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(54) **VIRTUAL KEYBOARD SYSTEMS WITH AUTOMATIC CORRECTION**

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(57) **ABSTRACT**

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There is disclosed an enhanced text entry system which uses word-level analysis to correct inaccuracies automatically in user keystroke entries on reduced-size or virtual keyboards. A method and system are defined which determine one or more alternate textual interpretations of each sequence of inputs detected within a designated auto-correcting region. The actual interaction locations for the keystrokes may occur outside the boundaries of the specific keyboard key regions associated with the actual characters of the word interpretations proposed or offered for selection, where the distance from each interaction location to each corresponding intended character may in general increase with the expected frequency of the intended word in the language or in a particular context. Likewise, in a virtual keyboard system, the keys actuated may differ from the keys actually associated with the letters of the word interpretations. Each such sequence corresponds to a complete word, and the user can easily select the intended word from among the generated interpretations. Additionally, when the system cannot identify a sufficient number of likely word interpretation candidates of the same length as the input sequence, candidates are identified whose initial letters correspond to a likely interpretation of the input sequence.

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