gesture on a view location icon (e.g., gesture 610 on view location icon 602, Figure 6A) while the map application is displayed, the device displays (706) a second visual indicator (e.g., cross-hair rectangle 618, Figure 6C) around a perimeter of the displayed map when the approximate region includes the displayed map and also extends beyond the displayed map. In some embodiments, the second visual indicator includes a rectangle displayed at the boundary of the displayed map.

[00186] The device changes (712) from displaying the first visual indicator to displaying the second visual indicator in response to magnifying an area of the map that

includes the approximate region in which the computing device is located. For example, in response to a de-pinching finger gesture (e.g., gesture 616, Figure 6B), which magnifies an area of the map, the device changes from displaying the first visual indicator 614 (Figure 6B) to displaying the second visual indicator 618 (Figure 6C).

[00187] The device changes (714) from displaying the second visual indicator to displaying the first visual indicator in response to de-magnifying an area of the map that includes the approximate region in which the computing device is located. For example, in response to a pinching finger gesture (e.g., gesture 620, Figure 6C), which demagnifies an area of the map, the device changes from displaying the second visual indicator 618 (Figure 6C) to displaying the first visual indicator 614 (Figure 6B).

[00188] Figure 8A illustrates an exemplary user interface for displaying and selecting application options in accordance with some embodiments. Figure 8A includes a curled version of a map application interface. But the curled version of the application interface is not limited to a map application. Figures 8B illustrates an exemplary user interface with user-requested information overlaid on a map in accordance with some embodiments.

[00189] In some embodiments, UI 800A (Figure 8A) includes the following elements, or a subset or superset thereof:

- 402, 404, 406, 5202, 5204, 602, 604, 606, and 608, as described above;
- a portion 802 of a flat version of an application interface;
- an image of a curled page 804 that obscures a portion of the flat version of the application interface;
- a roll-up region 806 in a display region formerly occupied by a another portion of the flat version of the application interface, wherein the roll-up region includes a plurality of option icons.

[00190] For a map application, the plurality of options icons in the roll-up region 806 includes the following icons, or a subset or superset thereof:

- a drop pin icon 808 that when activated (e.g., by a finger tap on the icon) initiates display of a user-moveable location marker on a flat version of a map;

- a show traffic icon 810 that when activated (e.g., by a finger tap on the icon) initiates display of traffic conditions on a flat version of a map;
- a map view icon 812 that when activated (e.g., by a finger tap on the icon) initiates display of a flat version of a graphical map;
- a satellite view icon 814 that when activated (e.g., by a finger tap on the icon) initiates display of a flat version of a satellite image corresponding to the graphical map;
- a hybrid view icon 816 that when activated (e.g., by a finger tap on the icon) initiates display of a flat version of a hybrid combination of a satellite image and a corresponding graphical map; and
- a list view icon 818 that when activated (e.g., by a finger tap on the icon) initiates display of a list of search results.

[00191] In some embodiments, UI 800B (Figure 8B) includes the following elements, or a subset or superset thereof:

- 402, 404, 406, 5202, 5204, 602, 604, 606, and 608, as described above;
- gas information icon 826 that is overlaid on the map when a gas information option icon (not shown) is selected;
- lodging information icon 830 that is overlaid on the map when a lodging information option icon (not shown) is selected;
- post office information icon 824 that is overlaid on the map when a post office information option icon (not shown) is selected; and
- food information icon 828 that is overlaid on the map when a food information option icon (not shown) is selected.

[00192] The user interfaces in Figures 6A and 8A-8B are used to illustrate the process described below with respect to Figure 9.

[00193] Figure 9 is a flow diagram illustrating a method of displaying and selecting application options in accordance with some embodiments. The method 900 is performed at a computing device with a touch screen display (e.g., portable multifunction device 100). The method 900 provides a simple and intuitive way for a user to view and select various

options when displaying an application. A map application is used here for exemplary and explanatory purposes. The method 900 is not limited to map applications.

[00194] A flat version of an application interface is displayed (902). For example, user interface 600A (Figure 6A) illustrates a flat version of an application interface for a map application.

[00195] In response to detecting a user gesture (e.g., a finger tap gesture 612, Figure 6A) on a view options icon (e.g., 608, Figure 6A) while the flat version of the application interface is displayed, a curled version of the application interface is displayed (904).

[00196] The curled version of the application interface (e.g., interface 800A, Figure 8A) includes an image of a curled page that obscures a first portion of the flat version of the application interface. For example, in Figure 8A, curled page 804 obscures the portion of the map underneath the curled page.

[00197] The curled version of the application interface also includes a roll-up region (e.g., roll-up region 806, Figure 8A) in a display region formerly occupied by a second portion of the flat version of the application interface. The roll-up region 806 includes a plurality of option icons (e.g., icons 808, 810, 812, 814, 816, and 818 in Figure 8A), with each respective icon in the plurality of option icons responsive to a user selection gesture on the respective option icon (904).

[00198] In some embodiments, the curled version of the application interface includes (906) a third portion of the flat version of the application interface. For example, in Figure 8A, the curled version of the map application interface 800A includes a third portion 802 of the flat version of the map application interface that is not obscured by the image of the curled page 804.

[00199] In some embodiments, the third portion is displayed in the curled version of the application interface in a manner that is visually distinct from display of the third portion in the flat version of the application interface. For example, the flat portion 802 in Figure 8A may be darkened relative to the corresponding flat portion of the map 5266 in Figure 6A. Continuing to show a portion 802 of the flat version of the application helps maintain the application context for the user while simultaneously permitting the user to view the application options in the roll-up region 806 (Figure 8A).

[00200] In some embodiments, a roll up animation is displayed (908) that transitions from displaying the flat version of the application interface to displaying the curled version of the application interface. For example, in response to detecting user gesture 612 on the view options icon 608 (Figure 6A), a roll up animation may transition from Figure 6A (the flat version) to Figure 8A (the curled version).

[00201] In some embodiments, the application is a map application (e.g., 154, Figure 1B) and the flat version of the application interface includes a map (e.g., map 5266, Figure 6A).

[00202] In some embodiments, for the map application, the plurality of option icons include a satellite view option icon 814, a hybrid view option icon 816, and a traffic information overlay option icon 810 (Figure 8A).

[00203] In some embodiments, for the map application, the plurality of option icons include an icon for adding a user-moveable location marker to the map. For example, Figure 8A includes a drop pin icon 808 for adding a user-moveable location marker (e.g., pin 1002, Figure 10A) to map 5266.

[00204] In some embodiments, for the map application, the plurality of option icons include a plurality of map overlay option icons. For example, there may be option icons allowing the user to overlay additional information on to the map 5266, such as traffic 810, gas, food, and lodging. Figure 8B illustrates an exemplary user interface 800B for displaying the additional information overlaid on the map (e.g., gas 826, lodging 830, food 828, and mail 824) in response to user selection of corresponding map overlay option icons.

[00205] In some embodiments, the curled page includes a translucent representation of a portion of the flat version of the application interface. For example, the curled page 804 in Figure 8A may display a translucent representation of map 5266 (not shown). In some embodiments, the curled page includes an inverted, translucent representation of a portion of the flat version of the application interface. For example, the curled page 804 in Figure 8A may display an inverted, translucent representation of map 5266 (not shown).

[00206] A user selection gesture (e.g., gesture 822, Figure 8A) on one or more of the plurality of option icons is detected (910). In some embodiments, the user selection gestures are finger gestures on the touch screen display. For example, in Figure 8A, user selection of the drop pin icon 808 is by finger gesture 822. In some embodiments, the application

interface displayed on the touch screen is responsive to stylus input gestures on the touch screen display.

[00207] The flat version of the application interface is redisplayed (912) with information corresponding to the one or more option icons upon which the user selection gestures were detected. For example, Figure 10A shows a user-moveable location marker 1002 added to map 5266 and Figure 8B shows information icons 824, 826, 828, and 830, which correspond to overlay option icons selected by the user, added to map 5266.

[00208] In some embodiments, the flat version of the application interface is redisplayed in response to detecting a second user gesture on the view options icon. For example, in Figure 8A, in response to a finger tap gesture 820 on the view options icon 608, display of the curled version 800A transitions to redisplay of the flat version of the application interface with information corresponding to the one or more option icons upon which the user selection gestures were detected.

[00209] In some embodiments, user selection gestures are detected on at least two of the plurality of option icons, and the flat version of the application interface is redisplayed with information corresponding to the at least two of the plurality of option icons upon which user selection gestures were detected. For example, in the roll up region 806 of the curled version of the map application (Figure 8A), the user may select both the show traffic icon 810 and the satellite icon 814 prior to redisplaying the flat version of the application interface. In response to a finger tap gesture 820 on the view options icon 608, the device will redisplay the flat version of the map application interface with a satellite view and with traffic information overlaid on the map.

[00210] For some options icons, selection of the option icon may result in an immediate transition to the flat application interface with the corresponding option added, without requiring detection of a second gesture on the view options icon (or some other close options icon). For example, detection of gesture 822 on the drop pin icon 808 may result in the immediate transition to the flat application interface with a user moveable location marker added to the map (e.g., pin 1002 added to map 5266 in Figure 10A).

[00211] In some embodiments, a roll down animation is displayed (914) that transitions from displaying the curled version of the application interface to redisplaying the flat version of the application interface with information corresponding to the one or more

option icons upon which user selection gestures were detected. For example, in response to user selection of the view options icon 608 (Figure 8A), a roll down animation may transition from Figure 8A (the curled version) to Figure 6A (the flat version).

[00212] The map application is just one example of an application that can use this method of displaying and selecting application options. Other applications that can use this method include, without limitation: contacts 137; telephone 138; video conferencing 139; e-mail client 140; instant messaging (IM) 141; blogging 142; camera 143; image management 144; video player 145; music player 146; browser 147; calendar 148; widgets 149 (e.g., weather widget 149-1, stocks widget 149-2, calculator widget 149-3, alarm clock widget 149-4, dictionary widget 149-5, and other widgets obtained by the user, as well as user-created widgets 149-6); widget creator 150; search 151; video and music player 152; notes 153; and online video 155.

[00213] Figure 10A illustrates an exemplary user interface for displaying a map application with a user-moveable location marker in accordance with some embodiments.

[00214] Figure 10B illustrates an exemplary user interface for displaying user-selectable option icons associated with a user-moveable location marker in accordance with some embodiments.

[00215] Figure 10C illustrates an exemplary user interface for obtaining directions to a location corresponding to a user-moveable location marker in accordance with some embodiments. Figure 10D illustrates an exemplary user interface for obtaining directions from a location corresponding to a user-moveable location marker in accordance with some embodiments.

[00216] Figure 10E illustrates an exemplary user interface for adding a location marker to a set of bookmarks in accordance with some embodiments.

[00217] Figure 10F illustrates an exemplary user interface with a current location of a computing device included in a list of bookmarks in accordance with some embodiments.

[00218] In some embodiments, UI 1000A (Figure 10A) includes the following elements, or a subset or superset thereof:

- 402, 404, 406, 5202, 5204, 5266, 602, 604, 606, 608, and 614 as described above;
- a user-moveable location marker 1002;

- a user-selectable region 1004 that when activated (e.g., by a finger tap 1010 on the region) initiates display of an interface (e.g., UI 1000B, Figure 10B) for obtaining information associated with the current location of a corresponding user-moveable location marker 1002-1; and
- a user-selectable region 1006 next to region 1004 that when activated (e.g., by a finger tap 1018 on region 1006) ceases display of region 1004 and region 1006;

[00219] UI 1000B (Figure 10B) includes the following elements, or a subset or superset thereof:

- 402, 404, and 406, as described above;
- a name 1019 (e.g., "Dropped Pin") for an associated user-moveable location marker (e.g., marker 1002-1, Figure 10A);
- a return to map icon 1020 that when activated (e.g., by a finger tap on the icon) initiates display of a map application interface with the corresponding user-moveable location marker (e.g., UI 1000A, Figure 10A);
- an image 1022 of a portion of the map application interface with the corresponding user-moveable location marker (e.g., UI 1000A, Figure 10A);
- an add to bookmarks icon 1024 that when activated (e.g., by a finger tap 1036 on the icon) initiates replacement of UI 1000B with display of a user interface for adding an entry to a set of bookmarked locations (e.g., UI 1000E, Figure 10E), the added entry corresponding to the current location of the user-moveable location marker 1002-1 on the map 5266 (Figure 10A);
- a directions to here icon 1026 that when activated (e.g., by a finger tap 1038 on the icon) initiates replacement of UI 1000B with display of a user interface for getting directions to the current location of the user-moveable location marker 1002-1 on the map 5266 from another location (e.g., UI 1000C, Figure 10C);
- a directions from here icon 1028 that when activated (e.g., by a finger tap 1040 on the icon) initiates replacement of UI 1000B with display of a user interface for getting directions from the current location of the user-moveable location marker 1002-1 on the map 5266 to another location (e.g., UI 1000D, Figure 10D);

- a remove location marker icon 1030 (e.g., "Remove Pin") that when activated (e.g., by a finger tap 1042 on the icon) initiates deletion of the corresponding user-moveable location marker 1002-1 from the map 5266 (Figure 10A);
- a create new contact icon 1032 that when activated (e.g., by a finger tap 1044 on the icon) initiates replacement of UI 1000B with display of a user interface for adding an entry to a set of contacts, the added entry including location information corresponding to the location of the user-moveable location marker 1002-1 on the map 5266 (Figure 10A); and
- an add to existing contact icon 1034 that when activated (e.g., by a finger tap 1046 on the icon) initiates replacement of UI 1000B with display of a user interface (or a series of user interfaces) for updating an entry in a set of contacts to include location information corresponding to the location of the user-moveable location marker 1002-1 on the map 5266 (Figure 10A).

[00220] UI 1000C (Figure 10C) and UI 1000D (Figure 10D) include the following elements, or a subset or superset thereof:

- 402, 404, 406, 5209, 5211, 5213, 5215, 5219, 5223, 5227, and 5236 as described above; and
- a keyboard 5216 for entering locations in areas 5213 and/or 5215;
- a delete icon 1050 that when activated (e.g., by a finger tap on the icon) initiates deletion of any text entered in the corresponding area.

[00221] UI 1000E (Figure 10E) is analogous to UI 5200M (Figure 5E, described above).

[00222] UI 1000F (Figure 10F) includes the following elements, or a subset or superset thereof:

- 402, 404, 406, 5240, 5290, 5292, 5294, and 5296 as described above; and
- current location 1070 that corresponds to the current location information for the device (e.g., portable multifunction device 100), whether or not the current location information has been added to a set of bookmarks (e.g., via UI 1000E, Figure 10E); and

- dropped pin 1072 that corresponds to the location information of a corresponding user-moveable location marker 1002 on the map 5266, whether or not the user-moveable location marker 1002 has been added to a set of bookmarks (e.g., via UI 1000E, Figure 10E).

[00223] The user interfaces in Figures 8A and 10A-10F are used to illustrate the process 1100 described below with respect to Figure 11 and the process 1500 described below with respect to Figure 15.

[00224] Figure 11 is a flow diagram illustrating a method 1100 for displaying and moving a user-moveable location marker on a map in accordance with some embodiments. The method 1100 is performed at a computing device with a touch screen display (e.g., portable multifunction device 100). The method 1100 provides a simple way for a user to place a location marker on the displayed map, and retrieve information associated with the location of the marker (e.g., the address of the marker and directions to or from the marker).

[00225] A map application (e.g., 154, Figure 1B) is displayed (1102). The map application is configured to display a map (e.g., map 5266, Figure 10A).

[00226] A first finger gesture is detected (1104) on an icon for adding a user-moveable location marker to the map (e.g., gesture 822, Figure 8A).

[00227] The device displays (1105) the user-moveable location marker (e.g., marker 1002-1, Figure 10A) on the map. In some embodiments, the user-moveable location marker 1002 is immediately displayed in response to detecting (1104) the finger gesture on the icon for adding a user-moveable location marker to the map (e.g., gesture 822, Figure 8A). In some embodiments, the user-moveable location marker 1002 is not displayed on the map until a finger gesture on a view options icon 608 (e.g., gesture 820, Figure 8A) or a close options icon is detected.

[00228] In some embodiments, the icon for adding a user-moveable location marker to the map is located in a curled version of the map application interface (e.g., icon 808 in UI 800A, Figure 8A).

[00229] In some embodiments, the device also displays text identifying the current location of the user-moveable location marker on the map. For example, the device may be configured to automatically display text identifying the current location in user-selectable

region 1006 (Figure 10A). In some embodiments, text identifying the location of the marker may be displayed elsewhere in UI 1000A (Figure 10A) or in an interface (e.g., UI 1000B, Figure 10B) for displaying additional options and information associated with the location marker.

[00230] In some embodiments, the device transmits a request for a reverse lookup of the current location of the user-moveable location marker on the map and receives information identifying the current location of the user-moveable location marker on the map. In some embodiments, the device transmits the request for the reverse lookup without user intervention at predetermined times (e.g., when the marker is initially placed on the map and after the marker has been moved on the map). In some embodiments, the device transmits the request for the reverse lookup in response to a user request (e.g., in response to detecting a finger tap gesture 1016 on location marker 1002-1 (Figure 10A). In some embodiments, UI 1000A (Figure 10A) or UI 1000B (Figure 10B) contains a reverse lookup icon (not shown) allowing the user to request a reverse lookup of the marker location.

[00231] In response to detecting a second finger gesture on the user-moveable location marker, the device moves (1106) the user-moveable location marker on the map in accordance with the second finger gesture. For example, in Figure 10A, the device moves the location marker 1002-1 in accordance with a second finger gesture 1012.

[00232] In some embodiments, the second finger gesture (e.g., 1012, Figure 10A) includes a finger contact area that moves on the touch screen. In some embodiments, moving the user-moveable location marker on the map in accordance with the second finger gesture includes displaying the user-moveable location marker offset from the moving finger contact area during the second finger gesture. For example, in Figure 10A the second finger gesture includes a finger contact area 1013 that moves on the touch screen. The user-moveable marker 1002-1 is offset from the moving finger contact area 1013. More details on moving the marker 1002-1 will be discussed with respect to Figures 12C(1)-12C(5) below.

[00233] In some embodiments, the user-moveable location marker is offset from the moving finger contact area such that a user's view of the user-moveable location marker is not obscured by the second finger gesture while moving the user-moveable location marker on the map in accordance with the second finger gesture. For example, the finger contact area (e.g., area 1013, Figure 10A, and area 1214, Figures 12C(2)-12C(4)) is offset from the

moving location marker 1002-1 so that the location marker is not obscured by the second finger gesture (Figure 10A). More details on moving the location marker 1002-1 will be discussed in reference to Figure 12C(1)-12C(5) below.

[00234] While displaying the map and the user-moveable location marker, the device displays (1108) a user-selectable region for obtaining information associated with a current location of the user-moveable location marker on the map. For example, UI 1000A (Figure 10A) includes a user selectable region 1004 for obtaining information associated with the marker 1002-1. In some embodiments,. the user-selectable region 1004 is denoted by a chevron (e.g. ">") and moves with the marker. In some embodiments, the display of user-selectable regions 1006 and 1004 is toggled on by a finger tap on the location marker 1002-1 and toggled off by a finger tap on region 1006. In other embodiments, region 1006 is a user-selectable region for obtaining information associated with a current location of the user-moveable location marker on the map

[00235] In response to detecting a third finger gesture on the user-selectable region for obtaining information, the display of the map and the user-moveable location marker is replaced (1110) with a display of a plurality of option icons. For example, in response to a third finger gesture 1010 on the user-selectable region 1004 (Figure 10A), the device replaces the display of the map 5266 and the marker 1002-1 with a display of a plurality of option icons (e.g., icons 1024, 1026, 1028, 1030, 1032, and 1034 in UI 1000B, Figure 10B). The plurality of option icons includes a first icon (add to bookmarks icon 1024), a second icon (directions to here icon 1026), and a third icon (directions from here icon 1028) that are described in more detail below.

[00236] In response to detection of a finger gesture on the first icon, the display of the plurality of option icons is replaced (1110) with a display of a user interface for adding an entry to a set of bookmarked locations. The added entry corresponds to the current location of the user-moveable location marker on the map. For example, in UI 1000B (Figure 10B), in response to detection of a finger gesture 1036 on the add to bookmarks icon 1024, the display of the plurality of option icons is replaced with a display of a user interface (e.g., UI 1000E Figure 10E) for adding an entry to a set of bookmarked locations. UI 1000E may include a text input box for modifying the name of the location marker ("Dropped Pin", Figure 10E) with a soft keyboard 5236.

[00237] In some embodiments, adding the entry to the set of bookmarked locations includes displaying a sequence of graphical user interfaces responsive to user gestures for adding the entry to the set of bookmarked locations.

[00238] In response to detection of a finger gesture on the second icon, the display of the plurality of option icons is replaced (1110) with a display of a user interface for getting directions to the current location of the user-moveable location marker on the map from another location . For example, in response to a finger gesture 1038 (Figure 10B) on the directions to here icon 1026, the display of the plurality of option icons is replaced with a display of a user interface UI 1000C (Figure 10C) for getting directions to the location of the marker on the map. In UI 1000C (Figure 10C), the area 5215 for entering the end point is automatically populated with the name of the location marker (e.g., "Dropped Pin" in Figure 10C). The user then merely has to enter the starting location and activate the route initiation icon 5227 (e.g., by a finger tap on the icon) to obtain directions to the current location of the user-moveable location marker on the map. In some embodiments, the device requests a reverse lookup to identify the current location of the marker.

[00239] In response to detection of a finger gesture on the third icon, the display of the plurality of option icons is replaced (1110) with a display of a user interface for getting directions from the current location of the user-moveable location marker on the map to another location. For example, in response to a finger gesture 1040 (Figure 10B) on the directions from here icon 1028, the display of the plurality of option icons is replaced with a display of a user interface UI 1000D (Figure 10D) for getting directions from the location of the marker on the map. In UI 1000D (Figure 10D), the area 5213 for entering the start point is automatically populated with the name of the location marker (e.g., "Dropped Pin" in Figure 10D). The user then merely has to enter the ending location and activate the route initiation icon 5227 (e.g., by a finger tap on the icon) to obtain directions from the current location of the user-moveable location marker on the map. In some embodiments, the device requests a reverse lookup to identify the current location of the marker.

[00240] In some embodiments, the plurality of option icons include a fourth icon (remove location marker icon 1030), wherein in response to detection of a finger gesture on the fourth icon, the user-moveable location marker is deleted. For example, in response to a finger gesture 1042 (Figure 10B) on the remove location marker icon 1030 (e.g. "Remove

Pin"), the corresponding user-moveable location marker 1002-1 is deleted from the map 5266 (Figure 10A).

[00241] In some embodiments, the plurality of option icons include an icon for adding an entry to a list of contacts, the added entry including location information corresponding to the map location of the marker. For example, in response to a finger gesture 1044 (Figure 10B) on the create new contact icon 1032, UI 1000B is replaced with display of a user interface (or series of user interfaces) for adding an entry to a set of contacts, the added entry including location information corresponding to the location of the user-moveable location marker 1002-1 on the map 5266 (Figure 10A).

[00242] In some embodiments, the plurality of option icons include an icon for updating an entry in a list of contacts to include location information corresponding to the current location of the user-moveable location marker on the map. For example, in response to a finger gesture 1046 (Figure 10B) on the add to existing contact icon 1034, UI 1000B is replaced with display of a user interface (or series of user interfaces) for updating an entry in a set of contacts to include location information corresponding to the location of the user-moveable location marker 1002-1 on the map 5266 (Figure 10A).

[00243] Figures 12A – 12E illustrate examples of user interactions with a displayed map, a user-moveable location marker, and information associated with the location marker via finger gestures in accordance with some embodiments. Figures 12A – 12E are used to illustrate the process 1300 described below with respect to Figure 13.

[00244] Figure 13 is a flow diagram illustrating a method 1300 for interacting with a displayed map and a location marker in accordance with some embodiments. The method 1300 distinguishes between gestures intended to move a map, gestures intended to move a location marker rather than the map, gestures intended for getting additional information about the location marker, and gestures intended for other types of interactions with the map. The method 1300 occurs at a computing device with a touch screen display (e.g., portable multifunction device 100). The method permits a map application on a touch screen display to respond to imprecise finger gestures in a manner that conforms to a user's expectations. In other words, the method enables a user's finger gestures to control a map application in a simple, intuitive way.

[00245] In response to detecting a first finger gesture on a marker on a digital map on the touch screen display, the device moves (1302) the digital map on the touch screen display. The first finger gesture moves a finger contact area more than a first predetermined distance in a first predetermined time when a finger in the first finger gesture initially touches the touch screen display.

[00246] For example, in Figure 12A, first finger gesture 1202 moves a finger contact area 1204 more than a first predetermined distance (e.g., 3-5 mm) in a first predetermined time (e.g., 0.2-0.3 seconds) when a finger in the first finger gesture 1202 initially touches the touch screen display. In response to detecting first finger gesture 1202 on a marker 1002 on a digital map 5266 on the touch screen display, the device moves (1302) the digital map 5266 on the touch screen display, as shown in Figure 12A.

[00247] The device interprets the initial movement in the first finger gesture 1202 as an instruction to move the displayed map (e.g., in accordance with the movement of the first finger gesture), rather than interpreting the first finger gesture as some other instruction (e.g., an instruction associated with the second, third, fourth, or fifth finger gestures, described below).

[00248] In response to detecting a second finger gesture on the marker on the digital map on the touch screen display, the device displays (1304) a user-selectable region for obtaining information associated with the marker on the touch screen display. The second finger gesture is a single tap gesture that moves a finger contact area less than a second predetermined distance and lasts less than a second predetermined time.

[00249] For example, in Figure 12B, second finger gesture 1206 is a single tap gesture that moves a finger contact area 1208 less than a second predetermined distance (e.g., 3-5 mm) and lasts less than a second predetermined time (e.g., 0.2-0.3 seconds). In response to detecting the second finger gesture 1206 on the marker 1002 on the digital map 5266 on the touch screen display, the device displays (1304) a user-selectable region 1004 for obtaining information associated with the marker 1002 on the touch screen display, as shown in Figure 12B.

[00250] The device interprets the second finger single tap gesture 1206 as an instruction to display user-selectable region 1004 for obtaining information associated with

the marker 1002, rather than interpreting the second finger gesture as some other instruction (e.g., an instruction associated with the first, third, fourth, or fifth finger gestures).

[00251] In some embodiments, the second predetermined distance for the second gesture is the same as the first predetermined distance for the first gesture. Alternatively, in some embodiments, the second predetermined distance for the second gesture is different from the first predetermined distance for the first gesture. In some embodiments, the second predetermined time for the second gesture is the same as the first predetermined time for the first gesture. Alternatively, in some embodiments, the second predetermined time for the second gesture is different from the first predetermined time for the first gesture.

[00252] In response to detecting a third finger gesture on a user-moveable location marker on the digital map on the touch screen display, the device moves (1306) the user-moveable location marker on the digital map in accordance with the third finger gesture. The third finger gesture includes a stationary (or substantially stationary) contact followed by translation of a finger contact area on the touch screen display after the second predetermined time ends. The stationary (or substantially stationary) contact moves the finger contact area less than a third predetermined distance and lasts more than the second predetermined time.

[00253] For example, in Figure 12C, third finger gesture 1212 includes a stationary (or substantially stationary) contact 1212-1 followed by translation 1212-2 of a finger contact area on the touch screen display after the second predetermined time ends. The stationary (or substantially stationary) contact 1212-1 moves the finger contact area less than a third predetermined distance (e.g., 3-5 mm) and lasts more than the second predetermined time (e.g., 0.2-0.3 seconds). In response to detecting the third finger gesture 1212 on a user-moveable location marker 1002 (Figure 12C) on the digital map on the touch screen display, the device moves (1306) the user-moveable location marker 1002 on the digital map in accordance with the third finger gesture (e.g., in Figures 12C(1)-12C(5), from 4th street to 6th street in accordance with translation 1212-2).

[00254] In some embodiments, the third finger gesture 1212 includes a finger contact area 1214 that moves on the touch screen. In some embodiments, moving the user-moveable location marker 1002 on the map 5266 in accordance with the third finger gesture 1212-2 includes displaying the user-moveable location marker 1002 offset from the moving finger contact area 1214 during the third finger gesture 1212-2. For example, in Figure 12C(1), the

user-moveable location marker 1002 is initially obscured by finger contact area 1214. After contact 1212-1 has exceeded the second predetermined time (e.g., 0.2-0.3 seconds), the user-moveable location marker 1002 may be offset from the finger contact area 1214 (Figure 12C(2)). In some embodiments, an animation is displayed that shows the user-moveable location marker 1002 being offset from the finger contact area 1214 (e.g., an animation that transitions from Figure 12C(1) to Figure 12C(2)). In some embodiments, a shadow 1210 of the user-moveable location marker 1002 is displayed. In some embodiments, the shadow 1210 touches the user-moveable location marker 1002 to indicate that the marker 1002 is "attached" to the map 5266 and cannot be moved (e.g., Figures 12C(1) and 12C(5)). In some embodiments, the shadow 1210 is separated from the user-moveable location marker 1002 to indicate that the marker 1002 has been "detached" or "lifted up" from the map 5266 so that the marker 1002 (but not the map 5266) will move in accordance with the finger gesture (e.g., the marker moves in accordance with gesture 1212-2 in Figures 12C(2)-12C(4), with the shadow 1210 separated from the marker 1002).

[00255] In some embodiments, the user-moveable location marker 1002 is offset from the moving finger contact area such that a user's view of the user-moveable location marker is not obscured by the third finger gesture while moving the user-moveable location marker 1002 on the map 5266 in accordance with the third finger gesture. For example, the finger contact area 1214 in Figures 12C(2)-12C(4) is offset from the moving location marker 1002 so that the location marker 1002 is not obscured by the third finger gesture.

[00256] The device interprets the third finger gesture 1212 as an instruction to move the user-moveable location marker 1002 on the digital map in accordance with the third finger gesture 1212, rather than interpreting the third finger gesture as some other instruction (e.g., an instruction associated with the first, second, fourth, or fifth finger gestures).

[00257] In some embodiments, in response to detecting a fourth finger gesture on or near the marker on the digital map on the touch screen display, the device magnifies (1308) an area of the map that includes the marker on the touch screen display. The fourth finger gesture is a single-finger, double tap gesture that moves a finger contact area less than a fourth predetermined distance and lasts less than a fourth predetermined time. In some embodiments, the fourth predetermined time is equal to the second predetermined time.

[00258] For example, in Figure 12D, the fourth finger gesture 1216 is a single-finger, double tap gesture that moves a finger contact area 1218 less than a fourth predetermined distance (e.g., 3-5 mm) and lasts less than a fourth predetermined time (e.g., 0.2-0.3 seconds). In some embodiments, in response to detecting the fourth finger gesture 1216 on or near the marker 1002 on the digital map 5266 on the touch screen display, the device magnifies (1308) an area of the map that includes the marker 1002 on the touch screen display (Figure 12D). In some embodiments, the fourth predetermined time is equal to the second predetermined time. In some embodiments, the device compares the time delay between detection of a first tap gesture and a second tap gesture to a predetermined value (e.g., 0.1-0.2 seconds) to determine if the user is making a double tap gesture. In some embodiments, the device also compares a change in location of the first tap gesture and the second tap gesture to a predetermined value (e.g., 3-5 mm) to determine if the user is making a double tap gesture.

[00259] The device interprets the fourth finger gesture 1216 as an instruction to magnify an area of the map that includes the marker, rather than interpreting the fourth finger gesture as some other instruction (e.g., an instruction associated with the first, second, third, or fifth finger gestures).

[00260] In some embodiments, in response to detecting a fifth finger gesture on the marker on the digital map on the touch screen display, the device demagnifies (1310) an area of the map that includes the marker on the touch screen display. The fifth finger gesture is a two-finger, double tap gesture that lasts less than a fifth predetermined time. In some embodiments, the fifth predetermined time is equal to the second predetermined time.

[00261] For example, in Figure 12E, the fifth finger gesture 1218 is a two-finger, double tap gesture that lasts less than a fifth predetermined time (e.g., 0.2-0.3 seconds). In response to detecting the fifth finger gesture 1218 on the marker 1002 on the digital map 5266 on the touch screen display, the device demagnifies (1310) an area of the map that includes the marker on the touch screen display (Figure 12E). In some embodiments, the fifth predetermined time is equal to the second predetermined time. In some embodiments, the device compares the time delay between detection of a first two-finger tap gesture and a second two-finger tap gesture to a predetermined value (e.g., 0.1-0.2 seconds) to determine if the user is making a two-finger double tap gesture. In some embodiments, the device also

compares changes in locations of the two fingers in the first tap gesture and the two fingers in the second tap gesture to predetermined values (e.g., 3-5 mm) to determine if the user is making a two-finger double tap gesture.

[00262] The device interprets the fifth finger gesture 1218 as an instruction to demagnify an area of the map that includes the marker, rather than interpreting the fifth finger gesture as some other instruction (e.g., an instruction associated with the first, second, third, or fourth finger gestures).

[00263] Figure 14 is a flow diagram illustrating a method 1400 for obtaining directions in accordance with some embodiments. The method 1400 occurs at a computing device with a touch screen display (e.g., portable multifunction device 100).

[00264] The computing device displays (1402) a map application. The map application is configured to separately display:

- a list 5240 (Figure 10F) of bookmarked locations, wherein a current location icon 1070 for the device is displayed at the top of the list of bookmarked locations 5434;
- a list 5246 (Figure 5H) of recent queries by a user;
- a list 5252 (Figure 5J) of contacts for the user; and
- a keyboard 5216 with a route search initiation icon 5225 (Figure 5R);

[00265] In some embodiments, if the view location icon 602 (Figure 6A) is activated (e.g., by a finger tap 610 on the icon), a current location icon 1070 corresponding to the current location of the device is displayed at the top of the list of bookmarked locations 5434 even if the current location has not been made into a bookmark (e.g., even if UI 1000E (Figure 10E) is not used on the current location). In process 1400, the current location icon 1070 is treated as a bookmarked location even if it is not an actual bookmarked location.

[00266] In some embodiments, the list 5240 (Figure 10F) of bookmarked locations may include an entry 1070 corresponding to the current location of the device and an entry 1072 (e.g., "Dropped Pin") corresponding to the location of a user-moveable marker 1002. In some embodiments, entries 1070 and 1072 are displayed at the top of the list of bookmarked locations 5434 (e.g., in the first two positions in the list) even if these two entries have not been made into bookmarks (e.g., even if UI 1000E (Figure 10E) is not used on the current location or the location of a corresponding user-moveable marker 1002). In process 1400,

entries 1070 and 1072 are treated as bookmarked locations even if entries 1070 and 1072 are not actual bookmarked locations. Having one or both of these entries at the top of the list of bookmarked locations makes it easy for a user to add these locations to a search, to the starting location of a route search, and/or to the ending location of a route search (e.g., by a finger tap on entry 1070 or entry 1072).

[00267] In response to detecting a finger gesture on an input icon associated with the first area (e.g., input icon 5219 associated with area 5213, Figure 10C), the device displays (1408):

- the list 5240 (Figure 10F) of bookmarked locations, wherein in response to detecting a finger gesture on a bookmarked location (including entry 1070 or entry 1072) in the list of bookmarked locations, the map application receives an address or name, corresponding to the bookmarked location, when the address or name is entered in the first area;
- the list 5246 (Figure 5H) of recent queries by the user, wherein in response to detecting a finger gesture on a location in the list of recent queries by the user, the map application receives an address corresponding to the location when the address is entered in the first area; or
- the list 5252 (Figure 5J) of contacts for the user, wherein in response to detecting a finger gesture on a contact in the list of contacts for the user, the map application receives an address associated with the contact when the address is entered in the first area;

[00268] In response to detecting a finger gesture on an input icon associated with the second area (e.g., input icon 5223 associated with area 5215, Figure 10C), the device displays (1410):

- the list 5240 (Figure 10F) of bookmarked locations, wherein in response to detecting a finger gesture on a bookmarked location (including entry 1070 or entry 1072) in the list of bookmarked locations, the map application receives an address or name, corresponding to the bookmarked location, when the address or name corresponding to the bookmarked location is entered in the second area;
- the list 5246 (Figure 5H) of recent queries by the user, wherein in response to detecting a finger gesture on a location in the list of recent queries by the user, the map application

receives an address corresponding to the location when the address corresponding to the location is entered in the second area; or

- the list 5252 (Figure 5J) of contacts for the user, wherein in response to detecting an finger gesture on a contact in the list of contacts for the user, the map application receives an address associated with the contact when the address associated with the contact is entered in the second area.

[00269] In response to detecting a finger gesture on the route search initiation icon (e.g., 5227, Figure 10C), the device (1412):

- sends the first location and the second location to a remote computer;
- receives routing information between the first location and the second location; and
- displays at least some of the routing information between the first location and the second location on a digital map.

[00270] Figure 15 is a flow diagram illustrating a method for displaying and moving a user-moveable location marker 1002 on a map in accordance with some embodiments. The method 1500 occurs at a computing device with a touch screen display (e.g., portable multifunction device 100). The method 1500 provides a simple way for a user to place a location marker on the displayed map, and retrieve information associated with the location of the marker (e.g., the address of the marker and directions to or from the marker).

[00271] The device displays (1502) a map application (e.g., 154, Figure 1B). The map application is configured to display a map (e.g., map 5266, Figure 10A). In response to detecting a stationary first finger gesture (e.g., 1016, Figure 10A) on the displayed map for greater than a predetermined time, the device displays (1504) a user-moveable location marker (e.g., marker 1002-1, Figure 10A) on the map. Thus, in method 1500, a user-moveable location marker is added to a map merely by touching and holding a finger on the touch screen display for greater than a predetermined time (e.g., 0.5-1.0 seconds). The remainder of method 1500 is similar to method 1100, described above

[00272] In response to detecting a second finger gesture on the user-moveable location marker, the device moves (1506) the user-moveable location marker on the map in accordance with the second finger gesture. For example, in Figure 10A, the device moves the location marker 1002-1 in accordance with a second finger gesture 1012.

[00273] In some embodiments, the second finger gesture (e.g., 1012, Figure 10A) includes a finger contact area that moves on the touch screen. In some embodiments, moving the user-moveable location marker on the map in accordance with the second finger gesture includes displaying the user-moveable location marker offset from the moving finger contact area during the second finger gesture. For example, in Figure 10A the second finger gesture includes a finger contact area 1013 that moves on the touch screen. The user-moveable marker 1002-1 is offset from the moving finger contact area 1013. More details on moving the marker 1002-1 were discussed with respect to Figure 12C(1)-12C(5) above.

[00274] In some embodiments, the user-moveable location marker is offset from the moving finger contact area such that a user's view of the user-moveable location marker is not obscured by the second finger gesture while moving the user-moveable location marker on the map in accordance with the second finger gesture. For example, the finger contact area (e.g., area 1013, Figure 10A, and area 1214, Figure 12C(2)-12C(4)) is offset from the moving location marker 1002-1 so that the location marker is not obscured by the second finger gesture (Figure 10A). More details on moving the location marker 1002-1 were discussed in reference to Figure 12C(1)-12C(5) above.

[00275] In some embodiments, the device displays (1508) text identifying the current location of the user-moveable location marker on the map. For example, the device may be configured to automatically display text identifying the current location in user-selectable region 1006 (Figure 10A). In some embodiments, text identifying the location of the marker may be displayed elsewhere in UI 1000A (Figure 10A) or in an interface (e.g., UI 1000B, Figure 10B) for displaying additional options and information associated with the location marker.

[00276] In some embodiments, the device transmits (1510) a request for a reverse lookup of the current location of the user-moveable location marker on the map and receives information identifying the current location of the user-moveable location marker on the map. In some embodiments, the device transmits the request for the reverse lookup without user intervention at predetermined times (e.g., when the marker is initially placed on the map and after the marker has been moved on the map). In some embodiments, the device transmits the request for the reverse lookup in response to a user request (e.g., in response to detecting a finger tap gesture 1016 on location marker 1002-1 (Figure 10A). In some embodiments, UI

1000A (Figure 10A) or UI 1000B (Figure 10B) contains a reverse lookup icon (not shown) allowing the user to request a reverse lookup of the marker location.

[00277] While displaying the map and the user-moveable location marker, the device displays (1512) a user-selectable region for obtaining information associated with a current location of the user-moveable location marker on the map. For example, UI 1000A (Figure 10A) includes a user selectable region 1004 for obtaining information associated with the marker 1002-1. In some embodiments, the user-selectable region 1004 is denoted by a chevron (e.g. ">") and moves with the marker. In some embodiments, the display of user-selectable regions 1006 and 1004 is toggled on by a finger tap on the location marker 1002-1 and toggled off by a finger tap on region 1006. In other embodiments, region 1006 is a user-selectable region for obtaining information associated with a current location of the user-moveable location marker on the map

[00278] In response to detecting a third finger gesture on the user-selectable region for obtaining information, the display of the map and the user-moveable location marker is replaced (1514) with a display of a plurality of option icons. For example, in response to a third finger gesture 1010 on the user-selectable region 1004 (Figure 10A), the device replaces the display of the map 5266 and the marker 1002-1 with a display of a plurality of option icons (e.g., icons 1024, 1026, 1028, 1030, 1032, and 1034 in UI 1000B, Figure 10B). The plurality of option icons includes a first icon (add to bookmarks icon 1024), a second icon (directions to here icon 1026), and a third icon (directions from here icon 1028) that are described in more detail below.

[00279] In response to detection of a finger gesture on the first icon, the display of the plurality of option icons is replaced (1514) with a display of a user interface for adding an entry to a set of bookmarked locations. The added entry corresponds to the current location of the user-moveable location marker on the map. For example, in UI 1000B (Figure 10B), in response to detection of a finger gesture 1036 on the add to bookmarks icon 1024, the display of the plurality of option icons is replaced with a display of a user interface (e.g., UI 1000E Figure 10E) for adding an entry to a set of bookmarked locations. UI 1000E may include a text input box for modifying the name of the location marker ("Dropped Pin", Figure 10E) with a soft keyboard 5236.

[00280] In some embodiments, adding the entry to the set of bookmarked locations includes displaying a sequence of graphical user interfaces responsive to user gestures for adding the entry to the set of bookmarked locations.

[00281] In response to detection of a finger gesture on the second icon, the display of the plurality of option icons is replaced (1514) with a display of a user interface for getting directions to the current location of the user-moveable location marker on the map from another location . For example, in response to a finger gesture 1038 (Figure 10B) on the directions to here icon 1026, the display of the plurality of option icons is replaced with a display of a user interface UI 1000C (Figure 10C) for getting directions to the location of the marker on the map. In UI 1000C (Figure 10C), the area 5215 for entering the end point is automatically populated with the name of the location marker (e.g., "Dropped Pin" in Figure 10C). The user then merely has to enter the starting location and activate the route initiation icon 5227 (e.g., by a finger tap on the icon) to obtain directions to the current location of the user-moveable location marker on the map. In some embodiments, the device requests a reverse lookup to identify the current location of the marker.

[00282] In response to detection of a finger gesture on the third icon, the display of the plurality of option icons is replaced (1514) with a display of a user interface for getting directions from the current location of the user-moveable location marker on the map to another location. For example, in response to a finger gesture 1040 (Figure 10B) on the directions from here icon 1028, the display of the plurality of option icons is replaced with a display of a user interface UI 1000D (Figure 10D) for getting directions from the location of the marker on the map. In UI 1000D (Figure 10D), the area 5213 for entering the start point is automatically populated with the name of the location marker (e.g., "Dropped Pin" in Figure 10D). The user then merely has to enter the ending location and activate the route initiation icon 5227 (e.g., by a finger tap on the icon) to obtain directions from the current location of the user-moveable location marker on the map. In some embodiments, the device requests a reverse lookup to identify the current location of the marker.

[00283] In some embodiments, the plurality of option icons include a fourth icon (remove location marker icon 1030), wherein in response to detection of a finger gesture on the fourth icon, the user-moveable location marker is deleted. For example, in response to a finger gesture 1042 (Figure 10B) on the remove location marker icon 1030 (e.g. "Remove

Pin"), the corresponding user-moveable location marker 1002-1 is deleted from the map 5266 (Figure 10A).

[00284] In some embodiments, the plurality of option icons include an icon for adding an entry to a list of contacts, the added entry including location information corresponding to the map location of the marker. For example, in response to a finger gesture 1044 (Figure 10B) on the create new contact icon 1032, UI 1000B is replaced with display of a user interface (or series of user interfaces) for adding an entry to a set of contacts, the added entry including location information corresponding to the location of the user-moveable location marker 1002-1 on the map 5266 (Figure 10A).

[00285] In some embodiments, the plurality of option icons include an icon for updating an entry in a list of contacts to include location information corresponding to the current location of the user-moveable location marker on the map. For example, in response to a finger gesture 1046 (Figure 10B) on the add to existing contact icon 1034, UI 1000B is replaced with display of a user interface (or series of user interfaces) for updating an entry in a set of contacts to include location information corresponding to the location of the user-moveable location marker 1002-1 on the map 5266 (Figure 10A).

[00286] The foregoing description, for purpose of explanation, has been described with reference to specific embodiments. However, the illustrative discussions above are not intended to be exhaustive or to limit the invention to the precise forms disclosed. Many modifications and variations are possible in view of the above teachings. The embodiments were chosen and described in order to best explain the principles of the invention and its practical applications, to thereby enable others skilled in the art to best utilize the invention and various embodiments with various modifications as are suited to the particular use contemplated.

What is claimed is:

1. A computer-implemented method, comprising:

at a computing device with a touch screen display:

displaying a map application, wherein the map application is configured to display a map;

detecting a first finger gesture on an icon for adding a user-moveable location marker to the map;

displaying the user-moveable location marker on the map;

in response to detecting a second finger gesture on the user-moveable location marker, moving the user-moveable location marker on the map in accordance with the second finger gesture;

while displaying the map and the user-moveable location marker, displaying a user-selectable region for obtaining information associated with a current location of the user-moveable location marker on the map;

in response to detecting a third finger gesture on the user-selectable region for obtaining information, replacing the display of the map and the user-moveable location marker with a display of a plurality of option icons, wherein the plurality of option icons include:

a first icon, wherein in response to detection of a finger gesture on the first icon, the display of the plurality of icons is replaced with a display of a user interface for adding an entry to a set of bookmarked locations, the added entry corresponding to the current location of the user-moveable location marker on the map;

a second icon, wherein in response to detection of a finger gesture on the second icon, the display of the plurality of icons is replaced with a display of a user interface for getting directions to the current location of the user-moveable location marker on the map from another location; and

a third icon, wherein in response to detection of a finger gesture on the third icon, the display of the plurality of icons is replaced with a display of a user interface for getting directions from the current location of the user-moveable location marker on the map to another location.

2. The method of claim 1, wherein the icon for adding a user-moveable location marker to the map is located in a curled version of a map application interface.

3. The method of claim 1, wherein:

the second finger gesture includes a finger contact area that moves on the touch screen, and

moving the user-moveable location marker on the map in accordance with the second finger gesture includes displaying the user-moveable location marker offset from the moving finger contact area during the second finger gesture.

4. The method of claim 3, wherein the user-moveable location marker is offset from the moving finger contact area such that a user's view of the user-moveable location marker is not obscured by the second finger gesture while moving the user-moveable location marker on the map in accordance with the second finger gesture.

5. The method of claim 1, wherein the plurality of option icons include a fourth icon, wherein in response to detection of a finger gesture on the fourth icon, the user-moveable location marker is deleted.

6. The method of claim 1, including displaying text identifying the current location of the user-moveable location marker on the map.

7. The method of claim 6, including transmitting a request for a reverse lookup of the current location of the user-moveable location marker on the map and receiving information identifying the current location of the user-moveable location marker on the map.

8. The method of claim 1, wherein adding the entry to the set of bookmarked locations includes displaying a sequence of graphical user interfaces responsive to user gestures for adding the entry to the set of bookmarked locations.

9. The method of claim 1, including adding an entry to a set of contacts, the added entry including location information corresponding to the map location of the marker.

10. The method of claim 1, including updating an entry in a set of contacts to include location information corresponding to the current location of the user-moveable location marker on the map.

11. A computing device, comprising:

a touch screen display;

one or more processors;

memory; and

one or more programs, wherein the one or more programs are stored in the memory and configured to be executed by the one or more processors, the one or more programs including instructions for:

displaying a map application, wherein the map application is configured to display a map;

detecting a first finger gesture on an icon for adding a user-moveable location marker to the map;

displaying the user-moveable location marker on the map;

moving, in response to detecting a second finger gesture on the user-moveable location marker, the user-moveable location marker on the map in accordance with the second finger gesture;

displaying, while displaying the map and the user-moveable location marker, a user-selectable region for obtaining information associated with a current location of the user-moveable location marker on the map;

replacing, in response to detecting a third finger gesture on the user-selectable region for obtaining information, the display of the map and the user-moveable location marker with a display of a plurality of option icons, wherein the plurality of option icons include:

a first icon, wherein in response to detection of a finger gesture on the first icon, the display of the plurality of icons is replaced with a display of a user interface for adding an entry to a set of bookmarked locations, the added entry corresponding to the current location of the user-moveable location marker on the map;

a second icon, wherein in response to detection of a finger gesture on the second icon, the display of the plurality of icons is replaced with a display of a user interface for getting directions to the current location of the user-moveable location marker on the map from another location; and

a third icon, wherein in response to detection of a finger gesture on the third icon, the display of the plurality of icons is replaced with a display of a user interface

for getting directions from the current location of the user-moveable location marker on the map to another location.

12. A computer readable storage medium having stored therein instructions, which when executed by a device with a touch screen display, cause the device to:

display a map application, wherein the map application is configured to display a map;

detect first finger gesture on an icon for adding a user-moveable location marker to the map;

display the user-moveable location marker on the map;

move, in response to detecting a second finger gesture on the user-moveable location marker, the user-moveable location marker on the map in accordance with the second finger gesture;

display, while displaying the map and the user-moveable location marker, a user-selectable region for obtaining information associated with a current location of the user-moveable location marker on the map;

replace, in response to detecting a third finger gesture on the user-selectable region for obtaining information, the display of the map and the user-moveable location marker with a display of a plurality of option icons, wherein the plurality of option icons include:

a first icon, wherein in response to detection of a finger gesture on the first icon, the display of the plurality of icons is replaced with a display of a user interface for adding an entry to a set of bookmarked locations, the added entry corresponding to the current location of the user-moveable location marker on the map;

a second icon, wherein in response to detection of a finger gesture on the second icon, the display of the plurality of icons is replaced with a display of a user interface for getting directions to the current location of the user-moveable location marker on the map from another location; and

a third icon, wherein in response to detection of a finger gesture on the third icon, the display of the plurality of icons is replaced with a display of a user interface for getting directions from the current location of the user-moveable location marker on the map to another location.

13. A graphical user interface on a device with a touch screen display, comprising:

a map application, wherein the map application is configured to display a map;

an icon for adding a user-moveable location marker to the map;

a user-selectable region for obtaining information associated with a current location of the user-moveable location marker on the map; and

a plurality of option icons, including a first icon, a second icon, and a third icon;

wherein:

in response to detecting a first finger gesture on the icon for adding a user-moveable location marker to the map, the user-moveable location marker is displayed on the map;

in response to detecting a second finger gesture on the user-moveable location marker, the user-moveable location marker is moved on the map in accordance with the second finger gesture;

while displaying the map and the user-moveable location marker, the user-selectable region for obtaining information associated with a current location of the user-moveable location marker on the map is displayed;

in response to detecting a third finger gesture on the user-selectable region for obtaining information, the display of the map and the user-moveable location marker is replaced with a display of the plurality of option icons, wherein:

in response to detection of a finger gesture on the first icon, the display of the plurality of icons is replaced with a display of a user interface for adding an entry to a set of bookmarked locations, the added entry corresponding to the current location of the user-moveable location marker on the map;

in response to detection of a finger gesture on the second icon, the display of the plurality of icons is replaced with a display of a user interface for getting directions to the current location of the user-moveable location marker on the map from another location; and

in response to detection of a finger gesture on the third icon, the display of the plurality of icons is replaced with a display of a user interface for getting directions from the current location of the user-moveable location marker on the map to another location.

14. A device, comprising:

a touch screen display;

means for displaying a map application, wherein the map application is configured to display a map;

means for detecting a first finger gesture on an icon for adding a user-moveable location marker to the map;

means for displaying the user-moveable location marker on the map;

means for moving, in response to detecting a second finger gesture on the user-moveable location marker, the user-moveable location marker on the map in accordance with the second finger gesture;

means for displaying, while displaying the map and the user-moveable location marker, a user-selectable region for obtaining information associated with a current location of the user-moveable location marker on the map;

means for replacing, in response to detecting a third finger gesture on the user-selectable region for obtaining information, the display of the map and the user-moveable location marker with a display of a plurality of option icons, wherein the plurality of option icons include:

a first icon, wherein in response to detection of a finger gesture on the first icon, the display of the plurality of icons is replaced with a display of a user interface for adding an entry to a set of bookmarked locations, the added entry corresponding to the current location of the user-moveable location marker on the map;

a second icon, wherein in response to detection of a finger gesture on the second icon, the display of the plurality of icons is replaced with a display of a user interface for getting directions to the current location of the user-moveable location marker on the map from another location; and

a third icon, wherein in response to detection of a finger gesture on the third icon, the display of the plurality of icons is replaced with a display of a user interface for getting directions from the current location of the user-moveable location marker on the map to another location.

15. A computer-implemented method, comprising:

at a computing device with a touch screen display:

in response to detecting a first finger gesture on a marker on a digital map on the touch screen display, moving the digital map on the touch screen display, wherein the

first finger gesture moves a finger contact area more than a first predetermined distance in a first predetermined time when a finger in the first finger gesture initially touches the touch screen display;

in response to detecting a second finger gesture on the marker on the digital map on the touch screen display, displaying a user-selectable region for obtaining information associated with the marker on the touch screen display, wherein the second finger gesture is a single tap gesture that moves a finger contact area less than a second predetermined distance and lasts less than a second predetermined time; and

in response to detecting a third finger gesture on a user-moveable location marker on the digital map on the touch screen display, moving the user-moveable location marker on the digital map in accordance with the third finger gesture, wherein the third finger gesture includes a substantially stationary contact, wherein the substantially stationary contact moves a finger contact area less than a third predetermined distance and lasts more than the second predetermined time, followed by translation of the finger contact area on the touch screen display after the second predetermined time ends.

16. The method of claim 15, including:

in response to detecting a fourth finger gesture on or near the marker on the digital map on the touch screen display, magnifying an area of the map that includes the marker on the touch screen display, wherein the fourth finger gesture is a single-finger, double tap gesture that moves a finger contact area less than a fourth predetermined distance and lasts less than a fourth predetermined time.

17. The method of claim 15, including:

in response to detecting a fifth finger gesture on the marker on the digital map on the touch screen display, demagnifying an area of the map that includes the marker on the touch screen display, wherein the fifth finger gesture is a two-finger, double tap gesture that lasts less than a fifth predetermined time.

18. A computing device, comprising:

a touch screen display;

one or more processors;

memory; and

one or more programs, wherein the one or more programs are stored in the memory and configured to be executed by the one or more processors, the one or more programs including instructions for:

in response to detecting a first finger gesture on a marker on a digital map on the touch screen display, moving the digital map on the touch screen display, wherein the first finger gesture moves a finger contact area more than a first predetermined distance in a first predetermined time when a finger in the first finger gesture initially touches the touch screen display;

in response to detecting a second finger gesture on the marker on the digital map on the touch screen display, displaying a user-selectable region for obtaining information associated with the marker on the touch screen display, wherein the second finger gesture is a single tap gesture that moves a finger contact area less than a second predetermined distance and lasts less than a second predetermined time; and

in response to detecting a third finger gesture on a user-moveable location marker on the digital map on the touch screen display, moving the user-moveable location marker on the digital map in accordance with the third finger gesture, wherein the third finger gesture includes a substantially stationary contact, wherein the substantially stationary contact moves a finger contact area less than a third predetermined distance and lasts more than the second predetermined time, followed by translation of the finger contact area on the touch screen display after the second predetermined time ends.

19. A computer readable storage medium having stored therein instructions, which when executed by a device with a touch screen display, cause the device to:

in response to detecting a first finger gesture on a marker on a digital map on the touch screen display, move the digital map on the touch screen display, wherein the first finger gesture moves a finger contact area more than a first predetermined distance in a first predetermined time when a finger in the first finger gesture initially touches the touch screen display;

in response to detecting a second finger gesture on the marker on the digital map on the touch screen display, display a user-selectable region for obtaining information associated with the marker on the touch screen display, wherein the second finger gesture is a single tap gesture that moves a finger contact area less than a second predetermined distance and lasts less than a second predetermined time; and

in response to detecting a third finger gesture on a user-moveable location marker on the digital map on the touch screen display, move the user-moveable location marker on the digital map in accordance with the third finger gesture, wherein the third finger gesture includes a substantially stationary contact, wherein the substantially stationary contact moves a finger contact area less than a third predetermined distance and lasts more than the second predetermined time, followed by translation of the finger contact area on the touch screen display after the second predetermined time ends.

20. A graphical user interface on a device with a touch screen display, comprising:

a marker on a digital map; and

a user-selectable region for obtaining information associated with the marker;

wherein:

in response to detecting a first finger gesture on the marker on the digital map on the touch screen display, the digital map is moved on the touch screen display, wherein the first finger gesture moves a finger contact area more than a first predetermined distance in a first predetermined time when a finger in the first finger gesture initially touches the touch screen display;

in response to detecting a second finger gesture on the marker on the digital map on the touch screen display, displaying the user-selectable region for obtaining information associated with the marker is displayed on the touch screen display, wherein the second finger gesture is a single tap gesture that moves a finger contact area less than a second predetermined distance and lasts less than a second predetermined time; and

in response to detecting a third finger gesture on a user-moveable location marker on the digital map on the touch screen display, the user-moveable location marker is moved on the digital map in accordance with the third finger gesture, wherein the third finger gesture includes a substantially stationary contact, wherein the substantially stationary contact moves a finger contact area less than a third predetermined distance and lasts more than the second predetermined time, followed by translation of the finger contact area on the touch screen display after the second predetermined time ends.

21. A device, comprising:

a touch screen display;

means for, in response to detecting a first finger gesture on a marker on a digital map on the touch screen display, moving the digital map on the touch screen display, wherein the first finger gesture moves a finger contact area more than a first predetermined distance in a first predetermined time when a finger in the first finger gesture initially touches the touch screen display;

means for, in response to detecting a second finger gesture on the marker on the digital map on the touch screen display, displaying a user-selectable region for obtaining information associated with the marker on the touch screen display, wherein the second finger gesture is a single tap gesture that moves a finger contact area less than a second predetermined distance and lasts less than a second predetermined time; and

means for, in response to detecting a third finger gesture on a user-moveable location marker on the digital map on the touch screen display, moving the user-moveable location marker on the digital map in accordance with the third finger gesture, wherein the third finger gesture includes a substantially stationary contact, wherein the substantially stationary contact moves a finger contact area less than a third predetermined distance and lasts more than the second predetermined time, followed by translation of the finger contact area on the touch screen display after the second predetermined time ends.

22. A computer-implemented method, comprising:

at a computing device with a touch screen display:

displaying a map application, wherein the map application is configured to display a map;

receiving location information for the computing device; and

in response to detecting a user gesture on a view location icon while the map application is displayed:

displaying a first visual indicator on a portion of the displayed map that indicates an approximate region in which the computing device is located in accordance with the received location information when the approximate region lies within the displayed map, and

displaying a second visual indicator around a perimeter of the displayed map when the approximate region includes the displayed map and also extends beyond the displayed map;

changing from displaying the first visual indicator to displaying the second visual indicator in response to magnifying an area of the map that includes the approximate region in which the computing device is located; and

changing from displaying the second visual indicator to displaying the first visual indicator in response to demagnifying an area of the map that includes the approximate region in which the computing device is located.

23. The method of claim 22, wherein detecting the user gesture on the view location icon initiates a request for the location information for the computing device.

24. The method of claim 22, including receiving the location information from a transmitting device that is located within the region corresponding to the displayed first visual indicator.

25. The method of claim 22, wherein the location information corresponds to one or more terrestrial transmitting devices from which the computing device receives signals.

26. The method of claim 22, including receiving signals from a plurality of services capable of providing the location information, and selecting location information from one of the plurality of services in accordance with location information selection criteria.

27. The method of claim 22, wherein the first visual indicator includes a circle displayed on the displayed map.

28. The method of claim 22, wherein the first visual indicator includes a rectangle displayed on the displayed map.

29. The method of claim 22, wherein the second visual indicator includes a rectangle displayed at the boundary of the displayed map.

30. A computing device, comprising:

a touch screen display;

one or more processors;

memory; and

one or more programs, wherein the one or more programs are stored in the memory and configured to be executed by the one or more processors, the one or more programs including instructions for:

displaying a map application, wherein the map application is configured to display a map;

receiving location information for the computing device; and

in response to detecting a user gesture on a view location icon while the map application is displayed:

displaying a first visual indicator on a portion of the displayed map that indicates an approximate region in which the computing device is located in accordance with the received location information when the approximate region lies within the displayed map, and

displaying a second visual indicator around a perimeter of the displayed map when the approximate region includes the displayed map and also extends beyond the displayed map;

changing from displaying the first visual indicator to displaying the second visual indicator in response to magnifying an area of the map that includes the approximate region in which the computing device is located; and

changing from displaying the second visual indicator to displaying the first visual indicator in response to demagnifying an area of the map that includes the approximate region in which the computing device is located.

31. A computer readable storage medium having stored therein instructions, which when executed by a device with a touch screen display, cause the device to:

display a map application, wherein the map application is configured to display a map;

receive location information for the computing device; and

in response to detecting a user gesture on a view location icon while the map application is displayed:

display a first visual indicator on a portion of the displayed map that indicates an approximate region in which the computing device is located in accordance with the received location information when the approximate region lies within the displayed map, and

display a second visual indicator around a perimeter of the displayed map when the approximate region includes the displayed map and also extends beyond the displayed map;

change from displaying the first visual indicator to displaying the second visual indicator in response to magnifying an area of the map that includes the approximate region in which the computing device is located; and

change from displaying the second visual indicator to displaying the first visual indicator in response to demagnifying an area of the map that includes the approximate region in which the computing device is located.

32. A graphical user interface on a device with a touch screen display, comprising:

a map application, wherein the map application is configured to display a map;

a view location icon;

a first visual indicator;

a second visual indicator;

wherein:

in response to detecting a user gesture on the view location icon while the map application is displayed:

the first visual indicator is displayed on a portion of the displayed map that indicates an approximate region in which the computing device is located in accordance with received location information when the approximate region lies within the displayed map, and

a second visual indicator is displayed around a perimeter of the displayed map when the approximate region includes the displayed map and also extends beyond the displayed map;

in response to magnifying an area of the map that includes the approximate region in which the computing device is located, the displayed first visual indicator is changed to the second visual indicator; and

in response to demagnifying an area of the map that includes the approximate region in which the computing device is located, the displayed second visual indicator is changed to the first visual indicator.

33. A device, comprising:

a touch screen display;

means for displaying a map application, wherein the map application is configured to display a map;

means for receiving location information for the computing device; and

means for, in response to detecting a user gesture on a view location icon while the map application is displayed:

displaying a first visual indicator on a portion of the displayed map that indicates an approximate region in which the computing device is located in accordance with the received location information when the approximate region lies within the displayed map, and

displaying a second visual indicator around a perimeter of the displayed map when the approximate region includes the displayed map and also extends beyond the displayed map;

means for changing from displaying the first visual indicator to displaying the second visual indicator in response to magnifying an area of the map that includes the approximate region in which the computing device is located; and

means for changing from displaying the second visual indicator to displaying the first visual indicator in response to demagnifying an area of the map that includes the approximate region in which the computing device is located.

34. A computer-implemented method, comprising:

at a computing device with a touch screen display:

displaying a map application, wherein the map application is configured to separately display:

a list of bookmarked locations, wherein a current location of the device is displayed at the top of the list of bookmarked locations;

a list of recent queries by a user;

a list of contacts for the user; and

a keyboard with a route search initiation icon;

displaying a first area for entering a first location;

displaying a second area for entering a second location;

in response to detecting a finger gesture on an input icon associated with the first area, displaying:

the list of bookmarked locations, wherein in response to detecting a finger gesture on a bookmarked location in the list of bookmarked locations, the map application receives an address or name, corresponding to the bookmarked location, when the address or name is entered in the first area;

the list of recent queries by the user, wherein in response to detecting a finger gesture on a location in the list of recent queries by the user, the map application receives an address corresponding to the location when the address is entered in the first area; or

the list of contacts for the user, wherein in response to detecting a finger gesture on a contact in the list of contacts for the user, the map application receives an address associated with the contact when the address is entered in the first area;

in response to detecting a finger gesture on an input icon associated with the second area, displaying:

the list of bookmarked locations, wherein in response to detecting a finger gesture on a bookmarked location in the list of bookmarked locations, the map application receives an address or name, corresponding to the bookmarked location, when the address or name corresponding to the bookmarked location is entered in the second area;

the list of recent queries by the user, wherein in response to detecting a finger gesture on a location in the list of recent queries by the user, the map application receives an address corresponding to the location when the address corresponding to the location is entered in the second area; or

the list of contacts for the user, wherein in response to detecting an finger gesture on a contact in the list of contacts for the user, the map application receives an address associated with the contact when the address associated with the contact is entered in the second area; and

in response to detecting a finger gesture on the route search initiation icon:

sending the first location and the second location to a remote computer;

receiving routing information between the first location and the second location; and

displaying at least some of the routing information between the first location and the second location on a digital map.

35. A computing device, comprising:

a touch screen display;

one or more processors;

memory; and

one or more programs, wherein the one or more programs are stored in the memory and configured to be executed by the one or more processors, the one or more programs including instructions for:

displaying a map application, wherein the map application is configured to separately display:

a list of bookmarked locations, wherein a current location of the device is displayed at the top of the list of bookmarked locations;

a list of recent queries by a user;

a list of contacts for the user; and

a keyboard with a route search initiation icon;

displaying a first area for entering a first location;

displaying a second area for entering a second location;

in response to detecting a finger gesture on an input icon associated with the first area, displaying:

the list of bookmarked locations, wherein in response to detecting a finger gesture on a bookmarked location in the list of bookmarked locations, the map application receives an address or name, corresponding to the bookmarked location, when the address or name is entered in the first area;

the list of recent queries by the user, wherein in response to detecting a finger gesture on a location in the list of recent queries by the user, the map application receives an address corresponding to the location when the address is entered in the first area; or

the list of contacts for the user, wherein in response to detecting a finger gesture on a contact in the list of contacts for the user, the map application receives an address associated with the contact when the address is entered in the first area;

in response to detecting a finger gesture on an input icon associated with the second area, displaying:

the list of bookmarked locations, wherein in response to detecting a finger gesture on a bookmarked location in the list of bookmarked locations, the map application receives an address or name, corresponding to the bookmarked location, when the address or name corresponding to the bookmarked location is entered in the second area;

the list of recent queries by the user, wherein in response to detecting a finger gesture on a location in the list of recent queries by the user, the map application receives an address corresponding to the location when the address corresponding to the location is entered in the second area; or

the list of contacts for the user, wherein in response to detecting an finger gesture on a contact in the list of contacts for the user, the map application receives an address associated with the contact when the address associated with the contact is entered in the second area; and

in response to detecting a finger gesture on the route search initiation icon:

sending the first location and the second location to a remote computer;

receiving routing information between the first location and the second location; and

displaying at least some of the routing information between the first location and the second location on a digital map.

36. A computer readable storage medium having stored therein instructions, which when executed by a device with a touch screen display, cause the device to:

display a map application, wherein the map application is configured to separately display:

a list of bookmarked locations, wherein a current location of the device is displayed at the top of the list of bookmarked locations;

a list of recent queries by a user;

a list of contacts for the user; and

a keyboard with a route search initiation icon;

display a first area for entering a first location;

display a second area for entering a second location;

in response to detecting a finger gesture on an input icon associated with the first area, display:

the list of bookmarked locations, wherein in response to detecting a finger gesture on a bookmarked location in the list of bookmarked locations, the map application receives an address or name, corresponding to the bookmarked location, when the address or name is entered in the first area;

the list of recent queries by the user, wherein in response to detecting a finger gesture on a location in the list of recent queries by the user, the map application receives an address corresponding to the location when the address is entered in the first area; or

the list of contacts for the user, wherein in response to detecting a finger gesture on a contact in the list of contacts for the user, the map application receives an address associated with the contact when the address is entered in the first area;

in response to detecting a finger gesture on an input icon associated with the second area, display:

the list of bookmarked locations, wherein in response to detecting a finger gesture on a bookmarked location in the list of bookmarked locations, the map application receives an address or name, corresponding to the bookmarked location, when the address or name corresponding to the bookmarked location is entered in the second area;

the list of recent queries by the user, wherein in response to detecting a finger gesture on a location in the list of recent queries by the user, the map application receives an address corresponding to the location when the address corresponding to the location is entered in the second area; or

the list of contacts for the user, wherein in response to detecting an finger gesture on a contact in the list of contacts for the user, the map application receives an address associated with the contact when the address associated with the contact is entered in the second area; and

in response to detecting a finger gesture on the route search initiation icon:

send the first location and the second location to a remote computer;

receive routing information between the first location and the second location; and

display at least some of the routing information between the first location and the second location on a digital map.

37. A graphical user interface for a map application on a device with a touch screen display, comprising:

a digital map;

a list of bookmarked locations, wherein a current location of the device is displayed at the top of the list of bookmarked locations;

a list of recent queries by a user;

a list of contacts for the user;

a keyboard with a route search initiation icon;

a first area for entering a first location;

an input icon associated with the first area;

a second area for entering a second location; and

an input icon associated with the second area

wherein:

in response to detecting a finger gesture on the input icon associated with the first area:

the list of bookmarked locations is displayed, wherein in response to detecting a finger gesture on a bookmarked location in the list of bookmarked locations, the map application receives an address or name, corresponding to the bookmarked location, when the address or name is entered in the first area;

the list of recent queries by the user is displayed, wherein in response to detecting a finger gesture on a location in the list of recent queries by the user, the map application receives an address corresponding to the location when the address is entered in the first area; or

the list of contacts for the user is displayed, wherein in response to detecting a finger gesture on a contact in the list of contacts for the user, the map application receives an address associated with the contact when the address is entered in the first area;

in response to detecting a finger gesture on the input icon associated with the second area:

the list of bookmarked locations is displayed, wherein in response to detecting a finger gesture on a bookmarked location in the list of bookmarked locations, the map application receives an address or name, corresponding to the bookmarked location,

when the address or name corresponding to the bookmarked location is entered in the second area;

the list of recent queries by the user is displayed, wherein in response to detecting a finger gesture on a location in the list of recent queries by the user, the map application receives an address corresponding to the location when the address corresponding to the location is entered in the second area; or

the list of contacts for the user is displayed, wherein in response to detecting an finger gesture on a contact in the list of contacts for the user, the map application receives an address associated with the contact when the address associated with the contact is entered in the second area; and

in response to detecting a finger gesture on the route search initiation icon:

the first location and the second location is sent to a remote computer;

routing information between the first location and the second location is received; and

at least some of the routing information between the first location and the second location is displayed on the digital map.

38. A device, comprising:

a touch screen display;

means for displaying a map application, wherein the map application is configured to separately display:

a list of bookmarked locations, wherein a current location of the device is displayed at the top of the list of bookmarked locations;

a list of recent queries by a user;

a list of contacts for the user; and

a keyboard with a route search initiation icon;

means for displaying a first area for entering a first location;

means for displaying a second area for entering a second location;

means for, in response to detecting a finger gesture on an input icon associated with the first area, displaying:

the list of bookmarked locations, wherein in response to detecting a finger gesture on a bookmarked location in the list of bookmarked locations, the map application

receives an address or name, corresponding to the bookmarked location, when the address or name is entered in the first area;

the list of recent queries by the user, wherein in response to detecting a finger gesture on a location in the list of recent queries by the user, the map application receives an address corresponding to the location when the address is entered in the first area; or

the list of contacts for the user, wherein in response to detecting a finger gesture on a contact in the list of contacts for the user, the map application receives an address associated with the contact when the address is entered in the first area;

means for, in response to detecting a finger gesture on an input icon associated with the second area, displaying:

the list of bookmarked locations, wherein in response to detecting a finger gesture on a bookmarked location in the list of bookmarked locations, the map application receives an address or name, corresponding to the bookmarked location, when the address or name corresponding to the bookmarked location is entered in the second area;

the list of recent queries by the user, wherein in response to detecting a finger gesture on a location in the list of recent queries by the user, the map application receives an address corresponding to the location when the address corresponding to the location is entered in the second area; or

the list of contacts for the user, wherein in response to detecting an finger gesture on a contact in the list of contacts for the user, the map application receives an address associated with the contact when the address associated with the contact is entered in the second area; and

means for, in response to detecting a finger gesture on the route search initiation icon:

sending the first location and the second location to a remote computer;

receiving routing information between the first location and the second location; and

displaying at least some of the routing information between the first location and the second location on a digital map.

39. A computer-implemented method, comprising:

at a computing device with a touch screen display:

displaying a map application, wherein the map application is configured to display a map;

in response to detecting a stationary first finger gesture on the displayed map for greater than a predetermined time, displaying a user-moveable location marker on the map;

in response to detecting a second finger gesture on the user-moveable location marker, moving the user-moveable location marker on the map in accordance with the second finger gesture;

while displaying the map and the user-moveable location marker, displaying a user-selectable region for obtaining information associated with a current location of the user-moveable location marker on the map; and

in response to detecting a third finger gesture on the user-selectable region for obtaining information, replacing the display of the map and the user-moveable location marker with a display of a plurality of option icons, wherein the plurality of option icons include:

a first icon, wherein in response to detection of a finger gesture on the first icon, the display of the plurality of icons is replaced with a display of a user interface for adding an entry to a set of bookmarked locations, the added entry corresponding to the current location of the user-moveable location marker on the map;

a second icon, wherein in response to detection of a finger gesture on the second icon, the display of the plurality of icons is replaced with a display of a user interface for getting directions to the current location of the user-moveable location marker on the map from another location; and

a third icon, wherein in response to detection of a finger gesture on the third icon, the display of the plurality of icons is replaced with a display of a user interface for getting directions from the current location of the user-moveable location marker on the map to another location.

40. The method of claim 39, wherein the icon for adding a user-moveable location marker to the map is located in a curled version of a map application interface.

41. The method of claim 39, wherein:

the second finger gesture includes a finger contact area that moves on the touch screen, and

moving the user-moveable location marker on the map in accordance with the second finger gesture includes displaying the user-moveable location marker offset from the moving finger contact area during the second finger gesture.

42. The method of claim 41, wherein the user-moveable location marker is offset from the moving finger contact area such that a user's view of the user-moveable location marker is not obscured by the second finger gesture while moving the user-moveable location marker on the map in accordance with the second finger gesture.

43. The method of claim 39, wherein the plurality of option icons include a fourth icon, wherein in response to detection of a finger gesture on the fourth icon, the user-moveable location marker is deleted.

44. The method of claim 39, including displaying text identifying the current location of the user-moveable location marker on the map.

45. The method of claim 44, including transmitting a request for a reverse lookup of the current location of the user-moveable location marker on the map and receiving information identifying the current location of the user-moveable location marker on the map.

46. The method of claim 39, wherein adding the entry to the set of bookmarked locations includes displaying a sequence of graphical user interfaces responsive to user gestures for adding the entry to the set of bookmarked locations.

47. The method of claim 39, including adding an entry to a set of contacts, the added entry including location information corresponding to the map location of the marker.

48. The method of claim 39, including updating an entry in a set of contacts to include location information corresponding to the current location of the user-moveable location marker on the map.

49. A computing device, comprising:

a touch screen display;

one or more processors;

memory; and

one or more programs, wherein the one or more programs are stored in the memory and configured to be executed by the one or more processors, the one or more programs including instructions for:

displaying a map application, wherein the map application is configured to display a map;

in response to detecting a stationary first finger gesture on the displayed map for greater than a predetermined time, displaying a user-moveable location marker on the map;

in response to detecting a second finger gesture on the user-moveable location marker, moving the user-moveable location marker on the map in accordance with the second finger gesture;

while displaying the map and the user-moveable location marker, displaying a user-selectable region for obtaining information associated with a current location of the user-moveable location marker on the map; and

in response to detecting a third finger gesture on the user-selectable region for obtaining information, replacing the display of the map and the user-moveable location marker with a display of a plurality of option icons, wherein the plurality of option icons include:

a first icon, wherein in response to detection of a finger gesture on the first icon, replacing the display of the plurality of icons with a display of a user interface for adding an entry to a set of bookmarked locations, the added entry corresponding to the current location of the user-moveable location marker on the map;

a second icon, wherein in response to detection of a finger gesture on the second icon, replacing the display of the plurality of icons with a display of a user interface for getting directions to the current location of the user-moveable location marker on the map from another location; and

a third icon, wherein in response to detection of a finger gesture on the third icon, replacing the display of the plurality of icons with a display of a user interface for getting directions from the current location of the user-moveable location marker on the map to another location.

50. A computer readable storage medium having stored therein instructions, which when executed by a device with a touch screen display, cause the device to:

display a map application, wherein the map application is configured to display a map;

in response to detecting a stationary first finger gesture on the displayed map for greater than a predetermined time, display a user-moveable location marker on the map;

in response to detecting a second finger gesture on the user-moveable location marker, move the user-moveable location marker on the map in accordance with the second finger gesture;

while displaying the map and the user-moveable location marker, display a user-selectable region for obtaining information associated with a current location of the user-moveable location marker on the map; and

in response to detecting a third finger gesture on the user-selectable region for obtaining information, replace the display of the map and the user-moveable location marker with a display of a plurality of option icons, wherein the plurality of option icons include:

a first icon, wherein in response to detection of a finger gesture on the first icon, replace the display of the plurality of icons is replaced with a display of a user interface for adding an entry to a set of bookmarked locations, the added entry corresponding to the current location of the user-moveable location marker on the map;

a second icon, wherein in response to detection of a finger gesture on the second icon, the display of the plurality of icons is replaced with a display of a user interface for getting directions to the current location of the user-moveable location marker on the map from another location; and

a third icon, wherein in response to detection of a finger gesture on the third icon, the display of the plurality of icons is replaced with a display of a user interface for getting directions from the current location of the user-moveable location marker on the map to another location.

51. A graphical user interface on a device with a touch screen display, comprising:

a map application, wherein the map application is configured to display a map;

a user-moveable location marker;

a user-selectable region for obtaining information associated with a current location of the user-moveable location marker on the map; and

a plurality of option icons, wherein the plurality of option icons include a first icon, a second icon, and a third icon;

wherein:

in response to detecting a stationary first finger gesture on the displayed map for greater than a predetermined time, the user-moveable location marker is displayed on the map;

in response to detecting a second finger gesture on the user-moveable location marker, the user-moveable location marker is moved on the map in accordance with the second finger gesture;

while displaying the map and the user-moveable location marker, the user-selectable region is displayed on the map;

in response to detecting a third finger gesture on the user-selectable region, the display of the map and the user-moveable location marker is replaced with a display of the plurality of option icons, wherein:

in response to detection of a finger gesture on the first icon, the display of the plurality of icons is replaced with a display of a user interface for adding an entry to a set of bookmarked locations, the added entry corresponding to the current location of the user-moveable location marker on the map;

in response to detection of a finger gesture on the second icon, the display of the plurality of icons is replaced with a display of a user interface for getting directions to the current location of the user-moveable location marker on the map from another location; and

in response to detection of a finger gesture on the third icon, the display of the plurality of icons is replaced with a display of a user interface for getting directions from the current location of the user-moveable location marker on the map to another location.

52. A device, comprising:

a touch screen display;

means for displaying a map application, wherein the map application is configured to display a map;

means for, in response to detecting a stationary first finger gesture on the displayed map for greater than a predetermined time, displaying a user-moveable location marker on the map;

means for, in response to detecting a second finger gesture on the user-moveable location marker, moving the user-moveable location marker on the map in accordance with the second finger gesture;

means for, while displaying the map and the user-moveable location marker, displaying a user-selectable region for obtaining information associated with a current location of the user-moveable location marker on the map;

means for, in response to detecting a third finger gesture on the user-selectable region for obtaining information, replacing the display of the map and the user-moveable location marker with a display of a plurality of option icons, wherein the plurality of option icons include:

a first icon, wherein in response to detection of a finger gesture on the first icon, the display of the plurality of icons is replaced with a display of a user interface for adding an entry to a set of bookmarked locations, the added entry corresponding to the current location of the user-moveable location marker on the map;

a second icon, wherein in response to detection of a finger gesture on the second icon, the display of the plurality of icons is replaced with a display of a user interface for getting directions to the current location of the user-moveable location marker on the map from another location; and

a third icon, wherein in response to detection of a finger gesture on the third icon, the display of the plurality of icons is replaced with a display of a user interface for getting directions from the current location of the user-moveable location marker on the map to another location.

53. A computer-implemented method, comprising:

at a computing device with a touch screen display:

displaying a flat version of an application interface;

in response to detecting a user gesture on a view options icon while the flat version of the application interface is displayed, displaying a curled version of the application interface, wherein the curled version of the application interface includes:

an image of a curled page that obscures a first portion of the flat version of the application interface; and

a roll-up region in a display region formerly occupied by a second portion of the flat version of the application interface, wherein the roll-up region includes a plurality of option icons, each respective option icon in the plurality of option icons responsive to a user selection gesture on the respective option icon;

detecting a user selection gesture on one or more of the plurality of option icons; and

redisplaying the flat version of the application interface with information corresponding to the one or more option icons upon which user selection gestures were detected.

54. The method of claim 53, including,

detecting user selection gestures on at least two of the plurality of option icons; and

redisplaying the flat version of the application interface with information corresponding to the at least two of the plurality of option icons upon which user selection gestures were detected.

55. The method of claim 53, wherein the curled version of the application interface includes a third portion of the flat version of the application interface.

56. The method of claim 55,

wherein the third portion is displayed in the curled version of the application interface in a manner that is visually distinct from display of the third portion in the flat version of the application interface.

57. The method of claim 53, wherein the flat version of the application interface is redisplayed in response to detecting a second user gesture on the view options icon.

58. The method of claim 53, including

displaying a roll up animation that transitions from displaying the flat version of the application interface to displaying the curled version of the application interface.

59. The method of claim 58, further including

displaying a roll down animation that transitions from displaying the curled version of the application interface to redisplaying the flat version of the application interface with information corresponding to the one or more option icons upon which user selection gestures were detected.

60. The method of claim 53, wherein the curled page includes an inverted, translucent representation of a portion of the flat version of the application interface.

61. The method of claim 53, wherein the curled page includes a translucent representation of a portion of the flat version of the application interface.

62. The method of claim 53, wherein the user selection gestures are finger gestures on the touch screen display.

63. The method of claim 53, wherein the application is a map application and the flat version of the application interface includes a map.

64. The method of claim 63, wherein the plurality of option icons include a satellite view option icon, a hybrid view option icon, and a traffic information overlay option icon.

65. The method of claim 63, wherein the plurality of option icons include an icon for adding a user-moveable location marker to the map.

66. The method of claim 63, wherein the plurality of option icons include a plurality of map overlay option icons.

67. A computing device, comprising:

a touch screen display;

one or more processors;

memory; and

one or more programs, wherein the one or more programs are stored in the memory and configured to be executed by the one or more processors, the one or more programs including instructions for:

displaying a flat version of an application interface;

displaying, in response to detecting a user gesture on a view options icon while the flat version of the application interface is displayed, a curled version of the application interface, wherein the curled version of the application interface includes:

an image of a curled page that obscures a first portion of the flat version of the application interface; and

a roll-up region in a display region formerly occupied by a second portion of the flat version of the application interface, wherein the roll-up region includes a plurality of option icons, each respective option icon in the plurality of option icons responsive to a user selection gesture on the respective option icon

detecting a user selection gesture on one or more of the plurality of option icons; and

redisplaying the flat version of the application interface with information corresponding to the one or more option icons upon which user selection gestures were detected.

68. The device of claim 67, wherein the device is a portable multifunction device.

69. A computer readable storage medium having stored therein instructions, which when executed by a device with a touch screen display, cause the device to:

display a flat version of an application interface;

display, in response to detecting a user gesture on a view options icon while the flat version of the application interface is displayed, a curled version of the application interface, wherein the curled version of the application interface includes:

an image of a curled page that obscures a first portion of the flat version of the application interface; and

a roll-up region in a display region formerly occupied by a second portion of the flat version of the application interface, wherein the roll-up region includes a plurality of option icons, each respective option icon in the plurality of option icons responsive to a user selection gesture on the respective option icon;

detect a user selection gesture on one or more of the plurality of option icons; and

redisplay the flat version of the application interface with information corresponding to the one or more option icons upon which user selection gestures were detected.

70. A graphical user interface on a device with a touch screen display, comprising:

a flat version of an application interface;

a view options icon;

a curled version of the application interface, wherein the curled version of the application interface includes:

an image of a curled page that obscures a first portion of the flat version of the application interface; and

a roll-up region in a display region formerly occupied by a second portion of the flat version of the application interface, wherein the roll-up region includes a plurality of option icons, each respective option icon in the plurality of option icons responsive to a user selection gesture on the respective option icon;

wherein:

in response to detecting a user gesture on the view options icon while the flat version of the application interface is displayed, the curled version of the application interface is displayed;

user selection gestures are detected on one or more of the plurality of option icons; and

the flat version of the application interface is redisplayed with information corresponding to the one or more of the plurality of option icons upon which user selection gestures were detected.

71. A device, comprising:

a touch screen display;

means for displaying a flat version of an application interface;

means for displaying, in response to detecting a user gesture on a view options icon while the flat version of the application interface is displayed, a curled version of the application interface, wherein the curled version of the application interface includes:

an image of a curled page that obscures a first portion of the flat version of the application interface; and

a roll-up region in a display region formerly occupied by a second portion of the flat version of the application interface, wherein the roll-up region includes a plurality of option icons, each respective option icon in the plurality of option icons responsive to a user selection gesture on the respective option icon;

means for detecting a user selection gesture on one or more of the plurality of option icons; and

means for redisplaying the flat version of the application interface with information corresponding to the one or more option icons upon which user selection gestures were detected.

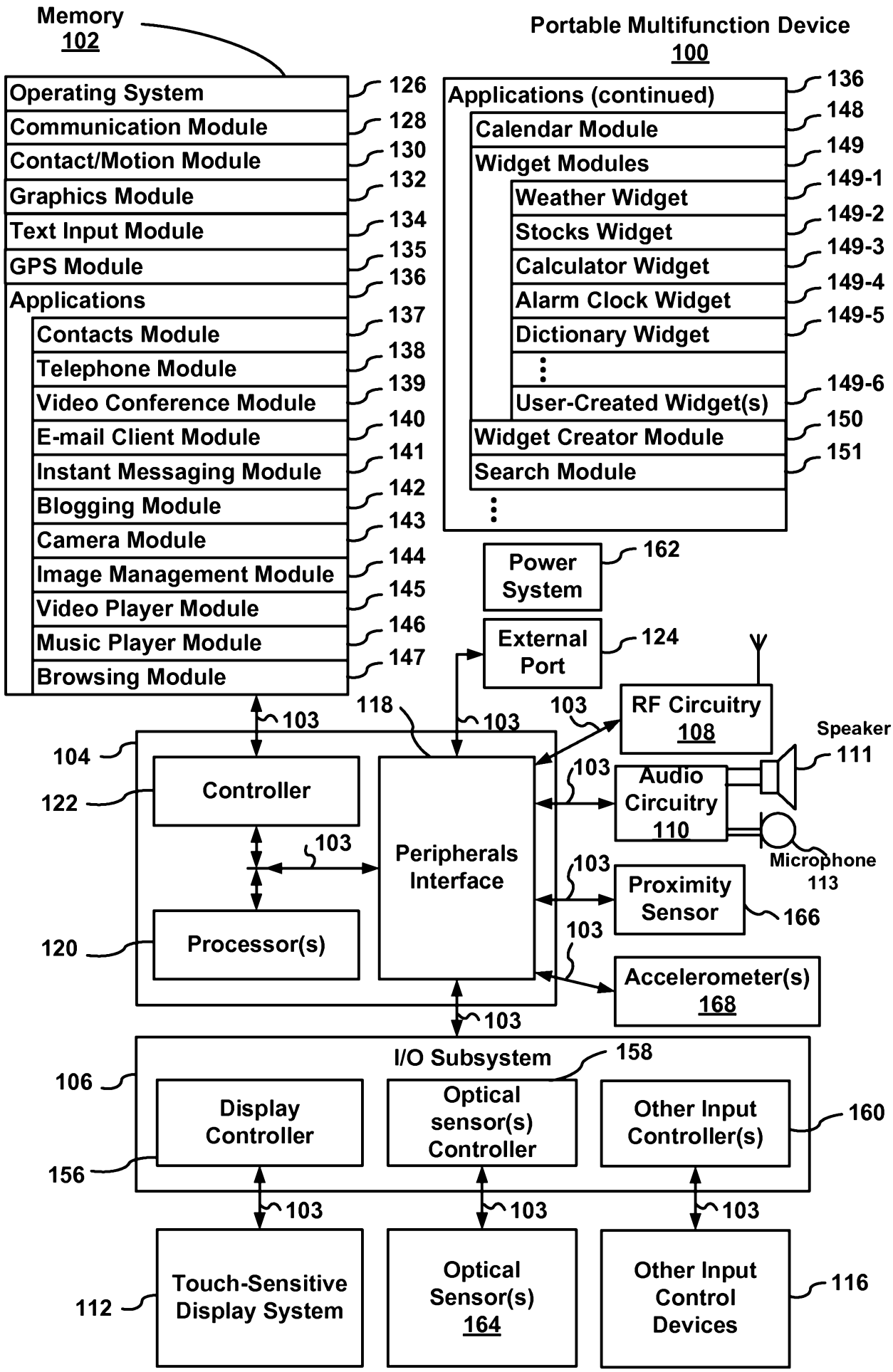
Memory
102
Portable Multifunction Device
100
Operating System
126
Communication Module
128
Contact/Motion Module
130
Graphics Module
132
Text Input Module
134
GPS Module
135
Applications
136
Contacts Module
137
Telephone Module
138
Video Conference Module
139
E-mail Client Module
140
Instant Messaging Module
141
Blogging Module
142
Camera Module
143
Image Management Module
144
Video Player Module
145
Music Player Module
146
Browsing Module
147
Applications (continued)
136
Calendar Module
148
Widget Modules
149
Weather Widget
149-1
Stocks Widget
149-2
Calculator Widget
149-3
Alarm Clock Widget
149-4
Dictionary Widget
149-5
User-Created Widget(s)
149-6
Widget Creator Module
150
Search Module
151
Power System
162
External Port
124
RF Circuitry
108
Speaker
111
Audio Circuitry
110
Microphone
113
Controller
122
Peripherals Interface
Proximity Sensor
166
Processor(s)
120
Accelerometer(s)
168
103
104
118
I/O Subsystem
158
106
Display Controller
Optical sensor(s) Controller
Other Input Controller(s)
160
156
Touch-Sensitive Display System
112
Optical Sensor(s)
164
Other Input Control Devices
116

Figure 1A

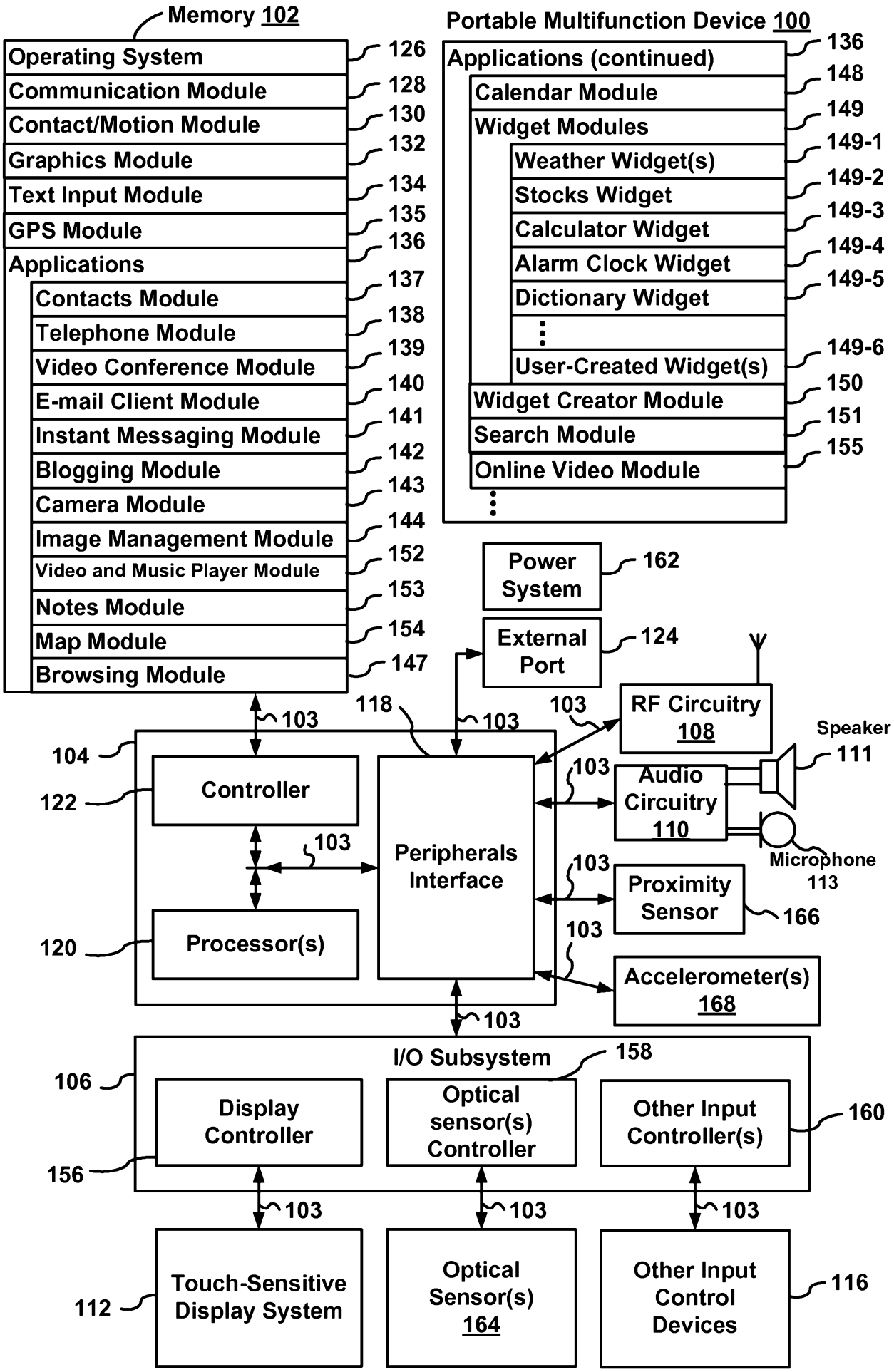
Memory 102
Operating System
126
Communication Module
128
Contact/Motion Module
130
Graphics Module
132
Text Input Module
134
GPS Module
135
Applications
136
Contacts Module
137
Telephone Module
138
Video Conference Module
139
E-mail Client Module
140
Instant Messaging Module
141
Blogging Module
142
Camera Module
143
Image Management Module
144
Video and Music Player Module
152
Notes Module
153
Map Module
154
Browsing Module
147
Portable Multifunction Device 100
Applications (continued)
136
Calendar Module
148
Widget Modules
149
Weather Widget(s)
149-1
Stocks Widget
149-2
Calculator Widget
149-3
Alarm Clock Widget
149-4
Dictionary Widget
149-5
User-Created Widget(s)
149-6
Widget Creator Module
150
Search Module
151
Online Video Module
155
Power System
162
External Port
124
RF Circuitry 108
Speaker 111
Audio Circuitry 110
Microphone 113
Proximity Sensor
166
Accelerometer(s) 168
Peripherals Interface
Controller
Processor(s)
104
122
120
118
103
I/O Subsystem
158
106
Display Controller
Optical sensor(s) Controller
Other Input Controller(s)
160
156
Touch-Sensitive Display System
112
Optical Sensor(s) 164
Other Input Control Devices
116

Figure 1B

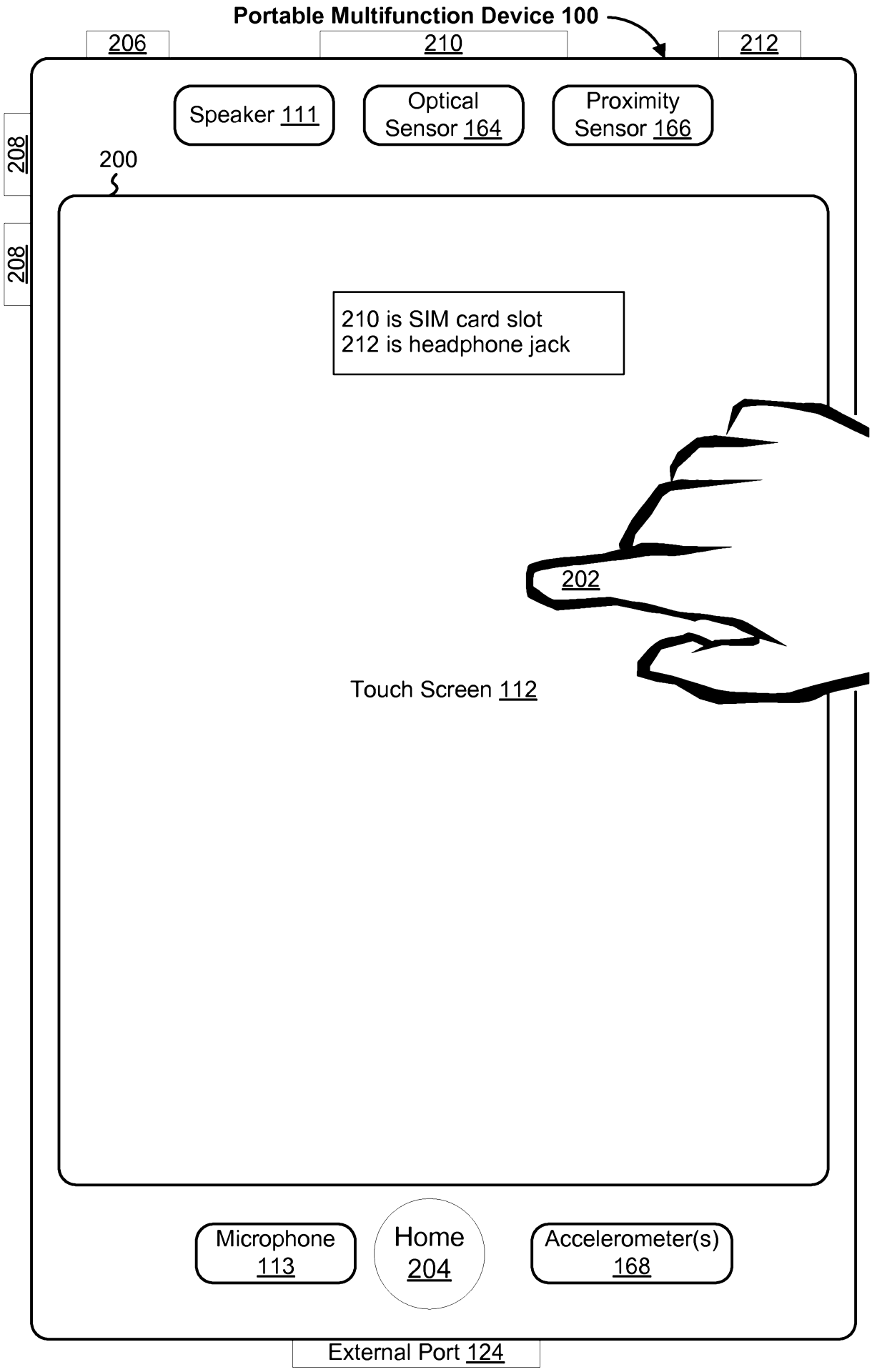
Portable Multifunction Device 100
206
210
212
Speaker 111
Optical Sensor 164
Proximity Sensor 166
208
200
208
210 is SIM card slot
212 is headphone jack
202
Touch Screen 112
Microphone 113
Home 204
Accelerometer(s) 168
External Port 124

Figure 2

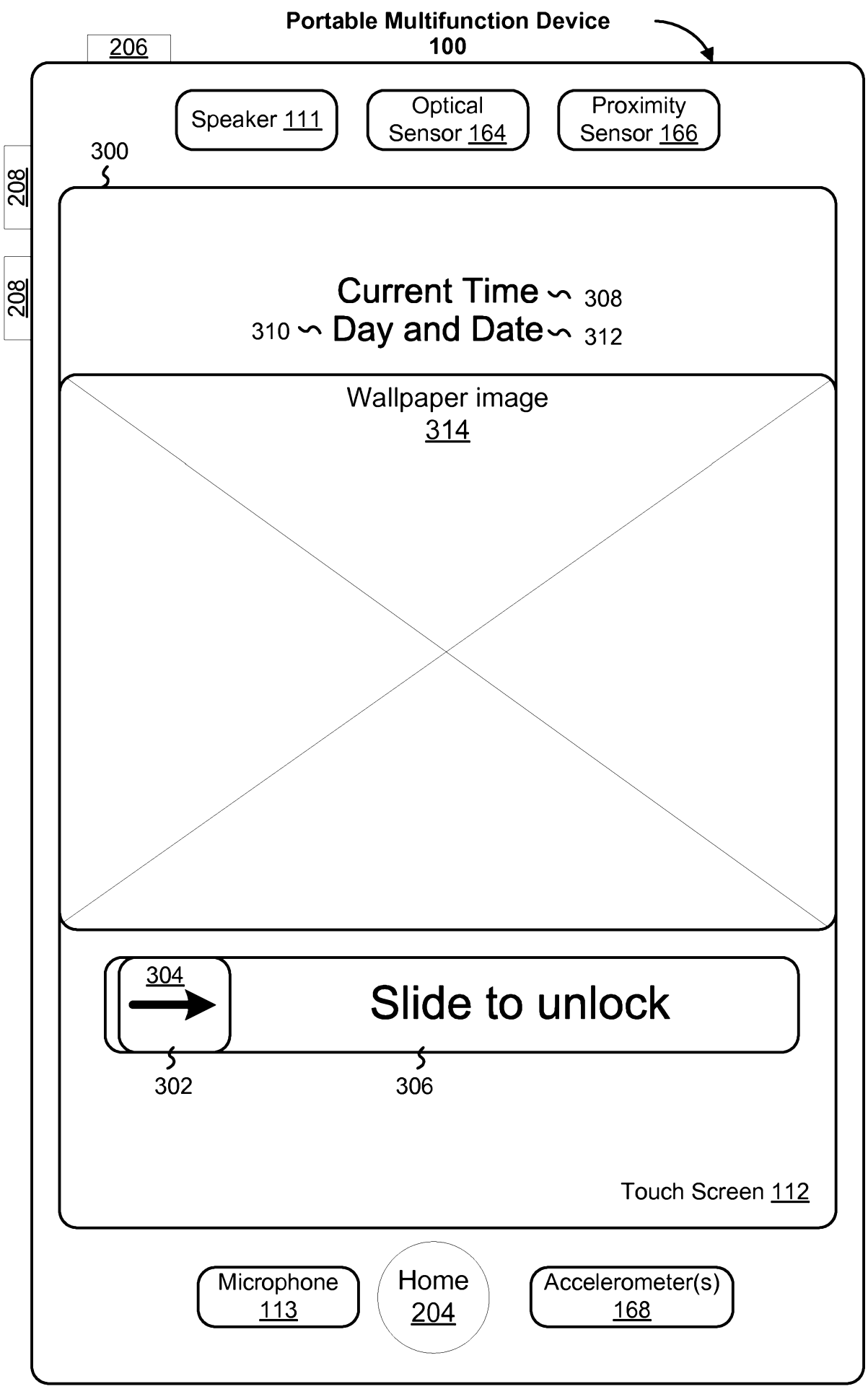
Portable Multifunction Device
100
206
Speaker 111
Optical Sensor 164
Proximity Sensor 166
300
208
208
Current Time 308
310 Day and Date 312
Wallpaper image
314
304
Slide to unlock
302
306
Touch Screen 112
Microphone 113
Home 204
Accelerometer(s) 168

Figure 3

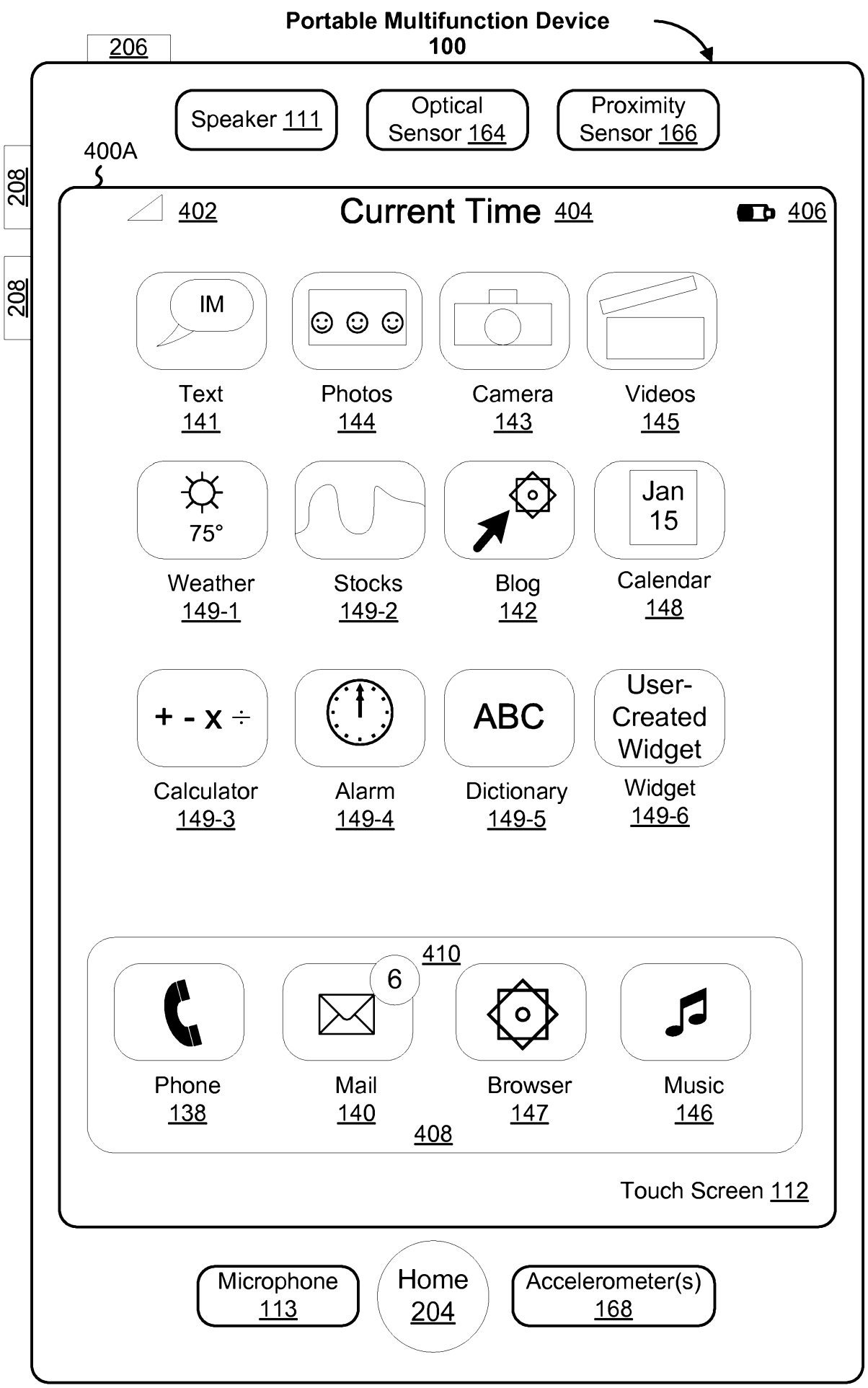
Portable Multifunction Device
100
206
Speaker 111
Optical Sensor 164
Proximity Sensor 166
400A
208
208
402
Current Time 404
406
IM
Text 141
Photos 144
Camera 143
Videos 145
75°
Weather 149-1
Stocks 149-2
Blog 142
Jan 15
Calendar 148
+ - x ÷
Calculator 149-3
Alarm 149-4
ABC
Dictionary 149-5
User-Created Widget
Widget 149-6
410
6
Phone 138
Mail 140
Browser 147
Music 146
408
Touch Screen 112
Microphone 113
Home 204
Accelerometer(s) 168

Figure 4A

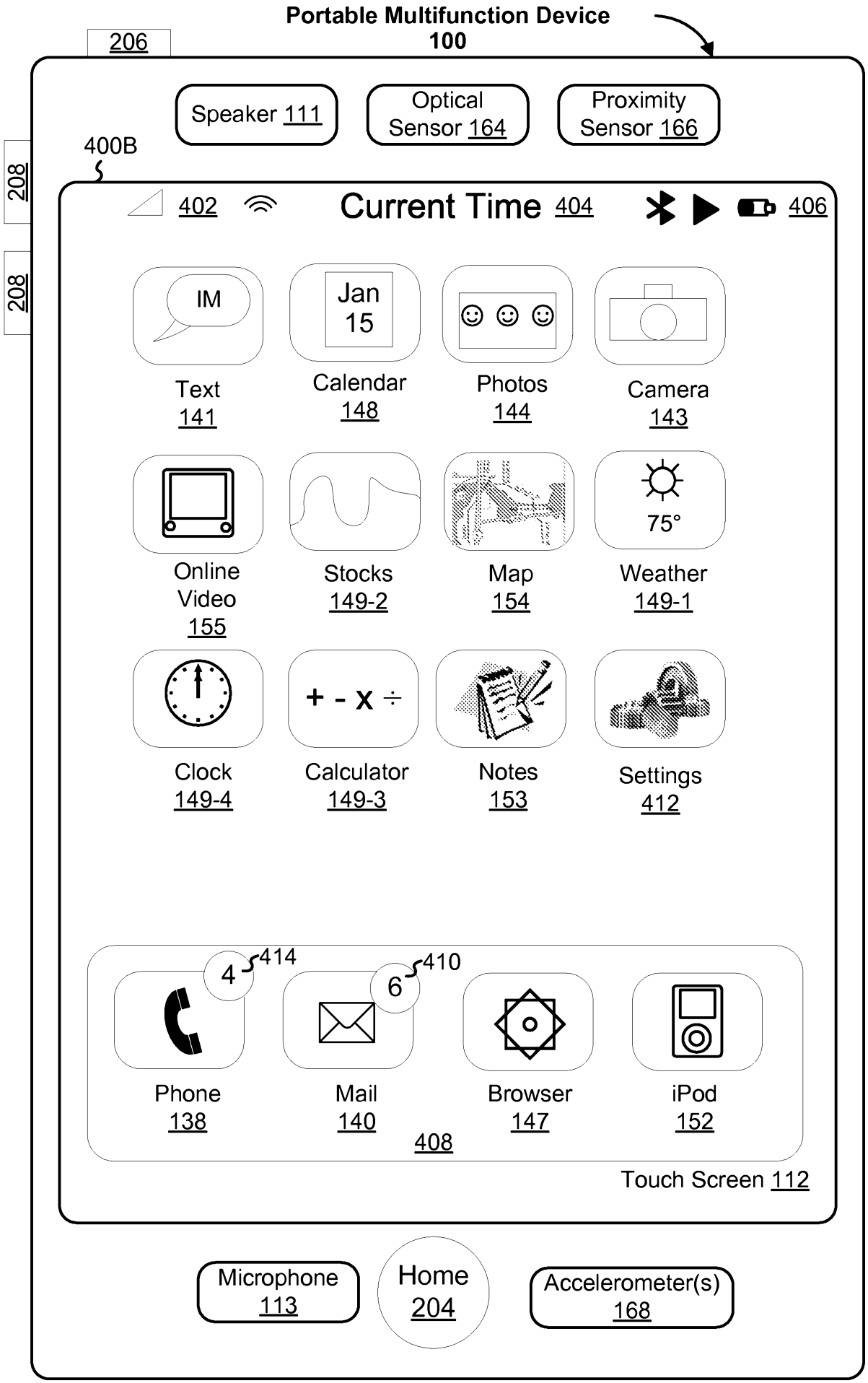
Portable Multifunction Device
100
206
Speaker 111
Optical Sensor 164
Proximity Sensor 166
400B
208
208
402
Current Time 404
406
IM
Text 141
Jan 15
Calendar 148
Photos 144
Camera 143
Online Video 155
Stocks 149-2
Map 154
75°
Weather 149-1
Clock 149-4
+ - x ÷
Calculator 149-3
Notes 153
Settings 412
4
414
6
410
Phone 138
Mail 140
Browser 147
iPod 152
408
Touch Screen 112
Microphone 113
Home 204
Accelerometer(s) 168

Figure 4B

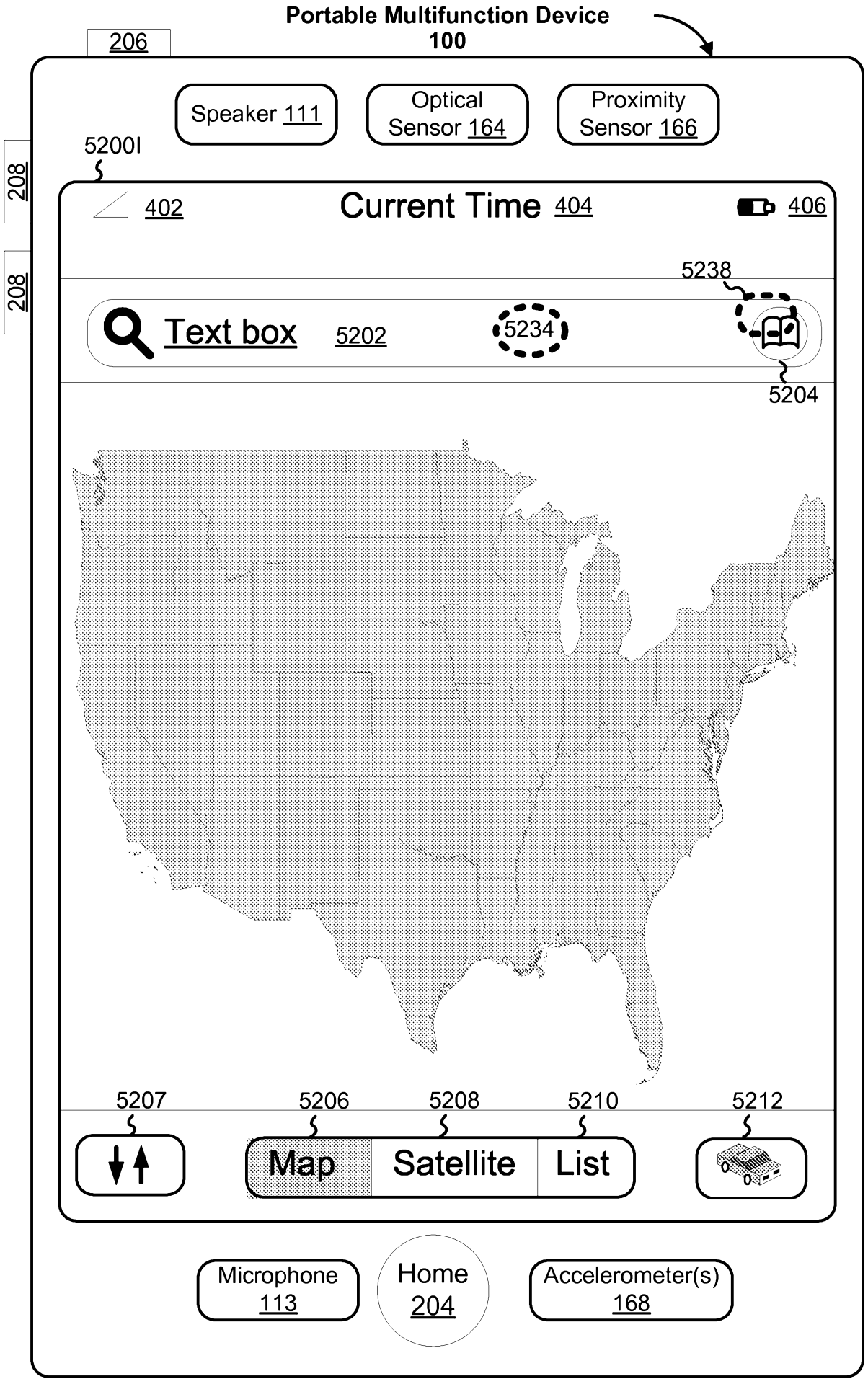
Portable Multifunction Device
100
206
Speaker 111
Optical Sensor 164
Proximity Sensor 166
5200I
208
208
402
Current Time 404
406
5238
Text box 5202
5234
5204
5207
5206
5208
5210
5212
Map
Satellite
List
Microphone 113
Home 204
Accelerometer(s) 168

Figure 5A

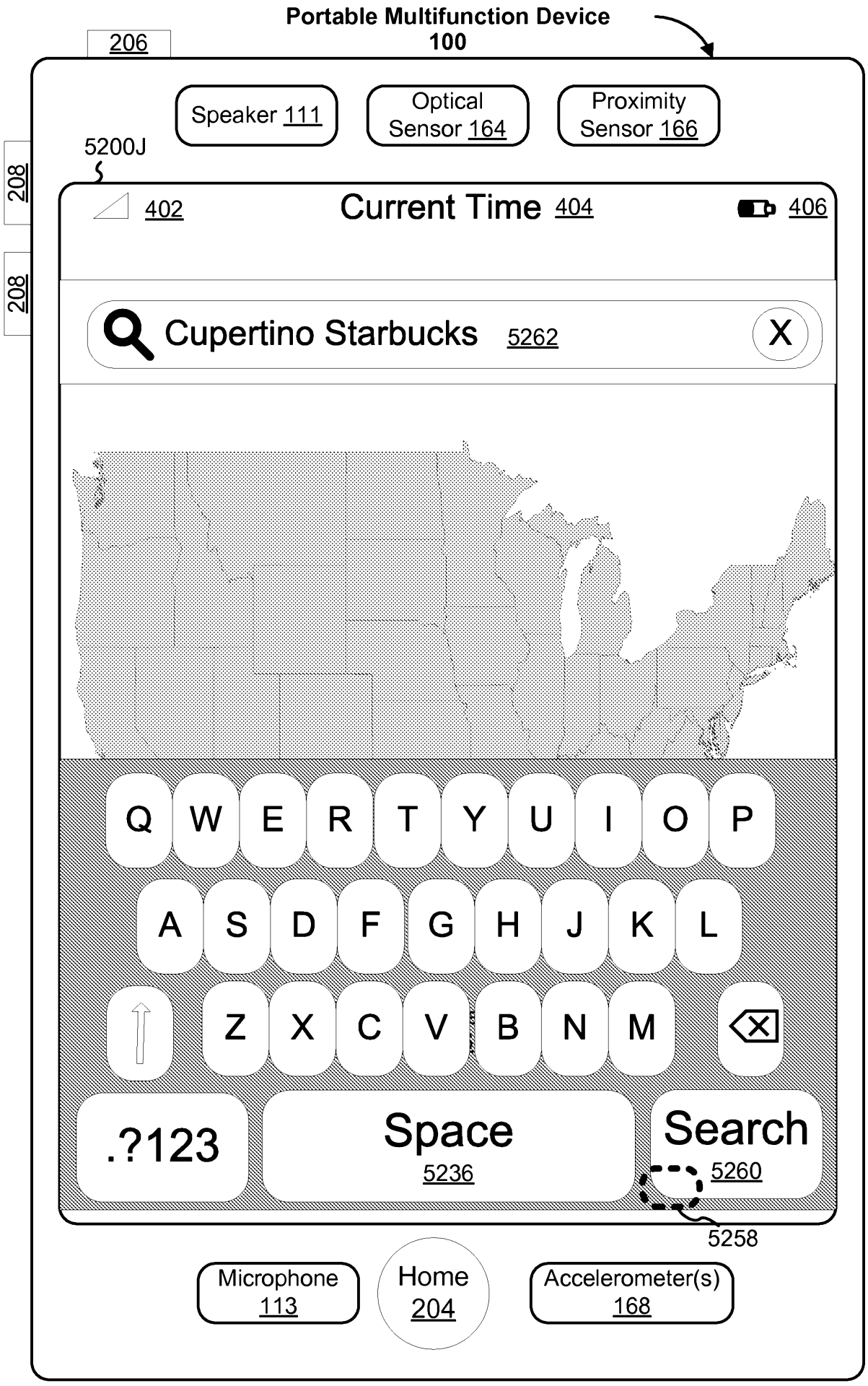
Portable Multifunction Device
100
206
Speaker 111
Optical Sensor 164
Proximity Sensor 166
5200J
208
208
402
Current Time 404
406
Cupertino Starbucks 5262
X
Q W E R T Y U I O P
A S D F G H J K L
Z X C V B N M
.?123
Space
5236
Search
5260
5258
Microphone 113
Home 204
Accelerometer(s) 168

Figure 5B

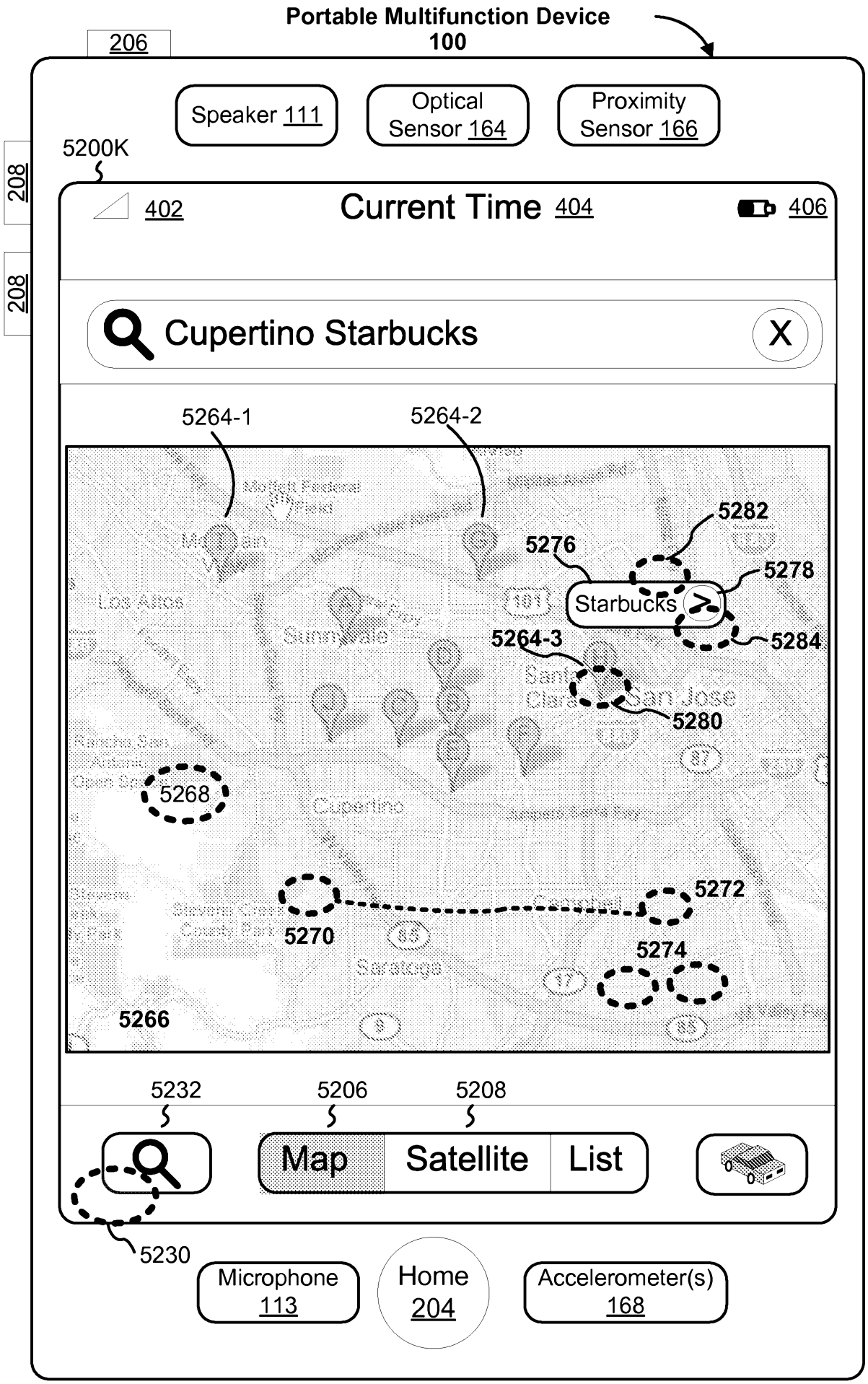
Portable Multifunction Device
100
206
Speaker 111
Optical Sensor 164
Proximity Sensor 166
5200K
208
208
402
Current Time 404
406
Cupertino Starbucks
X
5264-1
5264-2
5282
5276
5278
Starbucks
5284
5264-3
5280
San Jose
Sunnyvale
Los Altos
5268
Cupertino
5272
5270
5274
Saratoga
5266
5232
5206
5208
Map
Satellite
List
5230
Microphone 113
Home 204
Accelerometer(s) 168

Figure 5C

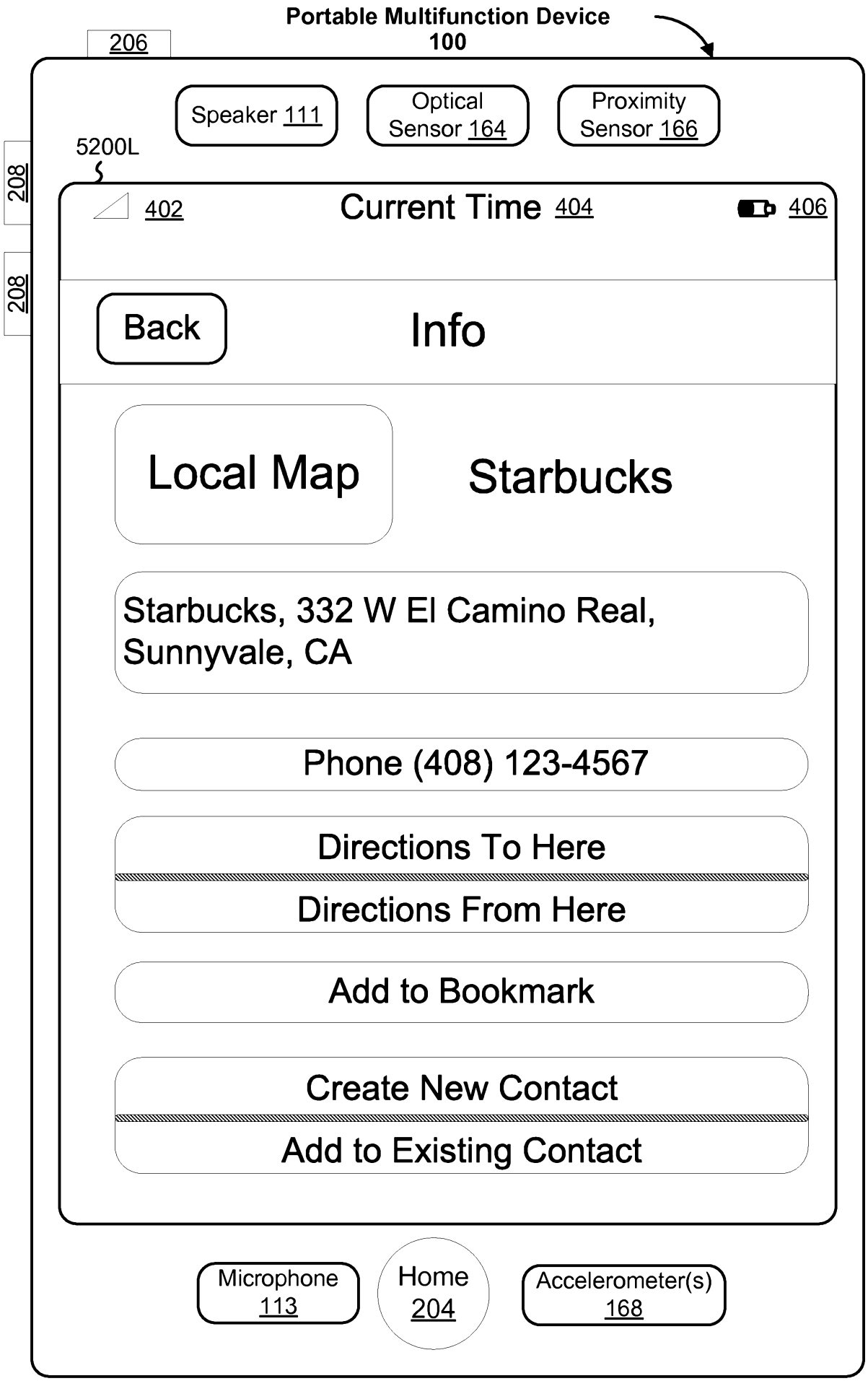
Portable Multifunction Device
100
206
Speaker 111
Optical Sensor 164
Proximity Sensor 166
5200L
208
208
402
Current Time 404
406
Back
Info
Local Map
Starbucks
Starbucks, 332 W El Camino Real, Sunnyvale, CA
Phone (408) 123-4567
Directions To Here
Directions From Here
Add to Bookmark
Create New Contact
Add to Existing Contact
Microphone 113
Home 204
Accelerometer(s) 168

Figure 5D

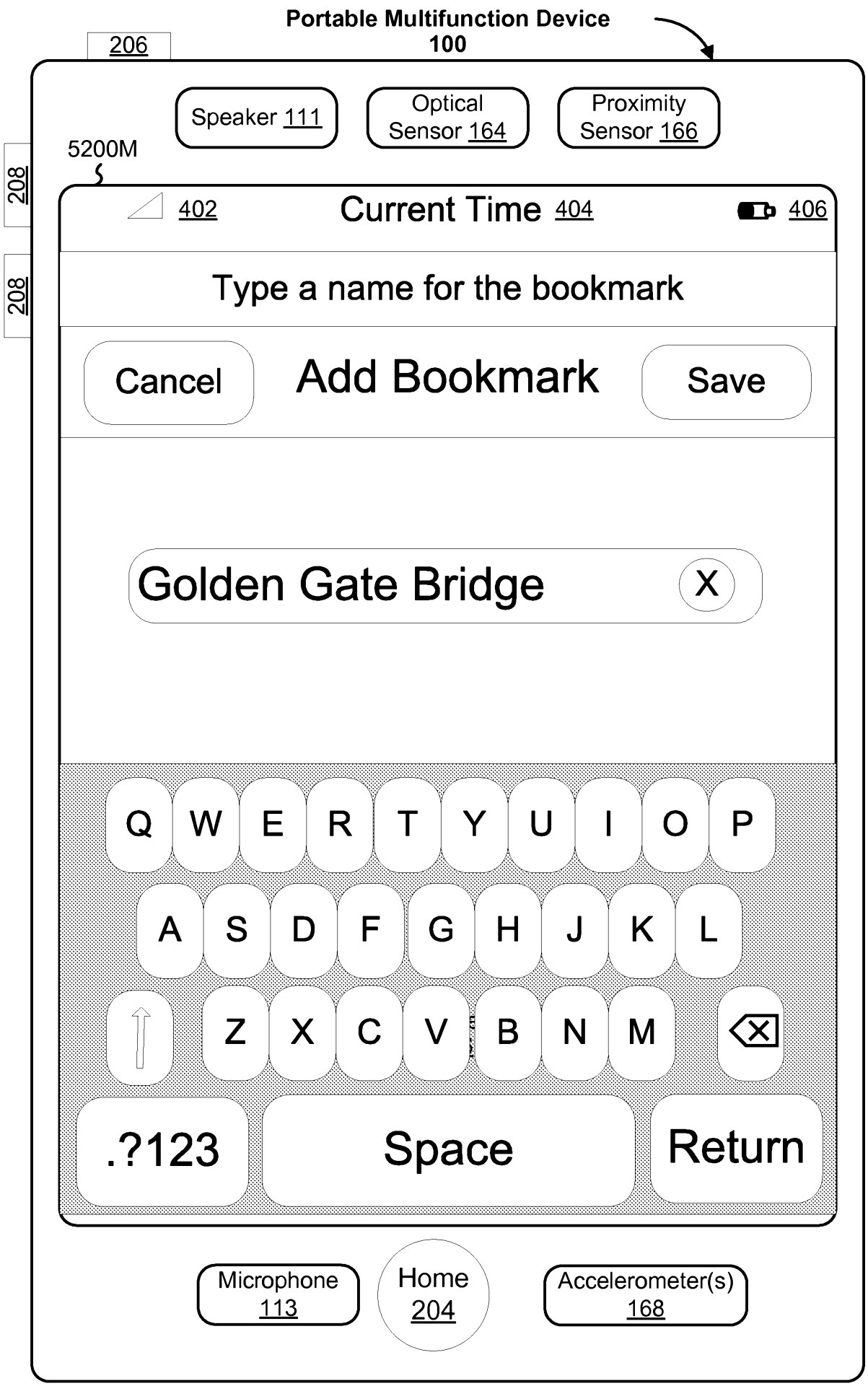
Portable Multifunction Device
100
206
Speaker 111
Optical Sensor 164
Proximity Sensor 166
5200M
208
208
402
Current Time 404
406
Type a name for the bookmark
Cancel
Add Bookmark
Save
Golden Gate Bridge
X
Q W E R T Y U I O P
A S D F G H J K L
Z X C V B N M
.?123
Space
Return
Microphone 113
Home 204
Accelerometer(s) 168

Figure 5E

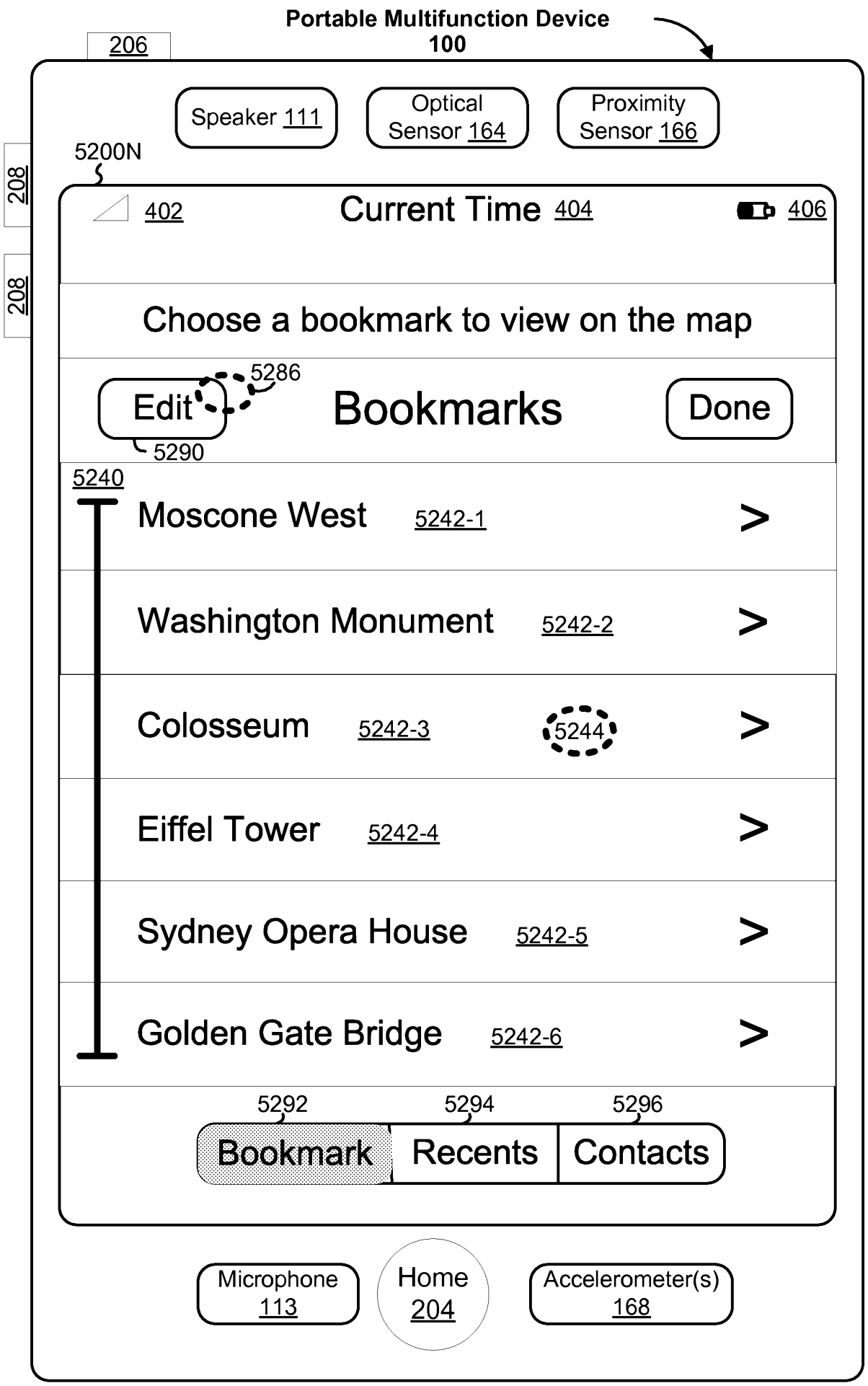
Portable Multifunction Device
100
206
Speaker 111
Optical Sensor 164
Proximity Sensor 166
5200N
208
208
402
Current Time 404
406
Choose a bookmark to view on the map
5286
Edit
Bookmarks
Done
5290
5240
Moscone West 5242-1
Washington Monument 5242-2
Colosseum 5242-3
5244
Eiffel Tower 5242-4
Sydney Opera House 5242-5
Golden Gate Bridge 5242-6
5292
5294
5296
Bookmark
Recents
Contacts
Microphone 113
Home 204
Accelerometer(s) 168

Figure 5F

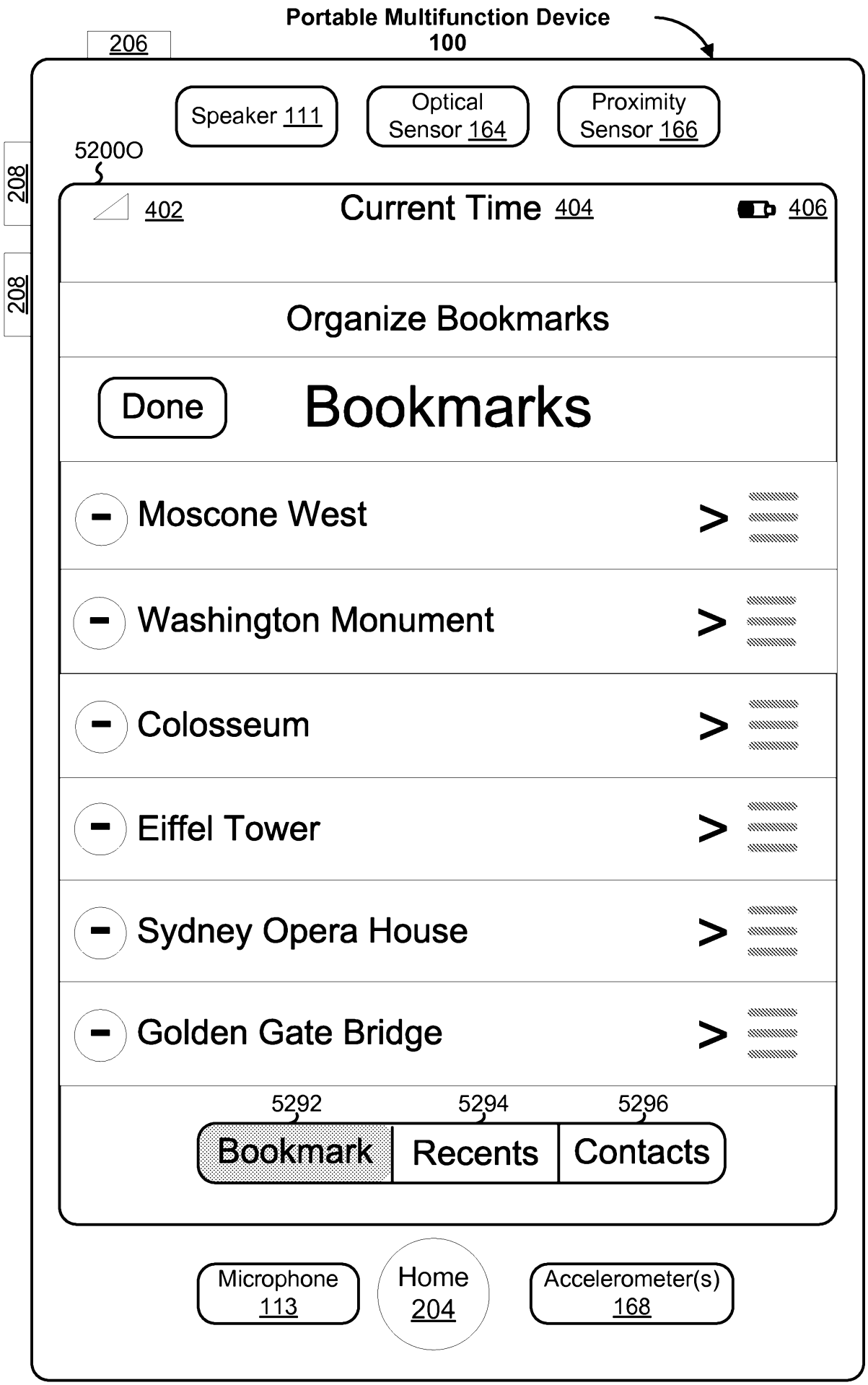
Portable Multifunction Device
100
206
Speaker 111
Optical Sensor 164
Proximity Sensor 166
5200O
208
208
402
Current Time 404
406
Organize Bookmarks
Done
Bookmarks
Moscone West
Washington Monument
Colosseum
Eiffel Tower
Sydney Opera House
Golden Gate Bridge
5292
5294
5296
Bookmark
Recents
Contacts
Microphone 113
Home 204
Accelerometer(s) 168

Figure 5G

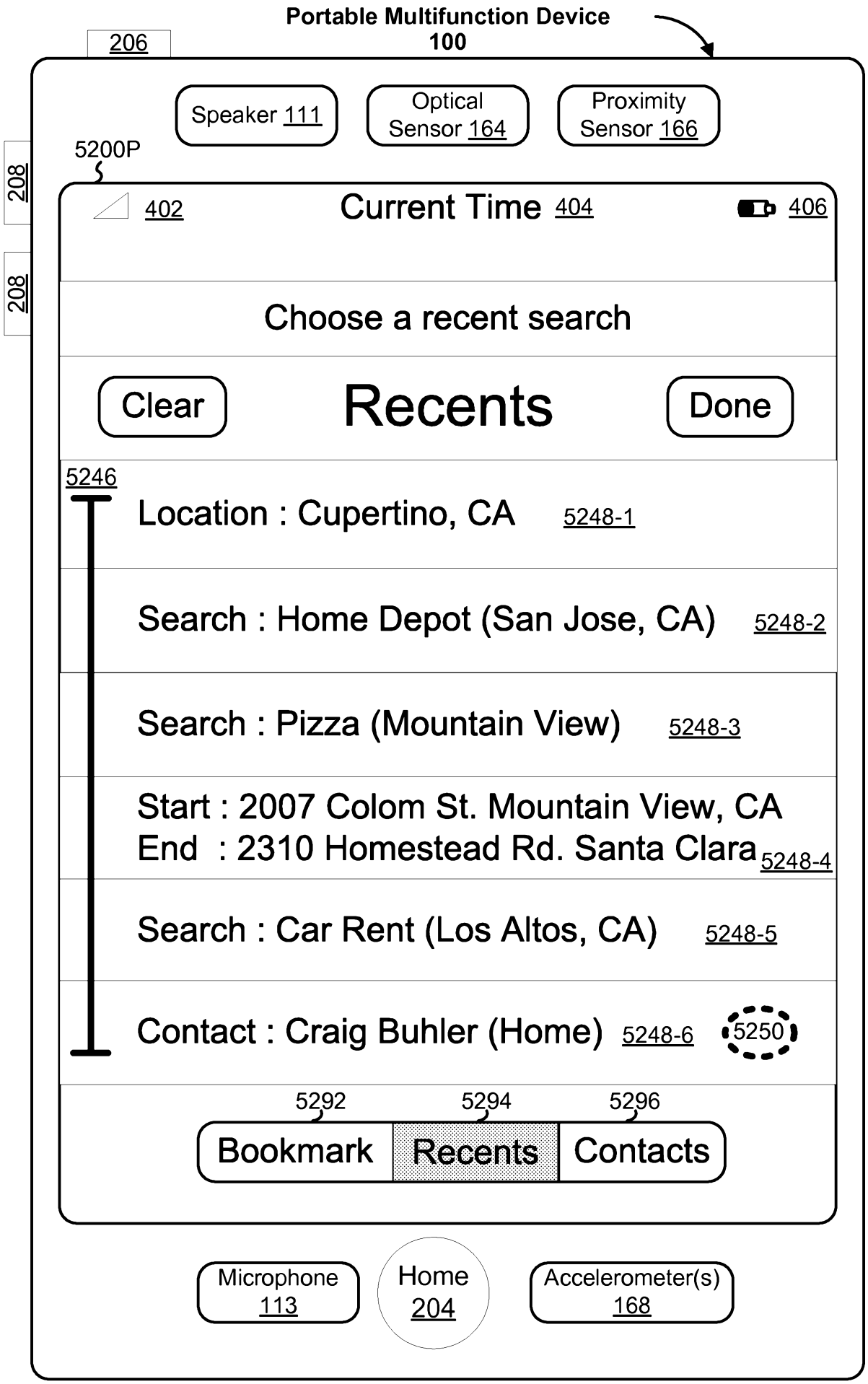
Portable Multifunction Device
100
206
Speaker 111
Optical Sensor 164
Proximity Sensor 166
5200P
208
208
402
Current Time 404
406
Choose a recent search
Clear
Recents
Done
5246
Location : Cupertino, CA 5248-1
Search : Home Depot (San Jose, CA) 5248-2
Search : Pizza (Mountain View) 5248-3
Start : 2007 Colom St. Mountain View, CA
End : 2310 Homestead Rd. Santa Clara 5248-4
Search : Car Rent (Los Altos, CA) 5248-5
Contact : Craig Buhler (Home) 5248-6
5250
5292
5294
5296
Bookmark
Recents
Contacts
Microphone 113
Home 204
Accelerometer(s) 168

Figure 5H

Portable Multifunction Device
100
206
Speaker 111
Optical Sensor 164
Proximity Sensor 166
5200Q
208
208
402
Current Time 404
406
Choose a recent search
Clear
Recents
Done
Location : Cupertino, CA
Search : Home Depot (San Jose, CA)
Search : Pizza (Mountain View)
Start : 2007 Colom St. Mountain View, CA
End : 2310 Homestead Rd. Santa Clara
1810
Clear All Recents
1812
Cancel
Microphone 113
Home 204
Accelerometer(s) 168

Figure 5I

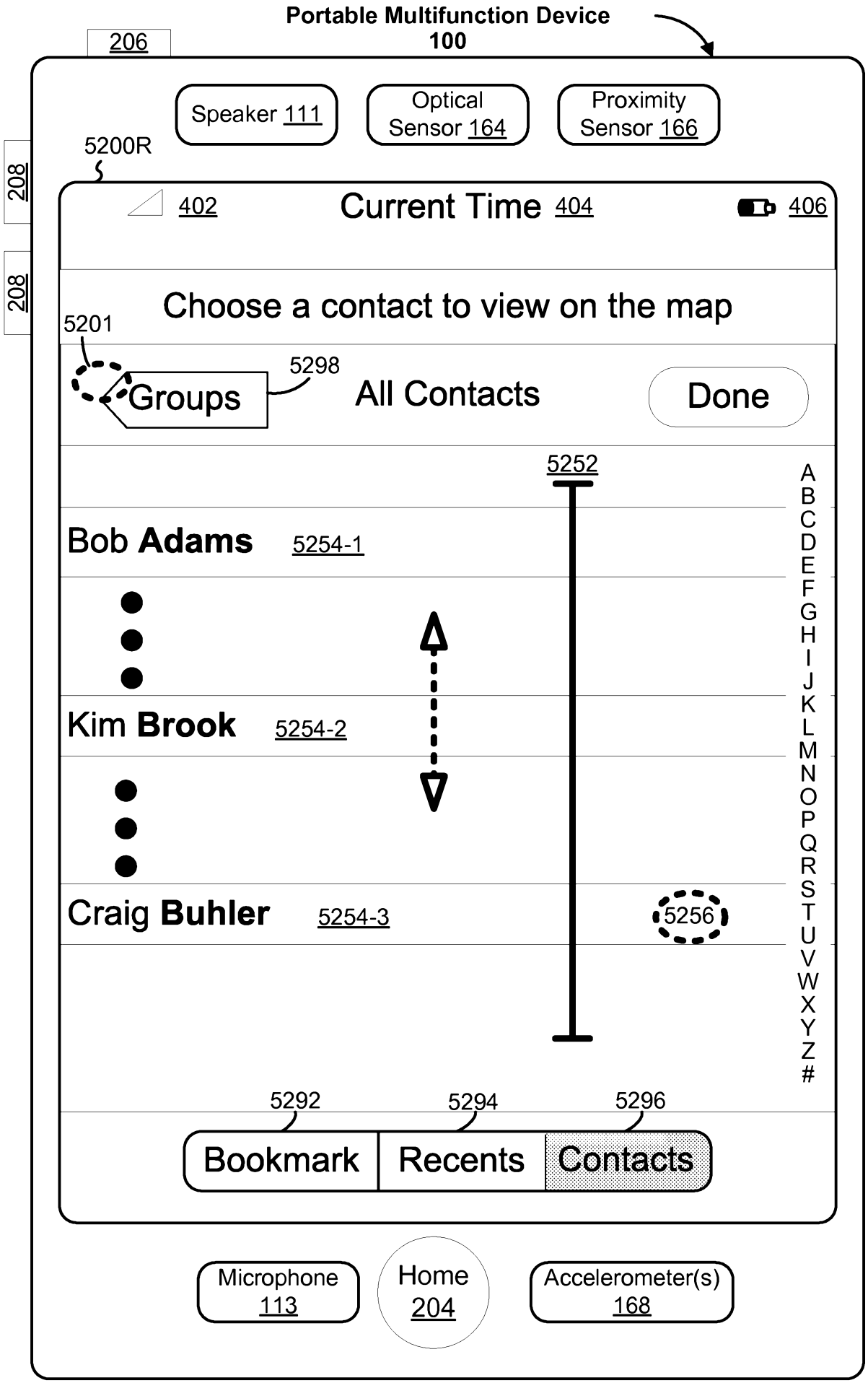
Portable Multifunction Device
100
206
Speaker 111
Optical Sensor 164
Proximity Sensor 166
5200R
208
208
402
Current Time 404
406
Choose a contact to view on the map
5201
Groups
5298
All Contacts
Done
5252
Bob Adams 5254-1
Kim Brook 5254-2
Craig Buhler 5254-3
5256
A B C D E F G H I J K L M N O P Q R S T U V W X Y Z #
5292
5294
5296
Bookmark
Recents
Contacts
Microphone 113
Home 204
Accelerometer(s) 168

Figure 5J

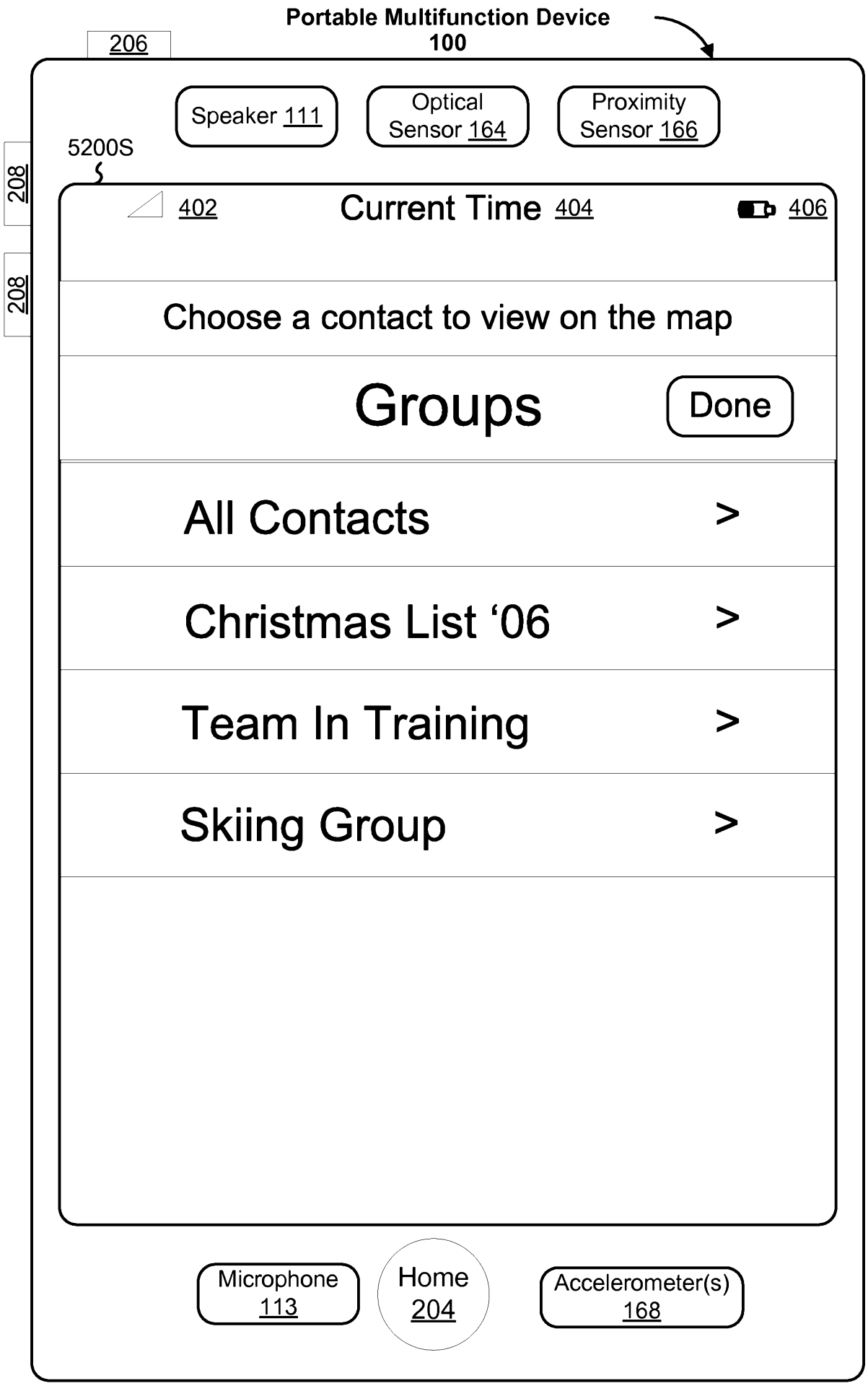
Portable Multifunction Device
100
206
Speaker 111
Optical Sensor 164
Proximity Sensor 166
5200S
208
208
402
Current Time 404
406
Choose a contact to view on the map
Groups
Done
All Contacts >
Christmas List '06 >
Team In Training >
Skiing Group >
Microphone 113
Home 204
Accelerometer(s) 168

Figure 5K

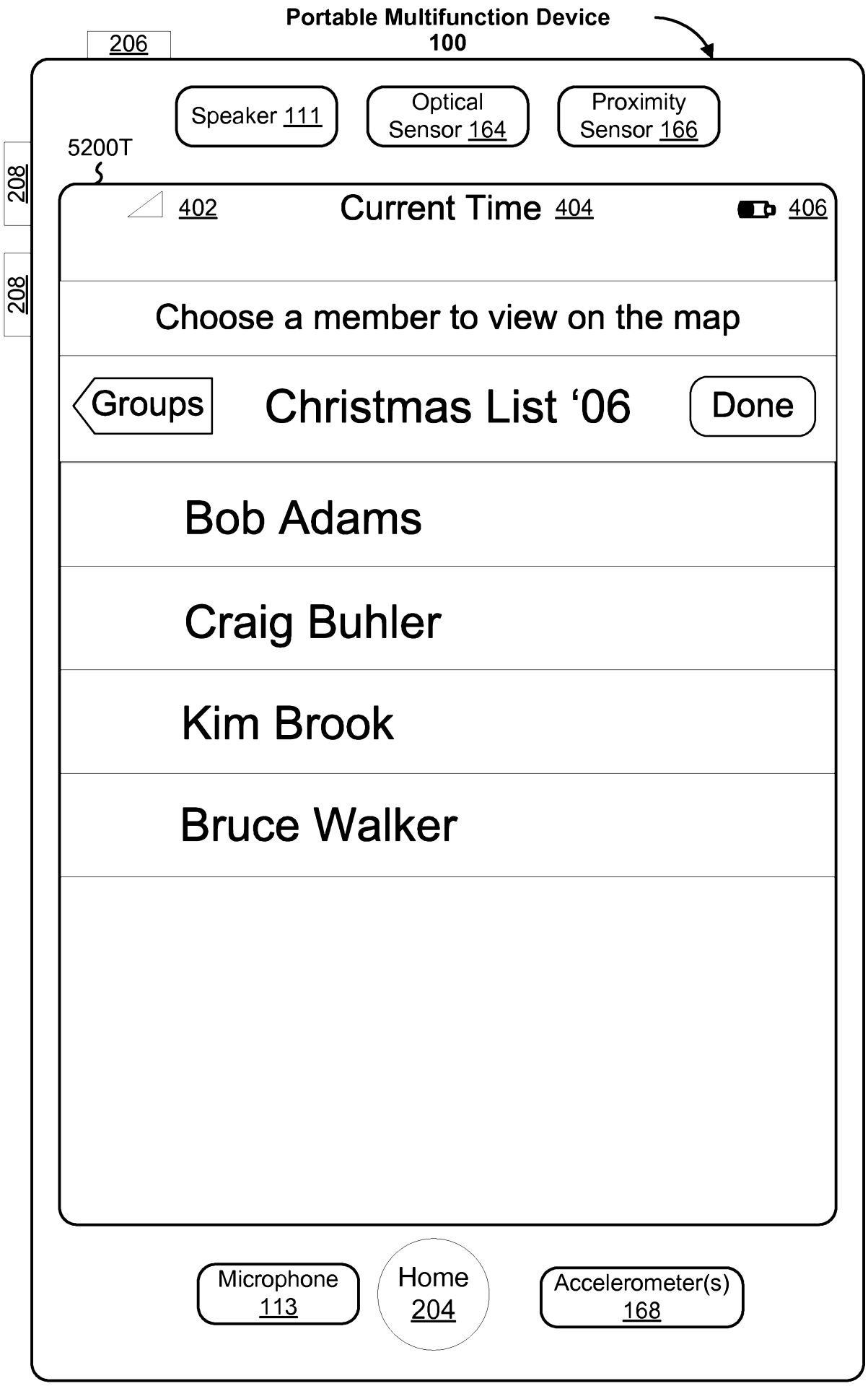
Portable Multifunction Device
100
206
Speaker 111
Optical Sensor 164
Proximity Sensor 166
5200T
208
208
402
Current Time 404
406
Choose a member to view on the map
Groups
Christmas List '06
Done
Bob Adams
Craig Buhler
Kim Brook
Bruce Walker
Microphone 113
Home 204
Accelerometer(s) 168

Figure 5L

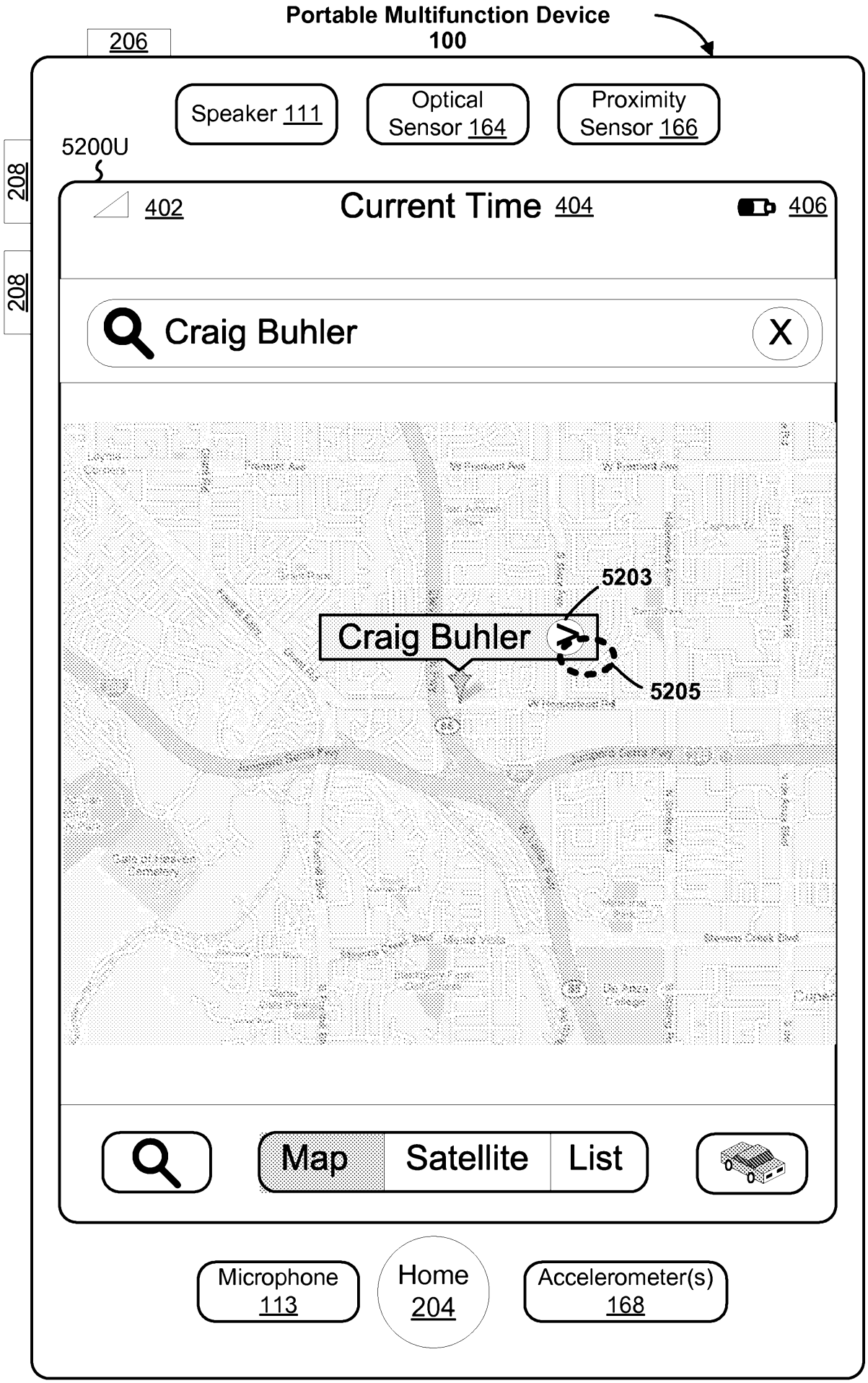
Portable Multifunction Device
100
206
Speaker 111
Optical Sensor 164
Proximity Sensor 166
5200U
208
208
402
Current Time 404
406
Craig Buhler
X
5203
Craig Buhler
5205
Map
Satellite
List
Microphone 113
Home 204
Accelerometer(s) 168

Figure 5M

Portable Multifunction Device
100
206
Speaker 111
Optical Sensor 164
Proximity Sensor 166
5200V
208
208
402
Current Time 404
406
Map
Info
Image
Craig Buhler
Home : 1234 Homestead Ave.
Cupertino, CA
Phone (408) 123-4444
Directions To Here
Directions From Here
Add to Bookmark
Create New Contact
Add to Existing Contact
Microphone 113
Home 204
Accelerometer(s) 168

Figure 5N

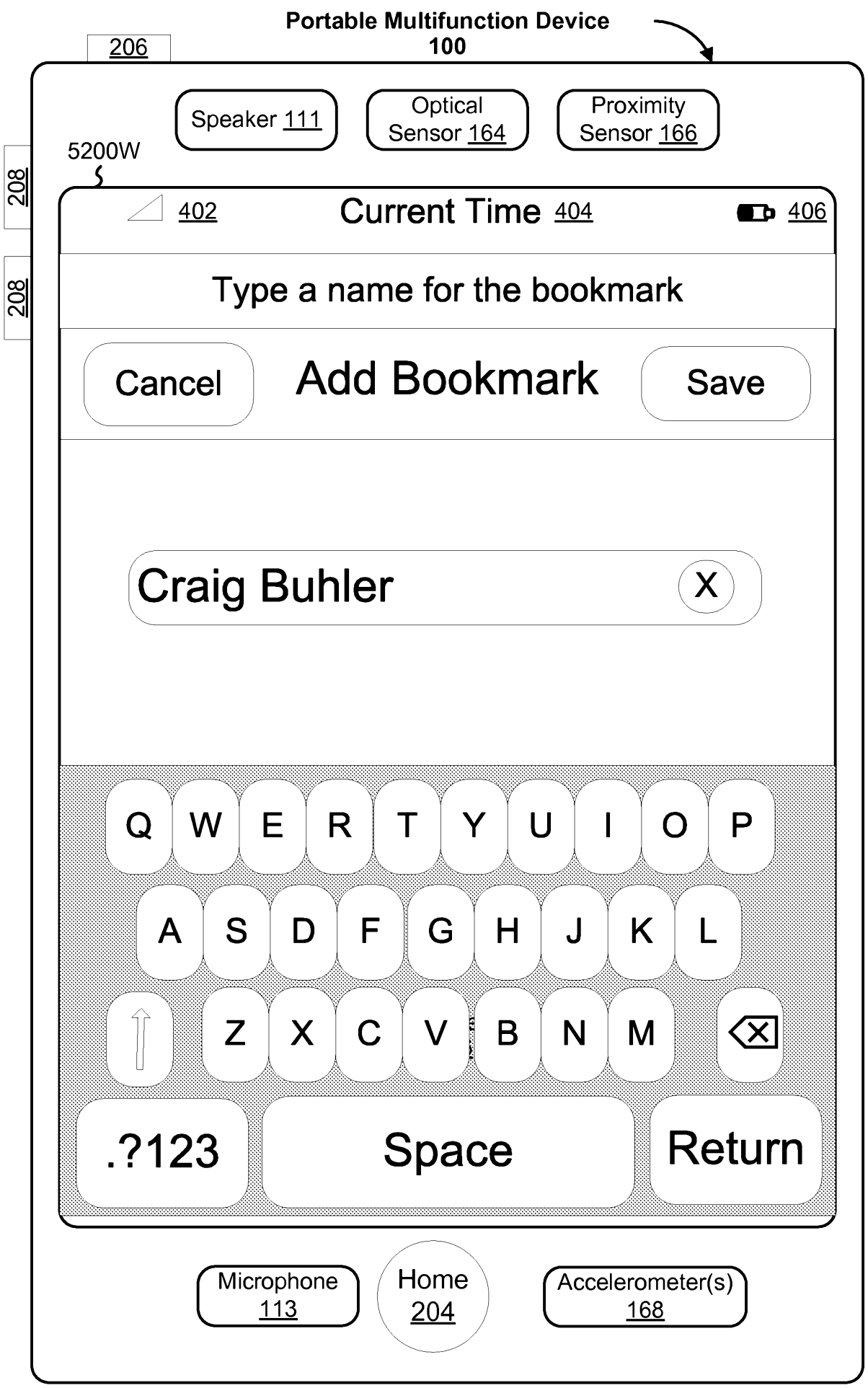
Portable Multifunction Device
100
206
Speaker 111
Optical Sensor 164
Proximity Sensor 166
5200W
208
208
402
Current Time 404
406
Type a name for the bookmark
Cancel
Add Bookmark
Save
Craig Buhler
X
Q W E R T Y U I O P
A S D F G H J K L
Z X C V B N M
.?123
Space
Return
Microphone 113
Home 204
Accelerometer(s) 168

Figure 5O

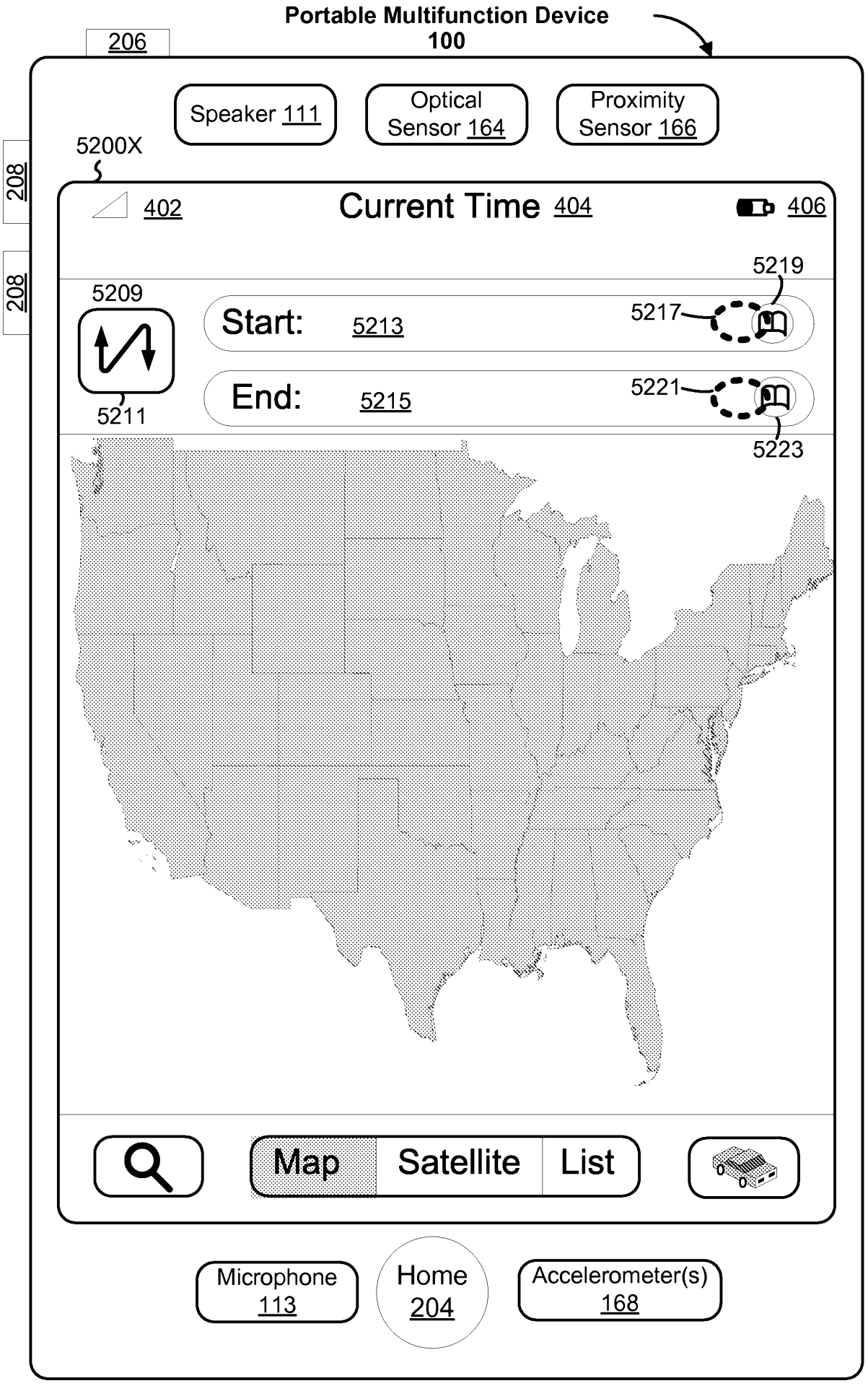
Portable Multifunction Device
100
206
Speaker 111
Optical Sensor 164
Proximity Sensor 166
5200X
208
208
402
Current Time 404
406
5219
5209
Start: 5213
5217
End: 5215
5221
5211
5223
Map
Satellite
List
Microphone 113
Home 204
Accelerometer(s) 168

Figure 5P

Portable Multifunction Device
100
206
Speaker 111
Optical Sensor 164
Proximity Sensor 166
5200Y
208
208
402
Current Time 404
406
Start:
5239
X
End:
5241
5216
Q W E R T Y U I O P
A S D F G H J K L
Z X C V B N M
.?123
Space
Next
Microphone 113
Home 204
Accelerometer(s) 168

Figure 5Q

Portable Multifunction Device
100
206
Speaker 111
Optical Sensor 164
Proximity Sensor 166
5200Z
208
208
402
Current Time 404
406
Start: 2 Infinite Loop, Cupertino, CA
End: 100 Main St., Seattle, WA
X
5216
Q W E R T Y U I O P
A S D F G H J K L
Z X C V B N M
.?123
Space
5227
Route
5225
Microphone 113
Home 204
Accelerometer(s) 168

Figure 5R

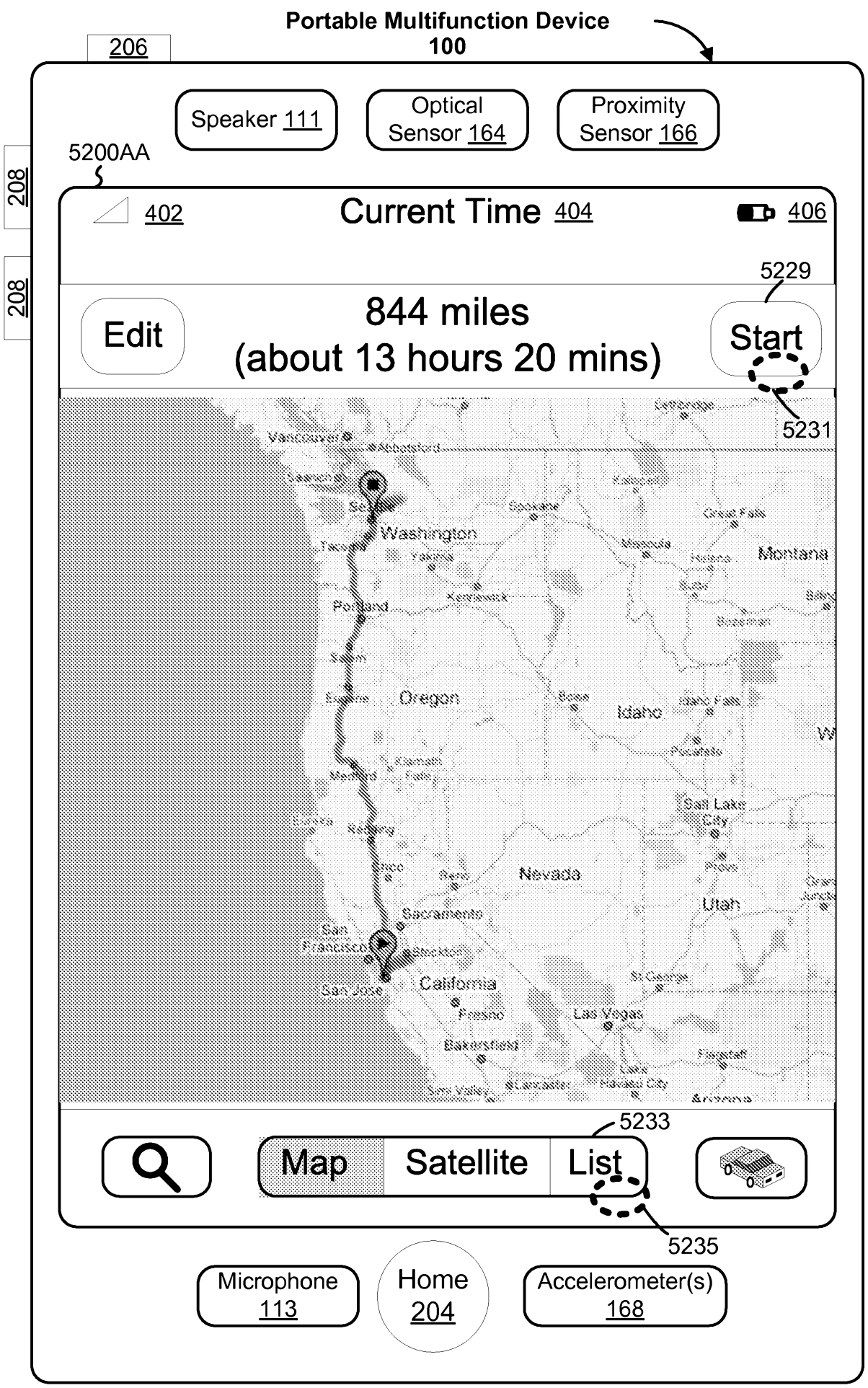
Portable Multifunction Device
100
206
Speaker 111
Optical Sensor 164
Proximity Sensor 166
5200AA
208
208
402
Current Time 404
406
5229
Edit
844 miles
(about 13 hours 20 mins)
Start
5231
Washington
Oregon
Idaho
Montana
Nevada
Utah
California
Portland
Sacramento
San Francisco
San Jose
Las Vegas
Salt Lake City
5233
Map
Satellite
List
5235
Microphone 113
Home 204
Accelerometer(s) 168

Figure 5S

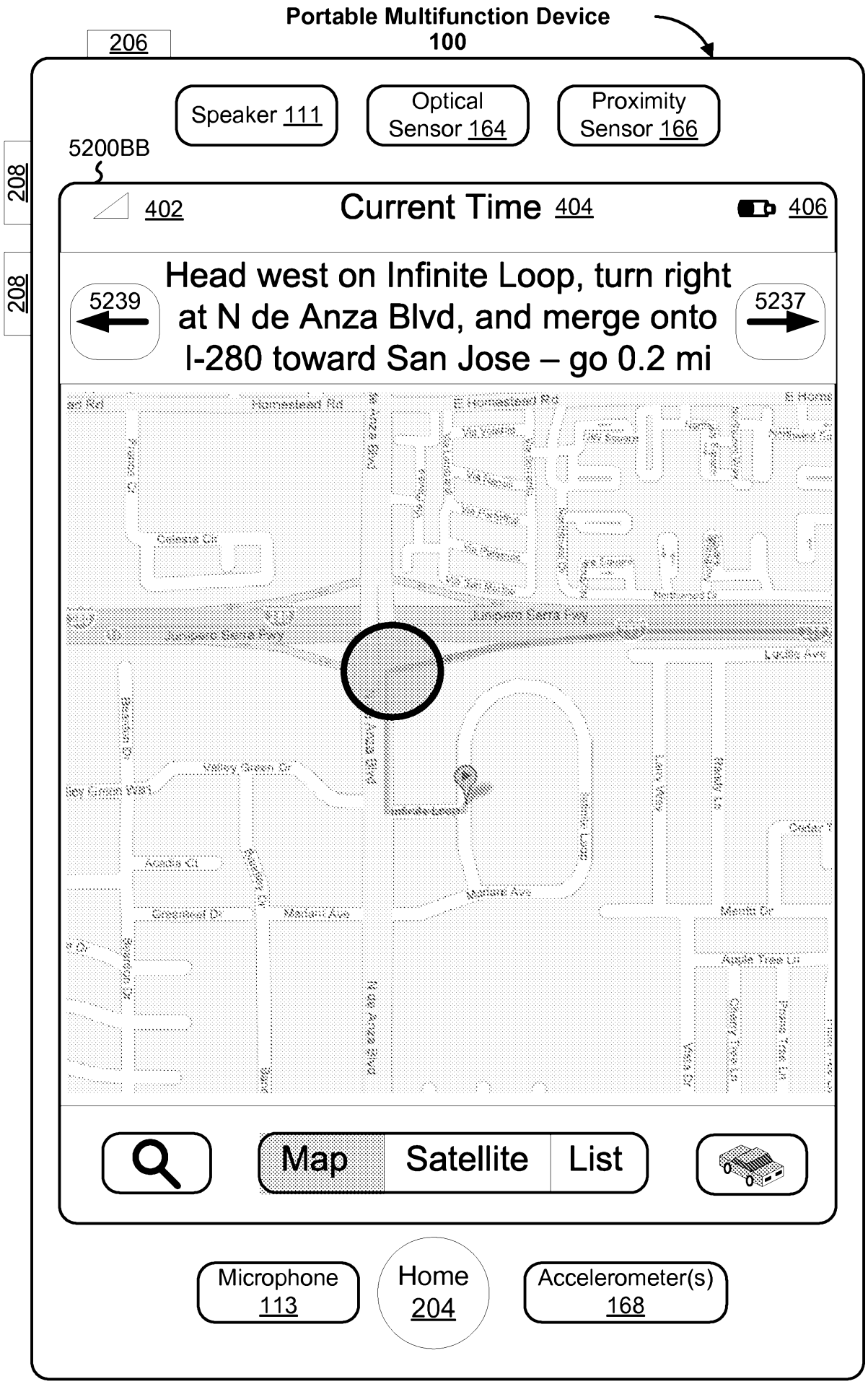
Portable Multifunction Device
100
206
Speaker 111
Optical Sensor 164
Proximity Sensor 166
5200BB
208
208
402
Current Time 404
406
Head west on Infinite Loop, turn right at N de Anza Blvd, and merge onto I-280 toward San Jose – go 0.2 mi
5239
5237
Map
Satellite
List
Microphone 113
Home 204
Accelerometer(s) 168

Figure 5T

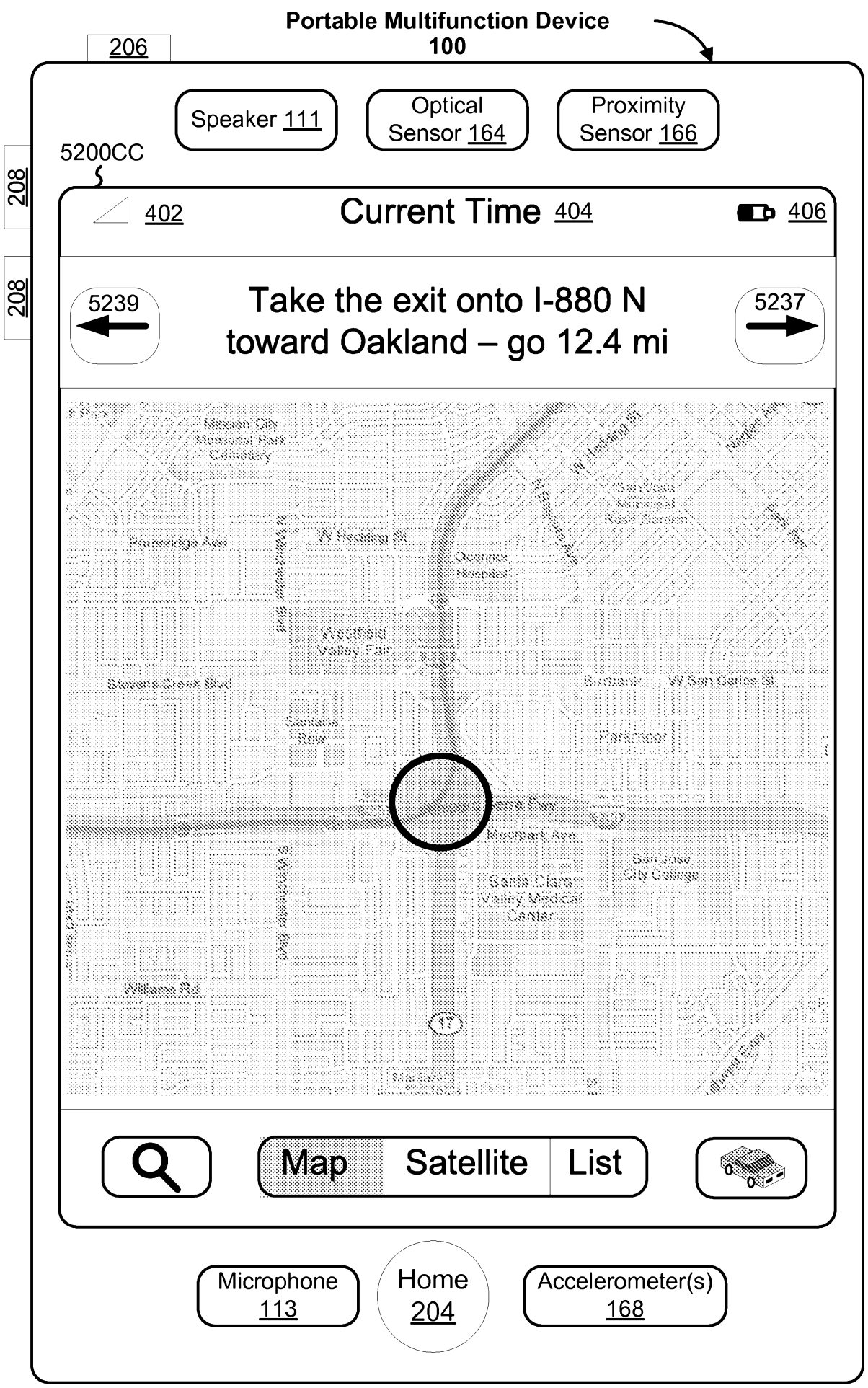
Portable Multifunction Device
100
206
Speaker 111
Optical Sensor 164
Proximity Sensor 166
5200CC
208
208
402
Current Time 404
406
5239
Take the exit onto I-880 N
toward Oakland – go 12.4 mi
5237
Map
Satellite
List
Microphone 113
Home 204
Accelerometer(s) 168

Figure 5U

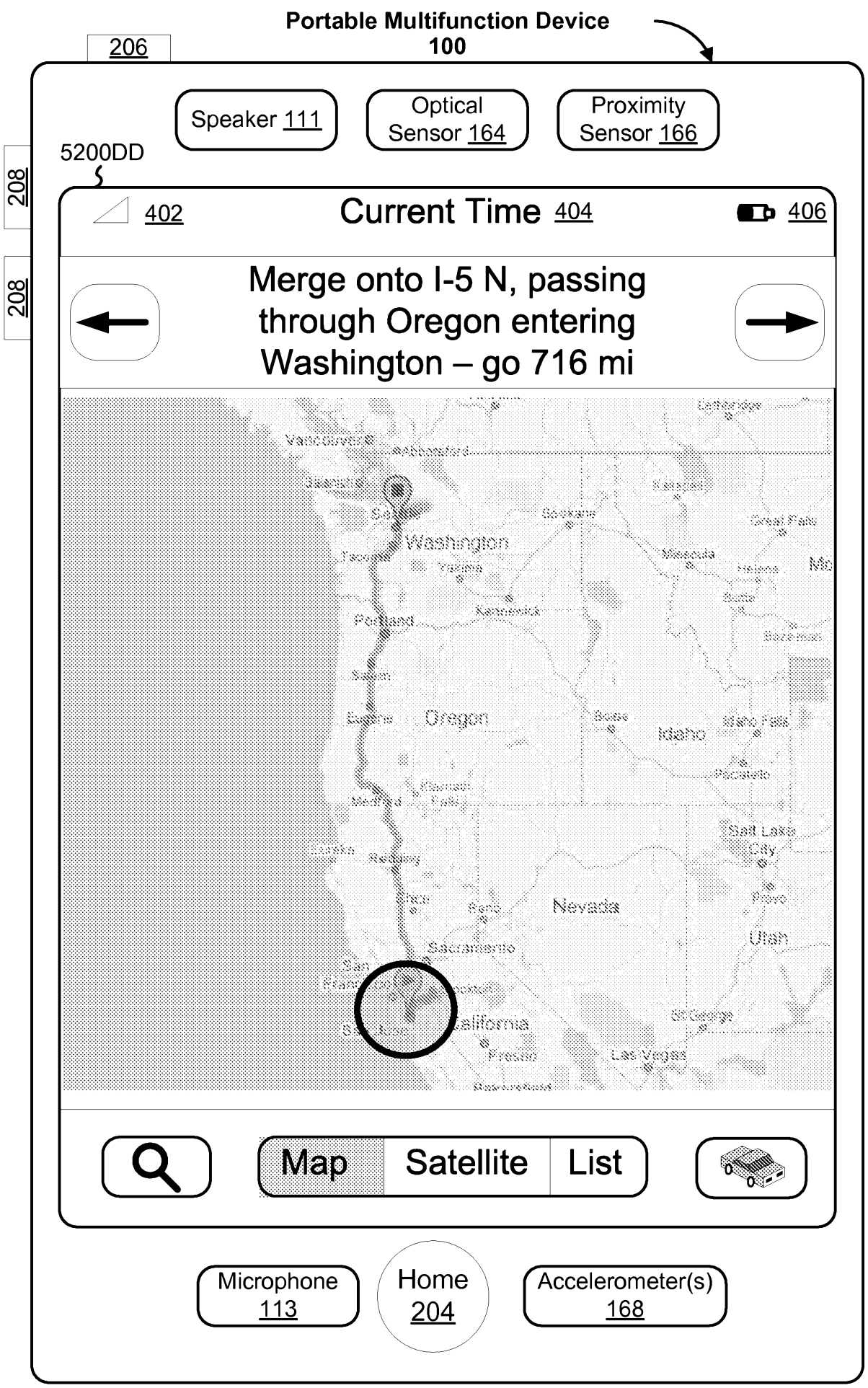
Portable Multifunction Device
100
206
Speaker 111
Optical Sensor 164
Proximity Sensor 166
5200DD
208
208
402
Current Time 404
406
Merge onto I-5 N, passing through Oregon entering Washington – go 716 mi
Washington
Oregon
Idaho
Nevada
Utah
Map
Satellite
List
Microphone 113
Home 204
Accelerometer(s) 168

Figure 5V

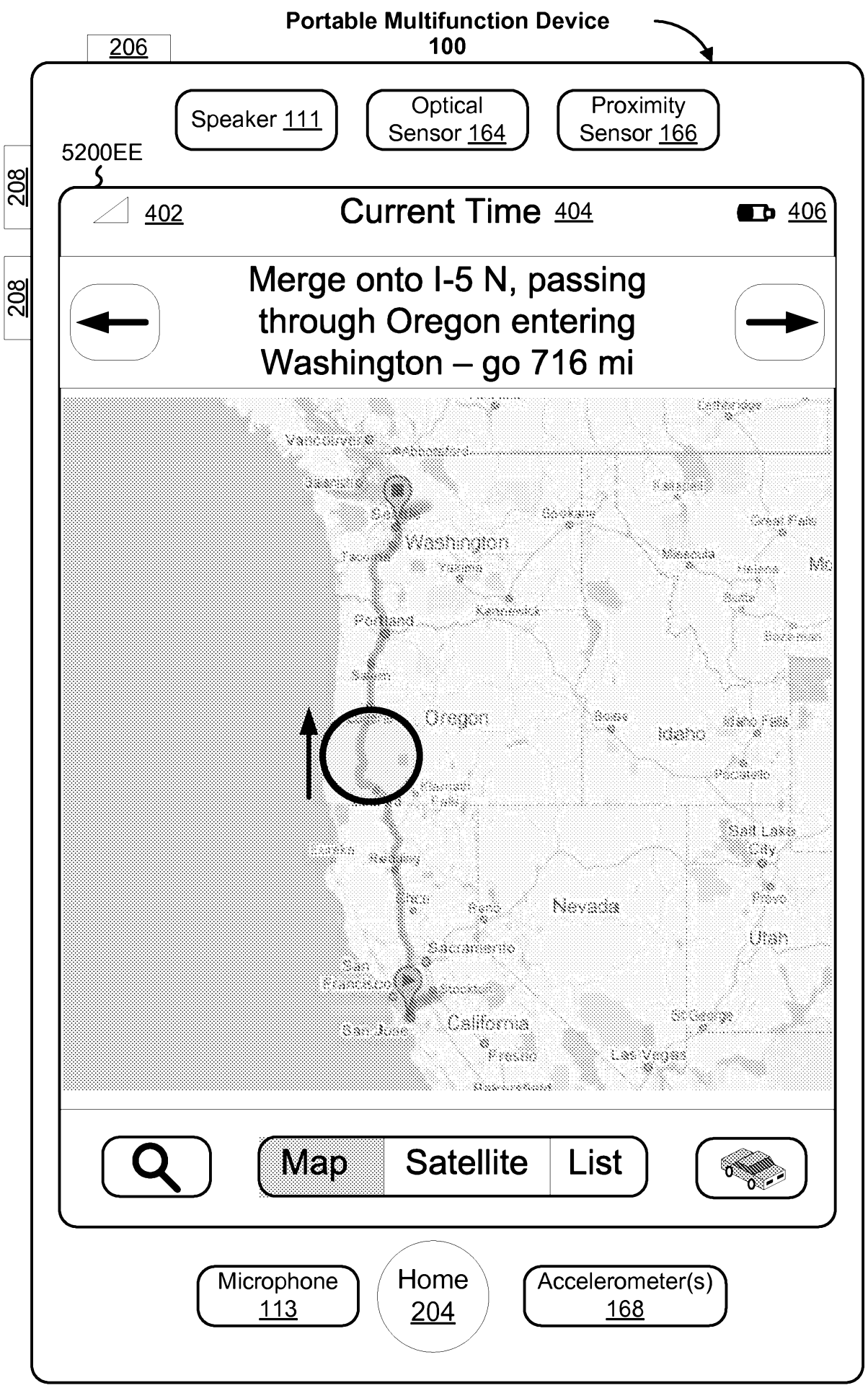
Portable Multifunction Device
100
206
Speaker 111
Optical Sensor 164
Proximity Sensor 166
5200EE
208
208
402
Current Time 404
406
Merge onto I-5 N, passing through Oregon entering Washington – go 716 mi
Washington
Oregon
Idaho
Nevada
Utah
California
Map
Satellite
List
Microphone 113
Home 204
Accelerometer(s) 168

Figure 5W

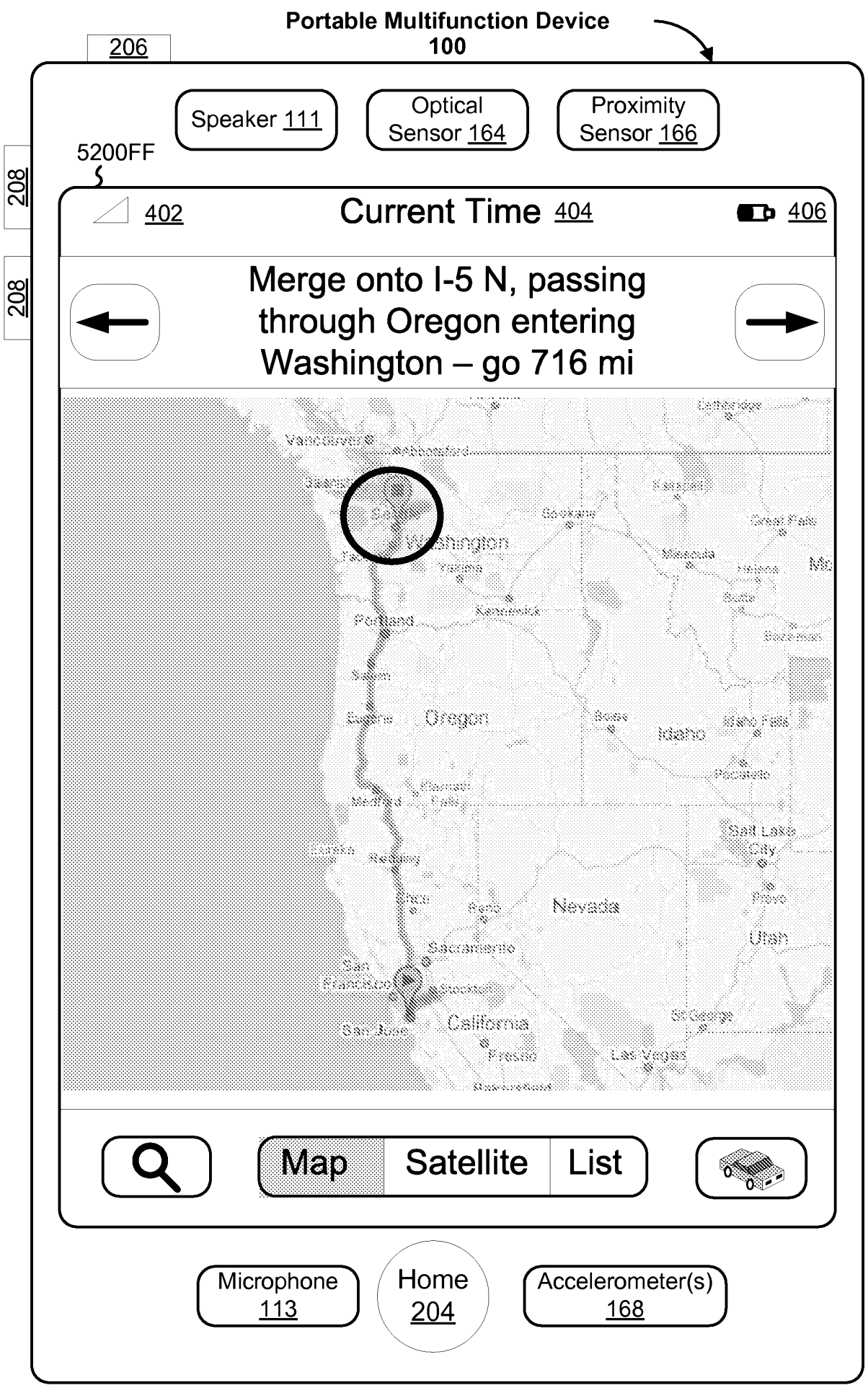
Portable Multifunction Device
100
206
Speaker 111
Optical Sensor 164
Proximity Sensor 166
5200FF
208
208
402
Current Time 404
406
Merge onto I-5 N, passing through Oregon entering Washington – go 716 mi
Map
Satellite
List
Microphone 113
Home 204
Accelerometer(s) 168

Figure 5X

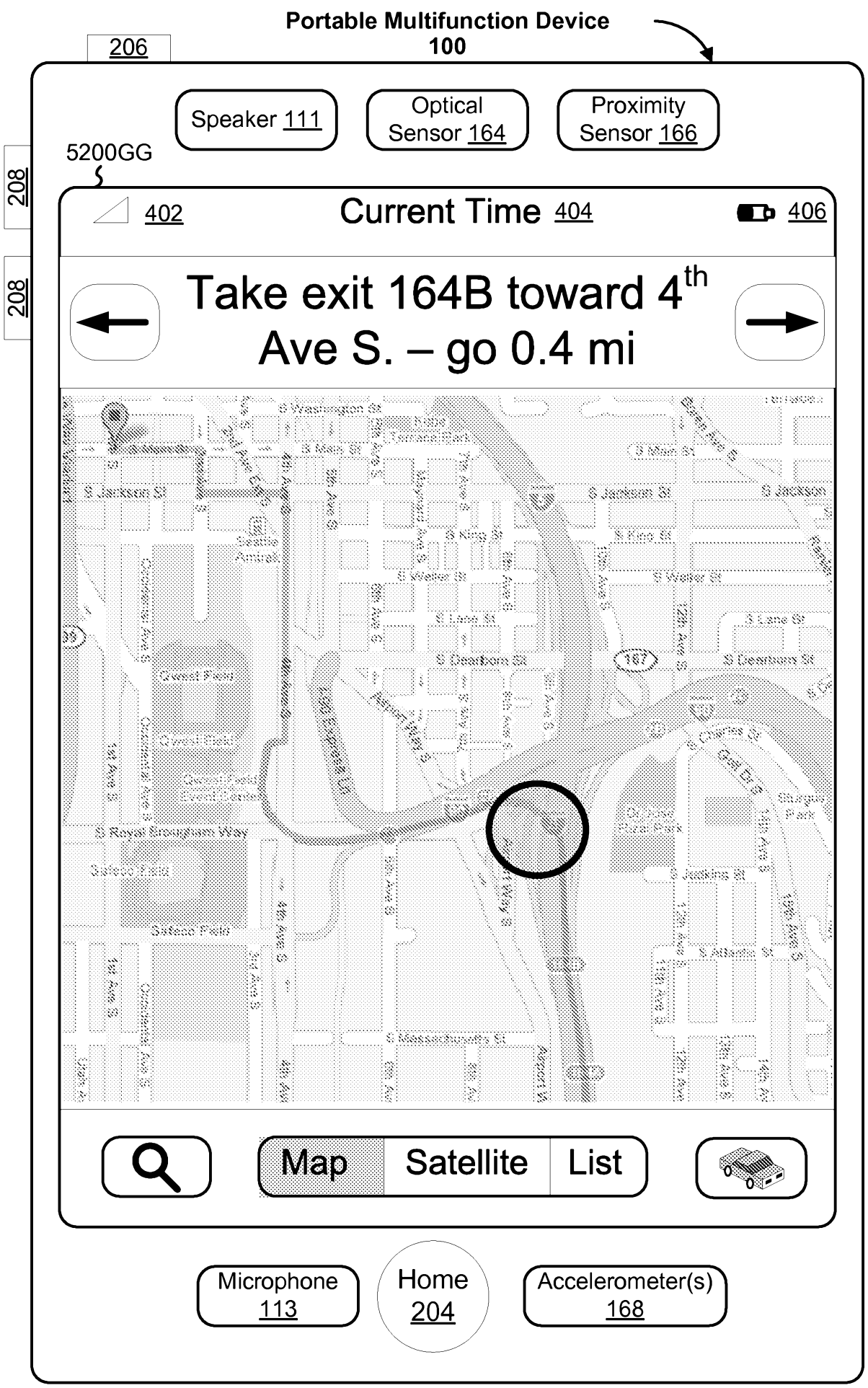
Portable Multifunction Device
100
206
Speaker 111
Optical Sensor 164
Proximity Sensor 166
5200GG
208
208
402
Current Time 404
406
Take exit 164B toward 4th Ave S. – go 0.4 mi
Map
Satellite
List
Microphone 113
Home 204
Accelerometer(s) 168

Figure 5Y

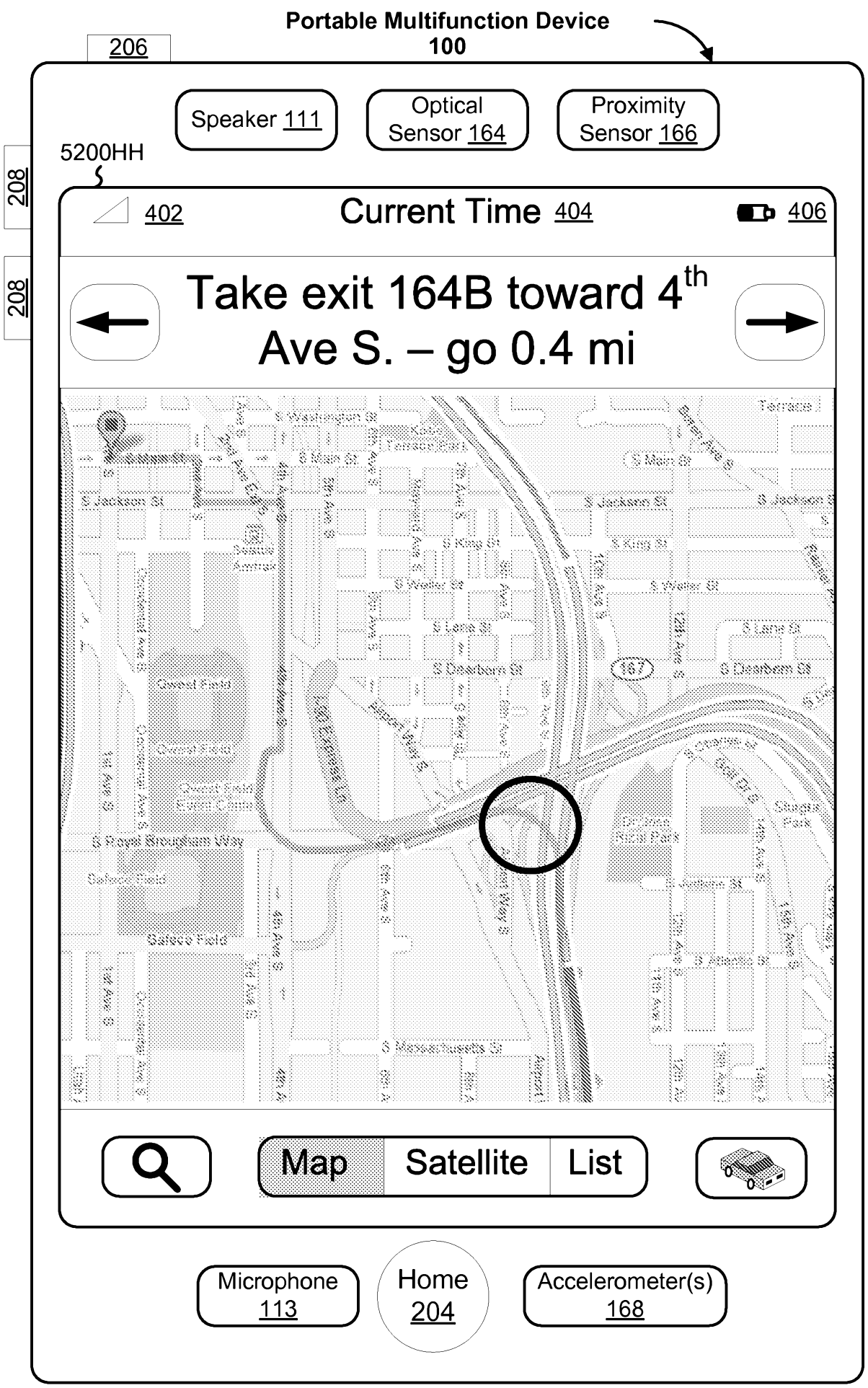
Portable Multifunction Device
100
206
Speaker 111
Optical Sensor 164
Proximity Sensor 166
5200HH
208
208
402
Current Time 404
406
Take exit 164B toward 4th Ave S. – go 0.4 mi
Map
Satellite
List
Microphone 113
Home 204
Accelerometer(s) 168

Figure 5Z

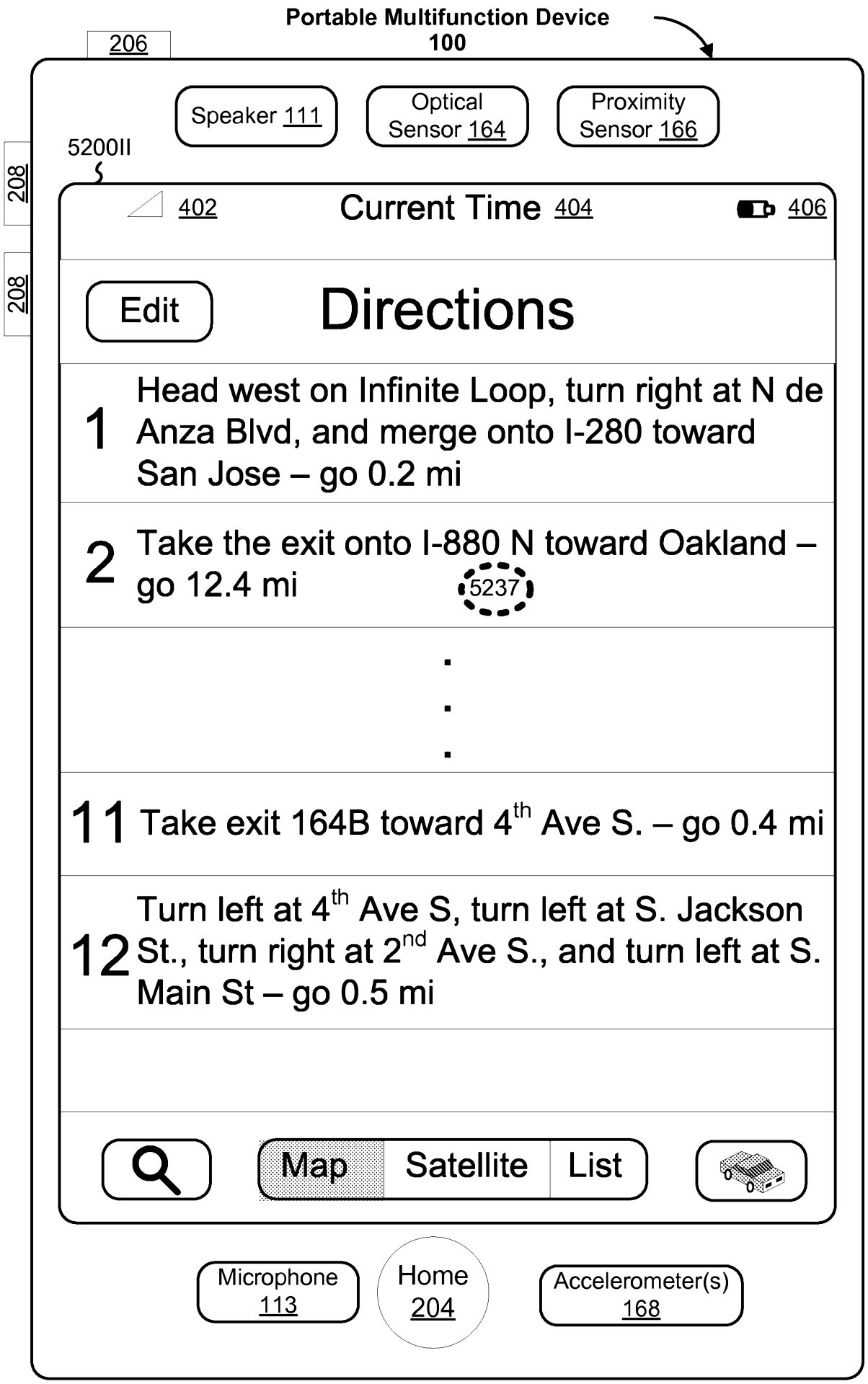
Portable Multifunction Device
100
206
Speaker 111
Optical Sensor 164
Proximity Sensor 166
5200II
208
208
402
Current Time 404
406
Edit
Directions
1 Head west on Infinite Loop, turn right at N de Anza Blvd, and merge onto I-280 toward San Jose – go 0.2 mi
2 Take the exit onto I-880 N toward Oakland – go 12.4 mi
5237
11 Take exit 164B toward 4th Ave S. – go 0.4 mi
12 Turn left at 4th Ave S, turn left at S. Jackson St., turn right at 2nd Ave S., and turn left at S. Main St – go 0.5 mi
Map
Satellite
List
Microphone 113
Home 204
Accelerometer(s) 168

Figure 5AA

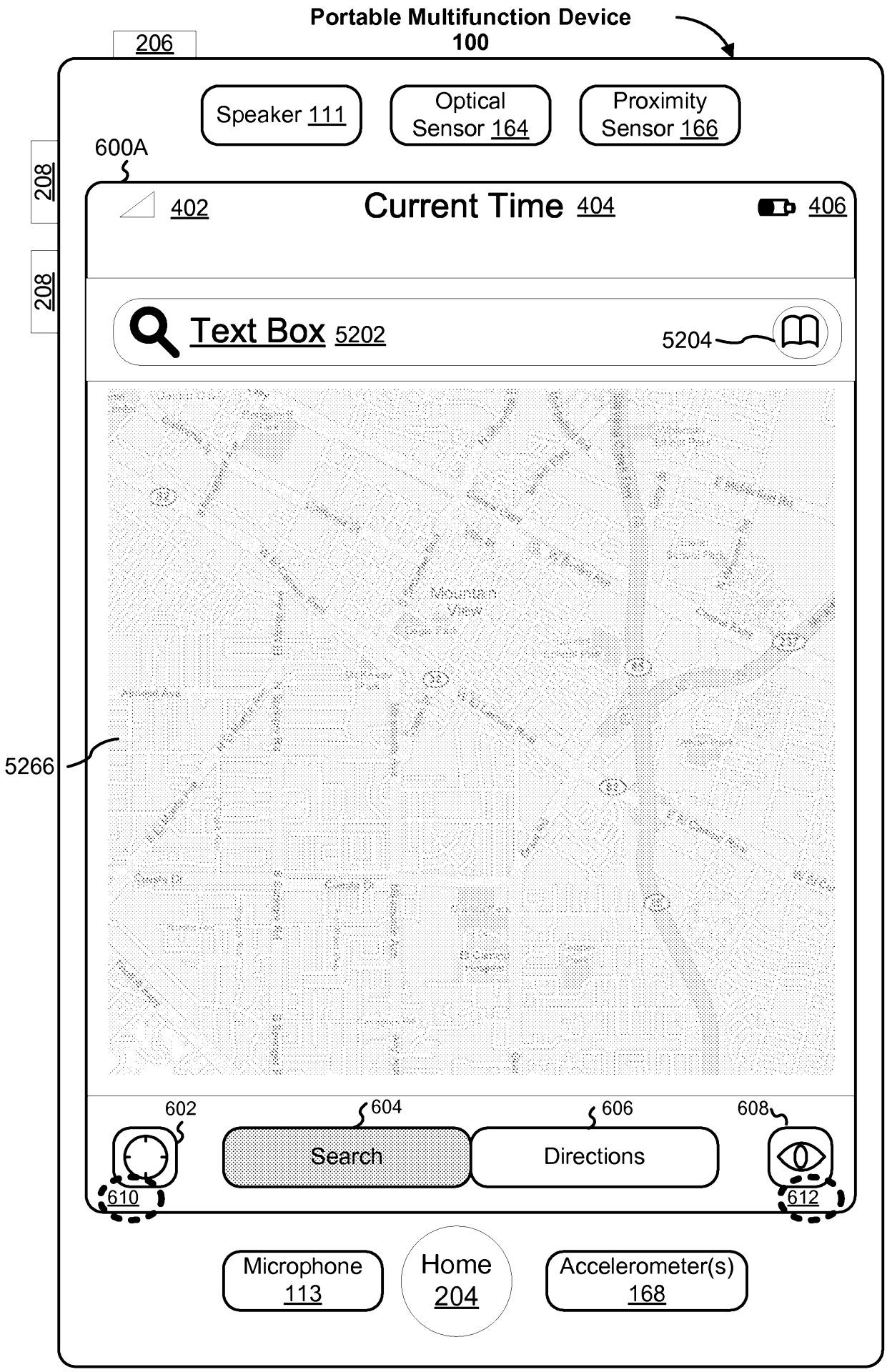
Portable Multifunction Device
100
206
Speaker 111
Optical Sensor 164
Proximity Sensor 166
600A
208
208
402
Current Time 404
406
Text Box 5202
5204
5266
Mountain View
602
604
606
608
Search
Directions
610
612
Microphone 113
Home 204
Accelerometer(s) 168

Figure 6A

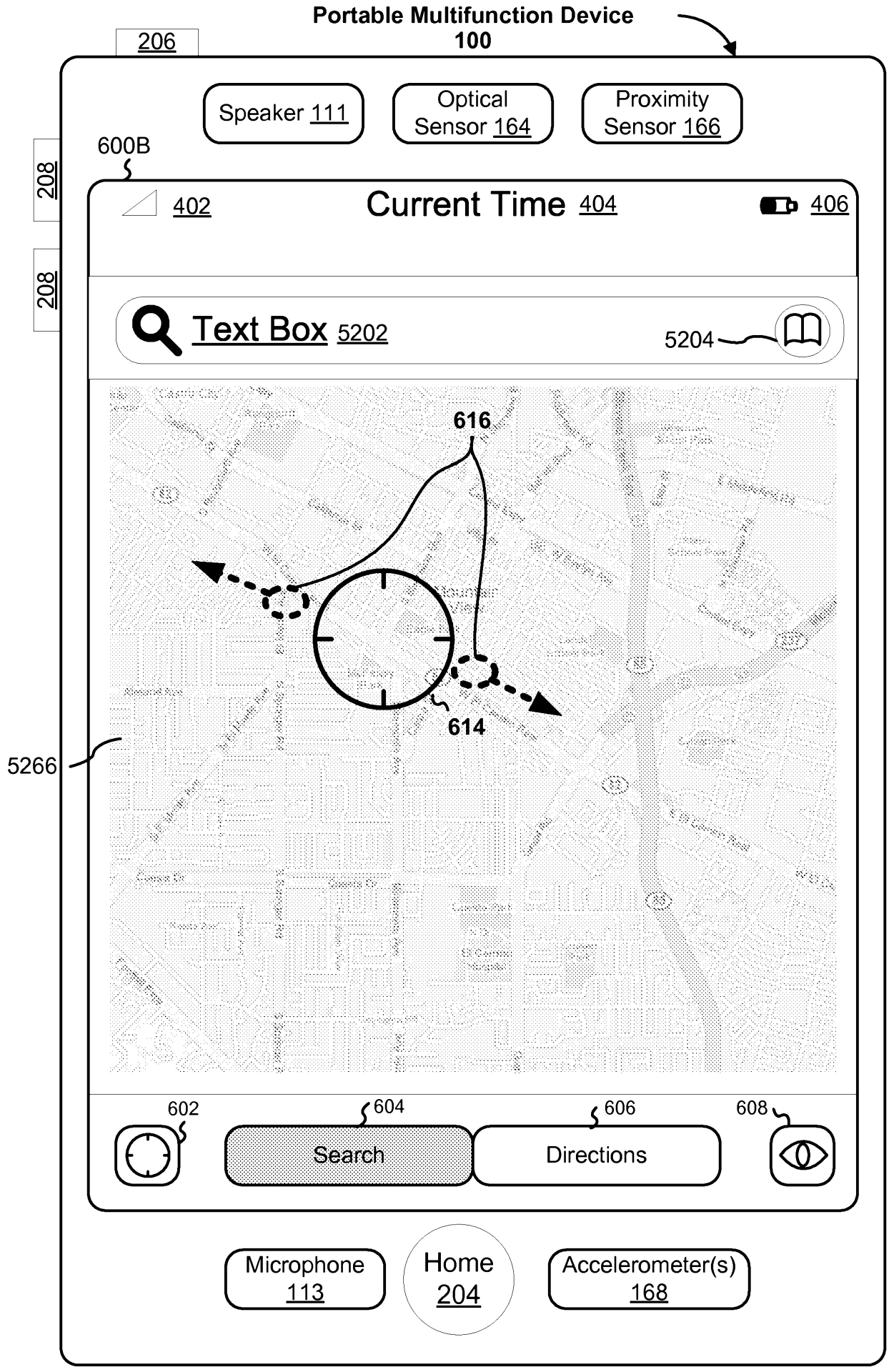
Portable Multifunction Device
100
206
Speaker 111
Optical Sensor 164
Proximity Sensor 166
600B
208
208
402
Current Time 404
406
Text Box 5202
5204
616
614
5266
602
604
606
608
Search
Directions
Microphone 113
Home 204
Accelerometer(s) 168

Figure 6B

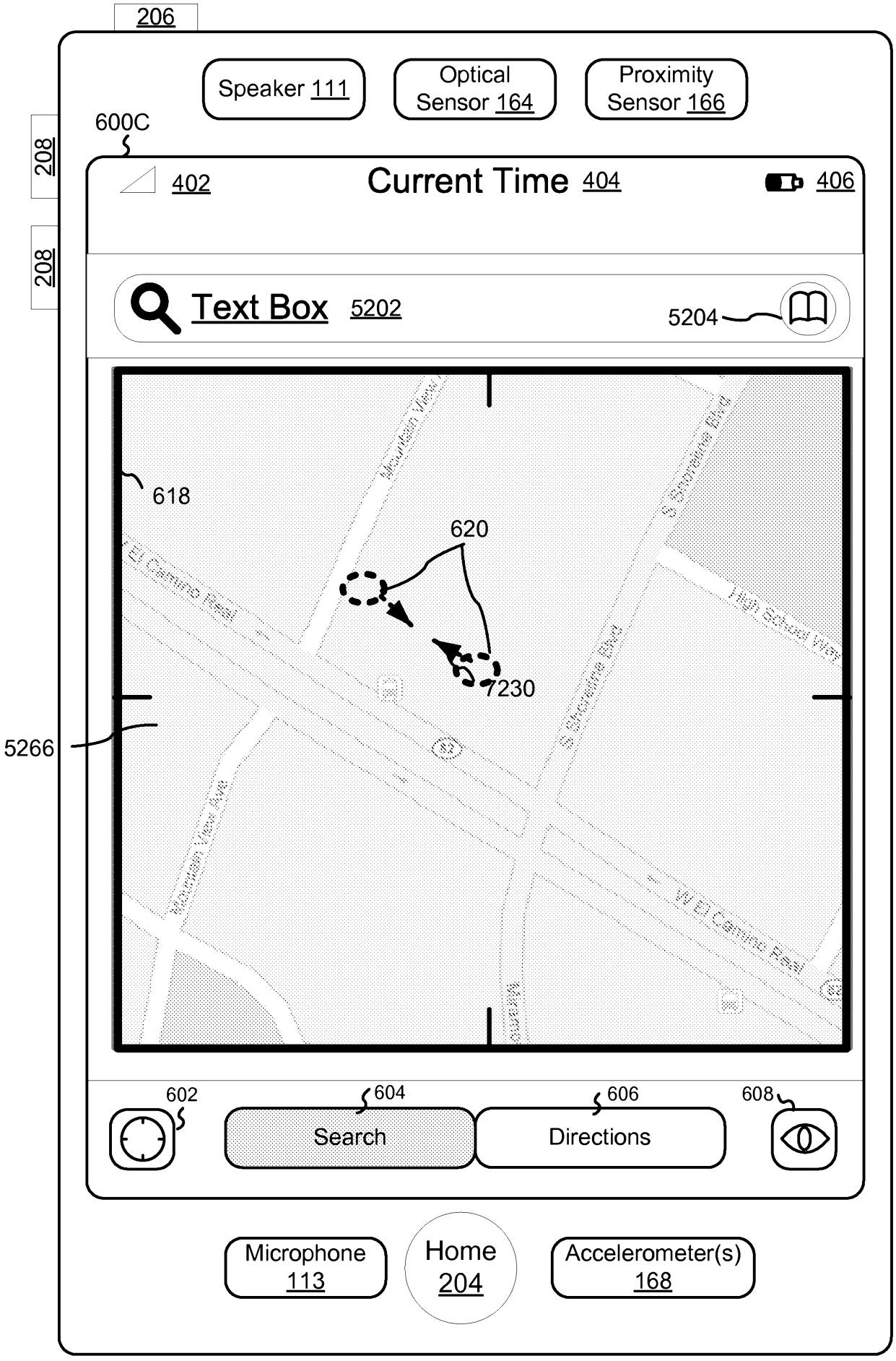
206
Speaker 111
Optical Sensor 164
Proximity Sensor 166
600C
208
208
402
Current Time 404
406
Text Box 5202
5204
618
620
7230
5266
602
604
606
608
Search
Directions
Microphone 113
Home 204
Accelerometer(s) 168

Figure 6C

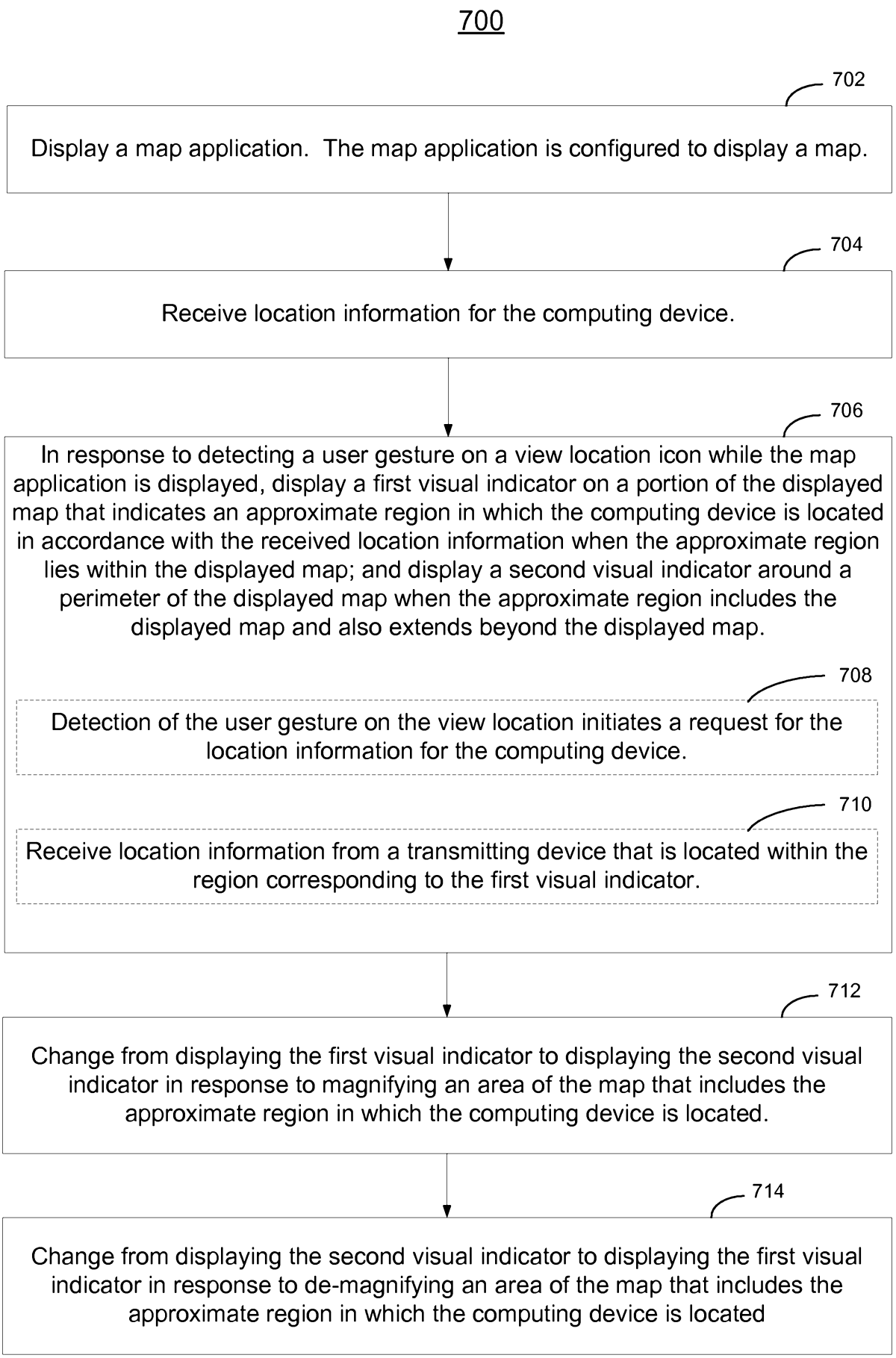
700
702
Display a map application. The map application is configured to display a map.
704
Receive location information for the computing device.
706
In response to detecting a user gesture on a view location icon while the map application is displayed, display a first visual indicator on a portion of the displayed map that indicates an approximate region in which the computing device is located in accordance with the received location information when the approximate region lies within the displayed map; and display a second visual indicator around a perimeter of the displayed map when the approximate region includes the displayed map and also extends beyond the displayed map.
708
Detection of the user gesture on the view location initiates a request for the location information for the computing device.
710
Receive location information from a transmitting device that is located within the region corresponding to the first visual indicator.
712
Change from displaying the first visual indicator to displaying the second visual indicator in response to magnifying an area of the map that includes the approximate region in which the computing device is located.
714
Change from displaying the second visual indicator to displaying the first visual indicator in response to de-magnifying an area of the map that includes the approximate region in which the computing device is located

Figure 7

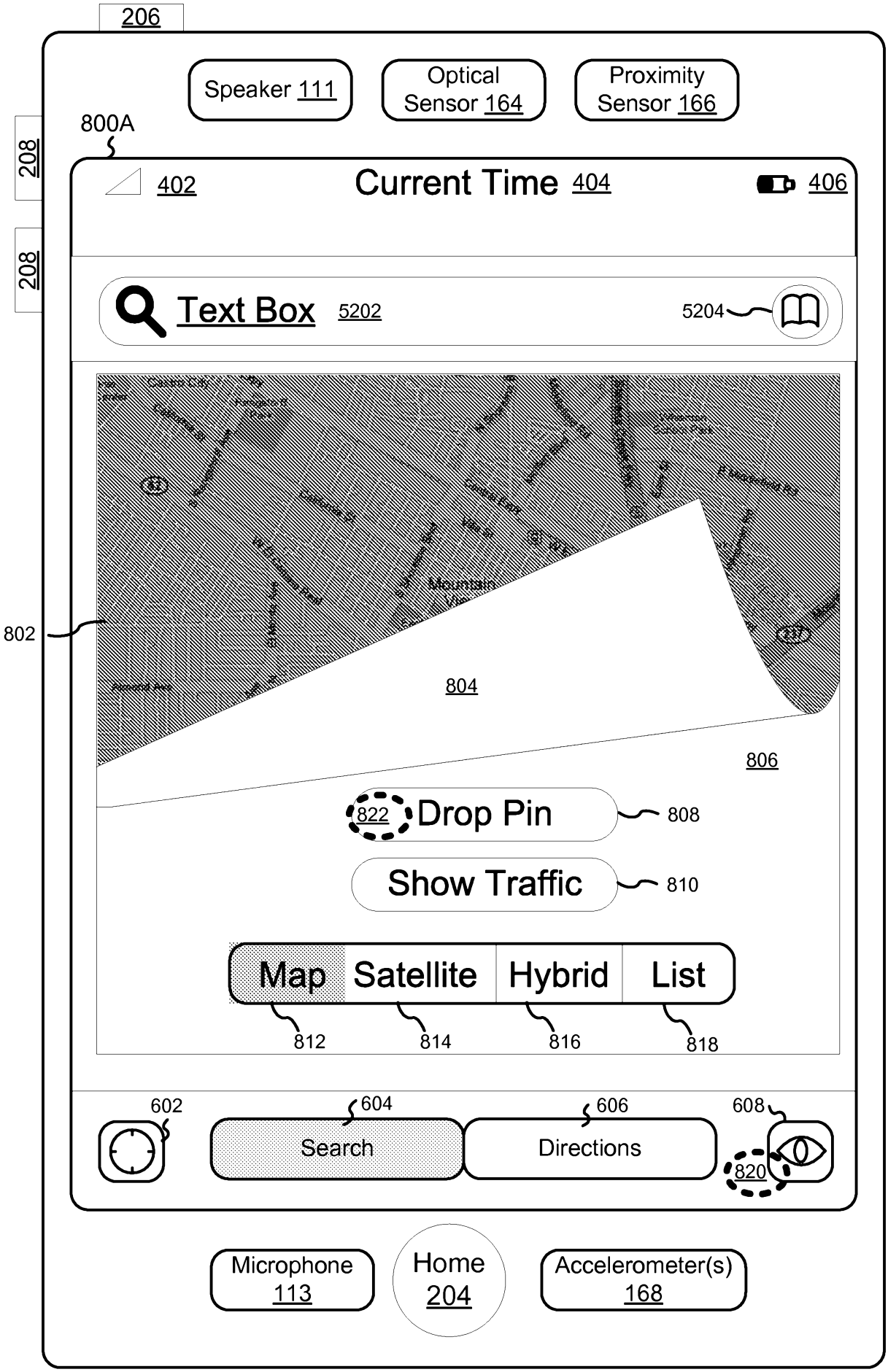
206
Speaker 111
Optical Sensor 164
Proximity Sensor 166
800A
208
208
402
Current Time 404
406
Text Box 5202
5204
802
804
806
822
Drop Pin
808
Show Traffic
810
Map
Satellite
Hybrid
List
812
814
816
818
602
604
606
608
Search
Directions
820
Microphone 113
Home 204
Accelerometer(s) 168

Figure 8A

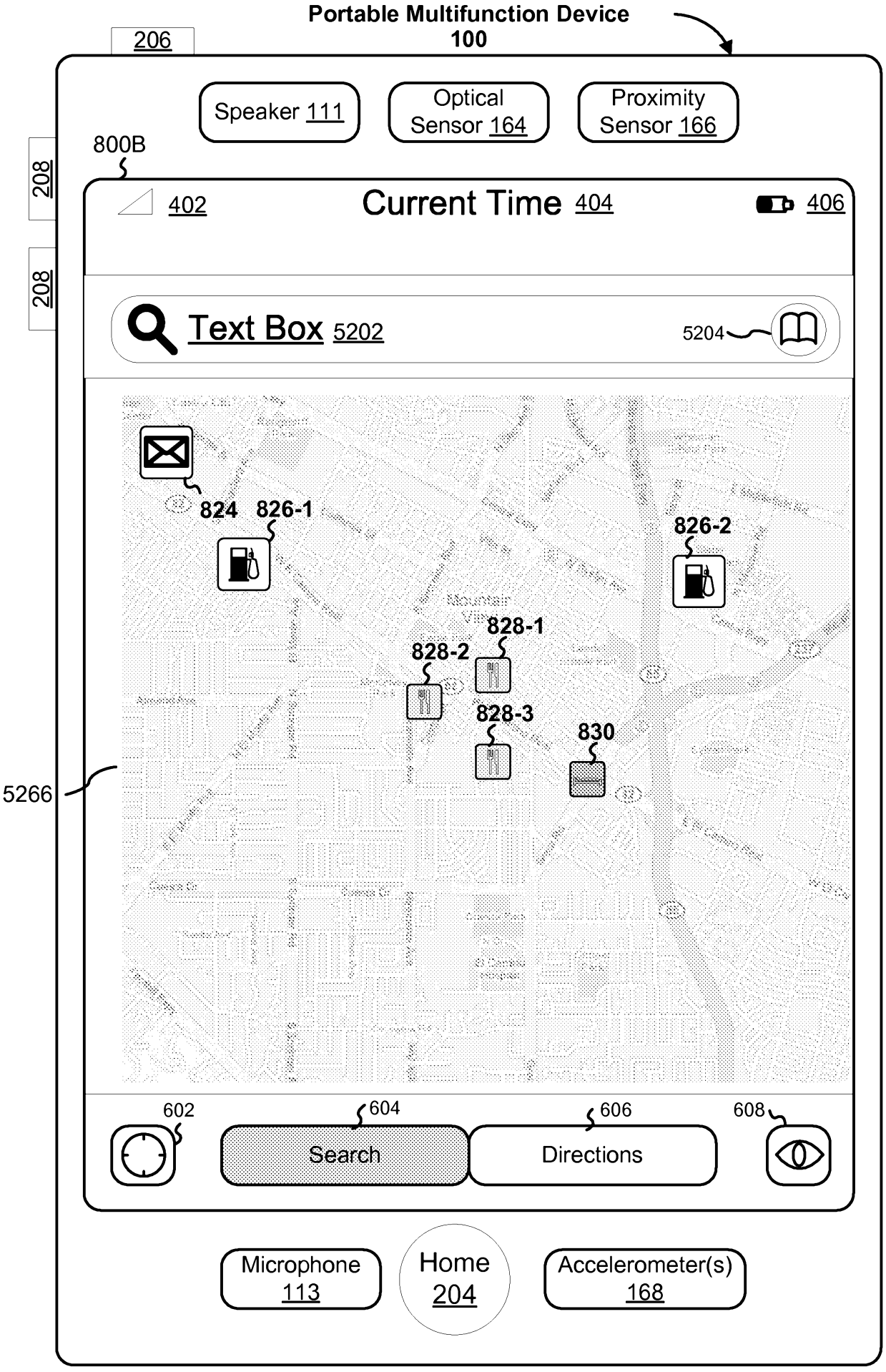
Portable Multifunction Device
100
206
Speaker 111
Optical Sensor 164
Proximity Sensor 166
800B
208
208
402
Current Time 404
406
Text Box 5202
5204
824
826-1
826-2
828-1
828-2
828-3
830
5266
602
604
606
608
Search
Directions
Microphone 113
Home 204
Accelerometer(s) 168

Figure 8B

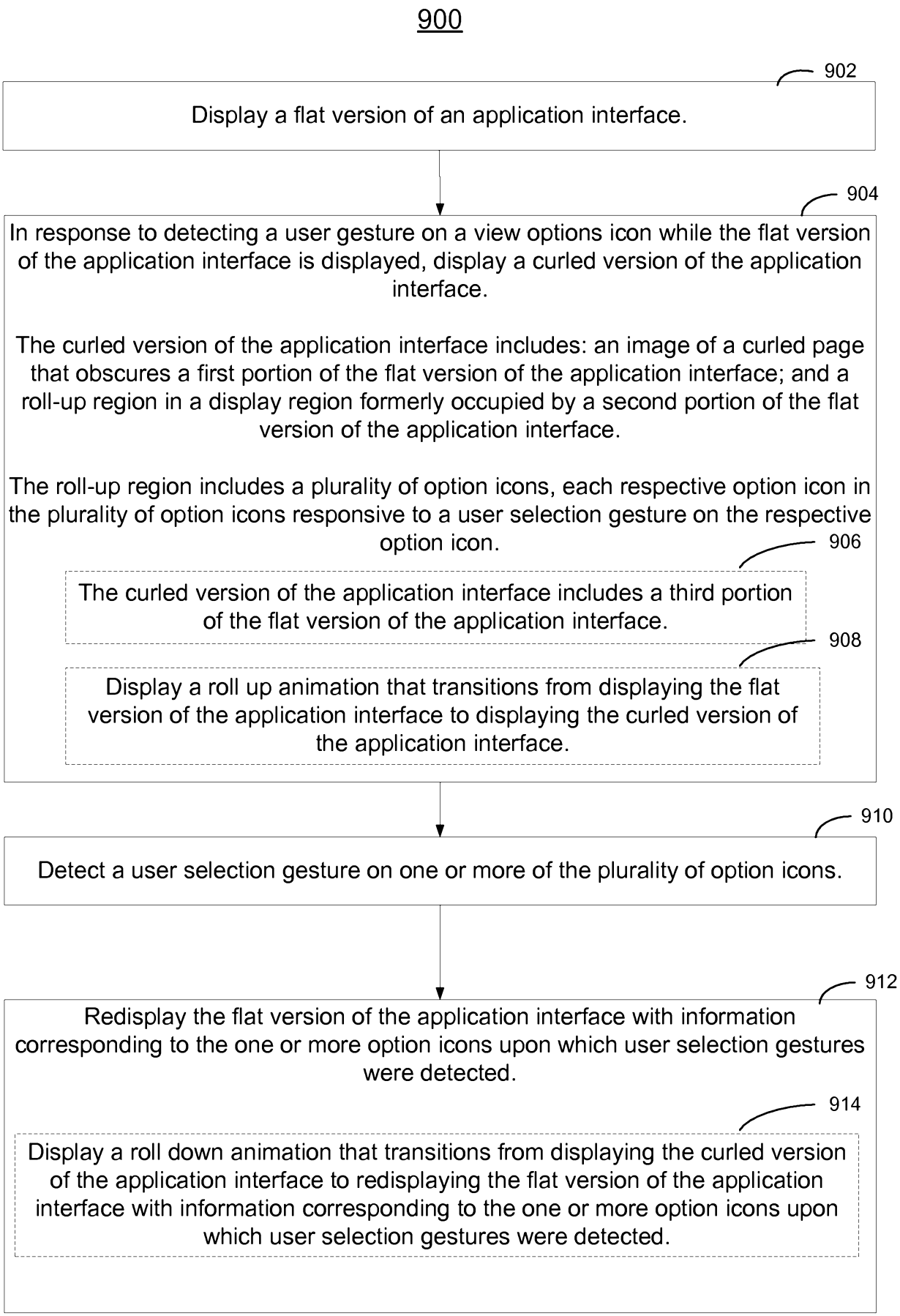
900
902
Display a flat version of an application interface.
904
In response to detecting a user gesture on a view options icon while the flat version of the application interface is displayed, display a curled version of the application interface.
The curled version of the application interface includes: an image of a curled page that obscures a first portion of the flat version of the application interface; and a roll-up region in a display region formerly occupied by a second portion of the flat version of the application interface.
The roll-up region includes a plurality of option icons, each respective option icon in the plurality of option icons responsive to a user selection gesture on the respective option icon.
906
The curled version of the application interface includes a third portion of the flat version of the application interface.
908
Display a roll up animation that transitions from displaying the flat version of the application interface to displaying the curled version of the application interface.
910
Detect a user selection gesture on one or more of the plurality of option icons.
912
Redisplay the flat version of the application interface with information corresponding to the one or more option icons upon which user selection gestures were detected.
914
Display a roll down animation that transitions from displaying the curled version of the application interface to redisplaying the flat version of the application interface with information corresponding to the one or more option icons upon which user selection gestures were detected.

Figure 9

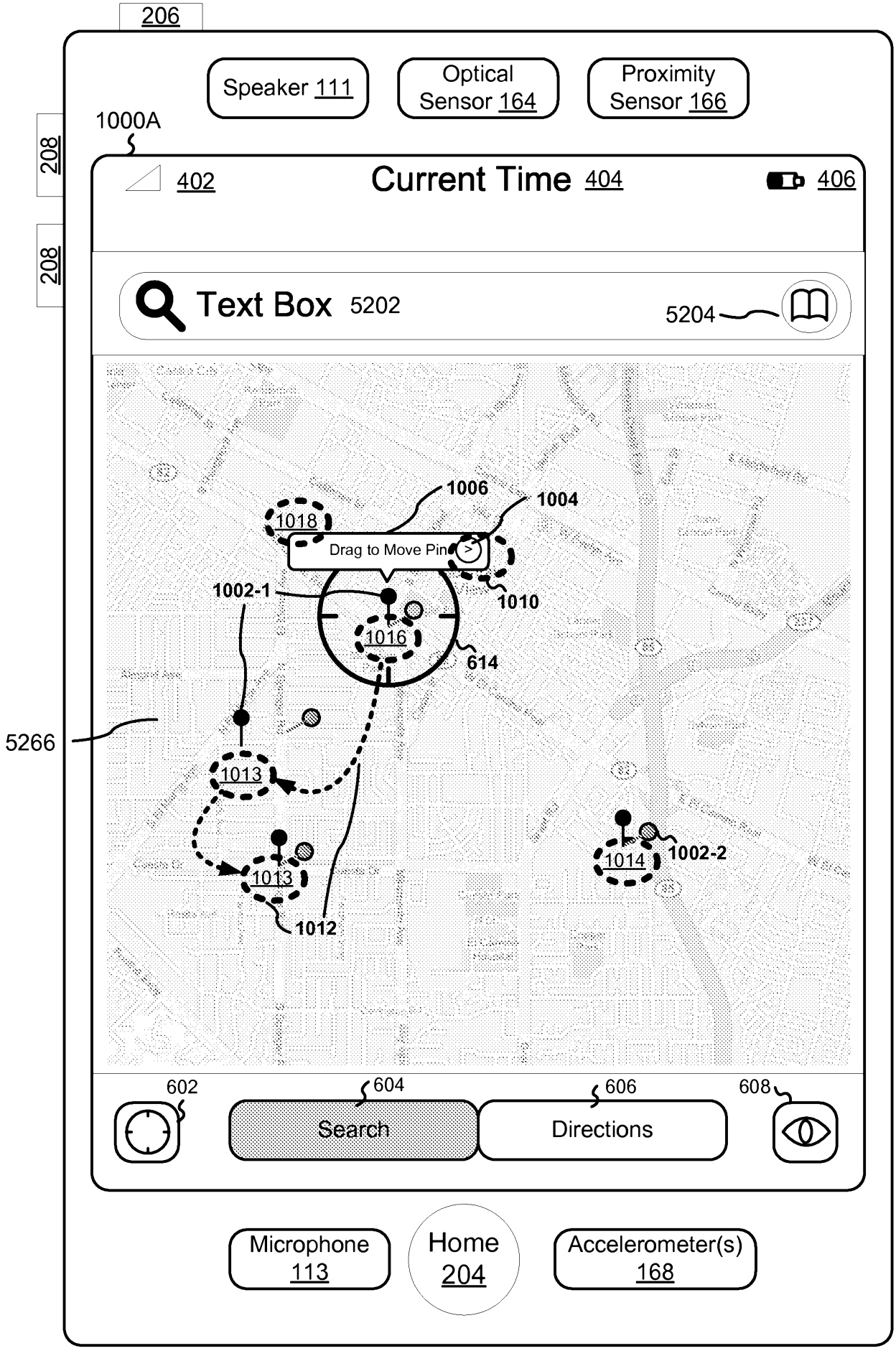
206
Speaker 111
Optical Sensor 164
Proximity Sensor 166
1000A
208
208
402
Current Time 404
406
Text Box 5202
5204
1006
1004
1018
Drag to Move Pin
1002-1
1010
1016
614
5266
1013
1013
1012
1014
1002-2
602
604
606
608
Search
Directions
Microphone 113
Home 204
Accelerometer(s) 168

Figure 10A

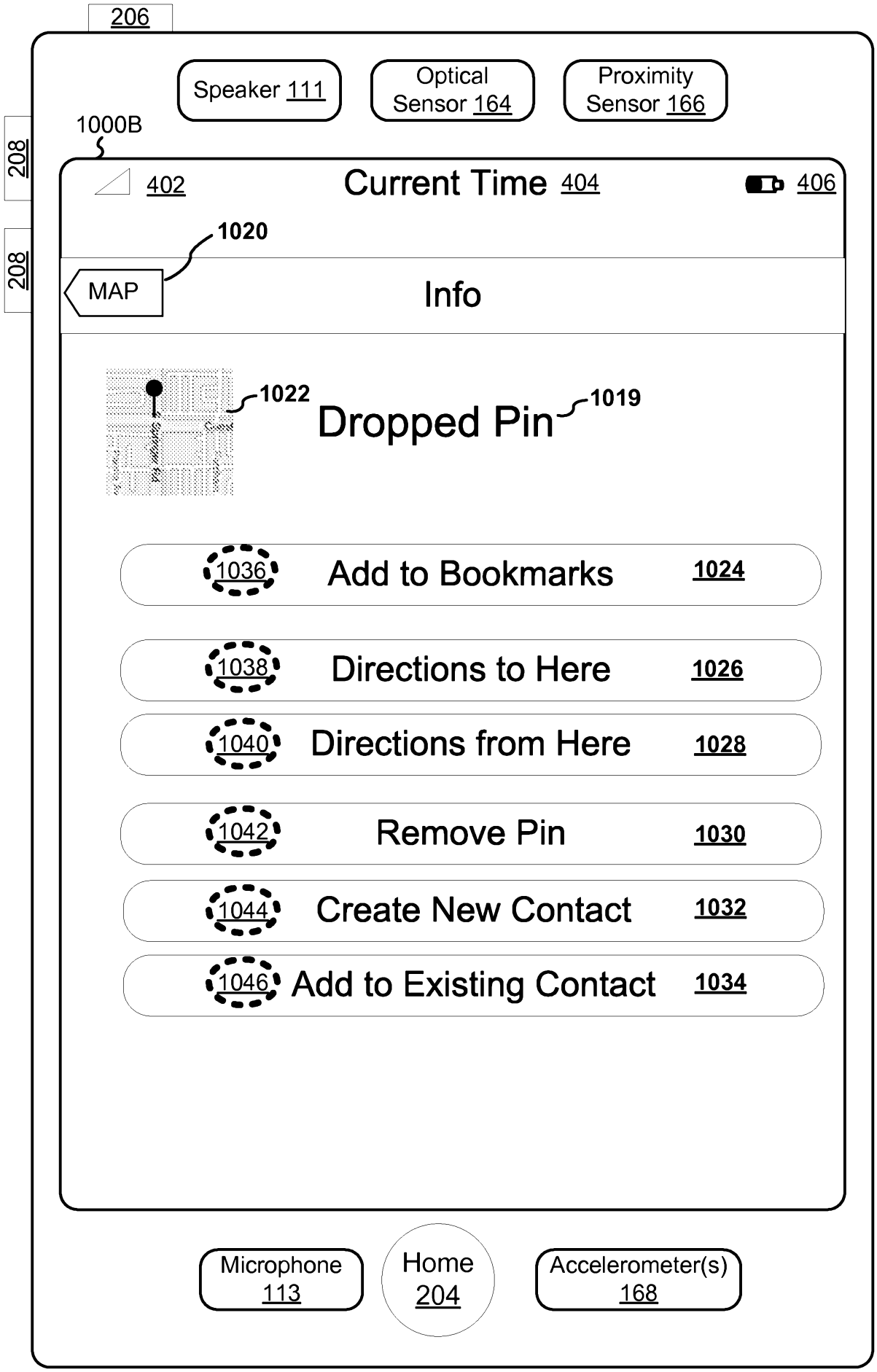
206
Speaker 111
Optical Sensor 164
Proximity Sensor 166
1000B
208
208
402
Current Time 404
406
1020
MAP
Info
1022
Dropped Pin
1019
1036
Add to Bookmarks
1024
1038
Directions to Here
1026
1040
Directions from Here
1028
1042
Remove Pin
1030
1044
Create New Contact
1032
1046
Add to Existing Contact
1034
Microphone 113
Home 204
Accelerometer(s) 168

Figure 10B

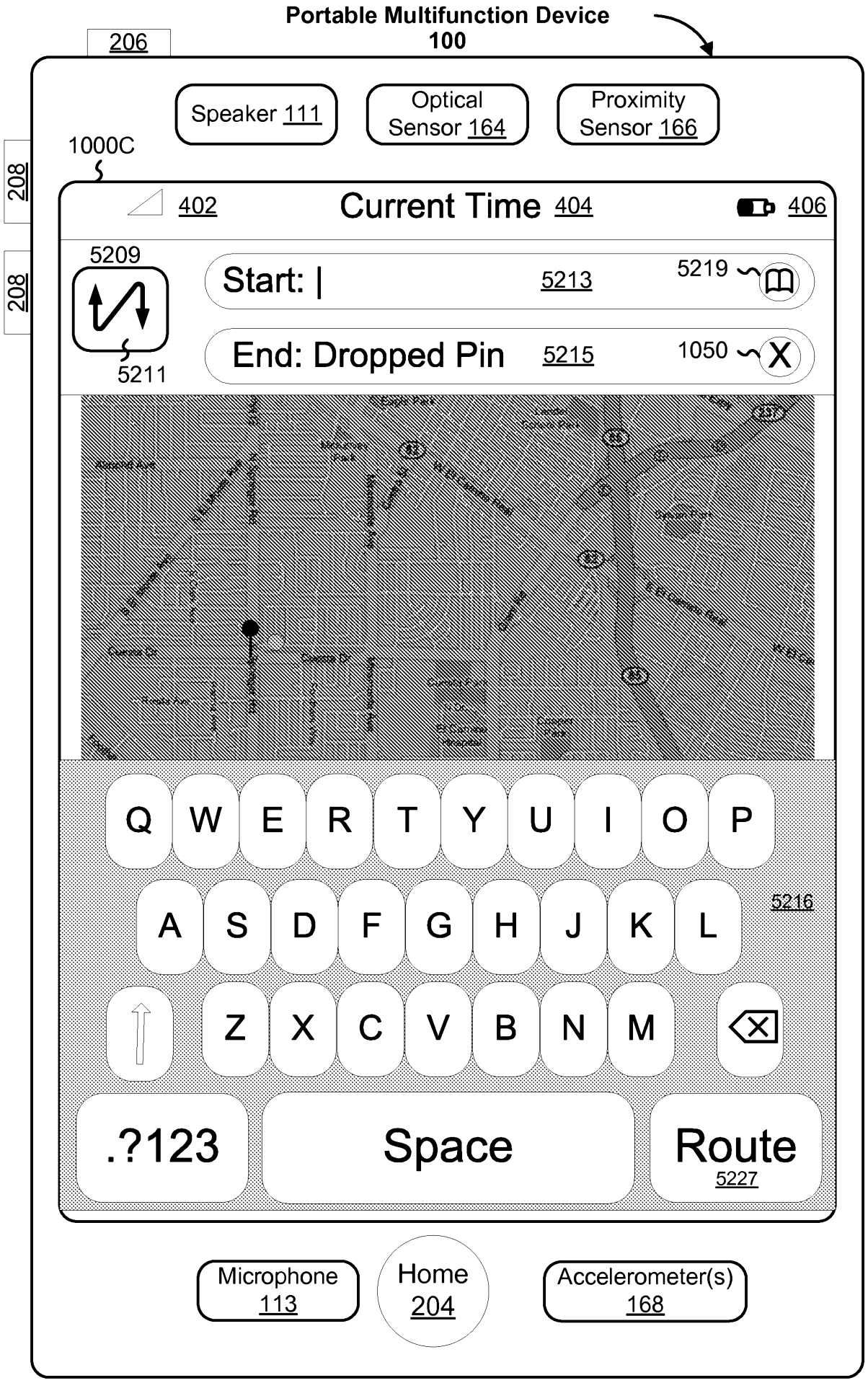
Portable Multifunction Device
100
206
Speaker 111
Optical Sensor 164
Proximity Sensor 166
1000C
208
208
402
Current Time 404
406
5209
5211
Start: |
5213
5219
End: Dropped Pin
5215
1050
5216
Q W E R T Y U I O P
A S D F G H J K L
Z X C V B N M
.?123
Space
Route
5227
Microphone 113
Home 204
Accelerometer(s) 168

Figure 10C

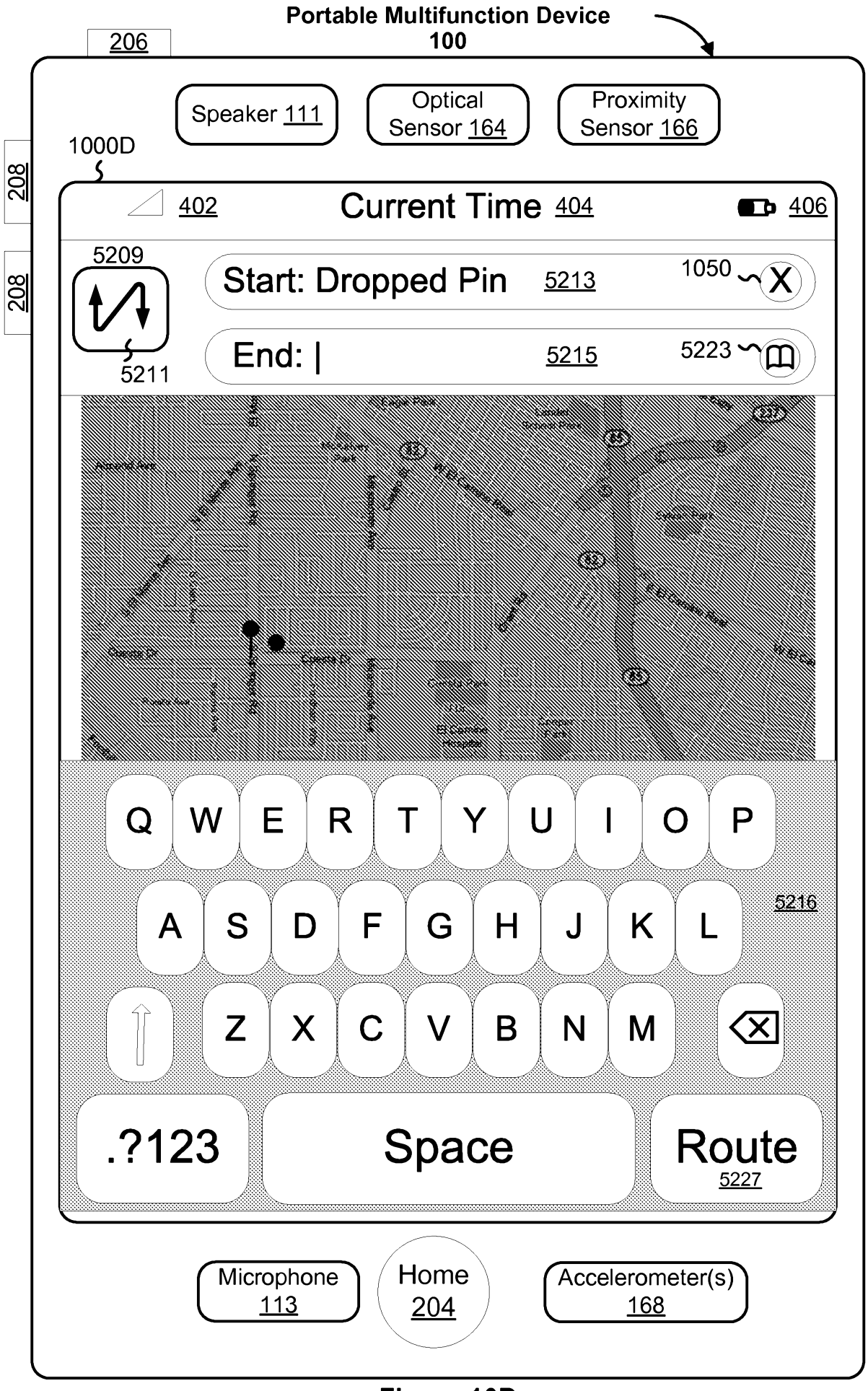
Portable Multifunction Device
100
206
Speaker 111
Optical Sensor 164
Proximity Sensor 166
1000D
208
208
402
Current Time 404
406
5209
5211
Start: Dropped Pin 5213
1050
End: | 5215
5223
Q W E R T Y U I O P
A S D F G H J K L
5216
Z X C V B N M
.?123
Space
Route
5227
Microphone 113
Home 204
Accelerometer(s) 168

Figure 10D

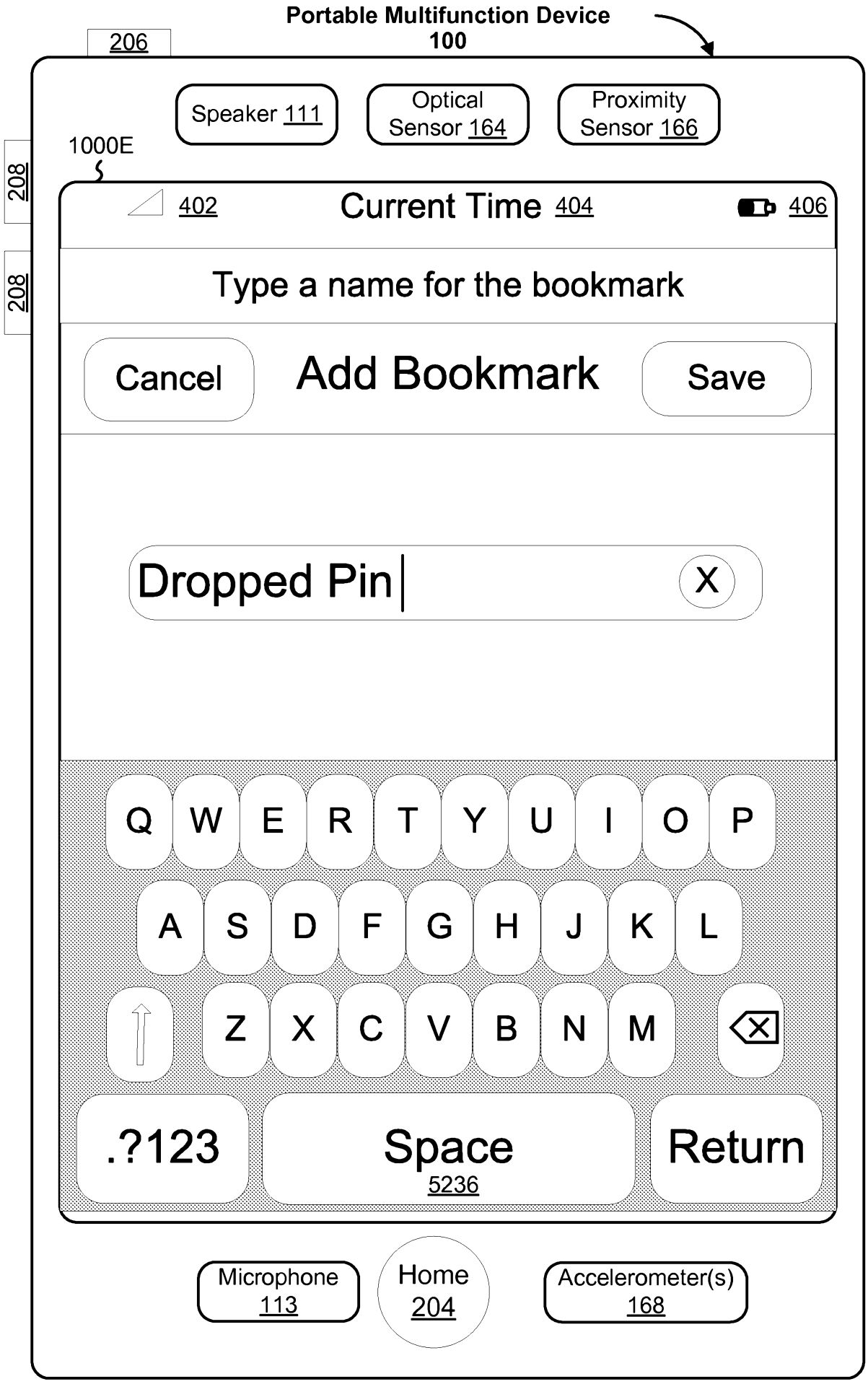
Portable Multifunction Device
100
206
Speaker 111
Optical Sensor 164
Proximity Sensor 166
1000E
208
208
402
Current Time 404
406
Type a name for the bookmark
Cancel
Add Bookmark
Save
Dropped Pin
X
Q W E R T Y U I O P
A S D F G H J K L
Z X C V B N M
.?123
Space
5236
Return
Microphone 113
Home 204
Accelerometer(s) 168

Figure 10E

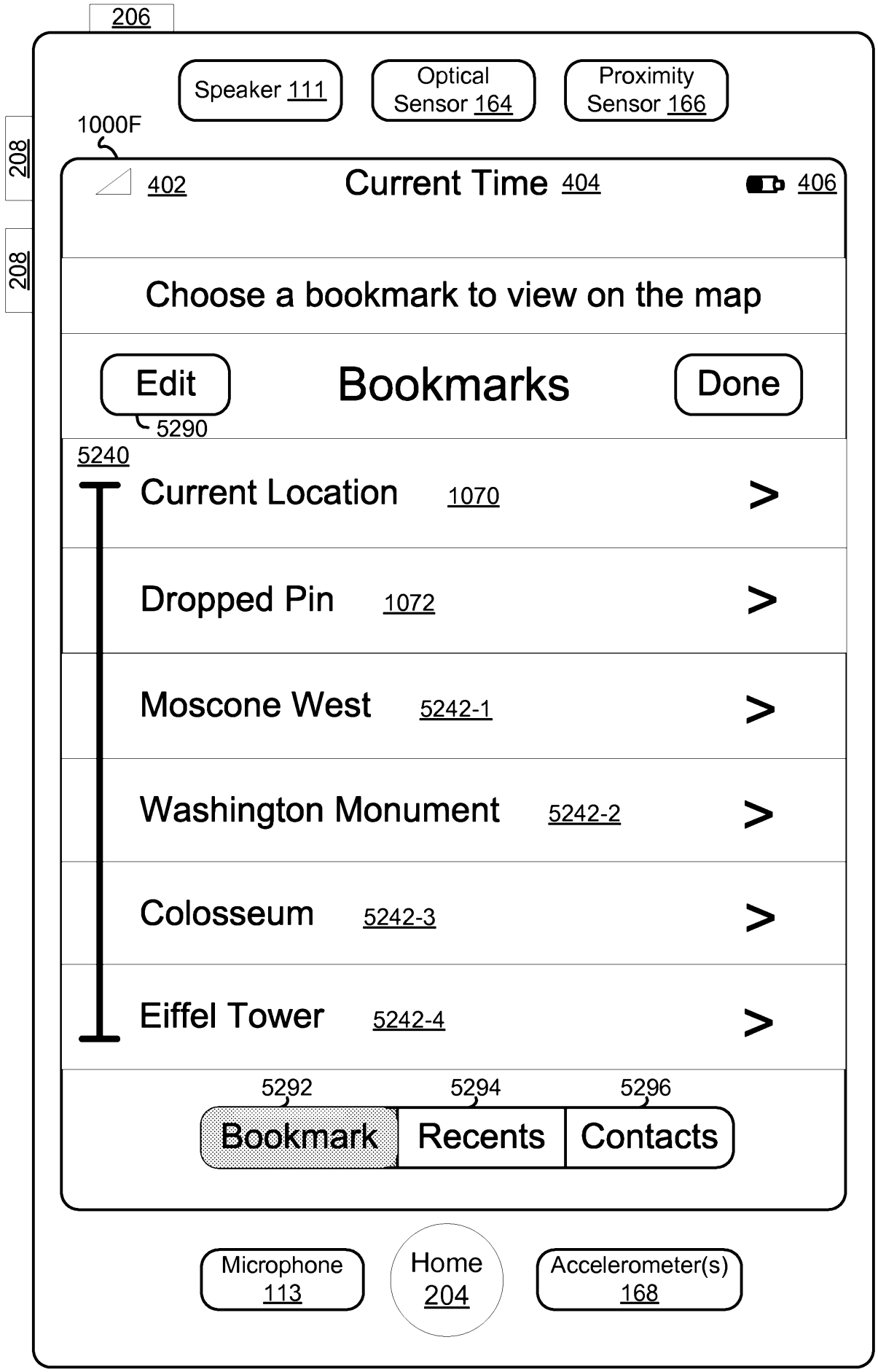
206
Speaker 111
Optical Sensor 164
Proximity Sensor 166
1000F
208
208
402
Current Time 404
406
Choose a bookmark to view on the map
Edit
5290
Bookmarks
Done
5240
Current Location 1070
Dropped Pin 1072
Moscone West 5242-1
Washington Monument 5242-2
Colosseum 5242-3
Eiffel Tower 5242-4
5292
5294
5296
Bookmark
Recents
Contacts
Microphone 113
Home 204
Accelerometer(s) 168

Figure 10F

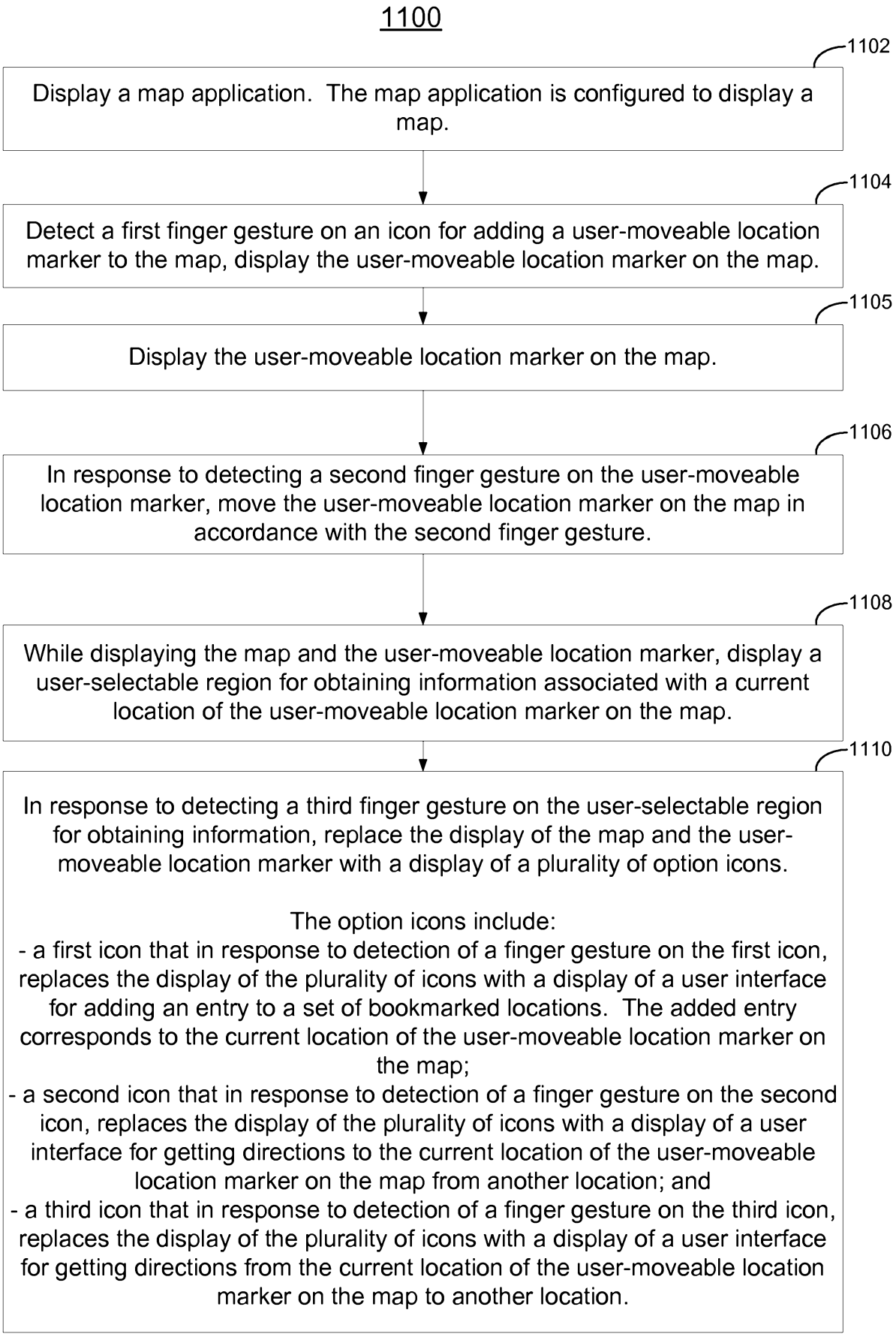
1100
1102
Display a map application. The map application is configured to display a map.
1104
Detect a first finger gesture on an icon for adding a user-moveable location marker to the map, display the user-moveable location marker on the map.
1105
Display the user-moveable location marker on the map.
1106
In response to detecting a second finger gesture on the user-moveable location marker, move the user-moveable location marker on the map in accordance with the second finger gesture.
1108
While displaying the map and the user-moveable location marker, display a user-selectable region for obtaining information associated with a current location of the user-moveable location marker on the map.
1110
In response to detecting a third finger gesture on the user-selectable region for obtaining information, replace the display of the map and the user-moveable location marker with a display of a plurality of option icons.
The option icons include:
- a first icon that in response to detection of a finger gesture on the first icon, replaces the display of the plurality of icons with a display of a user interface for adding an entry to a set of bookmarked locations. The added entry corresponds to the current location of the user-moveable location marker on the map;
- a second icon that in response to detection of a finger gesture on the second icon, replaces the display of the plurality of icons with a display of a user interface for getting directions to the current location of the user-moveable location marker on the map from another location; and
- a third icon that in response to detection of a finger gesture on the third icon, replaces the display of the plurality of icons with a display of a user interface for getting directions from the current location of the user-moveable location marker on the map to another location.

Figure 11

Move Map:

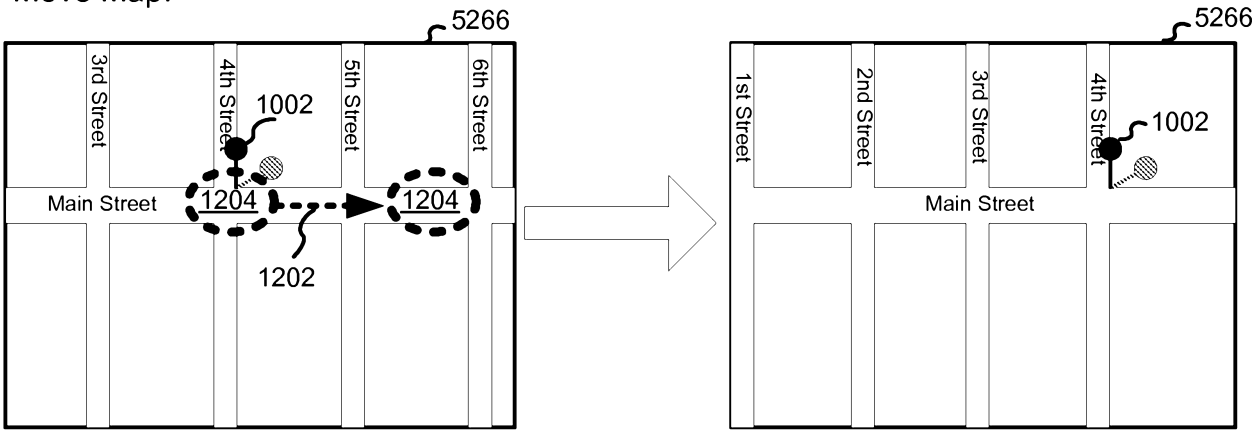

Figure 12A

Display user selectable region for obtaining information associated with marker:

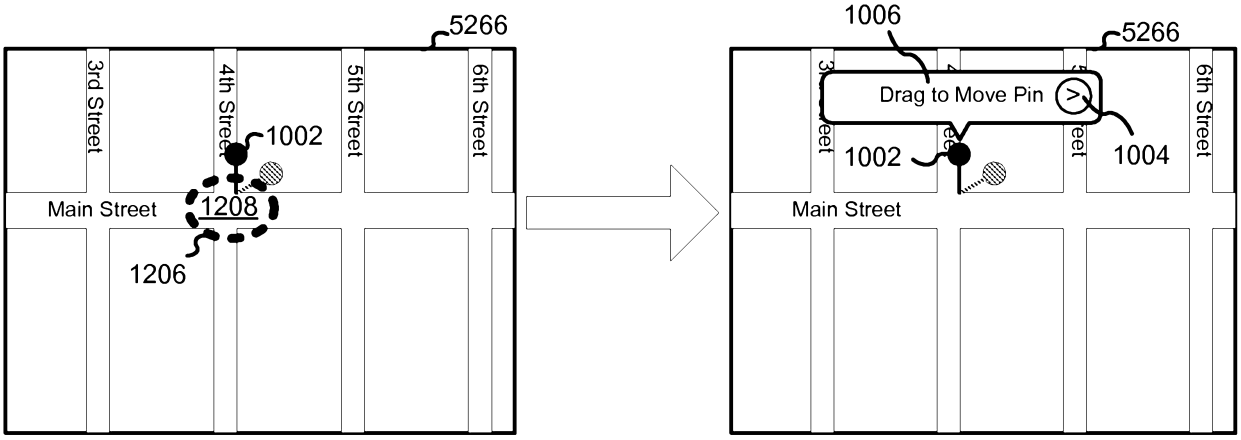

Figure 12B

Move Marker:

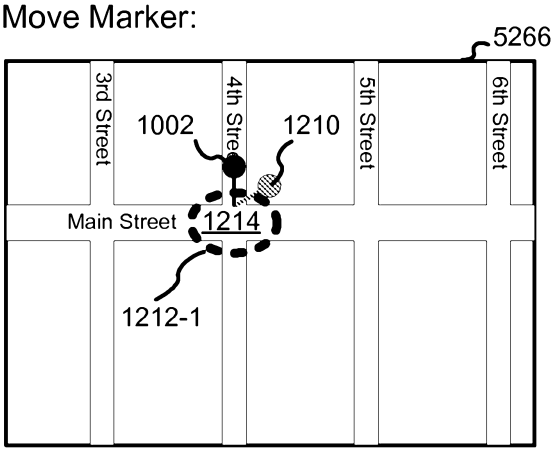

Figure 12C(1)

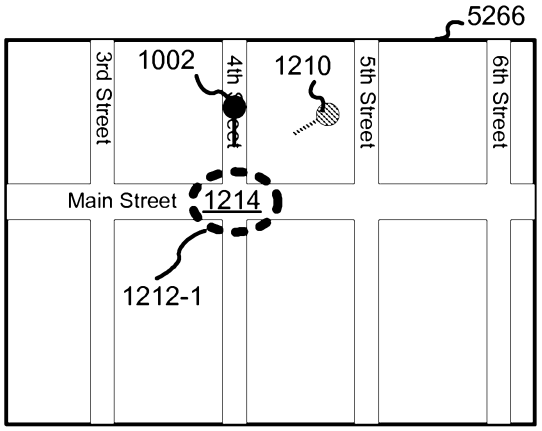

Figure 12C(2)

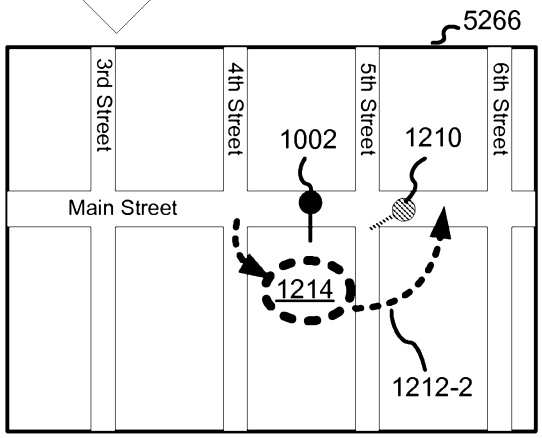

Figure 12C(3)

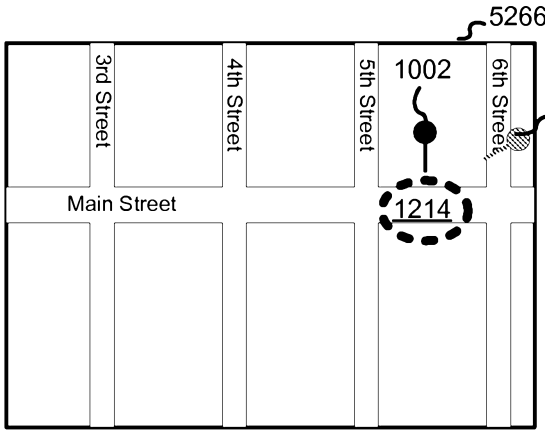

Figure 12C(4)

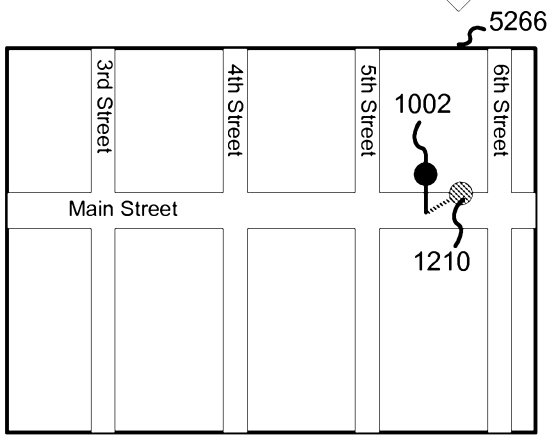

Figure 12C(5)

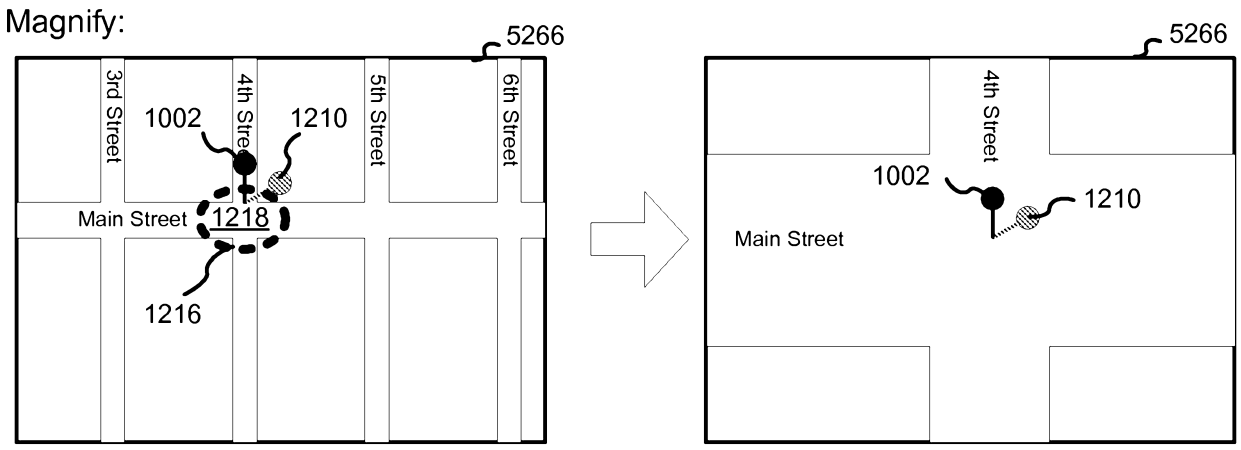

Figure 12D

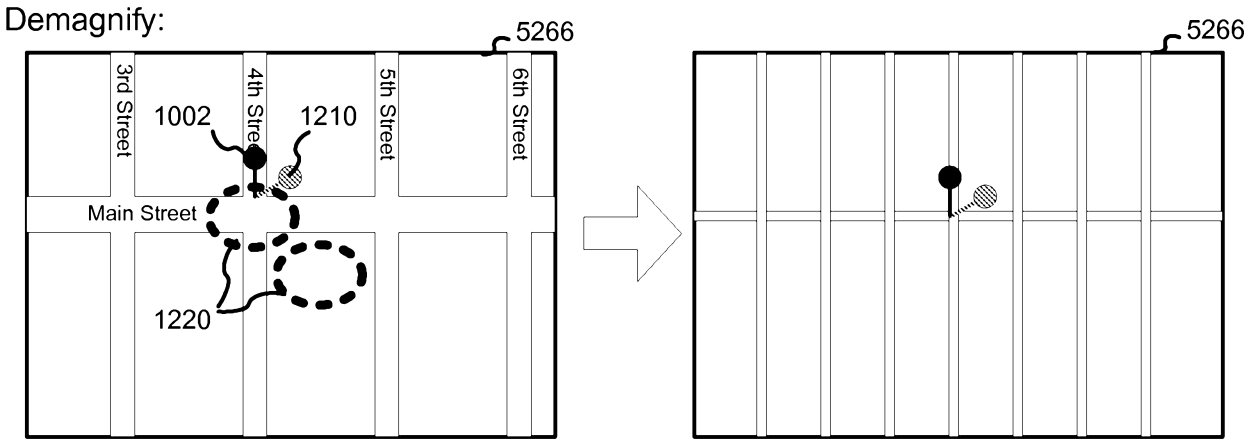

Figure 12E

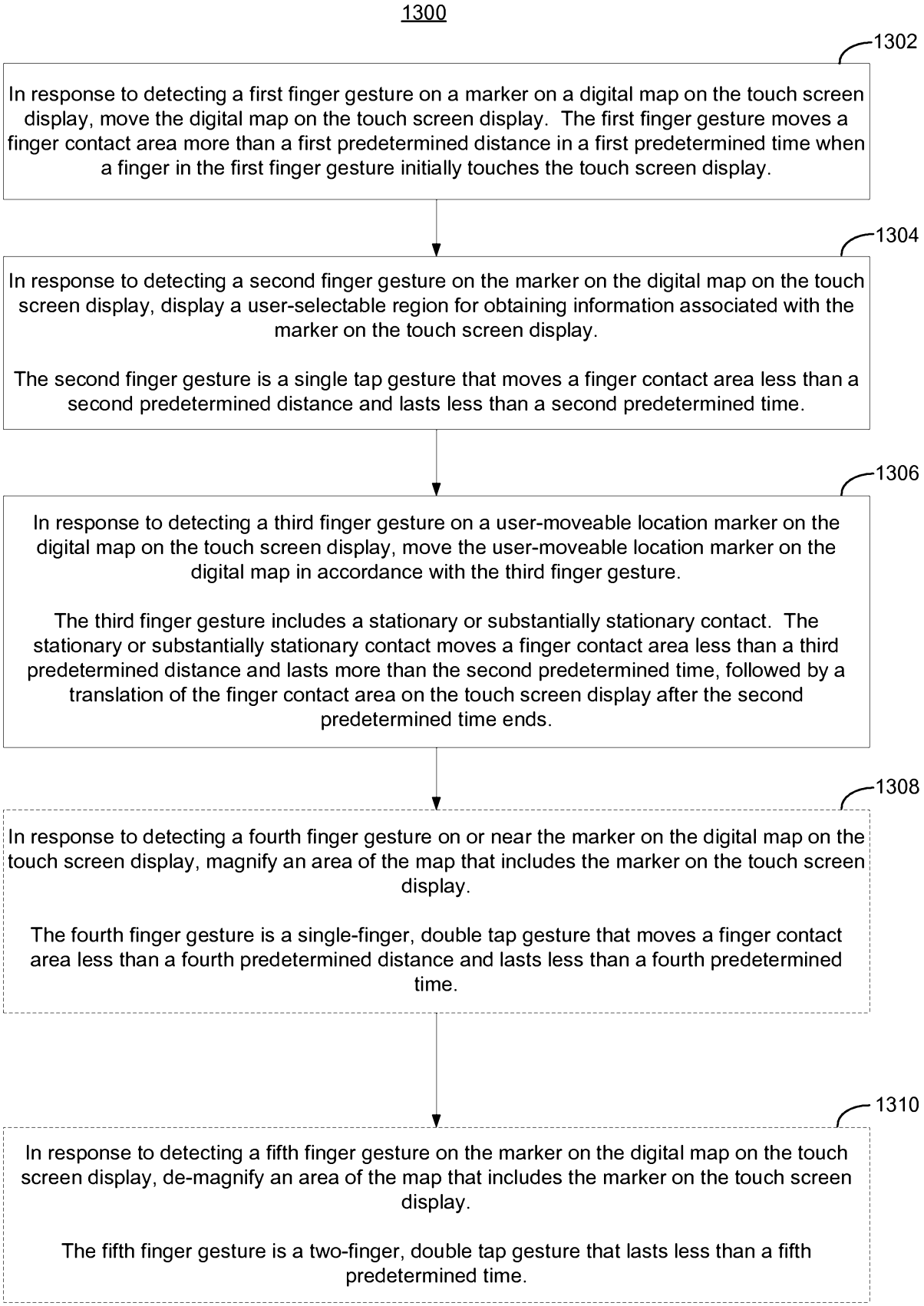
1300
1302
In response to detecting a first finger gesture on a marker on a digital map on the touch screen display, move the digital map on the touch screen display. The first finger gesture moves a finger contact area more than a first predetermined distance in a first predetermined time when a finger in the first finger gesture initially touches the touch screen display.
1304
In response to detecting a second finger gesture on the marker on the digital map on the touch screen display, display a user-selectable region for obtaining information associated with the marker on the touch screen display.
The second finger gesture is a single tap gesture that moves a finger contact area less than a second predetermined distance and lasts less than a second predetermined time.
1306
In response to detecting a third finger gesture on a user-moveable location marker on the digital map on the touch screen display, move the user-moveable location marker on the digital map in accordance with the third finger gesture.
The third finger gesture includes a stationary or substantially stationary contact. The stationary or substantially stationary contact moves a finger contact area less than a third predetermined distance and lasts more than the second predetermined time, followed by a translation of the finger contact area on the touch screen display after the second predetermined time ends.
1308
In response to detecting a fourth finger gesture on or near the marker on the digital map on the touch screen display, magnify an area of the map that includes the marker on the touch screen display.
The fourth finger gesture is a single-finger, double tap gesture that moves a finger contact area less than a fourth predetermined distance and lasts less than a fourth predetermined time.
1310
In response to detecting a fifth finger gesture on the marker on the digital map on the touch screen display, de-magnify an area of the map that includes the marker on the touch screen display.
The fifth finger gesture is a two-finger, double tap gesture that lasts less than a fifth predetermined time.

Figure 13

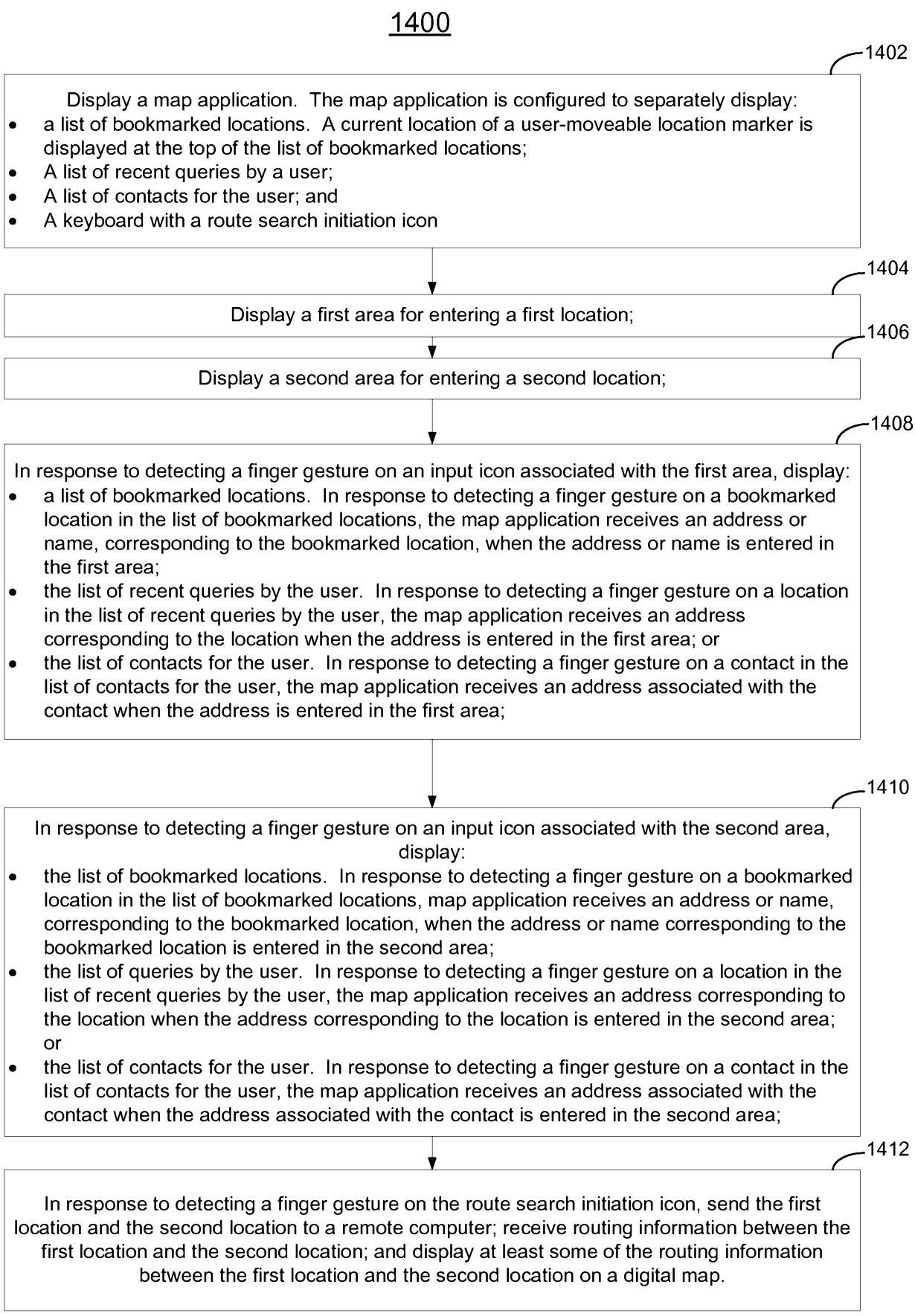
1400
1402
Display a map application. The map application is configured to separately display:
• a list of bookmarked locations. A current location of a user-moveable location marker is displayed at the top of the list of bookmarked locations;
• A list of recent queries by a user;
• A list of contacts for the user; and
• A keyboard with a route search initiation icon
1404
Display a first area for entering a first location;
1406
Display a second area for entering a second location;
1408
In response to detecting a finger gesture on an input icon associated with the first area, display:
• a list of bookmarked locations. In response to detecting a finger gesture on a bookmarked location in the list of bookmarked locations, the map application receives an address or name, corresponding to the bookmarked location, when the address or name is entered in the first area;
• the list of recent queries by the user. In response to detecting a finger gesture on a location in the list of recent queries by the user, the map application receives an address corresponding to the location when the address is entered in the first area; or
• the list of contacts for the user. In response to detecting a finger gesture on a contact in the list of contacts for the user, the map application receives an address associated with the contact when the address is entered in the first area;
1410
In response to detecting a finger gesture on an input icon associated with the second area, display:
• the list of bookmarked locations. In response to detecting a finger gesture on a bookmarked location in the list of bookmarked locations, map application receives an address or name, corresponding to the bookmarked location, when the address or name corresponding to the bookmarked location is entered in the second area;
• the list of queries by the user. In response to detecting a finger gesture on a location in the list of recent queries by the user, the map application receives an address corresponding to the location when the address corresponding to the location is entered in the second area; or
• the list of contacts for the user. In response to detecting a finger gesture on a contact in the list of contacts for the user, the map application receives an address associated with the contact when the address associated with the contact is entered in the second area;
1412
In response to detecting a finger gesture on the route search initiation icon, send the first location and the second location to a remote computer; receive routing information between the first location and the second location; and display at least some of the routing information between the first location and the second location on a digital map.

Figure 14

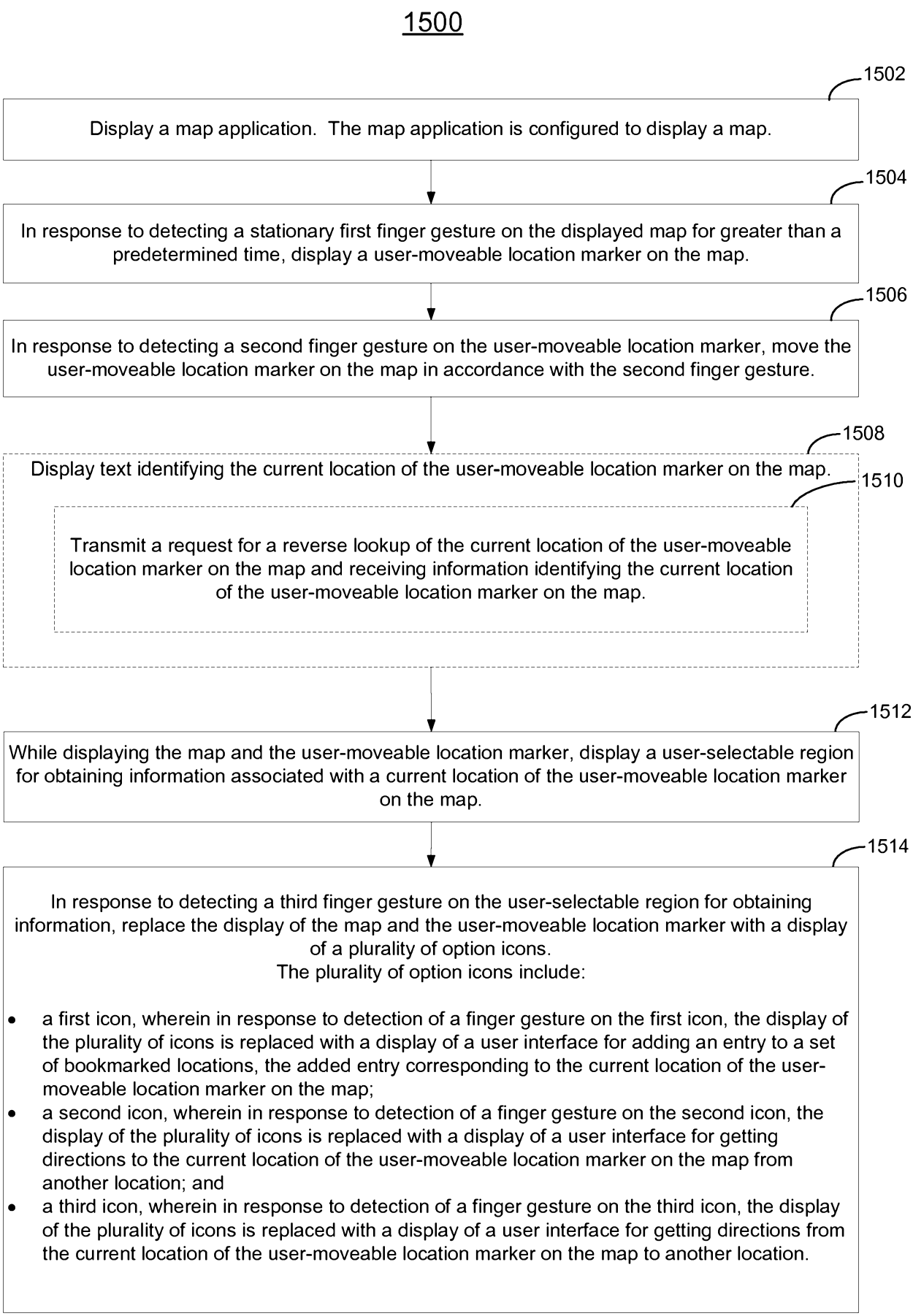
1500
1502
Display a map application. The map application is configured to display a map.
1504
In response to detecting a stationary first finger gesture on the displayed map for greater than a predetermined time, display a user-moveable location marker on the map.
1506
In response to detecting a second finger gesture on the user-moveable location marker, move the user-moveable location marker on the map in accordance with the second finger gesture.
1508
Display text identifying the current location of the user-moveable location marker on the map.
1510
Transmit a request for a reverse lookup of the current location of the user-moveable location marker on the map and receiving information identifying the current location of the user-moveable location marker on the map.
1512
While displaying the map and the user-moveable location marker, display a user-selectable region for obtaining information associated with a current location of the user-moveable location marker on the map.
1514
In response to detecting a third finger gesture on the user-selectable region for obtaining information, replace the display of the map and the user-moveable location marker with a display of a plurality of option icons.
The plurality of option icons include:
• a first icon, wherein in response to detection of a finger gesture on the first icon, the display of the plurality of icons is replaced with a display of a user interface for adding an entry to a set of bookmarked locations, the added entry corresponding to the current location of the user-moveable location marker on the map;
• a second icon, wherein in response to detection of a finger gesture on the second icon, the display of the plurality of icons is replaced with a display of a user interface for getting directions to the current location of the user-moveable location marker on the map from another location; and
• a third icon, wherein in response to detection of a finger gesture on the third icon, the display of the plurality of icons is replaced with a display of a user interface for getting directions from the current location of the user-moveable location marker on the map to another location.

Figure 15