

NAME OF SYSTEM:

**Information Retrieval and
SDI Current Awareness**

ORIGINATOR:

**Bonneville Power Administration
(BPA)**

U.S. Department of the Interior

Portland, Oregon 97208

OBJECTIVE. To establish a system for selective dissemination of information (SDI) that will better assure that new electrical engineering information is promptly brought to the attention of the engineering and technical personnel assigned to the BPA.

BACKGROUND. The Bonneville Power Administration is an agency of the U.S. Department of the Interior and is responsible for the marketing of power produced by Federal multipurpose dams in the Columbia River Basin system. This complex represents the largest hydroelectric development of any single river basin in the world. In fulfilling the mission, the Administration employs 600 engineers, the majority of whom are interested in electrical engineering and related subjects.

The growth rate of scientific knowledge and the parallel increase in professional literature has made it increasingly difficult for engineers and scientists to keep abreast of new developments in their fields of interest. They often have no choice but to read material because it may seem to contain substantive matter, only to find it is meaningless. Conversely, because of the sheer mass of new literature, many items of professional value may be overlooked.

Because of the need for its staff to keep abreast of these new technological developments, the BPA established a computer-based system for periodic, selective dissemination of information.

THE NEW METHOD. This SDI system is based on a BPA modification of a System 1401

computer program developed by the International Business Machines Corporation. In broad terms, the system establishes and maintains a list of 400 BPA members desiring to obtain periodic notification of abstracts of specific literature. Each subscriber has at least one interest profile (subject areas of interest to him) recorded on the magnetic tape file. The average range of profiles per participant is six to 10.

Each week the BPA library selects about 125 abstracts from American and foreign professional literature in the field of power transmission. Screening of literature is performed by a professional engineer on the library staff. The abstracts either accompany the literature or are obtained from abstracting services. The selected abstracts are converted to punched cards for processing. The input cards are coded to show information covering author, title, source, summary, and comments.

The indexing of individual items within the context of SDI consists of assigning descriptors (indexing terms) and phrases to the abstract so that it can be used for matching against the users interest profiles in the subsequent processing action. An automatic indexing system is primarily used for this purpose. Descriptors are lifted directly from the terminology appearing in the text of the abstract and, based on a matching program, are appended in alphabetical order to the abstract record.

Weekly computer runs match the abstract indexes against user profiles to produce a printed abstract card notice alerting a subscriber to literature of interest. Should he then desire a copy of the actual document, he need only detach an accompanying self-addressed notification card and forward it to the library.

REMARKS. Perhaps the outstanding feature of this pioneering Selective Dissemination of Information System is its flexibility, which includes its ability to serve both current awareness and retrospective search functions.

For retrospective search, the abstracts are retained on a cumulative magnetic tape file and processed against special inquiries as needed. When the file approaches unreasonable limits, a special program purges the abstracts appearing to have the least retention value. About 1,400 output notices are printed per week for the current awareness processing.

Engineers enrolled in the Bonneville SDI system have expressed satisfaction with its ability to disseminate a higher proportion of meaningful information. Evaluation cards completed by subscribers reveal that 57 percent have a direct interest in information received. Of particular interest, only 4.5 percent of those having a direct interest had seen the subject matter before being alerted by the SDI system.

INFORMATION RETRIEVAL AND SDI CURRENT AWARENESS

