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Weissman et al.

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(54) **MEANING-BASED INFORMATION ORGANIZATION AND RETRIEVAL**

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Related U.S. Application Data

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(51) **Int. Cl.**[7] **G06F 17/30**; G06F 7/00
(52) **U.S. Cl.** **707/5**; 707/3
(58) **Field of Search** 707/1–5

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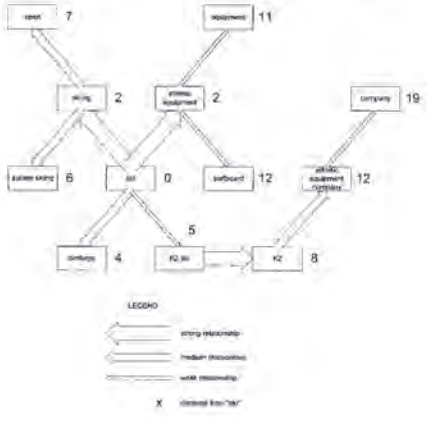
(57) **ABSTRACT**

The present invention relies on the idea of a meaning-based search, allowing users to locate information that is close in meaning to the concepts they are searching. A semantic space is created by a lexicon of concepts and relations between concepts. A query is mapped to a first meaning differentiator, representing the location of the query in the semantic space. Similarly, each data element in the target data set being searched is mapped to a second meaning differentiator, representing the location of the data element in the semantic space. Searching is accomplished by determining a semantic distance between the first and second meaning differentiator, wherein this distance represents their closeness in meaning. Search results on the input query are presented where the target data elements that are closest in meaning, based on their determined semantic distance, are ranked higher.

24 Claims, 5 Drawing Sheets-



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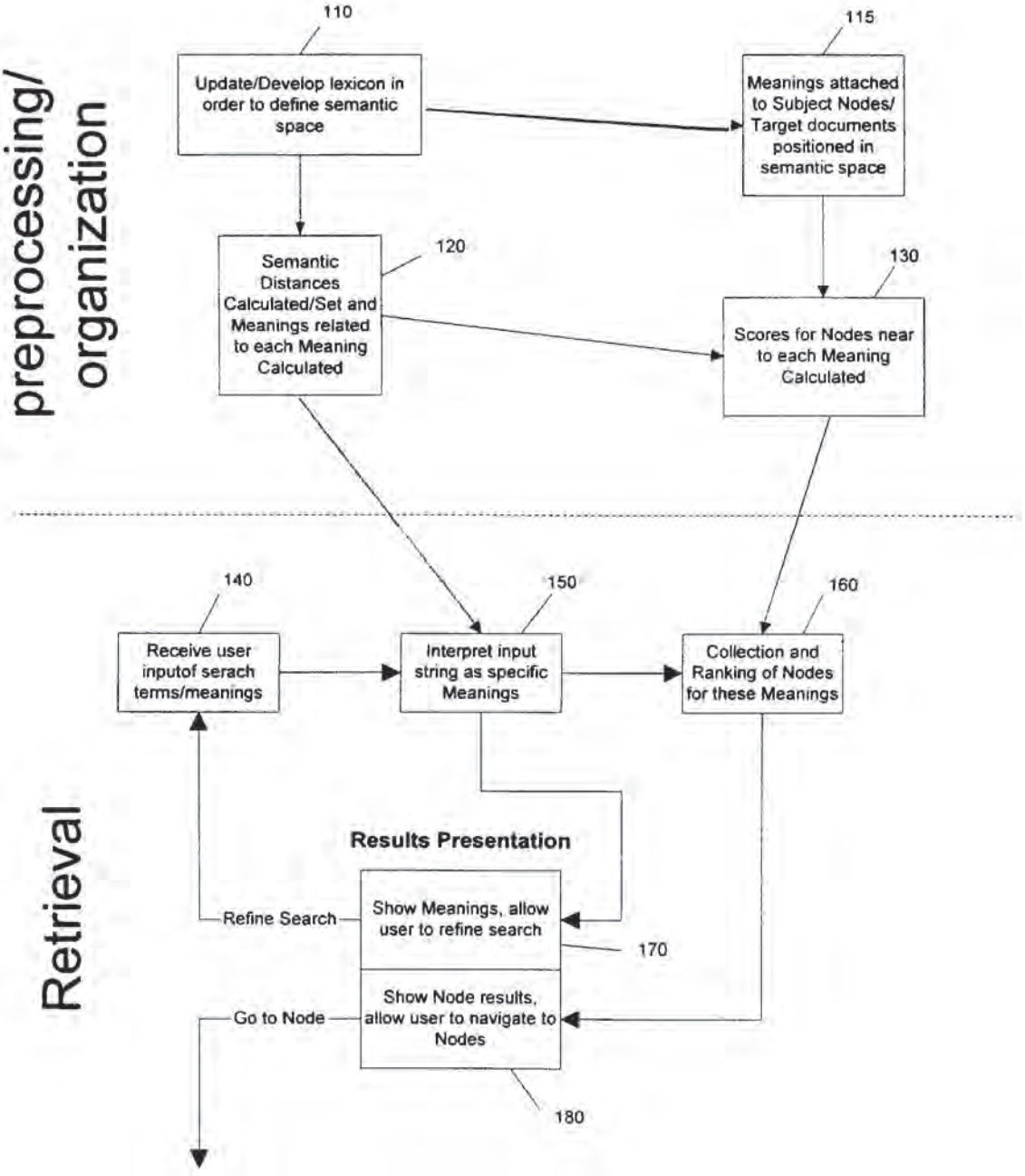
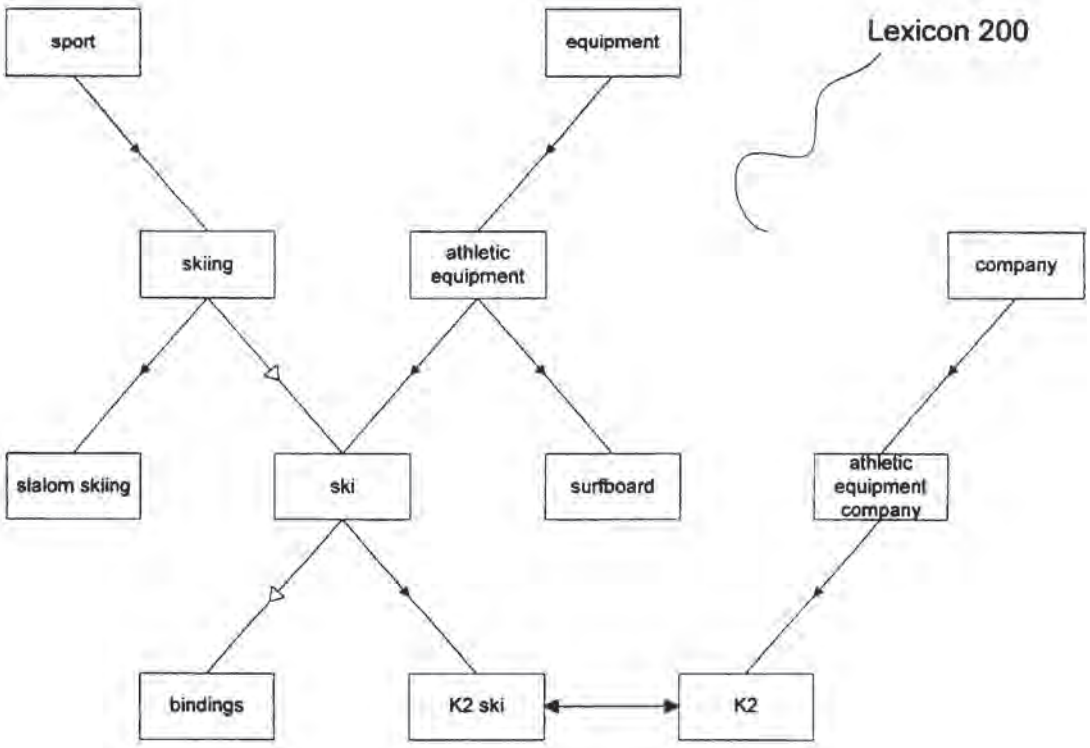


FIGURE 1



LEGEND:

"part of" relationship

"kind of" relationship

lateral bond relationship

FIGURE 2

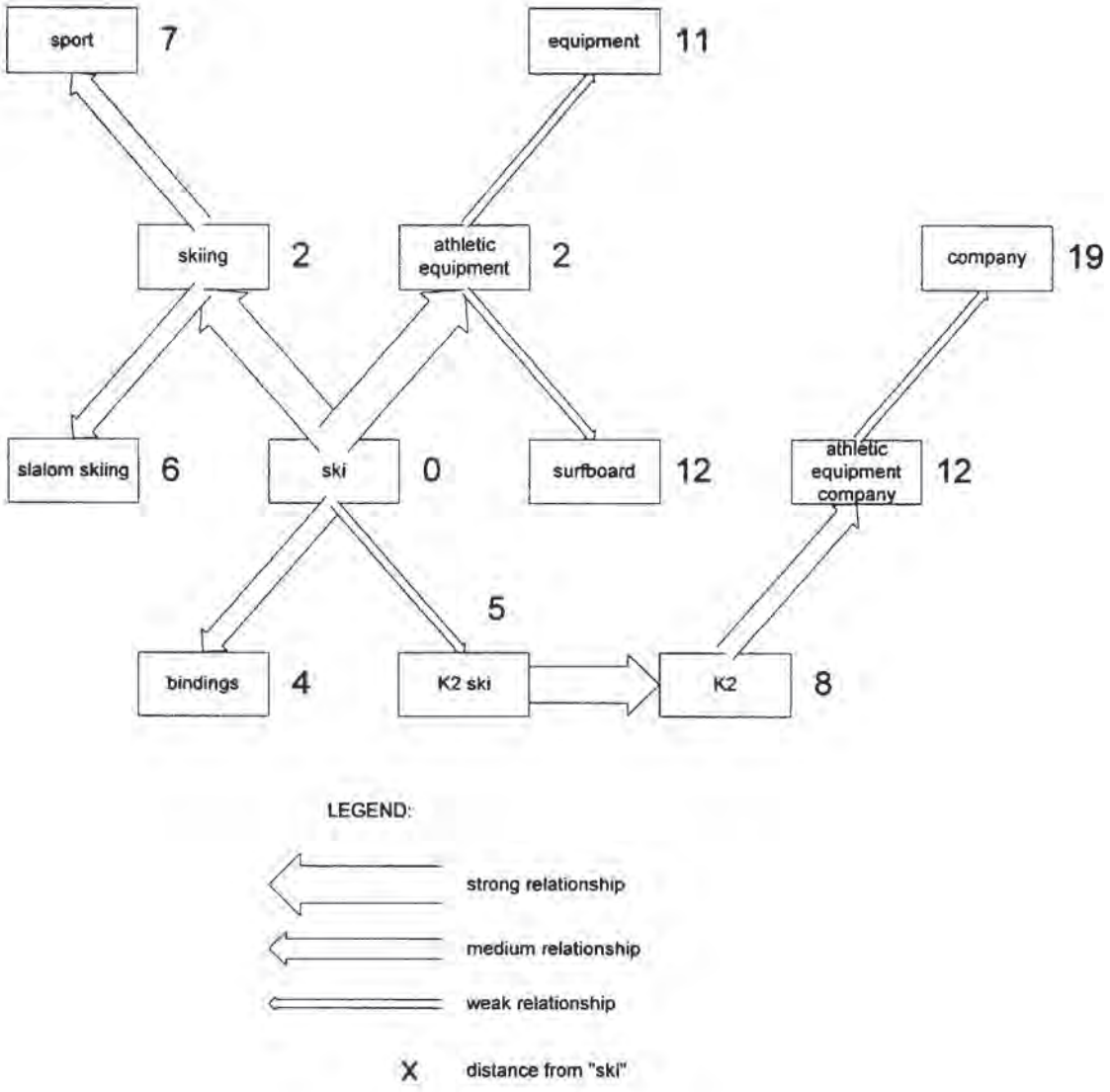


FIGURE 3

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