

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Murali ARAVAMUDAN et al. Confirmation No.: 5356
Application No.: 11/246,432 Art Unit: 2169
Filed: October 7, 2005 Examiner: H. Wong
Title: METHOD AND SYSTEM FOR INCREMENTAL SEARCH WITH
REDUCED TEXT ENTRY WHERE THE RELEVANCE OF RESULTS
IS A DYNAMICALLY COMPUTED FUNCTION OF USER INPUT
SEARCH STRING CHARACTER COUNT

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

AMENDMENT IN RESPONSE TO NON-FINAL OFFICE ACTION UNDER 37 C.F.R. 1.111

Dear Sir:

INTRODUCTORY COMMENTS

In response to the Non-Final Office Action dated March 7, 2011, please amend the above-identified U.S. patent application as follows:

Amendments to the Claims are reflected in the listing of claims which begins on page 2 of this paper.

Remarks/Arguments begin on page 8 of this paper.

AMENDMENTS TO THE CLAIMS

Claims 1-33 (Cancelled)

34. (Currently Amended) A method of processing a search request received from a user operating a hand-held text input device, the search request directed at identifying a desired item from a set of items, each of the items having one or more associated terms, the method comprising:

- providing the set of items, the items having assigned popularity values to indicate a relative measure of a likelihood that the item is desired by the user;
- for each item, associating a set of terms to describe the item and assigning a relevance value for each term based on a relevance of the term in identifying the item;
- receiving text on the hand-held text input device entered by the user, the text having one or more text characters of one or more prefixes for terms the user is using to identify a desired item;
- in response to receiving a text character, performing a first incremental find to compare the one or more user-entered prefixes with the terms associated with the items and to retrieve the relevance values for the one or more user-entered prefixes matching terms associated with the items;
- determining a first ranking order of items found in the first incremental find based at least in part on the retrieved relevance values and the assigned popularity values of the items found in the first incremental find;
- ordering and presenting one or more items to the user found in the first incremental find based on the first ranking order;
- in response to receiving at least one subsequent text character, performing a second incremental find to compare the one or more user-entered prefixes, including the at least one subsequent text character and any preceding text characters, with the terms associated with the items and to retrieve the relevance values for said one or more user-entered prefixes matching terms associated with the items;

determining a count of the number of characters of text received from the user;
adjusting the relevance value assigned to at least one of the terms associated with one or more of the items retrieved in response to the one or more user-entered prefixes based on the count of the number of text characters received from the user;
determining a second ranking order of the items found in the second incremental find based at least in part on the adjusted relevance values and the assigned popularity values of the items found in the second incremental find; and
ordering and presenting one or more items to the user based on the second ranking order so that the relative order of the items found in both the first and second incremental finds is adjusted as characters are entered.

35. (Previously Presented) The method of claim 34, further comprising the terms associated with the items being organized into searchable subspace categories, each subspace category having a relevance bias value, wherein at least one of determining the first ranking order and determining the second ranking order is further based on the relevance bias values of the subspace categories.

36. (Previously Presented) The method of claim 35, wherein the relevance bias values are based on the count of the number of text characters received from the user.

37. (Previously Presented) The method of claim 35, wherein the subspace categories include a personalized history category containing terms associated with items identified from previous incremental finds conducted by the user.

38. (Previously Presented) The method of claim 35, wherein the ordering and presenting of one or more items is limited to items having associated terms of one or more selected subspace categories.

39. (Previously Presented) The method of claim 38, wherein the one or more selected subspace categories are selected based on the count of the number of text characters received from the user.

40. (Previously Presented) The method of claim 35, wherein the ordered and presented one or more items are presented on a display device, the display device having display space allocated

according to the subspace categories.

41. (Previously Presented) The method of claim 34, wherein the hand-held text input device includes a set of overloaded keys generating an ambiguous text input.
42. (Previously Presented) The method of claim 41, wherein the hand-held text input device is a phone, a mobile computing device, or a remote control device for a television.
43. (Previously Presented) The method of claim 34, wherein the ordered and presented one or more items are presented on a display constrained device.
44. (Previously Presented) The method of claim 43, wherein the display device is a phone, a mobile computing device, or a non-intrusive interface display area of a television.
45. (Previously Presented) The method of claim 34, wherein the assigned popularity values of one or more items of the set of items is based on a relative measure of popular opinion of the item.
46. (Previously Presented) The method of claim 34, wherein the assigned popularity values of one or more items of the set of items is based on a temporal relevance of the items or a location relevance of the items.
47. (Previously Presented) The method of claim 34, wherein at least one of determining the first ranking order and determining the second ranking order is further based on the number of prefixes of the received text.
48. (Previously Presented) The method of claim 34, wherein a portion of the set of items resides on a computer remote from the user.
49. (Previously Presented) The method of claim 34, wherein a computer remote from the user performs at least one of the steps of receiving text entered by the user, performing the first incremental find, determining the first ranking order, performing the second incremental find, determining the count of the number of characters of text received, adjusting the relevance values of the terms associated with the items, and determining the second ranking order.

50. (Currently Amended) A system for processing a search request received from a user operating a hand-held text input device, the search request directed at identifying a desired item from a set of items, each of the items having one or more associated terms, the system comprising:

- a first memory for storing at least a first portion of the set of items, the items having assigned popularity values to indicate a relative measure of a likelihood that the item is desired by the user, and each item being associated with a set of terms to describe the item, each term being assigned a relevance value based on a relevance of an informational content of the term in identifying the item;
- a device input for receiving text entered by the user on a hand-held text input device, the text having two or more text characters of one or more prefixes for terms the user is using to identify a desired item, the two or more text characters including a first text portion and a second text portion, the second text portion being received subsequent to the first text portion;
- a processor for performing a first incremental find in response to receiving the first text portion and for ordering one or more items found in the first incremental find based on a first ranking order, the first incremental find comparing the one or more user-entered prefixes with the terms associated with the items and retrieving the relevance values for the one or more user-entered prefixes matching terms associated with the items, the first ranking order of the one or more items found in the first incremental find being based on the assigned popularity values of the items and being based on the retrieved relevance values for the one or more user-entered prefixes matching terms associated with the items, so that relatively more popular and more relevant items appear earlier in the order for user selection or activation, the processor also for performing a second incremental find in response to receiving the second text portion and for ordering one or more items found in the second incremental find based on a second ranking order, the second incremental find comparing the one or more user-entered prefixes with the terms associated with the items and retrieving the relevance values for the one or more user-entered prefixes matching terms associated with the items, the second ranking order of the one or more items found in the second

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