A Bibliographic Search System with a Focus on the User's Knowledge Structure

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| 内容記述 | 拡張的な検索システムの開発と使用のためのためのユーザの知識構造の理解と活用を目的として、新しい検索システムの開発と実装を行った。
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A Bibliographic Search System
with a Focus on
the User’s Knowledge Structure

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University of Tsukuba

INTRODUCTION

We develop a bibliographic search system regarding expertise as important in searching for subject information, and built two prototype systems.

We aim to improve the access to the books or journals in university libraries and manuscripts of Japanese classical literature in research institutions.

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Bibliographic Search system

IDEA

We focus on the user’s knowledge structure to satisfy information requests more efficiently. We do not use the natural language processing approach.

The reason is that the natural language processing is based on processing the terms in literature statistically, and does not consider users’ knowledge. However, the act of bibliographic search is a process that satisfies the user’s information request, and it is apparent that it has an intimate relationship with the user’s knowledge structure.

METHODOLOGY

This research proposes a bibliographic search method with a focus on the change in the user’s knowledge structure.

The basic idea of this method is as follows:

It is named an idea that change occurs to the user’s knowledge structure before and after a bibliographic search and what affects the change is the information the system presents.

And the state of a successful bibliographic search is defined as the state where the user’s knowledge structure and the knowledge system contained in the search results are consistent.

PROTOTYPE SYSTEM

The first system brings the user’s knowledge structure close to an expert’s knowledge structure by using the knowledge system on which consensus is reached to some extent among experts.

The second system changes the user’s knowledge structure according to the classification system by using the library classification for the information the system presents and projecting the set of the search results onto the classification system.

The tale of Genji

Workers classify many manuscripts by the text.

Currently, many experts (researchers of Japanese literature) pack information about classification of manuscripts and the bibliography into a book. So, we must markup the text.

What’s Tanabota?

Tanabota is a mapping system of OPAC, searching results onto a library map. The searching results appear at each shelf in the library, so you can find a group of literature on each different subjects.

This is an example of a screen as an example. The tale of Genji.

The user easily understands what the result includes various subjects like ‘Bookselling’, ‘Information science’, ‘Information engineering’ and so on.

University of Tsukuba Library
Library on Library and Information Science

Color coding by classification

Access to the books or journals in university libraries

University of Tsukuba Library
Library on Library and Information Science

Color coding by classification

Access to the manuscripts in research instructions

We aim to improve the access to the manuscripts of Japanese classical literature, critical editions, and papers in research institutions.

We link classification of the manuscripts with the manuscripts’ images on the web, papers and critical editions.

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We have just started to study the possibility of using TEI to mark up the bibliography.

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