BOOK REVIEWS

Information Retrieval Systems; Characteristics, Testing, and Evaluation, by F. Wilfred Lancaster. New York, John Wiley & Sons, 1968. 222 pp. $9.00.

Despite the fact that users retrieve the majority of information that they obtain from collections such as libraries by employing author/title listings in catalogs, information scientists consider only subject listings in discussions of information retrieval. This book is no excepton.

Lancaster defines an information retrieval system as informing a user "on the existence (or non-existence) and whereabouts of documents relating to his request." Half of his book treats of characteristics and operation of information retrieval systems and half of testing and evaluating such systems. It is the latter half of the book that distinguishes it from other general introductions to the subject.

For the testing and evaluation sections of his book, the author draws heavily on his experience gained while working on the Cranfield project as well as at the National Library of Medicine. At the latter he examined a segment of the real world in a major investigation of the MEDLARS system. An interesting finding of the MEDLARS study that he reports in the book, but on which he does not elaborate, is that there was no relationship between recall ratio percentage and precision ratio percentage for 299 searches examined.

In his preface the author expresses the hope that his book will be helpful to students and useful to practitioners. However, a principal function of such an introduction is to guide the reader in further pursuit, or retrieval, of information. In this function the book does not succeed, for seven chapters are barren of references, another eight average somewhat more than three, and the remaining chapter boasts fifty-three.

This book will not supplant other general introductions to information retrieval systems, but its discussion of testing and evaluation is a useful introduction.

Frederick G. Kilgour

How to Manage Your Information, by Bart E. Holm. New York, Reinhold Book Corporation, 1968. 292 pp. $10.00

Essential information exceeds the grasp of the keenest minds in all professions. A method of readily obtaining needed resource material can be a particularly knotty problem for those who have no background in appropriate methods of data storage and retrieval. Successful operation for many professionals depends directly upon their ability to work out a practical personal system which does not require complex apparatus, excessive cost or time. The purpose of this volume is to help such individuals evaluate their particular needs and design a method of managing information which will be workable and practical.

I found the book enjoyable and informative. It immediately recommends itself with its own efficient organization, attractive format, readable style, clever illustrations, and complete indexing. It not only deals with the broad principles necessary for development of a personal information system but also includes specific information of a practical nature on the approach to this problem for professionals in several different fields.

The first chapter, which is titled "Man The Collector", is fascinating to an unsophisticated non-librarian. It outlines the enormous problem of the growth of world-wide information that appears to be proliferating in an almost malignant manner. This served to emphasize a repeatedly stressed cardinal principle: the need to be selective, so that only items of probable real value will be retained. A most valuable chapter for those not experienced in library work relates to the basic principles for retrieval on a single or multiple entry basis. This logically leads into a discussion of how to evaluate the individual's personal need. The operations of specific simple systems, such as optical coincidence, termatrex, keysort and term cards were adequately discussed. Individual chapters are devoted to the unique problems that might be encountered by the engineer, the chemist, the physicist, the architect, the doctor, and the archivist, with emphasis on the specific vocabulary needed for proper organization and a brief review of information sources of the various disciplines. The remaining seven chapters deal with proper use of available sources of information, such as keeping current with the literature, use of the modern library, records management, microfilming, and data systems of the present and the future.

This volume should be a real value to many who have limited background and are struggling in vain to keep up with the information they need. It can provide practical pointers for those who want to make a serious effort toward establishing and maintaining a system of storage and retrieval of information that does not rely on an all too often faulty memory.

Ellis A. Fuller, M.D.

The Institutes of Education Union List of Periodicals Processing System, by J. D. Dews and J. M. Smethurst. (Symplegades, no. 1). Newcastle-upon-Tyne, Oriel Press Ltd., 1969. 39 pp. SBN (69UK) 85362 060 1. 15s.

The first half of this small manual is devoted to describing the file maintenance and text editing system developed by the University of Newcastle-upon-Tyne. The second half of the text is devoted to the technical specifications of the Newcastle File Handling System and refers specifically to the English Electric-Leo Marconi KDF 9 computer.

The system described is the application of a series of general purpose programs, that provide the capability of storing, adding, deleting, or changing variable length records, to a union list project for a group of libraries. Unfortunately this otherwise well designed system has not been able to do away with the manual "typed slips" back-up file which plagues so many other computerized union list projects. Also of interest in this processing system is the use of the work developed at the Newcastle Computer Typesetting Research Project for computer controlled composition of the final output.

Section two of *Seminar on the Organization and Handling of Bibliographic Records by Computer, Newcastle-upon-Tyne, 1967* edited by Nigel S. M. Cox and Michael W. Grose (Archon Books, Hamden, Connecticut, 1967) is the preferred description of all aspects of the system except for those who need the program specifications.

Alan D. Hogan

Computer Based Information Retrieval Systems, edited by Bernard Houghton. Camden, Conn., Archon Books, 1969. 136 pp. $5.00.

This book contains six papers that their authors presented at a special course in April 1968 at the Liverpool School of Librarianship. The objective of the course was to survey the major computer based informational retrieval systems operating in the United Kingdom for an audience of prospective users and planners. The book is a successful elementary introduction to large information retrieval systems.

In the 1940's and early 1950's, such pioneers as W. E. Baten, G. Cordonnier, Calvin Mooers and Mortimer Taube developed new techniques for information retrieval, a phrase which Mooers coined. The major innovation in the new development was "coordinate indexing" or the coordination of index terms at the time of searching. Coordination employed simple Boolean logic —"and," "or," and "but not." Coordinate indexing increased flexibility of searching and number of accesses to documents in contrast to the inflexible, pre-coordinated traditional subject catalogs.

It was also characteristic of the early systems that they dealt with relatively small files of documents not under classical bibliographical control —patents, internal reports, and segments of external report literature. With the advent of the computer, it became feasible to apply the new information retrieval techniques to large files of traditional materials, but to date the major effort has been directed toward huge files of journal articles.

It is, therefore, no surprise to find that the five chapters in *Computer Based Information Retrieval Systems* that describe systems all depict retrieval from files of journal articles. These five systems are MEDLARS, the *Science Citation Index* (SCI) and its peripherals, *Chemical Titles* (CT) and Chemical Biological Activities (CBAC), a burgeoning Institution of Electrical Engineers (IEE) sponsored project in selective dissemination of electronics information, and a minor computer application to production of the *British Technology Index;* the three major, operational projects are of United States origin. Selective dissemination is a gratifying feature of SCI, CT, CBAS, and the IEE project, for SDI applications take advantage of the computer's potential for personalization by servicing individual users on the basis of their individual needs.

The book is a successful primer that provides a useful introduction to computer based systems for retrieval of journal citations from large files. G. A. Somerfield's last chapter, "State of the Art of Computer Based Information Retrieval Systems," is more than its title implies, for the last half of the chapter analyzes desirable improvements yet to be achieved. The first half could well serve as an introduction to the book. Recently, several worthwhile primers on information retrieval and retrieval systems have appeared. *Computer Based Information Retrieval Systems* is still another to provide the brief, clear, elementary introduction that new students, new users, and new planners find most effective in providing an understanding of an unfamiliar field.

Frederick G. Kilgour

Modern Data Processing, by Robert R. Arnold, Harold C. Hill and Aylmer V. Nichols. New York, John Wiley and Sons, Inc., 1969. 370 pp. $8.95

This book is an updated version of the authors' previous book, *Introduction to Data Processing,* John Wiley and Sons, 1966. The present volume is designed to be used as an introductory text to the concepts of all facets of data processing. It will not teach people to be programmers or systems analysts but it can be very useful to anyone who would like to learn about data processing without having to become a programmer or systems analyst. The book is well organized and explains, in non-technical terms, highly technical facets of data processing. This book can be used not only

at the high school level but also at the beginning college level. In it the authors strived and achieved to make available all the latest advancements in the computer science field. In my opinion the authors have achieved their goal of developing a very good elementary text in data processing.

I highly recommend this book to librarians and all others as a basic primer in automation. It will be particularly useful to administrators, as it has an excellent glossary that assist them in their understanding of the data processing vocabulary and jargon.

Thomas K. Burgess