

generates the character(s) associated with the defined key region, or executes the function associated with the defined key region, and at block 4970 the system returns to FIG. 4A. If one or more words are currently displayed in the word choice list, decision block 4930 determines if the keystroke x/y coordinate falls within the word-choice list region 150. If so, at block 4935 the system processes the word selection from the word-choice list.

[0226] In accordance with another aspect of the invention, the user presses a Space key to delimit an entered keystroke sequence. After receiving the Space key, the disambiguating system selects the most frequently used word and adds the word to the information being constructed. The Space key is used to delimit an entered sequence.

[0227] In accordance with another aspect of the invention, the word selection list is presented as a vertical list of candidate words, with one word presented in each row, and wherein each row is further subdivided into regions or columns. The regions or columns define functions related to the acceptance of the candidate string displayed in the selected row, such as including or not including a trailing blank space, appending a punctuation mark or applying a diacritic accent. The function may be applied when the user touches the row of the intended string in the word selection list at a point contained in the region or column associated with the desired function, or performs an equivalent interaction action on the virtual keyboard in a region that corresponds to the displayed region or column. When the user selects the desired candidate word by interacting with the row within certain regions or columns, the word is automatically accepted for output and is added to the information being composed. For example, interacting with a row within the region associated with appending a trailing space immediately outputs the associated word with a trailing space.

[0228] In accordance with another aspect of the invention, one such region or column is defined such that interacting with a row within the region invokes a function which replaces the current input sequence of actual interaction points with a sequence of interaction points corresponding to the coordinate locations of the letters comprising the word in the selected row, but without terminating the current input sequence. As a result, the selected word appears in the selection list as the Exact Type interpretation of the input sequence. In most cases, the selected word also appears as the most likely word interpretation of the input sequence, although if the letters of the word are each near those of a much more frequent word, the more frequent word still appears as the most likely word interpretation.

[0229] In an alternate embodiment, only the words which incorporate the selected word are shown in the word selection list, including words matched after each additional input. This ability to re-define the input sequence as the coordinate locations of the letters of the intended word without terminating the input sequence enables the user to then continue typing, for example, a desired inflection or suffix to append to the word. When the intended word is relatively infrequent, and especially when it is seen only infrequently with the desired inflection or suffix, this feature makes it easier for the user to type the desired infrequently occurring form of the infrequent word without needing to carefully type each letter of the word. Only one additional

selection step is required when the uninflected form of the word is selected by interacting with the associated row in the selection list in the region associated with this feature.

[0230] In accordance with another aspect of the invention, an alternate input modality such as voice recognition may be used to select a word from the word selection list. If more than one likely word interpretation is found on the list, the selection component may eliminate the other candidates and show only the likely word interpretations matching the alternate input modality, optionally including interpretations whose calculated matching metric values were too low to qualify them for the selection list initially. In accordance with another aspect of the invention, when a designated selection input selects one syllable or word for correction or reentry from a multiple-syllable sequence or multiple-word phrase that has been matched or has been predicted using word completion, either the auto-correcting keyboard or an alternate input modality such as voice or handwriting recognition may be used to correct or reenter the syllable or word.

[0231] FIG. 4J shows a preferred embodiment for processing word-choice list selections, registering interactions within regions 154, 157, or 160. Block 41010 identifies which row of the word-choice list was interacted with and the associated word. Block 41020 identifies the word-choice list column that was interacted with and the associated function  $F_{col}$  for that column. In the preferred embodiment shown in FIG. 1B, three different columns are defined: one to the left of column marker 170, one to the right of column marker 172, and one between the column markers 170 and 172. Decision block 41030 determines if the function  $F_{col}$  consists of replacing the input sequence with a new set of x/y locations of the word selected, which in the preferred embodiment shown in FIG. 1B, corresponds to an x/y location to the right of column marker 172. If so, block 41032 replaces the input sequence with the sequence of x/y locations corresponding to the characters of the selected word and at block 41034 a new word choice list is generated as shown in FIG. 48. If function  $F_{col}$  does not replace the input sequence, processing of the selected word from the word choice list continues. Block 41040 adjusts the selected word's priorities.

[0232] In another embodiment, the word-choice list is horizontal with words placed side-by-side in one or more lines, displayed in a convenient area such as along the bottom of the application text area or projected along the top of the virtual keyboard. In another embodiment, an indication near each word or word stem in the list may cue the user that completions based on that word stem may be displayed and selected by means of a designated selection input applied to the list entry. The subsequent pop-up word choice list shows only words incorporating the word stem and may, in turn, indicate further completions. A word may be selected or extended via any of the methods described herein, adjusting appropriately for the horizontal versus vertical orientation.

[0233] In accordance with another aspect of the invention, during use of the system by a users the lexicon is automatically modified by a "Promotion Algorithm" which, each time a word is selected by the user, acts to promote that word within the lexicon by incrementally increasing the relative frequency associated with that word. In one preferred