REVIEWS

Edited by Blake Ives

Data Base: Structured Techniques For Design, Performance and Management, S. Atre, Wiley-Interscience, 605 Third Avenue, New York, NY 10016, 1980, $29.95.

Confused about data base management? Are you getting sales talk about all the different commercial data base systems, but little insight into how to use them? This book can help. The author, a former instructor at the IBM Systems Research Institute, has assembled a readable, useful volume on data base management (part of the successful Canning/Cougar series). There are many data base texts in print. Some are too technical; others are too general to be useful to practioners. This book has a good balance. It is functional.

The emphasis is upon design and management. Atre does not introduce new technology, but discusses current knowledge about the field and how to apply it to business and organizational activities. Part I deals with data administration and the development of data dictionary facilities. Part II focuses upon data base design, with emphasis upon both conceptual and logical model development. The final portion is devoted to physical aspects of data bases, including do's and don'ts on data structuring, data base evaluation and operations. Both traditional and relational data models are applied to real organization operations.

The well-illustrated book presents 10 chapters of understandable discussions. Examples of how commercial data base systems operate are introduced to explain the impact of specific design choices. Guidelines are given for determining size and report implications for various application designs. Two extensive case studies, one for a banking system and the other for a university curriculum data base, are included in appendix form, enabling the reader to examine a full design project.

Practitioners will find this a useful reference and training device. It is also suitable for classroom and workshop use.

JIM SENN
SUNY-Binghamton

Teams In Information Systems Development, Philip C. Semprevivo, Yourdon Press, 1133 Avenue of the Americas, New York, NY 10036, 1980, $17.50.

Project teams have been advocated as an approach to information systems development for the past 20 years. The concepts of chief-programmer teams and egoless programming are familiar to most of us. Unfortunately, many systems professionals have not clearly understood the advantages and disadvantages of utilizing project teams. In addition, they have been unsure how to maximize project team effectiveness. This informative, well-written book can significantly help managers of computer software projects better attain the benefits of the project team organization structure.

The book is divided into two sections. The first describes the problems and changes that occur in computerized information systems. It includes a discussion of the nature of systems development teams, presents the relevant research with regard to teams and presents methods for maximizing team effectiveness.

The second half of the book bridges the gap between academic research and its application to real-world situations. Topics covered include the organizational context of teams, the physical environment in which teams function, team structure, team member selection, social interaction, task environment and leadership. Each topic is discussed in terms of current research findings, performance evaluation techniques and specific suggestions for dealing with common problems.

PAUL CHENEY
Iowa State University

Phil Semprevivo's monograph, **Teams,** fills a void in the application-systems development literature. Most system-development activities involve groups of three to seven people. In contrast to the usual project-management writings that tend to stress individual skills and control methods, this book is concerned with leader selection, membership, group processes and evaluation.

Particularly strong is the stress on informal processes and communication skills. As Semprevivo notes, early team efforts proceeded on the naive assumption that designating a group of people as a team was sufficient to assure better performance. We have come to realize that the key issue is facilitating team member participation. Selecting the right people, giving them a meaningful role and creating an environment in which they can succeed are factors that influence group success.

Semprevivo introduces the notion of diagnosis as a way of evaluating performance and initiating corrective action. Data gathering and feedback techniques are illustrated. Process consultation and team building are covered in reasonable detail. Semprevivo does a good job of mixing conceptual and practical material. The second part of the book contains specific examples of applying the concepts in real situations. References at the end of each chapter are useful for pursuing the material in greater depth.

People familiar with organization behavior literature will

probably feel the book does not go into enough detail, particularly on group dynamics and explanations of why certain techniques work. However, as an introduction to the material, the book is written at the proper level. Sempreviso's experience as a consultant is evident in his selection and clear presentation of material.

Participants in a poorly performing project will probably not be able to make it successful merely by reading **Teams**. But the book raises a number of issues that thoughtful software managers will wish to consider further. The book complements the current crop of structured-development methodologies.

JON A. TURNER
New York University

An End-User's Guide to Data Base, James Martin, Prentice-Hall, Englewood Cliffs, NJ 07632, $21.95.

If moving targets are the hardest to hit, information systems managers must feel exceptionally secure. In the '60s they sold top management on the mysteries of real-time information systems, the total MIS and "war rooms." This glitter was followed in the '70s by the wonders of timesharing, data base management, user query languages and distributed processing. Now we ask top management to marvel at the electronic office, decision support systems, "natural" language interfaces and videotext.

In each case impressive changes are forecast for management decision-making, and in each case, actual impacts fall far short of expectations. Technologically and economically appealing solutions often fail when confronted by the political realities of organizations. Moving the organization away from the technological status quo requires change processes considerably more powerful then glossy user manuals and vendor sales presentations. Active user involvement and committment, though necessary, are infrequently achieved.

Data base, perhaps more than any other information system technology, has fallen victim to this inhibiting organizational inertia. The advantages of data base are considerable, but data base remains unimplemented or poorly implemented in many companies.

Martin's book is a belated but welcome attempt to right this data base wrong. The prolific Martin, author of several other technical data base books, aims this short (144 pages) book directly at the mid- and high-level user-manager.

The book, which can be read in an evening, "was written with no technical words except where they are unavoidable and clearly explained." Well, almost. "Tuple," "schema" and "operating system" each show up undefined, but generally the book is fairly light reading for a manager with only a limited knowledge of computers.

Martin's extensive and effective use of graphics and examples illustrates and simplifies what might otherwise be difficult material. The result is easy to read but conceptually rigorous. Topics of importance to data base users are included, while technical implementation details (such as storage structures) are ignored. The chapter titles include: What Is Data Base? Productivity and Flexibility, Who Does What? What Are Data? Data Modeling, Design Tools for End-Users, How to Succeed With Data Modeling, Data Base Languages for End-Users, Ownership of Data and Privacy, Considerations Which Affect Performance and Separate End-User Systems

Martin reinforces the need for user participation, from the first page—"It (data base) is unlikely to succeed fully unless the end-users it serves are intimately involved in certain aspects of its design"—to the last page—"become involved."

The book has its limitations, but they are relatively minor. The chapter on data models suffers from an overly abstract example. Another chapter over-emphasizes the Data Designer, a data base design tool marketed by the DMW group. Curiously, Martin forgets to remind us that he is a founder and chairman of the board of DMW.

Overall, however, the book is well done. It's well-conceived, designed, written, illustrated and edited. Martin has produced an excellent and important book. If you are about to implement (reimplement?) data base, buy a bunch of copies and spread them around your primary-user community. Be careful though; when your users finish the book, they may be dangerous. They will be enthusiastic and a lot more knowledgeable. You'll have to channel that motivation and be prepared to answer tough questions.

EDITOR

Computers and Communications: Their Management and Integration, John Diebold as interviewed by James L. Hayes, AMACOM, 135 West 50th Street, New York, NY 10020, 1980 (tape cassettes), $85.00

In 1890 the United States Census Bureau, faced with a massive information problem (the 10-year census) chose to bring in some technical expertise. John Diebold was unavailable, so the bureau settled for Hermann Hollerith. Fortunately, things worked out pretty well.

In more recent years, large organizations facing similar

massive-information problems have frequently called upon Diebold. He is today, perhaps, the most senior of a distinguished list of high-level management consultants who specialized in computer-related technology. To borrow from a popular advertisement, "When Diebold talks, chief executive officers listen."

AMACOM, a division of the American Management Association, drew upon Diebold's boardroom reputation when it persuaded him to participate in this series of taped conversations examining the potential of computers and communications. Diebold is interviewed by James L. Hayes, president and CEO of the American Management Association. In six conversations lasting approximately 20 minutes each, Diebold and Hayes span the following diverse subjects:

Investment guidelines for MIS, managing small computers, the role of telecommunications, the new MIS executive, the office of the future and the training/retraining of MIS personnel

Apparently aimed at high-level, non-MIS executives, the conversations provide a nontechnical view of the unique problems and opportunities presented to industry by today's rapidly changing computer and communications technologies. Diebold's insights come in a variety of flavors. Among them are the following samples:

"Senior MIS management that continues to block the incursion of minicomputers will win a few skirmishes, but will eventually lose the war."

"MIS executives must be willing to accept the challenge of moving up the ladder, to step away from the interesting hardware and technical details."

"Sometime in this decade a corporation, a major one will fail because (1) management doesn't have the information to meet a crisis, or (2) management has the information, but it is scattered about and cannot be pulled together rapidly and coherently."

Diebold's interview is liberally sprinkled with examples drawn from his extensive consulting experiences. Unfortunately, most of the examples are omitted from the written summary that accompanies the tapes.

This summary highlights a deficiency in audiotape presentations; the spoken word is a relatively inefficient means for conducting one-way communication. The tapes take approximately two hours to listen to, while the 33-page summary can be read in one-third the time with very little loss of content. But as Henry Mintzberg and others have convincingly shown, managers prefer oral contact to the written word.

Anyway, you can't read while driving to work. Be careful, though, if you or a CEO of your acquaintence intend to parallel-process listening with driving. Both Diebold and Hayes are rather slow, monotonous speakers. Pleasant dreams . . .

EDITOR

Computer Exhibit, National Museum of American History, Free.

You're in Washington, D.C., your work is done and the plane doesn't leave for three hours. If you're like lots of folks, you'll spend the waiting time in one of Washington's fine museums. The Air and Space Museum is probably the most popular, but my favorite is the National Museum of American History (both are located on the Mall, near the Capitol).

Collected there is a history of technology in the United States, technology in the broadest sense of the word. Sit in an 18th-century, one-room schoolhouse and see the technology our ancestors employed to transmit knowledge. A self-contained pencil factory demonstrates an entire manufacturing process. The First Ladies' inaugural dresses illustratively trace the history of fashion. The Jacquard loom highlights changing technology in the textile industry.

Unfortunately, somewhere in the midst of this journey through history, you arrive at the museum's computer exhibit and the illusion dissolves. On paper it sounds quite impressive. The Whirlwind and Atlas Guidance computers are there; they even have part of the old Univac I. But, as any newcomer to a computer room disappointingly learns, seeing computer cabinets is dull. Seeing these old boxes is even duller. There are no flashing lights, no spinning tapes, no paper flying through the printer, no messages decorating the console, no operators scurrying about on mysterious missions. These boxes sit there collecting dust and giving off a faint smell reminiscent of a moldy wine cellar.

The old computers are haphazardly displayed. Too heavy to move easily, they appear to have been left where the movers originally set them down. Peculiar posters adorn the exhibit. One, hanging above the Atlas, shows a picture of an aircraft carrier with a caption inexplicably informing us, "Some computers track space vehicles."

Missing is any sense of historical evolution. The old lumbering giants are there, but where is evidence for the phenomenal achievements in circuit density, speed and cost obtained since those vintage years? Where are the applications that have dramatically changed so many industries? Where are the minicomputers, the color graphics, the fiber optics? Where is the color, the speed, the flash, the pizzazz?

Considering the flexibility of the technology, this should be the liveliest exhibit in the museum. Instead it is the deadliest. Thousands of children walk through the museum each week. I wonder if even one has been "turned on" by this computer mausoleum?

I'll be generous and describe the exhibit as a prototype. Now let's lock the exhibit-room door and call upon experts from the museum and the new Charles Babbage Institute for the History of Information Processing to work with vendors to produce a first-class exhibit, an exhibit that is a tribute to this remarkable industry and to the country.

EDITOR