watches with motion input capabilities may use motion input to flatten menus as discussed above. In some embodiments, the tapping of the watch or particular gestures may be used to silence the watch. Other functions may also be accessed through taps, rotations, translations and other more complex gestures. These functions may include changing time zones, setting the watch (e.g., setting the time and other adjustable settings), changing modes (e.g., timers, alarms, stopwatch), activating the backlight, using a stopwatch (e.g., starting, stopping and splitting the stopwatch) and starting and stopping other timers.

[0167] In some embodiments, motion detection may be separate from a display. For example, a display may be worn on glasses or contacts, and other parts of the handheld device may be dispersed across a user's body such that the display may not be part of the same physically component as the motion input device or component.

[0168] As discussed above, particular figures illustrate various methods, flowcharts and processes which may be performed in particular embodiments. It should be understood that steps may be performed in any order, and steps from a particular method, flowchart or process may be combined with other methods, flowcharts or processes or other steps from the same method, flowchart or process in various embodiments without departing from the scope of the invention.

[0169] Although the present invention has been described in detail with reference to particular embodiments, it should be understood that various other changes, substitutions, and alterations may be made hereto without departing from the spirit and scope of the present invention. For example, although the present invention has been described with reference to a number of elements included within handheld device **10**, these elements may be combined, rearranged or positioned in order to accommodate particular architectures or needs. In addition, any of these elements may be provided as separate external elements to each other where appropriate. The present invention contemplates great flexibility in the arrangement of these elements as well as their internal components.

[0170] Numerous other changes, substitutions, variations, alterations and modifications may be ascertained by those skilled in the art and it is intended that the present invention encompass all such changes, substitutions, variations, alterations and modifications as falling within the spirit and scope of the appended claims.

What is claimed is:

1. A motion controlled handheld device comprising:

a display having a viewable surface and operable to generate an image;

a motion detection module operable to detect motion of the device within three dimensions and to identify components of the motion in relation to the viewable surface; and

a motion response module operable to identify a base reference position, to track the motion of the device in relation to the base reference position, to modify the image in response to the motion, to detect a predetermined pattern of motion of the device, to maintain the image without adjustment during the predetermined pattern of motion, to detect a completion of the predetermined pattern of motion, and to reset the base reference position upon detecting completion of the predetermined pattern of motion.

2. The motion controlled handheld device of claim 1, wherein:

the base reference position identifies a baseline orientation of the device, the baseline orientation represented by baseline components; and

the motion response module is further operable to track the motion of the device in relation to the base reference position by comparing the components of the motion with the baseline components.

3. The motion controlled handheld device of claim 1, wherein the base reference position associates a physical position with a virtual position in the image.

4. The motion controlled handheld device of claim 1, further comprising:

a gesture database comprising a plurality of gestures each gesture defined by a motion of the device with respect to a first position of the device; and

a gesture mapping database mapping each of the gestures to a corresponding command; and wherein

the motion response module is further operable to compare movement of the device with respect to the base reference position against the gestures to determine a received gesture, to identify the corresponding command mapped to the received gesture, and to execute the identified command to modify the image.

5. The motion controlled handheld device of claim 4, wherein the gesture database further defines each of the gestures using a sequence of accelerations.

6. The motion controlled handheld device of claim 1, wherein the motion response module is further operable to determine a current position of the device in relation to the base reference position and to modify the image based upon the current position of the device.

7. The motion controlled handheld device of claim 1, wherein the predetermined pattern of motion includes motion defined by a predetermined pattern of accelerations with respect to the base reference position.

8. The motion controlled handheld device of claim 1, further comprising:

a first accelerometer operable to detect acceleration along a first axis;

a second accelerometer operable to detect acceleration along a second axis, the second axis perpendicular to the first axis; and

a third accelerometer operable to detect acceleration along a third axis, the third axis perpendicular to the first axis and perpendicular to the second axis; and wherein

the motion detection module is further operable to detect motion of the device using the first accelerometer, the second accelerometer, and the third accelerometer, the motion detection module further operable to distinguish between tilt of the device and translation of the device.