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

U.S. DEPARTMENT OF COMMERCE
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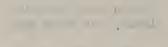
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AN ANNOTATED BIBLIOGRAPHY OF INTRODUCTORY ARTICLES
TO AID IN THE SELECTION OF SMALL COMPUTER SYSTEMS

Lynne S. Rosenthal and John Barkley

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:

System Selection and Evaluation Group

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Small Computer Annotated Bibliography

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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.

   1.2. Raskin, Jef, and Tom Whitney, "Perspectives on
         Personal Computing," Computer, January 1981,
         pp. 62-73.
         A tutorial overview of the evolution, applications,
         and the hardware and software considerations of
         personal computers.

   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

3.1. Fox, Tom, "Report Card: Benchmark," Interface Age,
      August 1981, pp. 76-82.
      A comparison chart and explanation of benchmark
      results for several microcomputers.

B. HARDWARE:

1. Product review

1.1. Kocher, Christopher and Michael Keith, "Six Personal
      Computers from Japan," Byte, May 1982, pp. 61-102.
      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.

1.2. "Low-Cost Computers," Popular Computing, May 1982,
      pp. 72-102.
      An in-depth look at the Atari 400, Radio Shack
      TRS-80 color computer, Sinclair ZX81, and the
      Commodore VIC-20.

1.3. "Personal Computers: Products for Every Need,"
      Personal Computing, May 1981, pp. 45-55,74.
      A survey of several personal computers on the
      market: Apple, Atari, Pet, Heath, Hp-85, Osborne,
      TRS-80, and TI.

1.4. Skier, Ken, "The Atari 800 Personal computer,"
      onComputing Inc., Summer 1980, pp. 24-27,54-59.
      A personal description of the Atari's capabilities
      and ability as a supported computer system.

1.5. "Today's Personal Computers: Products for Every Need
      -- Part 2," Personal Computing, June 1981,
      pp. 9-15,73-75.
      A survey of several personal computers on the
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      Intertec, Intellivision, NEC-8001, Northstar, PMC,
      and Sinclair ZX80.

1.6. Warren, Carl, "Radio Shack TRS-80 Model III Desktop
      Computer," Popular Electronics, May 1982, pp. 31-33.
      A description and evaluation of the TRS-80 Model III
      hardware and software.

1.7. Williams, Gregg, "A Closer Look at the IBM Personal
      Computer," Byte, January 1982, pp. 36,64,68.
      An in-depth description of the capabilities of the
      hardware and software of the IBM Personal Computer.

2. Printers

2.1. Blank, George, "The Quest for the Perfect Printer," *Creative Computing*, July 1981, pp. 130-137.
A review and comparison of several popular printers in the various price ranges.

2.2. Feigel, Curtis, "Byte Printer Directory," *Byte*, March 1982, pp. 278-296.
A list of printer manufacturers and their products.

2.3. Stewart, George,"Printers: Why You Need One, How to Choose One," *Popular Computing*, December 1981, pp. 84,87-92.
A basic guide to choosing a printer, including a helpful checklist.

2.4. Veit, Stanley, "Everything You Wanted to Know About Printers," *Personal Computing*, March 1981, pp. 58-69.
A discussion of printer capabilities and features, including a printer comparison chart and vendor guide.

3. Video Display Terminals

3.1. Raymond, Larry, "The Video Display Revolution" *Interface Age*, July 1981, pp. 77-83.
An overview of currently available VDTs. Two charts provide information on vendor, cost, size and weight, and features.

3.2. Veit, Stanley, "The ABC's of VDT," *Personal Computing*, August 1981, pp. 39,42-49,120.
An explanation of VDTs followed by a chart of the popular VDTs and a glossary of VDT terms.

4. Storage Options

4.1. Bierman, Paul, "Memories Are Made of This," *Personal Computing*, June 1981, pp. 41-49.
An explanation of the abbreviations or acronyms (eg. RAM,ROM, etc.) used in the memory section of a computer.

4.2. Bursky, Dave, "Disk Memories: What You Should Know Before You Buy Them," *Personal Computing*, April 1981, pp. 20-27.
Several of the factors to consider when selecting a disk memory. Included are a vendor guide, floppy capacity chart and glossary.

4.3. James, David, "Understanding Mass storage, What's In It For You," Personal Computing, February 1982, pp. 65-70,74,142-144.
An explanation of the various mass storage options for microcomputers.

4.4. Valentine, Pamela, "A Beginners Guide: Understanding Floppy Disks," onComputing Inc., Summer 1980, pp. 8-15.
An introductory tutorial on floppys including a discussion of the principle behind disk drives, their appearance, format, and use.

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.

1.2. Steele, Russell, "Evaluating Small Systems Applications Software," Microcomputing, June 1980, pp. 166-170.
A discussion of software attributes that should be considered when selecting software.

1.3. Thiel, Carol Tomme, "New Packages Span the Software Horizon," Infosystems, February 1982, pp. 47-53,56-62,68-74.
Software review of new or newly enhanced software packages (not exclusive to microcomputers).

2. System Software

2.1. Operating Systems

2.1.1. Alden, Roland, "Operating Systems: The Choice is Yours," Interface Age, June 1981, pp. 84-87.
A beginner's tutorial of an operating system, its parts and how it works.

2.1.2. Barden, William, "Disk Operating Systems - What Do You Do After You Plug It In?," Popular Computing, March 1982, pp. 60-68.
A general discussion of disks and the functions and features of a disk operating system.

2.1.3. Boyd, Good, and Stanley Veit, "A User´s Guide to Operating Systems," Personal Computing, May 1981, pp. 27-32,83-87,108.
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

2.2.1. Firebaugh, Sorensen, and Stone, "Comparative Evaluations of BASIC Systems," Creative Computing, December 1980, pp. 70-80.
Tables presenting the comparison and evaluation of several BASIC language systems. Tables include system characteristics, benchmark results, and quality, convenience, and editing capabilities.

2.2.2. Harwood, Robert, "High-Level Languages - Which is For You?," Personal Computing, January 1982, pp. 56-58,61-64,101.
Several of the factors to consider before choosing a language. Included are short descriptions of BASIC, FORTRAN, FORTH, COBOL, C.

2.2.3. Li, Teri, "Whose BASIC Does What?," Byte, January 1981, pp. 318-327.
A comparison of ROM-type BASIC´s for the Apple, Atari, Pet, Sorcerer, TI99/4, and TRS-80.

2.2.4. Mazur, Ken, "Understanding Interpreters and Compilers," Personal Computing, May 1981, pp. 39-42,77-81,110,112,116.
An elementary tutorial on the differences and features of interpreters and compilers.

3. Application Software

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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]

3.1.2. Carlson, Keith and Steve Haber, "Four Word Processors for the Apple II," Byte, June 1981, pp. 176-190,196-204.
A review and comparison of Supertext, Writeon, Datacope Scribe, and Easy Writer word processors.
-[Apple II]

3.1.3. Finseth, Craig, "Managing Words: What Capabilities Should You Have with a Text Editor?," Byte, April 1982, pp. 302-310.
A list and description of several popular text editor features.

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A summary of word processor features. Tables include: text formatters, editors, and a list of vendors.
-[Apple,Atari,CP/M,TRS-80]

3.1.5. Goodfellow, David, "Inspiration From the Muse," Microcomputing, May 1981, pp. 53-54.
A comparison of Supertext and the improved Supertext II word processing program.
-[Apple II]

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A brief introduction to word processing followed by a discussion of Edit and PR, Electric Pencil, Wordstar, Magic Wand.
-[CP/M]

3.1.7. McComb, Gordon, "A Primer for Word Processing," Creative Computing, July 1981, pp. 84-89.
An explanation of many of the common word processing features.

3.1.8. McWilliams, Peter, "An Introduction to Word Processing," Popular Computing, February 1982, pp. 17-19.
A guide to some of the most useful word processing features.

3.1.9. Moskowitz, Robert, "Word Processing Apple-ications," Interface Age, May 1981, pp. 92-99.
A comparison evaluation of six word processor programs: W/P System, Easywriter, Supertext, Applewriter, Write-on 11, and Magic Window.
-[Apple]

3.1.10.   Perry, Robert, "Word Processing: the A to Z of
          Software," Personal Computing, March 1982,
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          The features of 17 word processing packages are
          discussed. Included are a buyers guide, and
          charts of printer, editing, and formatting
          features.
          -[all systems]

3.1.11.   Shetter, Michael, "A   Very   Versatile   Word
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          A personal review of the features and
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          A list of word processor software and spelling
          verifiers for microsystems. Each entry denotes
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          price.
          -[all systems]

3.2. Spellers

  3.2.1. Kimmel, Stephen, "Hte Proofreader Porgrams,"
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          A review and comparison of Proofreader,
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          Superspell.
          -[TRS-80, CP/M]

  3.2.2. Lemmons,   Phil,   "Five   Spelling-Correction
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          1981, pp. 434-448.
          A software review of The Word. Spellguard,
          Wordsearch, Microspell, and Microproof.
          -[CP/M, TRS-80]

  3.2.3. "WP   Packages   for   Microsystems,"   Computer
          Decisions, January 1982, pp. 158,163-164.
          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

3.3.1. "General Ledger Packages," _Personal Computing_, August 1981, pp. 29-34,74-85.
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]

3.3.2. Perry, Robert, "Inventory Control Programs," _Personal Computing_, March 1981, pp. 25-35.
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

3.4.1. Good, Phillip, "VisiCalc, An Electronic Worksheet," _Popular Computing_, December 1981, pp. 34-38.
A general description of VisiCalc features. A description of SuperCalc is also included (in insert, page 36).
-[all systems]

3.4.2. Green, Doug, "VisiCalc: Reason Enough for Owning a Computer," _Creative Computing_, August 1980, pp. 26-28.
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

3.5.1. Barley, Kathryn and James Driscoll, "A Survey of Data-Base Management Systems for Microcomputers," _Byte_, November 1981, pp. 208-234.
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

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An investigation into data communications; what is it, how it works, and what equipment you need to use it.

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:

2.1. Brandt, Michael and Michael Bodner, "Intelligence Networks in the Office Environment," _Microcomputing_, October 1981, pp. 80-83.
Distributed networks can offer economic and performance advantages. Three networks, Ethernet, Nestar, and Corvus, are discussed.

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

3.1. Ball, A.J.S., Bochmann, and Gecsei, "Videotex Networks," <u>Computer</u>, December 1980, pp. 8-14.
An introduction to videotex networks and a description of several existing and planned network structures.

3.2. Dahmke, Mark and Stan Miaskowski, "Telecomputing: Hooking Your Computer to the World," <u>Popular Computing</u>, December 1981, pp. 94,96,98.
An overview of telecomputing including several examples, how it operates, equipment needed, costs, and sources.

3.3. Ditlea, Steve, "Office Data Banks," <u>Popular Computing</u>, February 1982, pp. 46,48,50.
A discussion of telecomputing possibilities, including available sources.

3.4. Eigsti, Steve, "Micronet - From the User's End," <u>Microcomputing</u>, October 1981, pp. 47,50,54-55.
A description of the Micronet telecomputing network, how to use it, and what it can do.

3.5. Skier, Ken, "The Source, Big Computer Power in Your Home," <u>onComputing Inc.</u>, Summer 1980, pp. 60-67.
A description of the Source telecomputing network and some of the programs accessible through it.

APPENDIX A

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

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

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

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

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

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

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

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

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

Infosystems   February 1982
   Hitchcock Bldg.
   Wheaton, Il 6087

Interface Age   June 1980 - April 1982
   9000 Keyston Crossing
   Indianapolis, Ind 46204

(Kilobaud) Microcomputing   January 1980 - January 1982
  80 Pine Street
Peterborogh, NH 03458

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

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

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

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

Popular Electronics   May 1982
  1 Park Ave.
NY, NY 10016

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6. PERFORMING ORGANIZATION *(If joint or other than NBS, see instructions)* **NATIONAL BUREAU OF STANDARDS** **DEPARTMENT OF COMMERCE** **WASHINGTON, D.C. 20234**	7. Contract/Grant No.
	8. Type of Report & Period Covered

9. SPONSORING ORGANIZATION NAME AND COMPLETE ADDRESS *(Street, City, State, ZIP)*

10. SUPPLEMENTARY NOTES

☐ Document describes a computer program; SF-185, FIPS Software Summary, is attached.

11. ABSTRACT *(A 200-word or less factual summary of most significant information. If document includes a significant bibliography or literature survey, mention it here)*

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 micro-
processors.

12. KEY WORDS *(Six to twelve entries; alphabetical order; capitalize only proper names; and separate key words by semicolons)*

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

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