

METHOD AND SYSTEM FOR PROVIDING WORD RECOMMENDATIONS FOR TEXT INPUT

RELATED APPLICATIONS

[0001] This application is related to “Method, System, and Graphical User Interface for Providing Word Recommendations” (U.S. Patent Application number to be determined, filed Jan. 5, 2007, attorney docket number 063266-5041), the content of which is hereby incorporated by reference in its entirety.

TECHNICAL FIELD

[0002] The disclosed embodiments relate generally to text input on portable communication devices, and more particularly, to methods and systems for providing word recommendations in response to text input.

BACKGROUND

[0003] In recent years, the functional capabilities of portable communications devices have increased dramatically. Current devices enable communication by voice, text, and still or moving images. Communication by text, such as by email, instant message (IM) or short messaging service (SMS), has proven to be quite popular.

[0004] However, the size of these portable communication devices also restricts the size of the text input device, such as a physical or virtual keyboard, in the portable device. With a size-restricted keyboard, designers are often forced to make the keys smaller or overload the keys. Both may lead to typing mistakes and thus more backtracking to correct the mistakes. This makes the process of communication by text on the devices inefficient and reduces user satisfaction with such portable communication devices.

[0005] Accordingly, there is a need for more efficient ways of entering text into portable devices.

SUMMARY

[0006] In accordance with some embodiments, a computer-implemented method involves receiving a sequence of input characters from a keyboard, wherein the keyboard has a predefined layout of characters with each character in the layout having one or more neighbor characters. The method also involves generating a set of strings from at least a subset of the sequence of input characters, where the set of strings comprises permutations of respective input characters in the subset of the sequence and neighbor characters of the respective input characters on the layout of the keyboard; identifying in a dictionary one or more candidate words that have a string in the set of strings as a prefix; scoring the candidate words; selecting a subset of the candidate words based on predefined criteria; and presenting the subset of the candidate words.

[0007] In accordance with some embodiments, there is a computer program product for use in conjunction with a portable communications device. The computer program product comprises a computer readable storage medium and a computer program mechanism embedded therein. The computer program mechanism includes instructions for receiving a sequence of input characters from a keyboard, wherein the keyboard has a predefined layout of characters with each character in the layout having one or more neighbor characters; instructions for generating a set of strings from at least a subset of the sequence of input characters, the set of strings

comprising permutations of respective input characters in the subset of the sequence and neighbor characters of the respective input characters on the layout of the keyboard; instructions for identifying in a dictionary one or more candidate words, each candidate word having a string in the set of strings as a prefix; instructions for scoring the candidate words; instructions for selecting a subset of the candidate words based on predefined criteria; and instructions for presenting the subset of the candidate words.

[0008] In accordance with some embodiments, a portable communications device includes a display; a keyboard, the keyboard having a predefined layout of characters with each character in the layout having one or more neighbor characters; one or more processors; memory; and a program stored in the memory and configured to be executed by the one or more processors. The program includes instructions for receiving a sequence of input characters from the keyboard; instructions for generating a set of strings from at least a subset of the sequence of input characters, the set of strings comprising permutations of respective input characters in the subset of the sequence and neighbor characters of the respective input characters on the layout of the keyboard; instructions for identifying in a dictionary one or more candidate words, each candidate word having a string in the set of strings as a prefix; instructions for scoring the candidate words; instructions for selecting a subset of the candidate words based on predefined criteria; and instructions for presenting the subset of the candidate words.

[0009] In accordance with some embodiments, a portable communications device includes display means; input means having a predefined layout of characters, each character in the layout having one or more neighbor characters; one or more processor means; memory means; and a program mechanism stored in the memory means and configured to be executed by the one or more processors means. The program mechanism includes instructions for receiving a sequence of input characters from the input means; instructions for generating a set of strings from at least a subset of the sequence of input characters, the set of strings comprising permutations of respective input characters in the subset of the sequence and neighbor characters of the respective input characters on the layout of the input means; instructions for identifying in a dictionary one or more candidate words, each candidate word having a string in the set of strings as a prefix; instructions for scoring the candidate words; instructions for selecting a subset of the candidate words based on predefined criteria; and instructions for presenting the subset of the candidate words.

[0010] In accordance with some embodiments, a computer-implemented method involves receiving a sequence of individual touch points input by a user that form a user-input directed graph; comparing the user-input directed graph to respective directed graphs for words in a dictionary; generating a list of candidate words based at least in part on the comparing step; and presenting at least some of the candidate words to the user.

[0011] In accordance with some embodiments, there is a computer program product for use in conjunction with a portable communications device. The computer program product comprises a computer readable storage medium and a computer program mechanism embedded therein. The computer program mechanism includes instructions for receiving a sequence of individual touch points input by a user that form a user-input directed graph; instructions for comparing the user-input directed graph to respective directed graphs for