word evaluation component to the summed distance values for a candidate object comprises multiplying the sum of the distance values by the base 2 logarithm of the ordinal ranking of the object

[0032] Preferably, objects in memory are stored such that the objects are classified into groupings comprising objects of the same length. The word evaluation component limits the number of objects for which a matching metric is calculated by initially identifying candidate groupings of objects of the same length as the number of inputs in the input sequence. Most preferably, if fewer than a threshold number of candidate objects are evaluated to have a matching metric score better than a threshold value, the word evaluation component identifies candidate groupings of objects of progressively longer lengths and calculates the matching metric for the objects in the identified groupings until said threshold number of candidate objects are evaluated to have a matching metric score better than said threshold. Further, 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 adding an increment value, and applying to this sum a weighting function according to the frequency of use associated with the object, and wherein the increment value added to the sum of the distance values is a value that is based on the difference between the number of characters in the candidate object and the number of inputs in the current input sequence.

[0033] 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. Most preferably, the frequency of use associated with each candidate object in memory comprises the ordinal ranking of the object with respect to other objects in one or a plurality of sub-groupings in memory with which said object is associated, wherein an object associated with a higher relative frequency corresponds to a numerically lower ordinal ranking. In addition, for each calculated distance value between a interaction location in the input sequence and the known coordinate location corresponding to a character within the auto-correcting region wherein said calculated distance exceeds a threshold distance value, for each object in memory in which said character occurs at a position in the sequence of the characters of said object corresponding to the position of said interaction location in said input sequence, said object is ranked by the word evaluation component as an object that is excluded from presentation to the user for selection. One or a plurality of the identified candidate groupings of the objects in memory comprise objects that are excluded from presentation to the user for selection, wherein at least one of the calculated distance values included in the calculated sum of distance values for each object in said one or identified candidate groupings of objects exceeds a threshold distance value. The auto-correcting region is separated into two or more predefined clustering regions, each of which contains the known locations of one or a plurality of characters, and wherein each objects in memory is assigned to a predefined group according to which of said two or more predefined clustering regions contain the known locations corresponding to one or a plurality of the initial characters of said object. In one embodiment, the auto-correcting region is separated into three predefined clustering regions, and wherein each object in memory is assigned to one of nine predefined groupings based which of the three predefined clustering regions contain the known locations corresponding to each of the first two characters of said object.

[0034] Preferably, for each character corresponding to a known location in the auto-correcting region, a region is predefined around one or a plurality of said known locations wherein the distance between an input interaction location failing within said predefined region and the known character location within said predefined region is calculated as a distance of zero. Most preferably, the relative sizes of said predefined regions correspond to the relative frequencies of occurrence of the characters associated with the known locations within said predefined regions. The predefined region around the known location of a character corresponds to a displayed key on the virtual keyboard. Further, at least one of the locations with known coordinates in the auto-correcting region corresponds to a plurality of characters, one or a plurality of which include various diacritic marks, wherein the plurality of characters comprise variant forms of a single base character, and wherein objects in memory are stored with their correct accented characters.

[0035] Preferably, the selection component presents the identified one or a plurality of candidate objects for selection by the user in a candidate object list in the text display area. Most preferably, the selection component identifies the highest ranked candidate object and presents the identified object in the candidate object list in the position nearest to the auto-correcting region. In addition, user selection of a character that is associated with an interaction outside of the auto-correcting region accepts and outputs the determined highest ranked candidate object at a text insertion point in the text display area prior to outputting the selected character at the text insertion point in the text display area. The user selection of an object for output at a text insertion point in the text display area terminates the current input sequence such that the next interaction within the auto-correcting region starts a new input sequence. In addition, the selection component detects a distinctive manner of selection that is used to select a candidate object and wherein upon detecting that an object has been selected through said distinctive manner, the system replaces the current input sequence of actual interaction locations with an input sequence of interaction locations corresponding to the coordinate locations of the characters comprising the selected object, and wherein a next interaction in the auto-correcting region is appended to the current input sequence.

[0036] Preferably, the word evaluation component determines, for each determined interaction location in each input sequence of interaction locations, the closest known location corresponding to a character, and constructs an exact typing object composed of said determined corresponding characters in the order corresponding to the input sequence of interaction locations. Most preferably, for each input sequence of interaction locations the selection component presents said exact typing object to the user for selection. Further, when the user selects said exact typing object for output to the text display area on the output device and said