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Book reviews

Data Communications: An Introduction to Concepts and Design, by R. Techo, 1980; 293 pages. (*Plenum*, $29·40)

This book is intended to introduce non-technical readers to the basic concepts in the field of data communications, enabling them to read technical literature and evaluate proposals for systems.

The first few chapters deal in considerable detail with the fundamental electrical aspects of the subject, with useful articles on transmission media, modulation methods, channel capacity and transmission impairments. The discussion of common carrier services and telephone plant, while containing much valuable information, is of limited application to the UK reader owing to the book's US origin. The reader seeking to explore the uncharted territory of British Telecom will need to look elsewhere for his guiding light!

The second part deals with data codes, error control and protocols. The latter is, perhaps of necessity, merely an overview. No mention is made of layered protocols and X25 is relegated to a footnote to a table! The chapters on system design and selection criteria are adequate, but again suffer from the US bias and sparsity of information about packet switching and statistical multiplexing techniques.

For a book obviously aimed at the business user, it is surprising that no mention is made even in the future developments chapter of local area network technology and its application to the electronic office.

In general, a book worth reading for its basic introduction, but lacking sufficient up to date information for its intended readership to make informed decisions.

I. M. C. SHAND (Kingston)

Selecting EDP Audit Areas, by W. E. Perry, 1980; 82 pages. (*EDP Auditors Foundation*, $17·50)

This is the first book of a proposed quarterly series published by The EDP Auditors Foundation for Education and Research, which is intended to provide guidance to the internal EDP audit community in meeting professional requirements. Its objective is to provide a method enabling auditors to easily identify high risk areas for audit purposes. To this end it proposes, first, a procedure for establishing the objectives of an EDP audit function and, second, a procedure setting priorities for EDP audit areas by severity of risk.

The methodology proposed by Perry first requires that a 'task force' composed of data processing personnel, management and internal audit, consider the four areas of EDP audit: application systems, systems development, installations and audit support. Each member of the task force is asked to complete a worksheet which initially ranks the importance of the four audit categories and then allocates a priority to the individual audit areas within the categories, using a scoring system between 1 and 5. To obtain an overall rating, the two weightings are multiplied and individual worksheets collated. The results are then used to allocate available audit time and to create an 'EDP audit charter' detailing areas of responsiblity. Perry recommends that, in the final analysis, the judgement of the participants should be used in developing the EDP audit charter and the results obtained from the mathematical exercise should only be used for guidance.

Having allocated scarce resources within the four main areas, Perry proposes a similar exercise to further divide the time spent between the various computer applications. He bases his calculations upon risk factors such as materiality of potential loss, sensitivity of transactions, technological complexity etc. The time of EDP audit staff is then allocated according to the priorities obtained.

This slim volume defines in detail the reasoning behind and meanings of individual weightings as used by Perry. It gives relatively little consideration either to the difficulties of using judgement in preparing the EDP audit charter or the type of applications, if any, where such a rigid approach to assessing risk factors may not be appropriate. This however is a minor criticism and I believe this book provides useful reference material for the EDP auditor and Perry's ideas provide a constructive framework on which the reader can develop his own method of selection.

J. M. ROSS (Reading)

Systems Management, by A. Parker, 1980; 168 pages. (*Edward Arnold*, £7·50)

What do the following acronyms mean: KRA, MOE, EMV, EVI, PPDF? Like myself, I suspect that not many senior systems staff would know until reading this book. The above are included as certain measures applied by the use of analytical/mathematical techniques in organisations for the selection, justification and design of computer based systems. However, the balance is retained as a similar amount of space is devoted to the humanistic/sociological approach since people are concerned with all aspects of systems.

The structure of the book is good, the contents of the chapters adequate with answer pointers to questions posed together with a good Bibliography at the end. I liked the project selection chapter (Fig. 2.1) and found the case studies helpful, realistic and entertaining, having suffered or been involved in similar situations at some time. I felt that the example terms of reference (Fig. 3.3) should be more quantitative and specific, and would query the bald statement that one follows precise rules in systems design. Perhaps Chapter 9 (*Project Phases*) should follow Chapter 11 (*Scheduling*) as the former includes a lead–lag network diagram (Fig. 9.2) more appropriate to the latter. Most non-mathematical systems people would probably find the mathematical chapters hard going and I suspect that not many organisations would apply *all* the measures stated. Apart from these minor comments, it is a useful readable book which I would recommend senior systems analysts and programmers to read. Alongside the companion book *Systems Analysis* I have recommended this book for purchase by students following advanced level systems analysis courses, as at £7·50 it is a worthwhile purchase

C. POTTER (Slough)