Book reviews

Introducing the Electronic Office, by S. G. Price, 1979; 161 pages. (NCC, £8.50)

According to the preface ‘this book is a seenetter, exploring possibilities, benefits and problems, and outlining the products available today’. The book is divided into six chapters covering: environment and scope; what will the electronic office look like; products and services available; hindrances and challenges; implementation; future. There is a foreword by Clive Jenkins, a bibliography, a glossary of acronyms and an index.

Overall this book is rather disappointing. Despite the claims made in the foreword and on the cover it is particularly weak on ‘the significance of the people factors’ of which discussion is both brief and lacking in conviction. The structure of the book could be improved by eliminating unnecessary repetition and by re-ordering some of the material. On occasion it reads as though it was written in sections and put together in a hurry. In commenting on current data processing systems, there is a tendency to suggest that little has been learnt and no improvements taken place since the mid-sixties, a tendency which experienced data processing practitioners may find irritating.

The author is in favour of the electronic office and its early implementation. His conclusion is ‘Research and development investment in the office is not the accepted practice today and experimentation is expensive but the acquisition of experience now by experimentation will enable the full opportunities of tomorrow to be taken’. He is clear also on the likely costs and difficulties and on the need to verify the purposes to be achieved and to redefine requirements to be met, by the electronic office. Accepting the author’s evidence on the latter would allow the reader to reach a quite different conclusion, i.e. verify and redefine as though for automation but do not proceed to implementation until a cost-effective electronic office is available.

Despite its limitations (and its price) for anyone interested in the role of the office, present and future, this book offers some useful information and poses some pertinent questions.

T. G. Gough (Harrogate)


This book is intended as a text book for a comprehensive course in software engineering or as a broad introduction to the subject. It assumes a knowledge of basic computer terminology. The introduction defines the scope of the subject and stresses the important roles of communication and creativity in this discipline. Section 1 deals with project management and is strongly oriented towards the methodologies of the Hughes Corporation by whom all the contributors are employed. A typical development cycle is discussed and related to an interesting energy/entropy model. Throughout there are frequent references to an up-to-date bibliography.

The next section on software design emphasises that this is a problem solving process and that creativity as well as technical expertise and experience are necessary to achieve good design. It discusses the dynamic nature of the problem and the roles of operating systems, hardware and data bases in the design process. There is much good material here about such matters as modularity and cost assessment using weighted matrices but the close association with the particular procedures of the corporation results in a long and somewhat complex discourse. To obtain the full benefit of the ideas discussed committed and diligent reading is necessary together with access to the references. Structured programming is dealt with next in some detail with frequent references to the well known texts. There are, I think, too many trivial examples and the repeated illustration of each construct discussed in a number of languages could well have been left as an exercise for the reader. Section 4 on validation and verification points out the varying interpretations of these terms. Software testing is discussed and the use of simulation and automation, all in a broad context. Testing is illustrated by an example using a test tool of some sophistication but one that is unlikely to be available to many readers in this country. Despite the brevity of this section it provides a useful survey and invokes a number of useful ideas. The section on privacy and security starts with a discussion of the problems and some approaches to their solutions. OS/360, Multics and Hydra are used to illustrate different systems. Methods of user authentication are discussed and illustrated. A fascinating section on the use of cryptography follows in what I felt to be excessive detail. An extension of the summary on privacy and security would have been more appropriate. The set of references to this section seemed to me less up-to-date than in the earlier chapters. The final section on the legal aspects of setting up and operating a software house under US law must obviously have limited relevance to the great number of readers in this country. It does however contain a number of useful checklists of general interest. A short appendix on education and curriculae seemed too brief to be of widespread use to course designers by itself.

The recognition that software design and development is an engineering problem seems to me to be one of the more important events in computing in recent years. This is a useful introduction to the discipline to both students and practitioners and should be in every library where computing has some relevance. Its rather dull style makes it unlikely to be a popular text book with students, even in a cheaper edition. It is well produced, nicely bound and has few printing errors—honest value for money.

Bernard Coleman (Wolverhampton)


This is a report of a WG5.2 workshop held in France in 1976. The book is in three parts. The first and largest part is a selection from contributed papers and some very terse notes of the discussions on those papers. The second is a condensation of the working papers of subgroups, giving the subgroups’ tentative recommendations on their allotted topics. The third part is the report of the workshop, containing guidelines and recommendations.

Many of the participants felt that talk of methodology in graphics, let alone talk of standardisation, was premature. Much of the workshop, and its most important result, was concerned with groping towards a conceptual basis on which useful abstractions could be built. ‘The most important result is the recognition and acceptance of the need for a clear distinction between a graphics subsystem (called the core) and a modelling subsystem (called also the geometric subsystem)’ (page 201).

The appeal of this book is not to those whose interest lies in software development methods or who seek an introductory overview of the field of computer graphics: it is to those who attended—or would have liked to attend—the workshop itself.

M. A. Jackson (London)