Heuristic Search for Information on Museum’s Holdings

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This article suggests a heuristic search method as an advanced approach to searching information from museums. In this method, a search engine takes terms out of the names of the existing materials and analyzes the degree of relevance between them to extract technical terms from general terms. The effectiveness of the method is also verified in this paper.

The degree of relevance can be calculated by applying the method to measure the degree of relevance between terms in general documents. In this case, one can obtain more appropriate related terms by selecting keywords rather than using all the terms in the names of materials.

One can find technical terms in the list of general terms by sorting the related terms obtained through the above process in the order of relevance and searching one by one in the order from highest to lowest.

When measuring the relevance between related terms, it is important to set up a proper categorization of materials. For example, when the materials are divided into too few clusters, any terms can be related to each other, resulting in that irrelevant associations may be generated. On the contrary, when the materials are divided into too many clusters, related terms may be excluded. Therefore, this article suggests a categorization of materials based on the tree structure of collections while verifying the effectiveness of this set up.

In the end, this article indicates how to enable cross-disciplinary search. In general, it is more difficult to find adequate terms when searching related terms from collections in different fields due to a larger vocabulary; however, it is possible to find cross-sectional information by focusing on terms common in different fields.

Key words: material name, degree of relevance, easiness of search, tree structure