

values between the interaction location should not be plural? and the known coordinate locations corresponding to one or a plurality of characters within the auto-correcting region;

[0024] a word evaluation component which, for a generated input sequence, identifies one or a plurality of candidate objects in memory, and for one or more identified candidate objects, evaluates here “an” might be construed as “only one”? perhaps just pluralize the next “object”? identified candidate objects by calculating a matching metric based on the calculated distance values calculated values don’t have to be “associated”, and ranks the evaluated candidate objects based on the calculated matching metric values, and

[0025] a selection component for identifying one or a plurality of candidate objects according to their evaluated ranking, presenting the identified objects to the user, and enabling the user to select one of the presented objects for output to the output device.

[0026] Preferably, the selection component further comprises (c) resetting the current input sequence of interaction locations to an empty sequence upon detecting the selection by the user of one of the presented objects for output to the text display area on the output device.

[0027] Preferably, (a) each of the plurality of objects in memory is further associated with one or a plurality of predefined groupings of objects; and (b) the word evaluation component, for each generated input sequence, limits the number of objects for which a matching metric is calculated by identifying one or a plurality of candidate groupings of the objects in memory, and for one or a plurality of objects associated with each of the one or a plurality of identified candidate groupings of objects, calculates a matching metric based on the calculated distance values and the frequency of use associated with each candidate object, and ranks the evaluated candidate objects based on the calculated matching metric values. This reduces the calculation required because, conversely, one or more groupings of objects are identified as containing no candidate objects for a given input sequence of interactions such that a matching metric need not be calculated for any object in the groupings so identified.

[0028] Preferably, the characters of the alphabet are arranged on the auto-correcting region in approximately a standard QWERTY layout. Most preferably, the width to height ratio of the auto-correcting region is approximately 2 to 1, or the width to height ratio of the auto-correcting region is less than 2 to 1. In one embodiment, one or a plurality of the characters arranged on the auto-correcting region are presented in a font so small as to be illegible, or “greeked.”

[0029] Preferably, the auto-correcting region includes one or a plurality of known locations associated with one or a plurality of punctuation characters, wherein the memory includes one or a plurality of objects in memory which include one or a plurality of the punctuation characters associated with locations in the auto-correcting region. Preferably, the objects in memory are further associated with one or a plurality of modules, wherein each module comprises a set of objects with one or a plurality of common characteristics. In one embodiment, the text entry system comprises a module selector whereby a user can determine which

modules are to be evaluated by the word evaluation component to identify candidate objects.

[0030] In another embodiment, the plurality of modules comprises word stem modules and suffix modules, wherein each word stem module comprises a logical organization of uninflected word stem objects, and wherein each suffix module comprises a logical organization of suffixes which can be appended to word stems to form inflected words, whereby each word stem module is associated with one or a plurality of suffix modules, whereby whenever the word evaluation component calculates a matching metric value for a given word stem in a given word stem module with respect to an initial sequence of interactions within an input sequence such that the calculated matching metric value ranks higher than a predetermined threshold, the word evaluation component evaluates the remaining interactions of the input sequence with respect to the associated suffix modules, whereby whenever the word evaluation component calculates a matching metric value for a given suffix in one of said associated suffix modules that ranks higher than a second predetermined threshold, said suffix is appended to said word stem to form a completed word corresponding to a matching metric value that is a function of said determined word stem matching metric value and said determined suffix matching metric value.

[0031] Preferably, the word evaluation component calculates the matching metric for each candidate object by summing the distance values calculated from each interaction location in the input sequence to the location assigned to the character in the corresponding position of the candidate object, and applying a weighting function according to the frequency of use associated with the object. In addition each character of the alphabet associated with the auto-correcting region is assigned a Cartesian coordinate and wherein the distance value calculation component calculates the distance between the interaction location and the location corresponding to a character according to standard Cartesian coordinate distance analysis. Further, each character of the alphabet associated with the auto-correcting region is assigned a Cartesian coordinate and wherein the distance value calculation component calculates the distance between the interaction location and the location corresponding to a character as the square of the standard Cartesian coordinate distance. The distance values are placed in a table. In addition, each location on the auto-correcting region is defined by a horizontal and a vertical coordinate, and wherein the distance value between a interaction location and the known coordinate location corresponding to a character comprises a horizontal and a vertical component, wherein the vertical component is adjusted by a weighting factor in calculating the distance of the interaction location from the character. The word evaluation component adds an increment value to the sum of the distance values prior to applying a weighting function according to the frequency of use associated with the candidate object. Most preferably, the increment value is a fixed value that is approximately twice the average distance between adjacent locations on the auto-correcting region corresponding to characters. The frequency of use associated with each candidate object in memory comprises the ordinal ranking of the object with respect to other objects in memory, wherein an object associated with a higher relative frequency corresponds to a numerically lower ordinal ranking. Most preferably, the frequency weighting function applied by the