

NAME OF SYSTEM:**Battelle Clue-Word Card****ORIGINATOR:****Defense Metals Information Center****Battelle Memorial Institute****Columbus, Ohio 43001**

OBJECTIVE. To design and operate an index filing and retrieval system that will more effectively handle the growing mass of scholarly and scientific reference material reaching the market place.

BACKGROUND. The Battelle Memorial Institute is organized into several subdivisions known as Information Analysis Centers. Each is oriented toward research and development in such disciplines as mechanical engineering, physics, chemistry, and metallurgy. Management at Battelle found that conventional methods for classifying and indexing documents were not well-suited to the needs of the scientists, engineers, and other members of the professional staff. Consequently, after extensive research and testing, they developed their own unique system and installed it first in the Defense Metals Information (Analysis) Center.

THE NEW METHOD. The clue-word indexing technique developed by the institute's staff is a closely coordinated team effort comprising the scientists and other users, the information panel, and the center's information specialists. In the delegation of responsibilities, members of the information panel control the selection of documents to be accessioned; the method of indexing; and access to the index and file for search purposes. The information specialists have responsibility for overall operation and maintenance of the system.

The basic input action of the clue-word index technique is the underlining of significant words in the document by members of the information panel. Additionally, brackets are placed around the more significant por-

tions of the text and illustrations. In total, this highlighted information forms an extract of the document.

While marking is a relatively simple and fast process, every effort is made to reduce the total time spent on this task by the scientists and other professional personnel who index the documents. Thus, information specialists, clerks, and typists do most of the routine work such as preparing duplicating stencils for the 5 x 8 inch clue-word extract cards. The Information Center personnel also add the document's control number and other standard identifying data. The extract card file is arranged alphabetically by the clue-word index terms. Each time a document is entered into the system, a sufficient number of extract cards are duplicated to permit filing a card under each of its underlined index terms and a few standard headings such as title and author's name.

Under actual search conditions a scientist normally answers most of his search needs by personally referring to the clue-word index with its key terms and extracts. Should he desire additional information, the referenced document may be obtained from the Central File. Typically, he starts the search by looking at the cards filed under the index term that he feels is the most pertinent to his search question. If this does not produce the desired results, he then looks for clues or leads in the form of other underlined words appearing in the extract, and thus is lead to other parts of the card file until he finds the information he is seeking.

REMARKS. Two of the more favorable benefits obtained from this system are the richness of material uncovered and the ease in indexing due to the close association that the scientists and other users have with the indexing and document selection processes.

The system's wide search versatility and latitude permit searchers to locate clue-word cards for as many pertinent documents as they wish. Thus, a search can be shallow or exhaustive, depending on the user's needs. There is also a high degree of relevance in

data retrieved due to the concentration of meaningful information on each clue-word extract card.

The system is actually very simple, yet highly effective in terms of results. However, some limitations should also be noted: (1) the relatively slow filing action due to the large number of index cards required per document; and (2) the effectiveness of this type system is largely dependent upon the existence of close cooperation and understanding between the users and the operators of the system.

The searching of the clue-word extract card file is susceptible to automatic searching

by computer, and thus under certain circumstances the clue-word system may be a satisfactory substitute for the more expensive full text indexing systems. Officials of Battelle have developed a proposal to utilize a computer for searching, but it will be necessary to convert the present clue-word extract cards to machine-language format before proceeding with the project.

Anyone starting a clue-word system at this time should give serious consideration to capturing the index data in machine language, possibly as a by-product of the typing operation, since some type of machine processing would probably be desirable later.

BATTELLE CLUE-WORD CARD

