

Preface to the Fourth Edition

It is now seven years since the publication of the third edition of this *Encyclopedia*. In the Preface to the third edition it was noted that the pace of change in computing “is still more rapid than in any other scientific or technical discipline,” but that it “may not be as breakneck as it once was.” The former claim is still correct; the latter, however, probably is not. The advent of the Internet and the rapidly falling prices and increasing capability of personal computers, among other things, made the 1990s a period of very rapid change indeed. Thus seven years is such a long time between editions that this is a very different volume from its predecessors.

How different? The third edition contained 605 articles from 370 contributors (compared with 550 and 301 in the second edition and 470 and 210 in the first edition). This edition has 623 articles from over 450 contributors of which

- ◆ 103 are new articles
- ◆ 29 are rewritten articles on subjects covered in the third edition
- ◆ 132 are third edition articles that have been extensively modified and brought up to date.

Also, this edition has 16 color pages whereas the third edition, the first to have any color at all, had only 12.

As in the previous editions, in addition to articles on the history of computing itself, many articles discuss the history of their subjects. There are five new biographies of major figures in computing, but we have

adopted a policy of not adding any new biographies of living people. There are also new articles on the history of ten important programming languages. Almost all articles from the third edition that have been retained have undergone at least minor modification, and many were extensively revised or replaced. In order that the fourth edition be not too much larger than the third, some articles from that edition have been merged into other articles while others have been deleted because their subject matter was deemed both obsolete and not of historical significance.

The seven appendices in the third edition have been retained, and two new ones have been added. One lists all articles in earlier editions that no longer appear, so that readers can find certain topics not covered in this edition. The other lists the presidents of various professional societies; previous editions included them in separate articles. The expanded Appendix IX, the Timeline of Significant Computing Milestones, remains, we hope, both informative and irreverent.

The overall result is a fourth edition in which over 40% of the material was either not contained in the third edition or has been significantly modified. The Classification of Articles in the front of this volume is an important tool for readers looking for subject matter in a specific area. In addition, there are two extensive indexes, a Subject Index and a Name Index. The latter contains the names of all persons mentioned somewhere in the *Encyclopedia* (except for authors of uncited items in bibliographies).

It is intended to make this edition available by subscription on the World Wide Web. And because current technology makes it easy and affordable, we hope to update the Web edition regularly to provide a more up-to-date resource than a printed book can ever be. This updated edition will then be used to publish fifth (and later!) editions. Indeed, before too long—but probably not for the fifth edition—this *Encyclopedia* may become entirely electronic.

Finally, a word about the title. It is the same as that of the first and third editions, whereas the second was called *The Encyclopedia of Computer Science and Engineering*. In the preface to the third edition it was light-heartedly suggested that we would henceforth use “Engineering” in the even numbered editions and omit it from the odd-numbered editions. The engineering aspects of computing, both hardware and soft-

ware, are fully represented in this edition, but we have chosen to retain the more succinct title of the third edition.

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January, 2000

NOTE: The editors and publisher welcome comments on how this *Encyclopedia* could be improved in both coverage and style as well as reports on any errors of fact or typographical errors. All correspondence should be sent by email to one of the addresses above or The Development Editor, *Encyclopedia of Computer Science*, John Wiley & Sons Ltd, The Atrium, Southern Gate, Chichester, West Sussex, PO19 8SQ, UK. (Email: encomsci@wiley.co.uk)