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tion system evaluation, and for the assessment of the survival power of an electronic index.

The book wisely advises against merely "controlled" indexing, (any term from the vocabulary is *permitted*) and recommends instead the use of the *most specific* term provided by the vocabulary. Vocabulary categorization is mentioned, and plenty of practical advice for book indexing is submitted. Software producers should recognize the desiderata raised for indexing software. The book also wisely excludes faceted formulae from "pre-coordination" (although they are also phrased *before* the search). Unfortunately, the glossary defines pre-coordination differently. (This represents the confusion prevailing in the literature. It is due to the lack of vocabulary categorization that would create clarity here).

The layout of the index is excellent, but access to the book's content can still be improved. For example, concordances were not indexed and a reference from compound terms to pre-coordinated headings would be desirable, as well as a reference from the latter ones to string indexing.

Through its conciseness and transparency, the book informs the novice in the field, the manager and the publisher of the complexity of the task of index preparation. Providing such an overview is the strength of the book. It destroys the still widely encountered opinion that indexing is a mechanical process that can be performed by clerical personal or by computer programs. Thus, the book, if widely distributed, can contribute much to a better recognition of index preparation as a work requiring indexing expertise and subject knowledge which deserves an adequate esteem by users and publishers.

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MEISS, Brigitte: **Information Retrieval und Doku-mentmanagement im Multimedia-Zeitalter.** Deutsche Gesellschaft für Dokumentation, Frankfurt/Main 1997 ISBN 3-925474-32-3, 118 pages, 8 figures.

The introduction to the book addresses the ever-continuing and increasing problems encountered in present-day information retrieval. The author suggests that competent indexing and skillful searching could counteract a lot of these problems.

With this goal in mind the conceptual foundations of information supply are discussed first. The importance and usefulness of classification schemes and thesauri are explained. Such devices are considered indispensible to subject searches and if proper names are not the exclusive search goals. The role of the degree of order to be attained in a collection through search

and desirable in the prevailing circumstances are unfolded, as well as the role of the definability of the search topic and the contributions of human memory, which also play an important part in the quality of the searches. The borderline between "relevance" and "pertinence" in the search results is clarified and thus much of the appertaining confusion is avoided which prevails in the literature.

The problems which originate from the variations in the orthography of names for concepts are explained. (But authors and searchers often choose the definition-like, paraphrasing and, hence, unpredictable mode of expression for concepts instead of their concise names, and the resulting problems also deserve being mentioned.) It is also argued in favor of writing one's own abstracts for the documents of potential interest.

The reader is informed of the limitations of the storage of the full texts of originals and abstracts, but also of the merits of full texts as complements to the indexing and classifying of the sources. The type of *noise* which inherently occurs in full text searches is discussed. But the information *loss*, from which this type of searches inherently also suffers, deserves mention, too, because it may well remain hidden for a long time in lack of experience and attention on the part of the user. We are also warned against simply storing full texts and trying to rely on tricks in the search for the text words.

Thus, the book sets out to counteract the ignorance which prevails on the part of many database users with respect to the conceptual devices for information supply, and it advices newcomers against beginning to collect knowledge on an insufficient basis.

The search strategies discussed in the book include the use of classifications and of thesauri (the latter with a well structured vocabulary) and the use of Boolean and proximity operators. In addition to the *noise* of irrelevant responses, the information *loss* deserves mentioning, which also inevitably occurs when these operators are employed in full text searches. The author states that the advance in information technology cannot substantially improve the quality of the searches if there is lack of a sound conceptual foundation. This precisely addresses the core problem of present-day information retrieval.

In a special chapter the properties of commercial mass media (where subject analysis is mostly completely dispensed with) are outlined. What is revealed here may well give the incentive to a reader to establish early a database of one's own for the knowledge in one's field of activity, and not to wait until any overview has been lost. Practical advice is given for the construction and maintenance of private databases if those of a merely ephemeral nature are to be avoided.

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Another chapter deals with the principles of database structuring, as well as with the embedment of an information system into its technical environment. A selection of the features of Hypertext and Internet is presented, as well as those of a few well known commercial databases.

Besides skill in searching, complete knowledge of the indexing policies in past and present is required in search (which can therefore hardly be accomplished in perfection by only casual database users).

The necessity of a well balanced division of the tasks between information science and informatics is emphasized. In particular, judgements and decisions must not be seen exclusively from the perspective of informatics. Much importance is also attached to close cooperation between the user and the information expert.

The book presents a promising philosophy and technology of database construction. It reflects the large practical experience of its author in handling operational databases, in particular of one with an integrated thesaurus. It offers a realistic impression of the complexity of the task of information supply.

The index provides sufficient access to the contents of the book and also to the terminology of information technology. The literature references could be a little more precise and include more citations.

In the outlook the expectation is expressed that in future the user might be able to solve all his information problems himself. This surprises because this would largely result in searching merely for the words assumed to occur in the texts of documents, an approach the deficiencies of which had convincingly been set forth earlier in the book.

A book of this size cannot constitute a genuine textbook on subject analysis and search. The topics of classification and indexing and of thesaurus construction would claim comprehensive books of their own if these subjects are to be dealt with exhaustively. But the book offers the basic knowledge necessary in evaluating databases in terms of their subscription, abandonment, continuation or establishment for operational use. The three or four hours necessary for the perusal of the book are a great gain for the less experienced in the field or those with a largely technological perspective of the field included. In its conciseness and clearness the book is highly recommended also for those who are responsible for management affairs in the information field.

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Galinski, Christian and Schmitz, Klaus-Dirk, Ed. (1996) **TKE 1996 - Terminology and Knowledge Engineering : Proceedings : Fourth International Congress on Terminology and Knowledge Engineering, Vienna, 26-28 August 1996.** Frankfurt: Indeks Verlag. viii, 464p. ISBN 3-88672-207-4.

The 51 papers contained in this volume provide a consolidation of the theme of the conference "Terminology and knowledge engineering". They are organized according to nine sub-themes.

The first of these sub-themes, "Terminology and philosophy of science" includes seven papers, each exploring different aspects of the sub-theme. Ahmad's paper presents an analysis of texts in nuclear physics and in the philosophy of science, arguing that the in-text deconstruction and reconstruction of scientific reality, mainly through manipulating the terminology of a given specialty, plays an important role both in the genesis of science and in the genesis of the philosophy of science. The author also indicates that a study of 'terminology dynamic' can provide useful insight into the work of the scientists. De Beaugrande, in a paper on 'language for special purposes and terminology', presents some terse demonstrations of the fact that access to knowledge can be properly assessed only by exploring the whole discourse domain and not just a few of its well-behaved lexical, morphological, syntactic and semantic features and structures. Evolution of scientific terminology is very often determined by conscious human efforts to create new concepts, new terms and new conceptual relationships, eliminate existing concepts, reorganize concept systems etc. Budin includes terminology standardization and harmonization as an integral part of the overall process of terminological evolution in "Evolution of scientific terminologies". Benking discusses "concept and context mapping" as a means of achieving common frames of reference like the Information Coding and Classification System. An abstract of Mark Burgin's paper "Terminological and teleological systems" indicates that there can be terminological algebra and calculus providing deductive means for inference of relations between concepts in terminological systems. Alemasov et al., in their paper "On conceptions set of reacting systems thermodynamics" realize conceptions set by classes and objects of C++ language from definitions and structure of conceptions set of reacting system thermodynamics. Shelov and others describe studies in terminology knowledge representation being undertaken at the Committee for Scientific Terminology in Fundamental Research, Russian Academy of Sciences (CST).

The second sub-theme, "Terminology on the information superhighway", is developed in five papers discussing the role of terminology in navigating