

[54] DOCUMENT FILING SYSTEM WITH KNOWLEDGE-BASE NETWORK OF CONCEPT INTERCONNECTED BY GENERIC, SUBSUMPTION, AND SUPERCLASS RELATIONS

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[52] U.S. Cl. 364/200; 364/513

[58] Field of Search 364/521, 200 MS File, 364/900 MS File, 513

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[57] ABSTRACT

A document filing system is provided for storing a large amount of information in proper arrangement for facilitating utilization thereof by a user, while allowing semantical retrieval to be realized even from vague fragmental information. Further, a method is provided for expressing the facts constituting information in terms of "concepts" representing things and "relations" defined between the concepts internally of computer, and a method of inputting user's information to a computer through dialogical procedure and retrieving desired information. Information stored of the computer architecs internally a concept network which is displayed in various forms such as hierarchical form based on subsumption relations between the concepts, hierarchical representation based on part-whole relation between the concept, a frame display of a single concepts, and tabular representation of a set of concepts belonging to a given class. The network may be browsed by referring to the contents of the display so that a user can easily know what kind of information has been stored internally of the computer, whereby he or she can perform inputting of new information and retrieval of desired information in a facilitated and simplified manner. The relations stored internally of the computer are classified into "generic relationship" and "instance relation" representing individual facts, whereby a generic framework of facts can be stored. The generic framework is displayed upon interaction with the user for allowing new information to be inputted and desired information to be retrieved in a facilitated and simplified manner. Retrieval by using sematic retrieval formula created internally through dialogical procedure is realized through inferring processing.

8 Claims, 24 Drawing Sheets

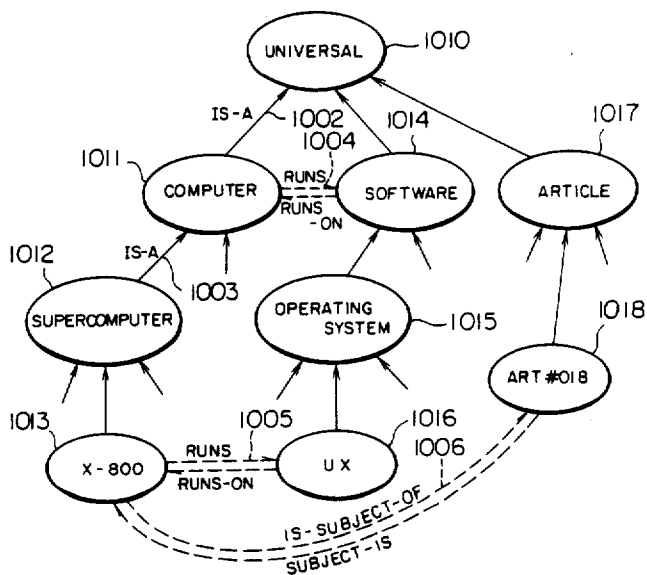


FIG. 1

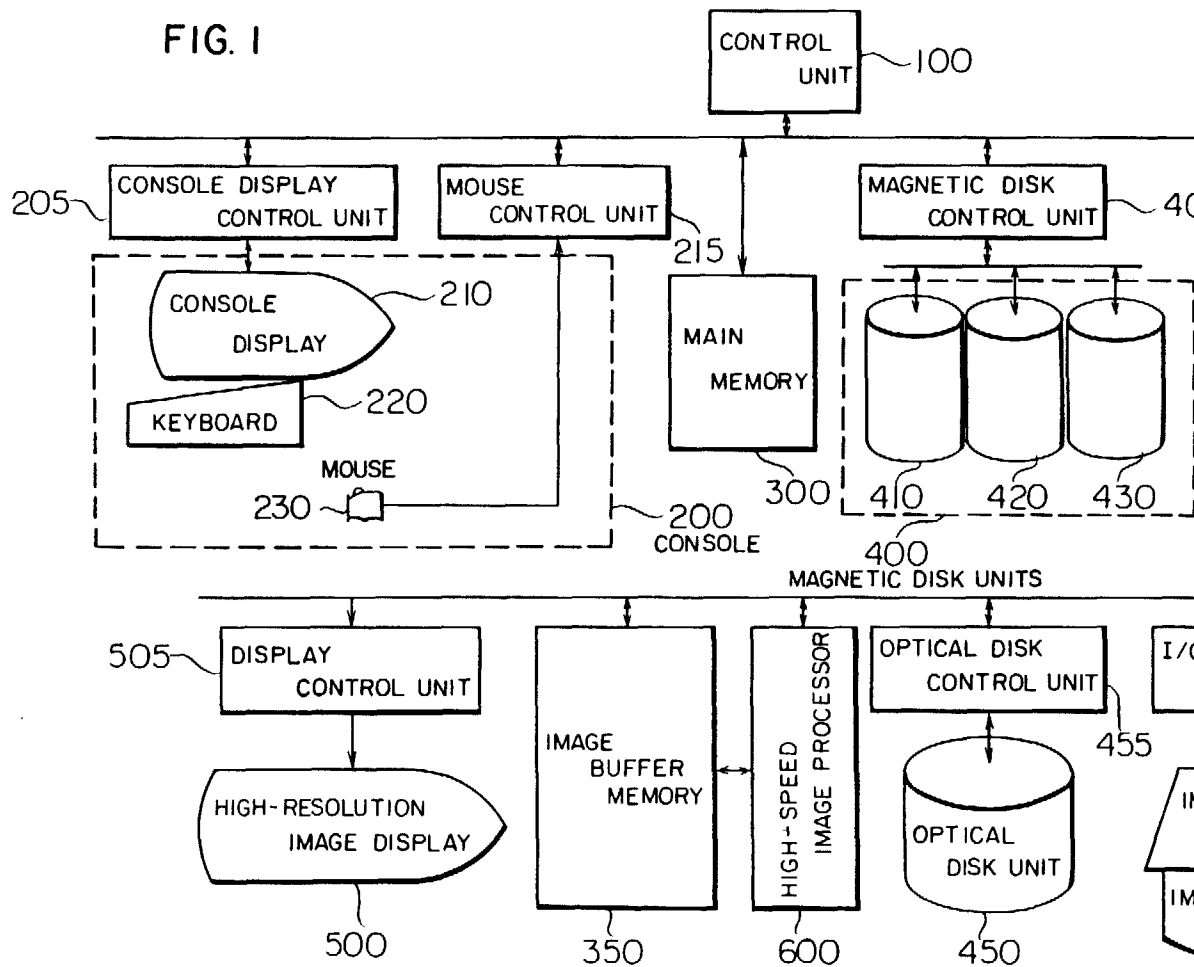


FIG. 2

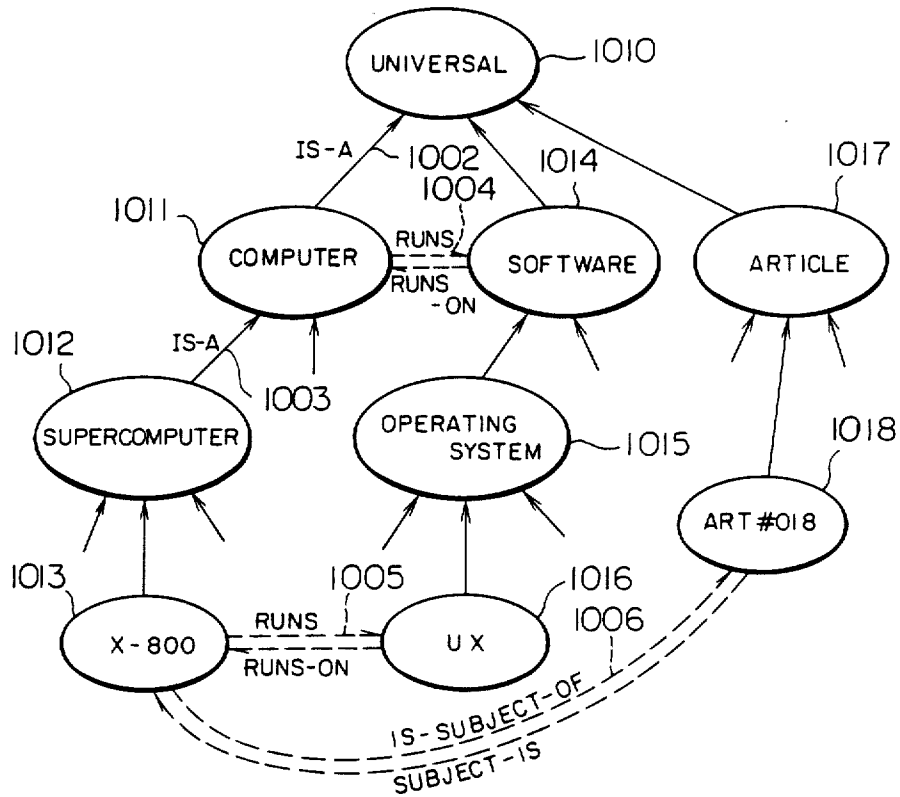


FIG. 3

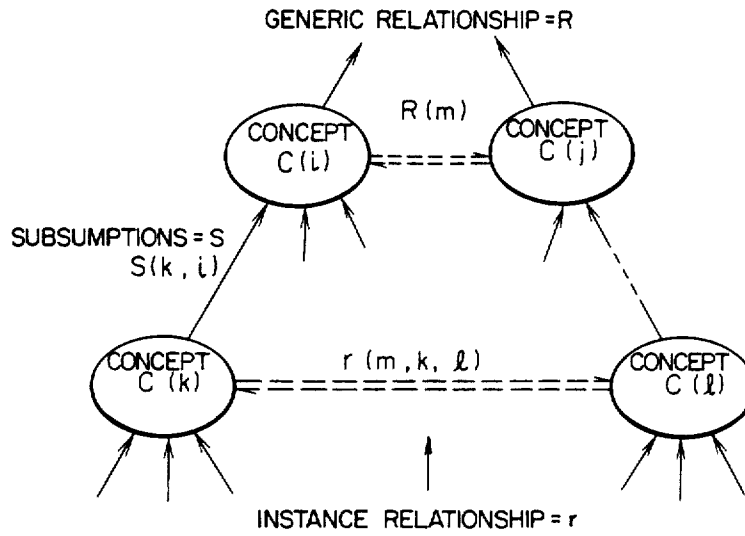
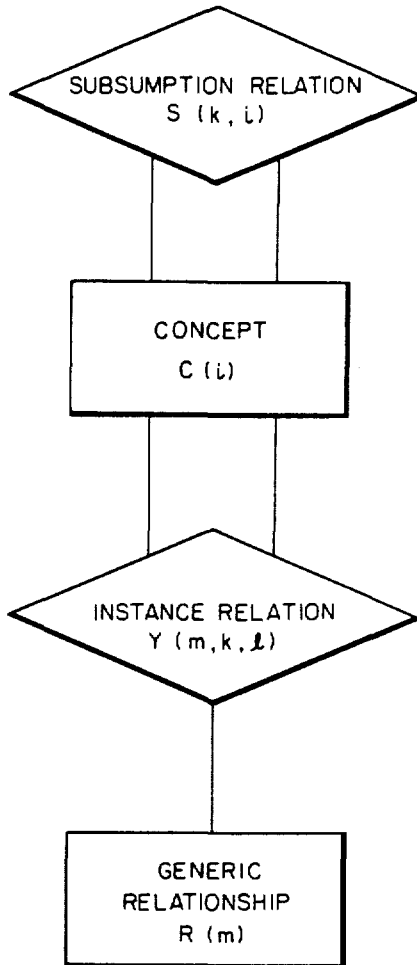


FIG. 4



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