

**ELECTRONIC TEXT INPUT INVOLVING WORD
COMPLETION FUNCTIONALITY FOR
PREDICTING WORD CANDIDATES FOR PARTIAL
WORD INPUTS**

CROSS-REFERENCE TO RELATED
APPLICATIONS

[0001] This application is a Continuation-in-Part of U.S. patent application Ser. No. 11/135,623 filed on May 23, 2005.

FIELD OF THE INVENTION

[0002] The present invention generally relates to electronic equipment capable of text input, and more particularly to a text input method for an electronic apparatus having a user interface with text input means and a display screen, wherein word completion functionality is provided for predicting word candidates for partial word inputs made by said user employing said text input means. The invention is also related to an electronic apparatus of this kind, and to an associated computer program product.

BACKGROUND OF THE INVENTION

[0003] Some apparatuses with touch-sensitive display screens provide a virtual keyboard feature in the user interface to facilitate text input. This works by displaying a virtual keyboard, often resembling a real-life keyboard, on the display screen. By tapping with a writing tool on individual buttons or keys of the virtual keyboard, the user may input successive characters which aggregate to a text input shown in a text input field on the display screen. Other apparatuses with touch-sensitive display screens instead, or additionally, provide handwriting recognition functionality. Such functionality typically involves detecting a hand-written input, made by the user by writing with a stylus or other writing tool on the surface of the touch-sensitive display screen, and interpreting the hand-written input as a symbol among a set of possible symbols in a predefined symbol set.

[0004] Since text input with a writing tool on a touch-sensitive display screen by nature will be slower than manual input on a hardware (physical) keyboard, it is generally desired to improve the input speed. One of the most popular approaches in this regard is the provision of word completion functionality in the user interface for automatic presentation of full word candidates to what the user has currently inputted in the form of a partial word.

[0005] For instance, if the user writes "wo" by tapping on the "w" key and then the "o" key of the virtual keyboard, the word completion functionality can predict full word candidates such as "word", "world" and "wormhole" and present them on the display screen in a selectable manner. A desired one of these candidates may be selected by the user by tapping on it, and the full word thus selected will automatically replace the current partial word input on the display screen. In the example above, the eight-character word "wormhole" may be input by a total of only three taps with the writing tool (two for inputting "w" and "o", and one for selecting the "wormhole" candidate), therefore saving precious taps and improving on the text input speed.

[0006] While word completion functionality certainly has its benefits, some problems are associated therewith. In more

particular, since the apparatus involved will typically be a small portable device such as a mobile terminal or a pocket computer, the available display screen space will be a limited resource. Thus, displaying multiple full word candidates anywhere in the user interface may potentially block other relevant information to be displayed (such as actual application contents), whereas if a dedicated area is reserved for the word completion functionality, less area will be available for presentation of other information.

[0007] A first prior art approach is illustrated in FIG. 9. A current text input 104 has been made by tapping with a writing tool on a virtual keyboard 110 and is shown in a text input field 102 of a touch-sensitive display screen. The current text input 104 consists of three complete words ("The Oxford English") and a current partial word 106 ("Dic"). The cursor position is indicated at 107. In FIG. 9, the word completion functionality has derived a set of predicted full word candidates 109. The candidates all have the partial input 106 as prefix. The full word candidates 109 are presented in a vertical list in a pop-up window 108 which may have a dynamic size and/or location.

[0008] A second prior art approach is illustrated in FIG. 10. Here, a set of predicted full word candidates 109', as derived by the word completion functionality, is shown horizontally candidate by candidate in a dedicated area 108' between the virtual keyboard 110 and the text input field 102.

SUMMARY OF THE INVENTION

[0009] In view of the above, an objective of the invention is to solve or at least reduce the problems discussed above. More specifically, the invention aims at providing word completion functionality in a manner which reduces or even eliminates the risk of blocking or otherwise interfering with other information on the display screen, such as application contents, and also saves display screen space. Another objective is to perform presentation of word completion candidates at a consistent display screen location which is intuitive to the user and facilitates efficient text input. Still an objective is to reduce the number of manual input steps required by a user for inputting a particular word.

[0010] Generally, the above objectives and purposes are achieved by a text input method, an electronic apparatus and a computer program product according to the attached independent patent claims.

[0011] A first aspect of the invention is a text input method for an electronic apparatus having a user interface with text input means and a display screen, wherein word completion functionality is provided for predicting word candidates for partial word inputs made by said user employing said text input means, the method involving:

[0012] receiving a partial word input from said user;

[0013] deriving a set of word completion candidates using said word completion functionality, each of the word completion candidates in said set having a prefix and a suffix, wherein the prefix corresponds to said partial word input; and

[0014] presenting the suffices for at least a sub set of the word completion candidates in a predetermined area on said