

with the tactile input(s). For example, a different angle of contact may correspond to different types of brushing or painting styles associated with a particular drawing application.

[0039] As one of ordinary skill in the art will recognize, the foregoing examples of characteristics that may be determined by the electronic device are provided for exemplary purposes only and should not in any way limit embodiments of the present invention to the examples provided. In contrast, other characteristics may likewise be determined that may be useful in predicting the operations to be performed or commands to be requested by the user and are, therefore, within the scope of embodiments of the present invention.

[0040] In addition to the foregoing, according to one embodiment, the electronic device (e.g., processor or similar

command(s) he or she is about to or trying to perform, in association with the tactile inputs detected. In other words, the electronic device (e.g., processor or similar means) may attempt to predict what the user would like to do given the action the user has taken at that point and the current state of the device.

[0043] In one embodiment, the operation(s) or action(s) may be identified by accessing one or more look up tables (LUTs) that each include a mapping of certain characteristics (e.g. number of tactile inputs, force of respective tactile inputs, hand pose, identity of fingers used, etc.) to possible operations or actions corresponding to those characteristics. To illustrate, Table 1 below provides an example of a LUT that maps the number of tactile inputs, as well as the identity of the fingers used, to various operations or actions.

TABLE 1

With finger identification		Without finger identification	
Finger	Widgets	Finger	Widgets
Thumb Index	Eraser, page change, etc. Mouse (left), pointer, paint, etc.	One contact	Eraser, page change, Mouse (left), pointer, paint, Mouse (right), etc.
Ring Thumb + Index (Ring)	Mouse (right), etc. Dragging, scaling, warping, etc.	Two contacts	Dragging, scaling, warping, Double line, mouse simulation, etc.
Index + Ring	Double line, mouse simulation, etc.	Three contacts	Rotation, compression, etc.
Thumb + Index + Ring	Rotation, compression, etc.		

means operating on the electronic device) may receive, at Block 303, contextual information relating to the current state of the electronic device. This information may include, for example, the identity of one or more applications currently operating on the electronic device (e.g., Internet browser, still or video image viewer, calendar, contact list, document processing, etc.). The information may further include, for example, an indication of one or more operations or commands previously performed by the user when operating within the particular application. For example, the contextual information may indicate that the user is operating a still image viewer and that he or she has recently opened a particular still image. In one embodiment, the contextual information may be received from a state machine (e.g., in the form of a software application or instructions) integrated into the operating system platform of the electronic device or combined with the corresponding application.

[0041] As one of ordinary skill in the art will recognize, the foregoing examples of contextual information that may be received by the electronic device are provided for exemplary purposes only and should not in any way limit embodiments of the present invention to the examples provided. In contrast, other types of contextual information may likewise be received that may be useful in predicting the operations to be performed or commands to be requested by the user and are, therefore, within the scope of embodiments of the present invention.

[0042] Using the determined characteristic(s) and the received contextual information, the electronic device and, in particular, the processor or similar means operating on the electronic device, may, at Block 304, identify which operation(s) the user is most likely about to or trying to take, or the

[0044] According to one embodiment, a different set of LUTs may be available for each application or group of applications capable of being executed on the electronic device. Alternatively, a more detailed LUT may be used that incorporates the different applications. According to one embodiment, the LUT(s) may be stored in a database or accessible by the electronic device.

[0045] In addition, or in the alternative, to using the LUTs, in order to identify one or more likely operation(s) or command(s), according to one embodiment, the electronic device (e.g., processor or similar means operating on the electronic device) may perform one or more algorithms that are based, for example, on an historical analysis of previous operations or commands performed by the user in different contexts. In other words, the electronic device (e.g., processor or similar means) may predict what the user may want to do based on what he or she has done in the past in a similar situation. In this embodiment, the electronic device (e.g., processor or similar means operating thereon) may monitor not only the frequency of performance of various operations and commands, but also the succession of operations or commands performed. For example, the sequence may include a plurality of frequently executed operations associated with a particular application being executed on the device in order of the most frequently executed to the least frequently executed. Similarly, the order of a sequence of operations or commands may correspond not only to the frequency of execution or performance, but also the order in which the operations or commands are more frequently executed or performed. According to one embodiment, this information may thereafter assist in predicting the operation(s) the user would like to perform given the characteristics of the tactile input detected and the