

## Abstracts

"A study on information and databases for Japanese classical literature" (in Japanese)

Hisashi Yasunaga

J.J.S.I.K., Vol.5, No.2, pp.1-15 (1995)

Abstract:

This paper describes studies of the construction, management and use of databases for Japanese classical literature.

A model has been constructed on the basis of analysis of information from scholarship in the field of Japanese literature. The model has the following functions; 1. To define clearly the structural genealogy of handwritten manuscripts and wood-block-printed books; 2. To show the five-level hierarchy of scholarly information in the field.

On the basis of this model, several databases in Japanese literature have been created on the mainframe computer at the National Institute of Japanese Literature, and some of these, including a catalog of manuscripts and old books and a catalog of research papers, have been opened for public use. It is particularly important to develop a retrieval system to navigate through the many different sorts of databases. Two examples are discussed in this paper: firstly, the data circulation system for original books by image transmission through computer networks; and secondly, the full-text database based on the description rules for original data.

We discuss the results of our experiments on the design, implementation and feasibility of the two systems. Lastly we look at future problems.

"The image database and circulation system on the original books for Japanese classical literature" (in Japanese)

Hisashi Yasunaga

J.J.S.I.K., Vol.5, No.2, pp.17-33 (1995)

Abstract:

In this paper, the preservation system for old books on the Japanese classical literature is discussed for the dedicated library. The realization of the system is by means of conversion of media. Nowadays the microfilms are usually used as the preservation media. However, this paper focuses on the use of computer technologies such as database system, optical disk, facsimile transmission, network system, etc. The on-line database system has developed by means of linkage with image and catalog databases on the old books. Particularly image database defines on the digital optical disks.

The user can search and request the object book through the catalog database by on-line access, then obtain directly the image copies of the books by facsimile output to the remote user terminal. An integrated system for data circulation is discussed based on the examples of the National Institute of Japanese Literature. Then, availabilities of the system have been confirmed through the feasibility experiments by users.

"Thoughts on the Social Implications of Information Theory"

Marta Dosa

J.J.S.I.K., Vol.5, No.2, pp.35-41 (1995)

Abstract:

"Information theory" is conceptualized in this brief communication of reflections as a collective term for all information-related theoretical models produced by a number of disciplines. There is a consensus in the scholarly community that information science/ informatics does not, at present, have a focused systematic foundation of theoretical knowledge. The author argues that this open-endedness of the theoretical context can work to the advantage of the information sciences because of its capacity to accommodate future multidisciplinary research results. The characteristics of information theories are briefly reviewed and perspectives on the implications of these characteristics for information planning the practice are offered. The author concludes that information research, including individual, societal, environmental and technological aspects, benefits from the flexibility of an open conceptual framework that closely resembles the dynamic world of reality.

"A Method of Solving Problems by a Decision Support Agent System"

Hiroyuki Murakami and Hitoshi Murakami

J.J.S.I.K., Vol.5, No.2, pp.43-48 (1995)

Abstract:

When we wanted to solve a problem, up to now we have chosen a suitable method for solving problems, and the problem has been solved, using the specified method. The purpose of this paper is to show a decision support agent system composed of an interface agent, a manage agent and thirteen problem solving agents. The interface agent has functions of an exchange of information about a problem to be solved to a user interface and self-

study. The manage agent has functions of understanding the feature of the problem and assigning a suitable problem solving agent for a task. The problem solving agents have functions of solving problems, self-improvement and self-evaluation.

"Prediction of formation area of amorphous alloys by object oriented design" (in Japanese)

Masami Kojima, Takashi Nakanomyou, Youko Akiyama, Toshiyuki Itoh, Shigeo Wada, Noriko Mori, Jing-Zhi Yu, Kaoru Ohno, and Yoshiyuki Kawazoe

J.J.S.I.K., Vol.5, No.2, pp.49-55 (1995)

Abstract:

This paper deals with two aspects about the prediction of ternary amorphous alloy formation area by object oriented database. The first is the collection and storage of the relevant experimental data about the formation of binary amorphous alloys, such as melting point of constituent element, ratio of atomic radius, mixing enthalpy, eutectic point and etc.. On the basis of analysis of these data, methods for checking the amorphous formation ability are discussed. The second is the transfer of the data mentioned above to the database for ternary amorphous alloys and the establishment of the prediction method for the formation area of them. It is found that the graphical method is useful for the prediction and that the object oriented data analysis is effective to the problems which can not be treated by standard relational database.

"Database Development in Assistance of New Superconducting Materials" (in Japanese)

Etsuo Nakada and Yuji Asada

J.J.S.I.K., Vol.5, No.2, pp.57-64 (1995)

Abstract:

We have constructed the numerical database for high-Tc oxide super-conductors. The database has been designed to assist material researchers. The key ID is the sample number, which is different for the sample with the same compositions if it comes from another papers. The key ID is important because the database is designed not for the standard data, but for the original ones. The original data with measuring conditions and graphic data with their attribution are great important in it. The meta-data is determined to fill requirements mentioned above. The crystal structure is classified using common name such as Y123, Bi2212, and BKBO because these names are popular to superconducting material researchers. The references are represented by the new number (journal name + volume + page). The database is constructed using ingres-4GL as DBMS and bbn-CORNERSTONE as data processing tool. It will be

served via internet near future. Temperature dependence of Hall coefficient of YBCO is studied as an example of application.

"A Support System of Countermeasures against Natural Calamities" (in Japanese)

Hiroyuki Murakami

J.J.S.I.K., Vol.5, No.2, pp.65-71 (1995)

Abstract:

In this paper, we propose a support system of countermeasure against natural calamities which consists of the systems in areas, the systems in wide regions and the system of the nation. The support systems of countermeasure against natural calamities in areas and in wide regions, which connects with the forecast systems of weather, tsunamis, earthquakes, floods and landslides, has two functions; the forecast of calamities and the indication of measures after calamity occurrences. The support system of countermeasure against natural calamities in the nation has a function of decision making of the government for wide range calamities.