An Annotated Bibliography of Introductory Articles to Aid in the Selection of Small Computer Systems

U.S. DEPARTMENT OF COMMERCE
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Institute for Computer Sciences and Technology
Center for Programming Science and Technology
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AN ANNOTATED BIBLIOGRAPHY OF
INTRODUCTORY ARTICLES TO AID IN THE
SELECTION OF SMALL COMPUTER
SYSTEMS

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U.S. DEPARTMENT OF COMMERCE, Malcolm Baldrige, Secretary
NATIONAL BUREAU OF STANDARDS, Ernest Ambler, Director
An annotated bibliography of articles on small computers has been compiled. Its purpose is to provide introductory material for those involved in the selection and evaluation of small computing systems. The bibliography is aimed at the novice microcomputer user although experienced users may find several of the product-related categories of value.

Key words: microprocessors, personal computers, small computers, software, word processing, personal work stations

1. INTRODUCTION

The purpose in publishing this bibliography is to provide introductory material for those involved in the selection and evaluation of small computing systems. This effort in compiling and categorizing references has been prompted by the overwhelming popularity and diversity of small computers. The bibliography is aimed at the novice microcomputer user although experienced users may find
several of the product-related categories of value.

This bibliography presents a consolidated reference to articles on small computers, their selection, and the hardware and software products associated with them. No claim to exhaustiveness is made. The intent is to provide references to readily available material. The magazines and journals selected are considered primary sources for articles on small computers (appendix A). Books, newspapers, and vendor and user group publications have been omitted at this time. The articles referenced were reviewed, evaluated, and selected as to their value in fulfilling the objectives of this bibliography. It must be recognized that new articles on small computers continue to be published, and it is therefore impossible for this bibliography to include the most recent material. The maintenance and update of the bibliography will be a continuing effort. We expect to issue supplements to it periodically.

The bibliography is divided into four major categories. Several of these categories have been further subdivided to aid the reader in locating areas of interest. Where applicable, an article is cross-referenced and may be found in more than one category. An indication as to the type of computer (all systems, CP/M-based, Apple, Atari, TRS-80, etc.) required for operation is included for articles relating to software products.
Because of the nature of a bibliography and its abstracts, it is necessary to mention vendors and commercial products. The absence or presence of a particular product does not imply criticism or endorsement by the National Bureau of Standards or the authors.

The authors invite comments and suggestions of classes of information or specific entries that would be of interest in future bibliography efforts. The authors can be contacted at:

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National Bureau of Standards
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Small Computer Annotated Bibliography

A. Small Computers:
   1. General Information
   2. Selection Methodology
   3. Performance Evaluation

B. Hardware:
   1. Product Review
   2. Printers
   3. Video Display Terminals
   4. Storage Options

C. Software:
   1. General Packages
   2. System Software
      2.1. Operating Systems
      2.2. Languages
   3. Applications Software
      3.1. Word Processing
      3.2. Spellers
      3.3. Business Applications
      3.4. Spread Sheet Programs
      3.5. Data Base Management Systems

D. Communications
   1. General Information
   2. Networks
   3. Telecomputing/Videotext
BIBLIOGRAPHY

A. Small Computers:

1. General Information

1.1. Hughes, Elizabeth, "What's in the Box? Taking the Mystery Out of Your Computer," onComputing Inc., Fall 1981, pp. 27-34. Description of the major parts of a general computer system, and shows how these parts work together.


1.3. Schoichet, Sandor, "Personal Work Stations: A Concept Evolves into a Booming Industry," Mini-Micro Systems, April 1981, pp. 98-104,107,111,113. An exploration into the personal work station concept, the dynamics that are generating such interest, and how the market is shaping up.

2. Selection Methodology

2.1. Miastkowski, Stan, "Choosing Your Popular Computer," Popular Computing, November 1981, pp. 16-18,20-23. The factors to consider while choosing a small computer are discussed. A chart of several systems and their characteristics is included.

2.2. "Retail Store Listing," Datamation, October 1981, pp. 29-50. A survey of the major computer outlets in the 10 largest cities in the U.S.; included are the names, addresses and phone numbers of each outlet and types of equipment and services offered.

2.3. Schwartz, Barbara, "Let the Buyer Beware - Choosing the Right Computer Store," Popular Computing, January 1981, pp. 82-84,86,88. Advice and a list of questions to help select a computer store that fits the user's needs.

3. Performance Evaluation
A comparison chart and explanation of benchmark results for several microcomputers.

B. HARDWARE:

1. Product review

A comparative review of the BMC if800, the Canon CX-1, the Hitachi MB-6890, the NEC PC-800A, Fujitsu FM-8, and the Systems Formulate Corporation Bubcom80.

An in-depth look at the Atari 400, Radio Shack TRS-80 color computer, Sinclair ZX81, and the Commodore VIC-20.

A survey of several personal computers on the market: Apple, Atari, Pet, Heath, HP-85, Qsborne, TRS-80, and TI.

A personal description of the Atari's capabilities and ability as a supported computer system.

A survey of several personal computers on the market: Altos, Cromemco Z-2, Sorcerer, Intecolor, Intertec, Intellivision, NEC-8001, Northstar, PMC, and Sinclair ZX80.

A description and evaluation of the TRS-80 Model III hardware and software.

An in-depth description of the capabilities of the hardware and software of the IBM Personal Computer.
2. Printers

A review and comparison of several popular printers in the various price ranges.

A list of printer manufacturers and their products.

A basic guide to choosing a printer, including a helpful checklist.

A discussion of printer capabilities and features, including a printer comparison chart and vendor guide.

3. Video Display Terminals

An overview of currently available VDTs. Two charts provide information on vendor, cost, size and weight, and features.

An explanation of VDTs followed by a chart of the popular VDTs and a glossary of VDT terms.

4. Storage Options

An explanation of the abbreviations or acronyms (eg. RAM,ROM, etc.) used in the memory section of a computer.

Several of the factors to consider when selecting a disk memory. Included are a vendor guide, floppy capacity chart and glossary.


C. SOFTWARE:

1. General Packages and Information

1.1. Good, Phillip, "Choosing the Right Business Software," Popular Computing, April 1982, pp. 33-38. A guideline to selecting software, including several factors to be aware of, plus hints to help make the selection easier.


2. System Software

2.1. Operating Systems


A discussion of operating systems is given along with descriptions of CP/M and several alternatives (NEWDOS, SOS, etc.). A list of vendors with operating system, computer type, cost, and application compatibilities is included.

2.2. Languages

Tables presenting the comparison and evaluation of several BASIC language systems. Tables include system characteristics, benchmark results, and quality, convenience, and editing capabilities.

Several of the factors to consider before choosing a language. Included are short descriptions of BASIC, FORTRAN, FORTH, COBOL, C.


An elementary tutorial on the differences and features of interpreters and compilers.

3. Application Software

3.1. Word Processing

A collection of short articles reviewing, Scripsit, Electric Pencil, and Lazy Writer word processing programs. Also reviewed are two programs that add extra features to Scripsit; Scripmod and Superscript.

- [TRS-80]
-[Apple II]


-[Apple, Atari, CP/M, TRS-80]

-[Apple II]

-[CP/M]


-[Apple]
The features of 17 word processing packages are discussed. Included are a buyers guide, and charts of printer, editing, and formatting features.
-[all systems]

A personal review of the features and limitations of SuperScribe word processor.
-[Apple]

A list of word processor software and spelling verifiers for microsystems. Each entry denotes the vendor, equipment required, and software price.
-[all systems]

3.2. Spellers

A review and comparison of Proofreader, Hexspell, Microproof, Chextext, Miz, Spellguard, Superspell.
-[TRS-80, CP/M]

A software review of The Word, Spellguard, Wordssearch, Microspell, and Microproof.
-[CP/M, TRS-80]

A list of word processor software and spelling verifiers for microsystems. Each entry denotes the vendor, equipment required, and software price.
-[all systems]
3.3. Business Applications

Descriptions of 20 general ledger packages, with highlights of advantages and disadvantages of each. A vendor guide and chart of features and reports is included.
- [all systems]

An examination of inventory control programs with a description of several available packages. A vendor guide is included.
- [all systems]

3.4. Spread Sheet Programs

A general description of VisiCalc features. A description of SuperCalc is also included (in insert, page 36).
- [all systems]

A description of VisiCalc and several of its features and commands.

3.4.3. Heintz, Carl "Major Additions to VisiCalc Revealed," Interface Age, August 1981, pp. 70-72, 148-149.
A brief review of VisiCalc, VisiTrend, VisiPlot and VisiDex.
- [all systems]

3.5. Data Base Management Systems

An overview based on user manuals of DBMS systems is presented. A comparison of systems features is also included.
3.5.2. Blechman, Fred and Jules Gilder, "How to Choose Data Base Management Programs," Personal Computing, February 1981, pp. 23-30. An introductory guide to DBM programs for small computers; how to choose one, and what are its capabilities. A discussion of several available DBM programs (for various computers) is included.

D. Communications:

1. General Information


1.2. Parsons, Thomas, "How Data Travels," Microcomputing, October 1981, pp. 46-57. A comprehensive introduction to the mechanics of how data in your computer is transmitted over a phone line.

2. Networks:


2.2. Dahmke, Mark, "Local Networks Save Money, Increase Reliability," Popular Computing, April 1982, pp. 138-140. An introductory guide to networks; what are they, how they work, and do you need one.

2.3. Saal, Harry, "Local-Area Networks: Possibilities for Personal Computers," Byte, October 1981, pp. 3-10. A description of the characteristics of a local area network and a discussion of related system designs that address some of the same requirements.
3. Telecomputing/Videotext


APPENDIX A

This bibliography was compiled from the following magazines for the indicated periods.

**Byte**
70 Main St.
Peterborough, NH 03458
January 1980 - May 1982

**Computer**
10662 Los Vaqueros Circle
Los Alamitos, Ca 90720
January 1980 - March 1982

**Computer Decisions**
50 Essex Street
Rochelle Pk, NJ 07662
January 1982

**Creative Computing**
P.O. Box 789-M
Morristown, NJ 07960
January 1980 - March 1982

**Data Management**
505 Busse Highway
Park Ridge, Il 60068
January 1981 - April 1982

**Datamation**
301 S. Grove Ave.
Barrington, Il 60010
January 1980 - April 1982

**Desktop Computing**
80 Pine St.
Peterborough, NH 03458
December 1981

**Electronics**
1221 Ave. of the Americas
NY, NY 10020
January 1980 - April 1982

**Infosystems**
Hitchcock Bldg.
Wheaton, Il 6087
February 1982

**Interface Age**
9000 Keystone Crossing
Indianapolis, Ind 46204
June 1980 - April 1982
(Kilobaud) Microcomputing
80 Pine Street
Peterborough, NH 03458
January 1980 - January 1982

Mini Micro Systems
221 Columbus Ave.
Boston, MA 02116
January 1980 - April 1982

onComputing Inc.
70 Main Street
Peterborough, NH 03458
Summer 1980, Fall 1981

Personal Computing
50 Essex Street
Rochelle Pk., NJ 07662
January 1980 - April 1982

Popular Computing
70 Main Street
Peterborough, NH 03458
November 1980 - May 1982

Popular Electronics
1 Park Ave.
NY, NY 10016
May 1982
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A bibliography of references on personal computers has been compiled. The purpose in compiling this limited bibliography was to separate the articles on personal computing from those concerning the more general issues of computers and microprocessors.

Microprocessors, personal computers, small computers, software, word processing