FREE

SOFTWARE

for your

APPLE ®

FREE Software & Resources For Your Apple II & IIe Computers

- What's Available
- Where it is
- How to get it

- Educational Software for School and Home
- Games • Home Management • Business
- Users' Groups • Telecommunications

"The Most Valuable Computer Resource You'll Ever Own"

ENRICH / GOOD IDEA BOOKS

FREE
SOFTWARE
FOR YOUR
APPLE

David Heller
Dorothy Heller

ENRICH/OHAUS
San Jose, California

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any of these programs and other materials in this book.

ABOUT THE AUTHORS

Dorothy and David Heller believe that computers can be understandable and accessible to everyone! They specialize in books that help people get more enjoyment and utility from their computers. David is co-author of *Dr. Wacko's Miracle Guide to Designing and Programming Your Own Atari Computer Arcade Games* and the *Dr. C. Wacko Presents BASIC* series for Apple, Atari, Commodore, and IBM personal computers (Addison-Wesley, 1983); *Space Knights* a science fiction novel with nine interactive games for the Atari computer (Reston, 1983); and is a frequent contributor to *Hi-Res, Atari Connection,* and *InfoWorld.*

Dorothy is co-author of *Computer Confidence: A Woman's Guide* (Acropolis, 1983); *PET Games and Recreations* (Reston, 1981); and is a frequent contributor to *Hi-Res, Atari Connection, InfoWorld, Compute,* and *Interface Age.*

Dorothy and David have also co-authored the *Free Software* series for the Atari, Commodore and TI computers (Enrich 1983, 1984).

ACKNOWLEDGEMENTS

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INTRODUCTION

ENRICH YOUR APPLE COMPUTING EXPERIENCE
WITH
FREE SOFTWARE FOR YOUR APPLE

For All Apple Computers
including
The Apple II, Apple II+, Apple IIe, Apple III and Lisa

- Shows you where to find valuable free resources for you and your Apple computer.

Users' Groups

- Introduces you to the exciting world of Apple Users' Groups. There are more than four hundred fifty of these groups worldwide offering extensive FREE software libraries, courses, informative newsletters, and help.

Free Software by Phone

- Shows you how to get hundreds of FREE programs and services, by phone, without leaving your home!

- Directory lists over five hundred phone numbers to get FREE software and services.

- Telecommunications terms and concepts clearly explained.

- Shows you exactly what equipment you'll need to make contact today!

- How to get FREE public domain CP/M terminal software.

- A list of vendors of moderately priced commercial terminal software. A description of and complete instructions for a unique and inexpensive commercial terminal program with up and downloading features that meets all your communications needs.

Start your own Bulletin Board Service (BBS)

- An "electronic Bulletin Board" operator tells you how to start your own "base" station. We tell you where and how to get FREE bulletin board software.

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- Shows you where to find the support you'll need to expand the use of your Apple computer at home and in the classroom. We also show you how and where to get FREE educational software, how to network with other parents and teachers to solve teaching problems, and to share ideas and programs.

Looking for the right magazine?

- Gives you an extensive directory feature loaded with magazines for Apple computer owners.

*** AND MUCH, MUCH MORE ***

A WORD AGAINST PIRACY

This book has been written to show you how to obtain FREE software *without* resorting to piracy.

Piracy is the theft of copyrighted software by unauthorized copying and distribution.

Piracy is not only illegal and immoral...it can actually drive a small software house out of business, destroy individual creative incentive, and make larger companies unwilling to make the investment required to produce high quality software.

Piracy can deprive you of a large software selection at the marketplace and make it hard for you to pursue a career as a professional programmer.

The overall result of piracy is to punish those who produce excellent software and encourage those who produce quick-and-dirty software.

When you buy programs from a reliable software house, you'll get the support you need to get the most out of their product. Customer service, documentation, updates, revision notices all cost money. The pirate can't offer any of these services. A thief can only sell you what has been stolen...then you're on your own.

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WELCOME TO FREE SOFTWARE

FOR YOUR APPLE COMPUTER

WELCOME TO
FREE SOFTWARE
FOR YOUR APPLE COMPUTER

Apple II, Apple II +, Apple IIe, Apple III, and Lisa Owners

NO MATTER WHERE YOU LIVE

No matter where you live, in the U.S. of A., Canada, England, Europe, Australia, or even Zanzibar, we'll show you how to get FREE software and where to find valuable resources for you and your Apple computer.

USERS' GROUPS: ONE GREAT RESOURCE

The first section of *Free Software* introduces you to the exciting world of Apple Users' Groups. There are more than four hundred of these groups worldwide offering extensive FREE software libraries, courses, informative newsletters, and help for Apple owners. Many of these groups have special interests. Our detailed profiles of selected groups introduce you to clubs that specialize in education, community service, computer hardware construction, Kanji translations, scientific research, business, home planning, medical applications, computer use for the handicapped and much, much more!

We've listed all the clubs, worldwide, and tell you how to become a member of many of these groups without leaving your home! Or, if you'd like, we show you where the nearest group is and the right person to contact, so you can attend their next meeting and get FREE software and support from other Apple owners.

EXCLUSIVE INTERVIEWS WITH APPLE COMPUTER, INC.

We even show you how to start your own Apple Users' Group, with the assistance of the International Apple Core. We also interview top executives at Apple to show you the depth of support Apple provides to users through dealers, distributors, IAC sponsorship, the Apple Education Foundations, and many other special services.

FREE SOFTWARE BY PHONE

The Free Software by Phone section shows you how to get hundreds of FREE programs without leaving your home! This detailed section begins by explaining the terms used in computer telecommunications, gives you a comprehensive equipment buyer's guide, and includes FREE program lists to turn your computer into a telecommunications terminal today!

We show you how to get FREE software by phone and include instructions for FREE or inexpensive terminal software programs in Applesoft DOS, Pascal, and CP/M. Handy 'Quick Reference' charts are provided to help you send and receive messages, get FREE software, send your programs to others or chat with distant computer owners.

SET UP YOUR OWN BASE STATION
WITH
FREE BBS SOFTWARE

In an exciting interview, an "electronic Bulletin Board" operator (who is only fifteen years old and is already an expert on Apple CP/M and telecommunications) tells you how to start your own "base" station and how to get the software you'll need absolutely FREE!

OVER FIVE HUNDRED FREE EXCHANGES TO CALL

A starter Apple phone directory of one hundred phone numbers puts you in contact today with other Apple users and a wide variety of exciting FREE services. As a bonus, we've included an additional five hundred phone numbers for you to explore!

ATTENTION—PARENTS & EDUCATORS
FREE EDUCATIONAL SOFTWARE

Free Software is particularly valuable to parents and educators who use their Apple computer in a learning environment. Our comprehensive section on Educational Software and Resources shows you where to find the support you need to expand the use of your Apple

computer at home and in the classroom. We also show you how and where to get FREE educational software, how to network with other parents and teachers to solve teaching problems, and to share ideas and programs.

ALMOST FREE SOFTWARE

A directory of magazines for Apple computer owners, with subscription information and a synopsis of the type of material and FREE Apple software listings each magazine provides, is in our Almost Free Software section. Knowing which publications are best for your needs saves you time and expense while increasing the enjoyment and utility you'll get from your Apple computer.

ENRICH YOUR COMPUTING EXPERIENCE

Regardless of your age, interests, or where you live, the valuable information in *Free Software* will expand and enrich your Apple computing experience!

WHAT IS FREE SOFTWARE?

As Apple Users' Groups have grown, many members have become increasingly familiar and proficient with their computers. An outgrowth of this experience is an abundance of user-written public domain programs for your Apple computer.

Public domain software is a user's gift to you. It is software that has been donated to the public by its creator.

WHERE IS IT? HOW CAN I GET IT?

These valuable programs are in the libraries of Apple Users' Groups throughout the world and are available to members and non-members alike for the cost of the disk or cassette, the reproduction, and handling. No profit is built into this cost; the charge for a typical disk loaded with as many as twenty programs is usually between three and ten dollars.

You can get public domain software by mail, by visiting a neighborhood club, or by using a modem to "ask" an electronic Bulletin Board to send the program to you over the phone lines.

You can also call up the Apple SIG (Special Interest Group) on CompuServe to take advantage of the public domain programs this service offers.

(Our "Free Software By Phone" section shows you how to do this.)

WHAT IS IT WORTH?

What's free public domain software worth? The answer is...a lot! Public domain software allows you to build a useful and diverse software library without spending a fortune or resorting to piracy.

Most public domain software authors can't match the skills and expertise that professionals bring to heavy business-applications software. There are times when you'll be happy to spend what a commercial software company asks. Their product will justify your investment.

Programs like Word Juggler™, Home Accountant™, and VisiCalc™ are examples of professional work that would be difficult to find in the public domain arena.

But what about all those other applications? Some of the best game, educational, and home management software is available free. If you're a computer programmer the choice of excellent public domain programming aids and utility software is almost endless.

Then there are those times when your kids want ten new games a month, or you need more software for your classroom than your school district can afford, or you want to take a look at a program's listing to learn more about programming. Public domain software to the rescue!

Public domain software:

- is useful, and enjoyable. There are free programs that range from games to home management to education.

- is really valuable. Although most public domain programs are not quite as polished as their commercial counterparts, many are just perfect for *your* special application. And, they're free!

- enables you to take advantage of the special knowledge and experience of different users—like programs that another parent has developed for a learning disabled child, or a program for home management that another Apple computer owner developed that is perfect for your needs.

- teaches you how to judge commercial software. After you've been exposed to a variety of public domain programs, you'll know the difference between a good commercial product and one that really isn't worth your money. When you do decide to invest in a commercial product, you'll be an educated buyer; you'll get the best value.

NO MATTER WHERE YOU LIVE

No matter where you live, you'll be able to get free software by simply writing to many of the clubs listed in our Apple Users' Group Directory. Ask for their catalog of public domain software. If they have one, they'll be happy to send it to you.

Apple Users' Groups offer a surprising variety of valuable information and software. The well-known Washington, D.C. Apple Pi, Ltd. has more than one hundred twenty-seven disks, containing more than two thousand seven hundred programs that include games, educational software, business, and utility programs in Applesoft, CP/M 94, Pascal, Forth, Binary, and Text files for Apple II, II+, IIe, and III owners. They have also started both Lisa and Macintosh special interest groups, so watch for public domain software for these exciting new machines in the near future!

Of course, you can also get thousands of programs directly from International Apple Core, L.O.G.I.C. in Toronto, Canada, and Call A.P.P.L.E. Many other clubs that aren't as well-known as these three also offer lots of software goodies.

Washington, D.C.'s Apple Pi, Ltd.'s (WAP's) software library is representative of the software services that many Apple Users' Groups are offering on a smaller scale.

Washington, D.C. Apple Pi's Library allows the sharing of user-written programs. There are four ways to get programs from WAP's Library:

1. If you live in the Washington, D.C. area, come to a WAP chapter meeting with a blank disk and have programs copied for you or bring in original, non-copyrighted programs to contribute and exchange for a FREE library disk.

2. Visit WAP's office during regular office hours and purchase the disks you want, or exchange them for your original, user-contributed programs. See the *WAP Journal* for office hours or call (301) 654-8060.

3. Copy WAP's disks from a friend or friendly dealer. It's fine with WAP, as long as you respect the nature of public domain software and don't try to sell your copies.

4. Order disks or tapes through the mail from the club office at Washington Apple Pi, Ltd., 8227 Woodmont Avenue, Suite 201, Bethesda, MD 20814. All new members receive a catalog of free software; the disks cost about $7.00 mail order with fifteen or more programs on each disk!

(See our Mini-Profile on WAP in the "Users' Group section on pp. 39).

If you donate original programs to the WAP's Library, you receive the disk of your choice in exchange!

WAP is representative of the many clubs that will send public domain software to you by mail or exchange software with your local club.

WHAT TYPE OF SOFTWARE IS AVAILABLE?

A wide variety of FREE software is now available. No matter where your interests lie, there's something for you!

GAMES
BUSINESS
EDUCATION
HOME MANAGEMENT
COMPUTER UTILITIES
GRAPHICS DEMONSTRATIONS
SOUND AND MUSIC PROGRAMS

The following graph and pie chart show the wide diversity of public domain software available from just one group, WAP.

Washington Apple Pi. Ltd.
Program Disk Library

Applesoft

961

Relocatable
Basic 3

Int Basic

464

CP/M 94

244

Pascal

Forth 119

445

412

Text Files

Binary
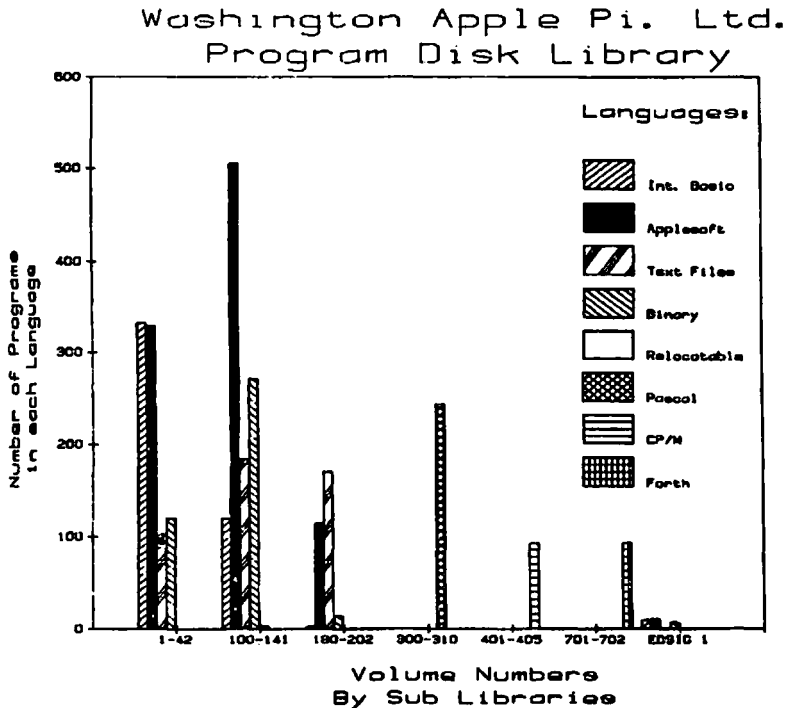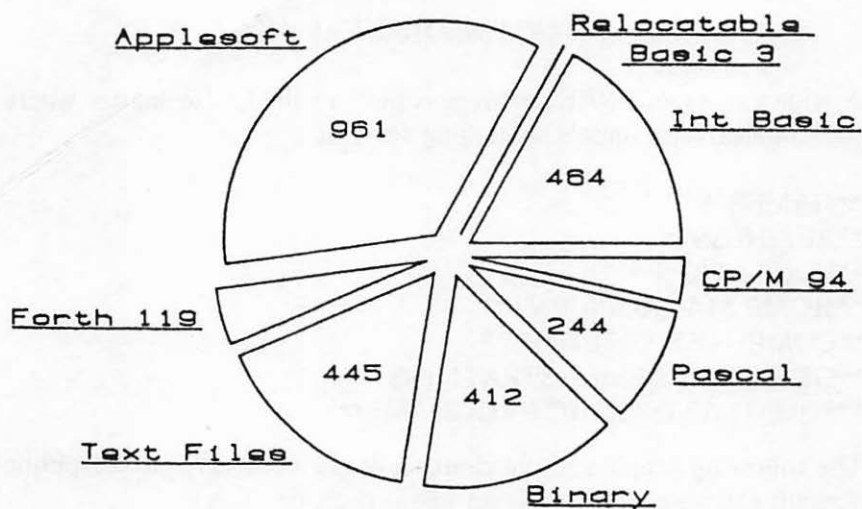
127 Disks = 2742 Programs

Languages Used
in WAP Programs

HELPFUL HINT

If you are a parent or educator, be sure to read our
Education section to discover more FREE software and
valuable resources.

Read our "FREE Software by Phone" section if you'd like
to get public domain software from the comfort of your
home.

USERS GROUPS
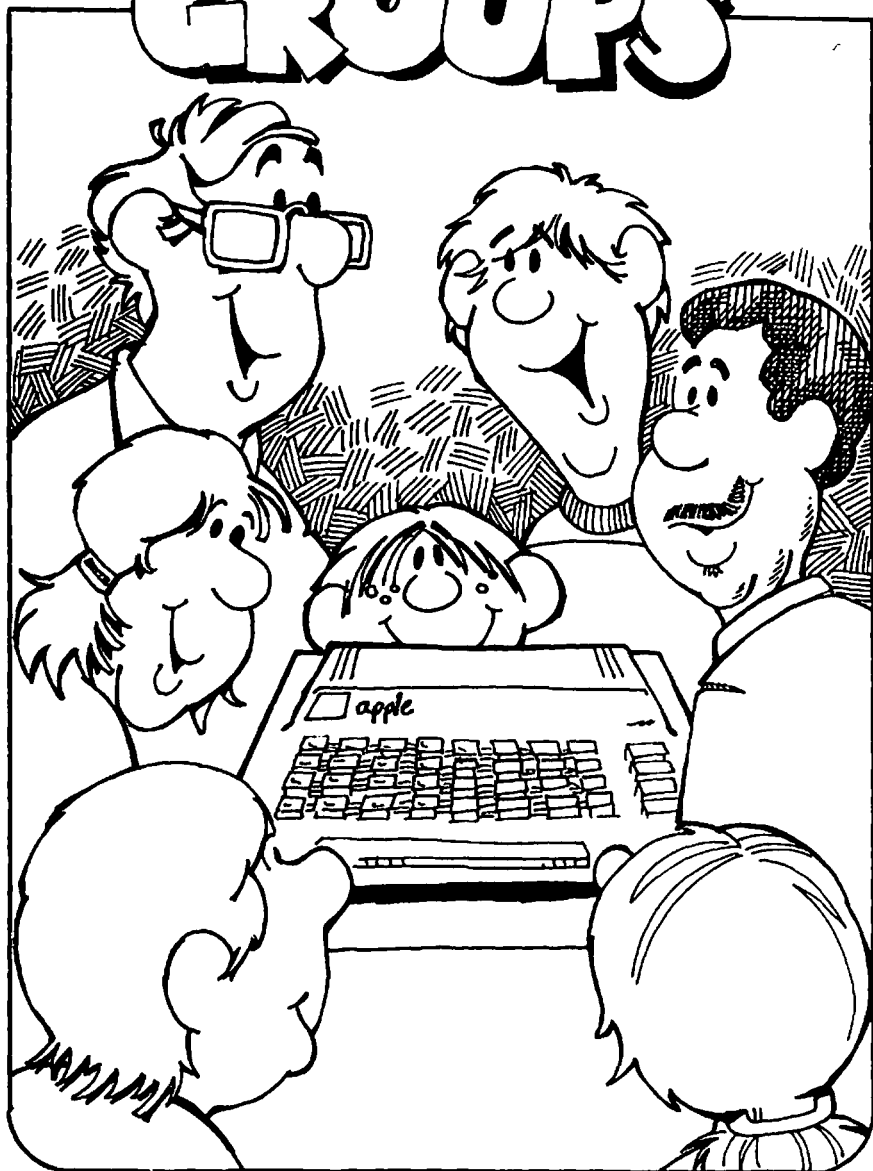
USERS' GROUPS

WHAT IS AN APPLE USERS' GROUP?

An Apple Computer Users' Group is an organization of people who own Apple computers. Their main purpose is to share information about Apple related programs and products, and to help each other expand the usefulness and enjoyment of their computing experience.

DO YOU NEED A USERS' GROUP?

Would you like to increase your software library with free public domain software?

Would you like to know where to find a commercial software package just right for your application?

Would you like to know what peripherals will work best with your Apple computer?

Do you need help in hooking up the new hardware you've just bought?

Would you like to learn BASIC, FORTH, PASCAL, PILOT, or assembly language?

Do you have a program or idea that you'd like to share with other Apple enthusiasts?

Would you like to work with others to develop software?

Would you like to get involved in community help projects?

Would you like to help your children learn from your computing experience?

Are you interested in computer telecommunications?

If you answered YES to any of these questions, you need a Users' Group.

A Users' Group can provide the solution to all of your computer-related questions. The questions above represent only a small sampling of the wide range of service and support you can get from an Apple Users' Group.

HOW CAN I FIND A LOCAL USERS' GROUP?

We've provided a state-by-state and country-by-country listing of all the Apple Users' Groups that are members of the International Apple Core. (IAC). Browse through this list, find the club nearest you, then call or write.

BUT, THERE'S NO CLUB NEAR ME!

If there isn't a club near you, or if the local club doesn't seem to fit your needs, you might consider starting a new users' group.

The key ingredients for a successful group are:

1. Five or more people who want to share information about their computers.

2. Two or more people willing to get things started.

STARTING A NEW USERS' GROUP

During your planning stages, it's a good idea to write to the people at the International Apple Core (IAC) at 908 George Street, Santa Clara, CA 95050, or call (408) 727-7652. IAC has a New Club Assistance Committee, headed by Karen Zinsmeister, whose goal is to help you with your new group. You can also purchase a detailed and comprehensive "Club Management Handbook" for $50.00 from the IAC.

The information we've provided here summarizes some of the major points about starting a new Apple's Users' Group.

FOUR IMPORTANT STEPS

1. Make contact with other computer users.

2. Announce your intention to start a users' group.

3. Hold your first meeting and keep meeting on a regular basis.

4. Ask for help, share ideas and stay informed.

1. MAKING CONTACT

Contact the nearest existing group and see if anyone there would like to join you, or knows of others who might. If there is no group of Apple computer owners nearby, you'll have to develop your own contacts.

Retailers

Check in with local Apple dealers, software stores, or general computer retailers in your area. Ask if they will:

1. Mail a notice to their customers for you, if you prepare it and pay for the postage.

2. Allow you to post a bulletin announcing your new group.

Schools and Colleges

Most schools and colleges have a newspaper, bulletin board, or public address system that will carry your message.

Local Companies

Contact the personnel director and ask to have your announcement circulated. Companies with engineering departments are likely to have computer hobbyists among their ranks. Apple computers are so widely used by so many people that you can also find other users in your local schools, hospitals, and libraries.

Post Notices

Post notices on bulletin boards at the library, supermarket, and bank.

Use Your Modem

If you have a modem, you can post a bulletin on a number of local BBS's. (See our "FREE Software By Phone" section for more information.)

Advertise

A small ad in your local newspaper can bring big results. Also, consider contacting local radio and television stations and ask them if they'll run your announcement as a public service.

2. THE ANNOUNCEMENT

Be sure to include all the following information in all your announcements:

A NEW GROUP is forming for those owning, using or interested in APPLE PERSONAL COMPUTERS.

FIRST MEETING: Date
TIME: Starting time of meeting
LOCATION: Address of the meeting
*PHONE: Please call (Name) at this number for further
          information or come to our first meeting!

*When you add your phone number to the notice, be sure to indicate the times you'll be available to chat. You don't want people calling you at any hour of the day or night.

3. MEETINGS

You should plan to hold meetings on a regular basis. Meetings can range from formal lectures to loosely moderated open discussions. It is always important to keep your meetings active, interesting and fun.

For many members, attending meetings will be their major form of participation. You must make sure that it's a rewarding experience for them.

Your first meeting

Make your first meeting an active one. Most members will have just come from work and they'll want something interesting!

Your first meeting should show your prospective members the value of your active group. Demonstrations are the most convincing form of proof. You might invite a guest speaker, demonstrate software or show off a favorite project. You could also invite a local manufacturer to demonstrate an interesting software product or peripheral device.

Some things your new group can do

There are no set rules about what your group can or can't do. Most groups do some or all of the following:

HOLD MEETINGS
OFFER COURSES
PRESENT SPEAKERS
EVALUATE PRODUCTS
PUBLISH A NEWSLETTER
ANSWER MEMBERS' QUESTIONS
SHOW OFF MEMBERS' PROJECTS
MAINTAIN A SOFTWARE LIBRARY
PARTICIPATE IN COMPUTER CONFERENCES
ARRANGE GROUP PURCHASES AND DISCOUNTS

4. ASK FOR HELP

Ask for help from other users' groups. Share ideas and exchange information. Subscribe to other groups' newsletters; stay in touch and stay informed.

IAC WILL HELP

The International Apple Core's New Users' Committee can provide your club with invaluable support. Read our mini-profile of the IAC on pp.(24) to learn more about this world-wide organization of Apple users.

MINI-PROFILES

We phoned Apple Users' Groups across the country and around the world to gather profiles of typical and not-so-typical clubs. The response from *all* club presidents and officers was both enthusiastic and extremely helpful. Without their help this book would not have been possible. Thank you!

We wanted to include profiles of all of the four hundred fifty and more Apple Users' Groups listed in *Free Software*. However, our schedule and the large amount of data gathered would not permit us to do this. We haven't forgotten dynamic groups such as Big Red Apple Club in Norfolk, Nebraska, an organization that provides support and software to many rural Apple users; innovative groups like Apple-Dayton in Dayton, Ohio; or the many active groups in Australia, the United Kingdom, and Europe. (If you would like your club profiled in the next edition of *Free Software,* write to us at UPDATE '85 on pp. 222 .)

We have put together profiles of the International Apple Core and eight participating clubs that demonstrate the spectrum of services and support you can expect to find as you explore the world of Apple Users' Groups.

Mini-Profile 1

IAC
International Apple Core
Santa Clara, California

EMPHASIS: International Support Organization
for Apple Users and Apple Users' Groups

ADDRESS:
908 George Street
Santa Clara, CA 95050

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OFFICERS:
Dave Alpert, President
Kenneth D. Silverman, Executive Director
Louis H. Milrad, Special Interests Groups Committee Chairman

PHONES:
Dave Alpert, (312) 648-1794
Kenneth Silverman and Main IAC Office, (408) 727-7652
Karen Zinsmeister, New Club Assistance Committee Chairperson,
    (408) 727-7652
Louis H. Milrad, Special Interests Groups, (416) 223-0599–work;
    (416) 223-0599–home

MAGAZINE:
Apple Orchard, twelve issues yearly, 110-page glossy, included in dues.
$30.00 U.S., FPO & APO; $36.00 Canada; $45.00 surface mail.
$48.00 airmail to Mexico, Central America, Caribbean Islands,
Phillippines, Samoa. $60.00 airmail to S. America, Europe, N. Africa.
$72.00 airmail to Asia, Middle East, S. Africa, Australia. (Also
available with Special Users' Group Package).

MEMBERS:
Over four-hundred-fifty clubs worldwide, plus individual member-
ships.

Education, Information, Support

The International Apple Core is a non-profit organization that was
founded by some of the original Apple Users' Groups to provide
mutual education, information, and support. From modest begin-
nings, it has evolved into an international organization that publishes a
major Apple magazine, disseminates thousands of public domain
programs, supports many Special Interest Groups, and provides
discounted Apple-compatible products and a special insurance plan
for computer equipment and software.

IAC's Regional Directors serve as a liaison for Apple Users' Groups all
over the world. There are IAC Apple Users' Groups everywhere in the
world, from Alaska to Singapore! To get more information about
Apple Users' Group happenings in your area, contact:

Officers

Dave Alpert	President	(312) 648-1794	Allen G. Sneider	Treasurer	(617) 742-6100
Harlan G. Felt	Vice-President	(408) 554-5211	John H. Budge	Secretary	(408) 554-5071
Louis H. Milrad	Vice-President	(416) 222-8447	Kenneth Silverman	Exec.Dir.	(408) 727-7652

Regional Directors

Stephen Lloyd	(Region 1)	(415) 571-7370
Jim Simpson	(Region 2)	(805) 492-3391
Mike Kramer	(Region 3 & 4)	(215) 356-6183
Bob Sander-Cederlof	(Region 3 & 4)	(214) 324-2050
Barry Bayer	(Region 5)	(312) 798-6496
Neil Lipson	(Region 6)	(215) 356-6183
Robert Ramsdell	(Region 7)	(617) 546-3104
Tom Wysocki	(Region 8)	(216) 942-7086
Roger Keating	P.O. Box 448	011-(612) 389-2994
	Double Bay 2048, N S W Australia	
Auby Mandell	409 Queen St. W.	(416) 593-9862
	Toronto, Onc. Canada M5V 2A5	
Dr. Steve Bellamy	#402, 5-7-13 Tajiri	0473-79-3610
	Ichikawa, Chiba, Japan	

Region Information

Region	Area
1	CA zips 94100 & up, WA, OR, NV, HI, AK, & American Samoa
2	Southern California, zips 93999 & lower
3	AZ, MN, TX, OK, AR, MO, LA, MS, TN
4	ID, UT, MT, WY, CO, ND, SD, NE, KS, MN, IA
5	WI, IL, MI, IN, KY
6	PA, NJ, FL
7	ME, CT, MA, NH, RI, VT, NY, DC
8	OH, WV, MD, DE, VA, NC, SC, GA, AL

Individual or Group Membership

You can join IAC several ways. You can become a member of one of the more than four hundred fifty users' groups worldwide and enjoy local group activities as well as IAC benefits; affiliate your new users' group with the IAC; or join the IAC directly as an individual member.

Individual members receive twelve issues yearly of *Apple Orchard* at the rates listed above (depending on airmail or surface delivery outside of the U.S.A.) and are eligible to participate in the Special Interest Groups and purchase software and computer insurance at special rates.

Clubs can also benefit from the Special User Group Package, which includes a one-year group membership, subscription to the *Apple Orchard,* 12 months of the "Disk of the Month," and a worldwide list of other users' groups. New members can purchase the whole package for $90.00; current member groups pay only $60.00.

Public Domain Software

IAC distributes public domain software from their large library, plus some copyrighted programs at discounted prices. Members can also subscribe to the "Disk of the Month" program, which offers monthly theme disks filled with user-contributed software for $30.00/six months or $5/disk.

A special bonanza for teachers and parents are the "3 Pak" disks for $19.95. The "Educational 3 Pak" is part of an ongoing program that offers three disks that teach Applesoft and Machine Lanaguage with a series of Math Tools.

A separate education disk offers learning programs oriented toward children ages 4-10. The education disk includes a program, "Voice Print," that enables handicapped users to generate voice prints on the screen using the cassette input on the back of the Apple.

The Logo 3 Pak (for members who have Apple Logo software) contains the Logo Tool Kit, sample Logo programs, and documentation that enable beginners to perform simple projects during their very first session with Logo.

IAC's public domain software library also offers: "The Compiler," a monthly disk of articles stored as TEXT files for users' group newsletters; "Hi-Res Games," contributed by a users' group in Japan; Applesoft and machine language tutorials; a pinball games disk; and public domain and discounted copyrighted software for Apple III users. Average disk price is $7.95, or $6.95 for quantity purchases of five disks or more.

Special Interest Groups

Direct contact with IAC's international "SIGs" is one of the major benefits to members. The goal for all of the SIGs is to provide a self-supporting organization that disseminates its own newsletter and public domain software to members with special interests. IAC SIGs now include:

SPECIAL INTEREST GROUPS:

Co-ordinator	Louis H. Milrad	(416) 222-8447
Agriculture	Susie Allen	(408) 746-0636
Apple ///	Don Norris	(415) 921-3774
"Calc" Applications	John C. Hunter	(416) 292-2590
Data Management	Malcolm Slovin	(213) 837-3741
Dental	Ellis D. Neiburger	(312) 244-0292
Education	Contact IAC	(408) 727-7652
Family	David Stern	(301) 881-2543
Games	Jim Eatherly	(202) 232-6046
Ham Radio	James Hassler (WB7TRQ)	(307) 632-4934
Handicapped	Dr. Ann Pettit	(317) 288-7733
Health Services	Terry Mitiken	(512) 691-6367
Investments	John McMullen	(914) 245-2734
Languages	Ed Titlebaum	(716) 275-4061
Lisa	Gene Pope	(303) 690-7559
Telecommunications	Craig Vaughan	(703) 471-0572
COMMITTEES		
IAC Librarian	Maj. Terry N. Taylor	(213) 372-4134
Software	Dr. Charles Smith	(416) 477-3575
Club Activities	Ransom Fields	(415) 863-1093
New Club Assistance	Karen Zinsmeister	(408) 727-7652

New SIGs that are just forming include:

CP/M SIG: H. Ken Kaner, 1139 Dolores, San Francisco, CA 94110, (415) 821-0125

Medical Office Management SIG: Alexander Kleider, 28 W. Kings Highway, Souix City, IA 51104, (712) 255-8089 (work), (712) 239-5948.

As this book goes to press, IAC members are also organizing a new Lisa SIG and a Laboratory SIG for research scientists. (See our "Mini-Profile" of the SRI Users' Group, pp. 43 .)

Louis Milrad, an IAC officer and active member of Toronto, Canada's L.O.G.I.C. group, is SIG Co-ordinator. For more information on existing special interest groups, or to form a new one, contact Louis at:

(416) 222-8447
or
Weir & Foulds   2 First Canadian Place
POB 480   Toronto, Canada
Exchange Tower   M5X1J5

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Mini-Profile 2

SFAC
San Francisco Apple Core
San Francisco, California

EMPHASIS: Sharing Information

ADDRESS:
1515 Sloat Blvd., Suite 2
San Francisco, CA 94134

OFFICERS:
Joyce Conklin, Coordinating Director
Don Scellato, Marketing Director
Sami Capron, International Group Coordinator

PHONES:
Club Office: (415) 566-2342
    (announcements, meetings times, and messages)
Joyce Conklin, (415) 341-6955
Don Scellato, (415) 672-2051
Sami Capron, (415) 388-8631

MAGAZINE:
Cider Press, twelve issues yearly, included in dues. $20.00 U.S., FPO
& APO; $30.00 Canada; $40.00 to Mexico, Central America,
Caribbean Islands; $41.00 to S. America, Europe, N. Africa; $47.00 to
Asia, Eastern Europe, Pacific Isles, Middle East, Australia, S. Africa.

MEMBERS: 1300

MEETINGS:
Third Saturday of the month in Bldg. C., Fort Mason Center, San
Francisco, CA, 10:00 A.M. Also separate SIG meetings.

SIGS:
New Users
BASIC
FORTH
CP/M
Printers
Telecommunications
Graphics
VisiCalc/Spreadsheets
East Bay Interest Group

Sharing Information While Having Fun

The San Francisco Apple Core is a veteran users' group that is more than five years old and was one of the original founders of the International Apple Core. The club is a non-profit corporation run by volunteer officers appointed by an annually-elected Board of Directors. Their goal is to share information about Apple computers through member services, interaction, and the club newsletter. "We try to have a good, friendly atmosphere for people of all ages, interests, and levels of computer know-how," says Coordinating Director and BASIC columnist Joyce Conklin.

Friendly Meetings

One-hundred-fifty to two-hundred Apple addicts meet regularly at Fort Mason Center in San Francisco on the third Saturday of the month. The meetings start at 10 A.M. with general information and announcements. "We follow with two demonstrations every meeting. The major demonstration is shown on a projection screen. We also have a second demo running simultaneously for people who aren't interested in the first topic."

All meetings and demonstrations include a general question-and-answer session. "We work hard on keeping this personal so beginners don't get intimidated."

The sales table is also open at every meeting so members can order from the extensive public domain software library and buy a variety of products and peripherals at discount prices.

From Star Wars to the 68000

SFAC meetings cover a wide range of topics. Recently, the group held a "GamesFest," where commercial companies displayed their latest in enetertainment software. Members could buy new packages, try out the latest games and compete in the "high score" contest. SFAC also keeps tabs on the latest happenings at Apple Computer and covers Apple's annual shareholders' meeting. Demonstrations may show off hardware, such as the 68000 microprocessor; explain how to use applications software; become a "Swap Meet" for members to recycle their systems; or include a "Special Interest Group extravaganza."

The club tries to combine information with fun. A recent meeting featured two representatives of Hollywood Hardware, who demonstrated how they created special effects on the Apple computer for *Star Trek, Star Wars, Battleship Galactica,* and *Never Say Never Again.* "It was a fascinating meeting," Joyce recalls. "No one wanted it to end!"

Monthly Magazine

Club members produce a monthly magazine, edited by Allan Woods. *The Cider Press* features book and product reviews; regular columns with BASIC, Pascal, and CP/M; program listings; helpful hints and information; reports from the Special Interest Groups; and club news and announcements.

All articles are contributed by members, who receive a free disk full of software in recognition for their efforts!

Public Domain Software and Other Goodies

The club has generated and accumulated an impressive library of public domain software. The SFAC 1983 Disk Number 1 contains three programs, including a complete hi-res graphics game, a High Score Tabulator, and a hi-res graphics display program. The Library #1 has over three hundred fifty programs, packaged in diskette holders in a SFAC binder with over thirty pages of documentation! The second Library contains two hundred fifty programs. The 1981 Yearbook collection contains twelve disks that emphasize games and

business applications. Members can also buy a Programming Utilities collection, a Game Set, 1983 Education Applications, Home Applications, a 1983 Disk 2 Potpourri, an SFAC Mailing List Program, and an SFAC Pascal Disk 1.

The VisiCalc group is working on SFAC VisiCalc template disks that will contain a collection of updated tax preparation templates and attendance and class grading templates for teachers.

The club is also issuing "Blossoming Forth," a user-written word processor and FORTH tutorial.

Members can also take advantage of discounted purchases of disk drives, diskettes, controller cards, shift key modifiers, and other Apple-compatible products. Prices range from $7.50 up to $98.00 for complete library collections, an average of about fifty cents a program! There is a small additional charge for mail order.

Supportive Members

"We include a smorgasbord of members," says Joyce Conklin, "from little kids to retired gentlemen. Club composition is changing in two ways: people are less interested in programming and more interested in applications and many more women are joining. I used to be the token female. Now, our membership and Special Interest Group leadership are about 50% female."

Beginners and members with special problems can find a friendly ear at SFAC. One member wrote to the magazine to thank the friendly SFAC people who helped her to decipher documentation that "seemed as if it were written in Japanese, translated into Sanskrit, and transcribed into English by a happy drunk whose native language was Hungarian."

"Our goal is to provide a place for questions, information, 'how to do it,' and to socialize and have fun," says Joyce Conklin. SFAC has been meeting this goal for over five years!

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Mini·Profile 3

HAAUG
Houston Area Apple Users' Group
Houston, Texas

EMPHASIS: Applications

ADDRESS:
HAAUG
c/o Robin Cox
5401 Chimney Rock #607
Houston, TX 77081

OFFICERS:
Mike Kramer, Editor, *Apple Barrel*

PHONES:
Mike Kramer, *Apple Barrel,* (713) 358-6687

MAGAZINE:
Apple Barrel, twelve issues yearly, included in dues. $30.00 first year; $20.00/year following.

MEMBERS: 1050

MEETINGS:
Third Saturday of the month at University of Texas; 2nd Thursday in evening at Houston church; also separate SIG meetings.

SIGS:
Business
Apple III
Medical
Home Use
Games
Assembler
Pascal
CP/M
Advanced Topics

"Learning More About Your Machine"

HAAUG was founded by Apple users in November 1979 by "One-hundred-sixty people who wanted to program. Now, 80% of our people could care less about programming."

HAAUG has successfully made the transition from a hobbyist group to an applications oriented club that serves physicians, professionals, and new computer users. During the process, their membership increased five-fold. "Right now, we're struggling with the question of whether we want to grow more," says magazine editor Mike Kramer.

Prestigious Magazine

Houston's Users' Group is well-known for its *Apple Barrel,* a high-quality magazine that publishes in-depth articles on applications and programming, as well as original program listings. "I'm proud to say that many of our articles are picked up regularly by the *Apple Orchard* and other users' group publications," says editor Kramer.

All Day with the Apple

HAAUG holds two meetings monthly, as well as SIG meetings.

The bulk of the membership meets every third Saturday at the University of Texas for an all-day meeting. Meetings begin in the morning for the club officers and the board of directors who take care of business matters. Special Interest Groups congregate from 12 Noon until 2 P.M. in various classrooms. The members then return to a main lecture hall for thirty minutes of business, followed by a guest speaker.

Speakers include representatives of Apple Computer, Inc., demonstrations of printers and new peripherals, and demonstrations and discussions of applications software.

After the main speaker and questions and answers, insatiable SIG members continue to meet until 6 P.M.

An especially active SIG is the Medical Group. "We have lots of physicians and researchers from the medical community and the University in our club."

Free Software

Although the emphasis at HAAUG has shifted from programming to applications, the group boasts a large software library of two to three hundred disks. Each new member receives one disk and a software catalog with a starter kit. Members can also take advantage of other public domain programs by copying them at the Saturday meetings or sending for them by mail order. Disks cost about four to five dollars each. A catalog of the software library is available on disk.

Community Outreach

HAAUG participates in an annual Applefest and has coordinated many community outreach programs. Recently, the group volunteered its services to Education Region #4 in Texas. "We've offered to help out schools and customize software for teachers in the Region," says Mike.

Come to HAAUG, y'all

Apple users are welcome at HAAUG, whether they are new owners or veteran hackers. "We try to create a friendly atmosphere where everyone can learn more about their machine, whether they're beginners or advanced users."

Mini-Profile 4

IAC Japan
Apple Unlimited
Ichikawa, Chiba Ken, Japan

EMPHASIS: Increasing Productivity

ADDRESS:
Apple Unlimited
402, 5-7-13 Tajiri
Ichikawa, Chiba Ken
Japan 272 01

OFFICERS:
Dr. Steve Bellamy, IAC Regional Director

PHONES:
0473-79-3610

MAGAZINE:
Absolutely Apple, quarterly, plus meeting notices and the "Unlimited", two-page newsletter.

MEMBERS:
500-700 (for Apple Unlimited)

DUES:
Approximately $10-12/monthly.

MEETINGS:
Twice weekly on Wednesday and Saturday

SIGS:

Hardware Construction
Word Pro
Calc
Games
Kanji Translation

Telecommunications
Pascal
DBase Users

Apple in Asia

Dr. Steve Bellamy is both IAC Regional Director for the Asian Region, which includes Japan, Taipei, Taiwan, Hong Kong, Korea, and the Philippines, and an active member of "Apple Unlimited." We interviewed Dr. Bellamy while he was between a trip to Taiwan and his office in Tokyo.

"Computer science is now compulsory in the Japanese schools, so sixty percent of our membership are Japaneses students, teachers, and academics. The remaining forty percent are westerners who are in senior management at corporations based in Japan and military people from the U.S. who buy their Apples at the P.X."

Activities are in English, which most Japanese members have also learned at school.

East is East and West is West

Apple Unlimited produces an impressive number of services and activities with a special Japanese flavor for their members.

The group sends out one-pagers on administrative matters, a regular two-page newsletter, "The Unlimited," that relays concise, specific information on resources, and a quarterly publication. "Absolutely Apple" includes a wide span of articles on hardware, applications, reviews, and programming. "It can be any length, and usually is much more than one hundred pages/issue."

Most users' groups meet monthly; Apple Unlimited meets twice weekly! The club congregates at its own office. The facilities, secretary, and staff are all sponsored by a leading industrialist.

"The trend is towards members who are interested in applications, but hobbyists are welcome, too."

New members first visit at least three special interest groups to get a good overview of the activities that the club offers, then take at least eight three-hour lessons on the Apple as a "grounding course."

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Apple Unlimited encourages continuing education. In addition to the intermediate courses and specific SIG training that the group offers, members are also encouraged to attend local universities. The club "tracks" a member's progress and recommends the courses that he or she should take to round out their education! "The Japanese are highly motivated to work towards the good of the group, so they are willing to take courses and additional training that they believe will benefit our organization."

SIGs and Software

Apple Unlimited's active SIGs take their mission seriously. The Telecommunications SIG is now negotiating a special arrangement with the Japanese telephone company to set up an electronic bulletin board system. "In Japan, direct connect devices are illegal; we're limited to acoustic couplers only." The club is working on an arrangement that would access the Source, CompuServe, PRESTEL, and a data base named "Venus—P," and would also enable members to communicate user-to-user. "We hope to be ready to present the plan at the next Asian Applefest," Bellamy says.

Apple Unlimited's SIGs are full of creative people, including the designers of many popular arcade games. "There are members of our Hardware Construction SIG," Steve says, "that are certified geniuses."

The club donates and updates its software library to cooperating Apple dealers. "Disseminating our software through the dealers helps them to make sales because they can give the programs away as an inducement to purchasing the system, and it also gives publicity to our group," Steve explains.

Steve ruefully admits that there isn't much need for public domain software in much of the Asian region outside of Japan. "In Hong Kong and Singapore, everything is considered to be public domain, including WordStar!"

"We encourage people to really use their Apples. People join principally because they want to increase their efficiency and productivity."

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Mini-Profile 5

WAP
Washington Apple Pi, Ltd.
Washington, D.C.

EMPHASIS: Service

ADDRESS:
WAP
8227 Woodmont Ave.
Suite 201
Bethesda, MD 20814

OFFICERS:
David Morganstein, President

PHONES:
WAP Office, (301) 654-8060
David Morganstein, President, (301) 972-4263

MAGAZINE:
The Journal of WAP, twelve issues yearly, 64-pages, included in dues.

$7.00 initiation fee, $18/year

MEMBERS: 4,000

MEETINGS:
Fourth Saturday of the month at the Uniformed Services University of
the Health Sciences (USUHS), Building B, 4301 Jones Bridge Road,
Bethesda, MD on campus of the National Naval Medical Center (see
Journal for changes in time or location).

Board of Directors meet second Wednesday of the month at 7:30 P.M.
in the WAP office—all members are welcome to attend!

ABBS: (301) 657-4507

SIGS:	Home Control SIG
	LAWSIG
Appleseeds	LOGOSIG
Apple III	NEWSIG
AMSIG	Pascal SIG (PIG)
Business	SIGAMES
CESIG	STOCKSIG
CP/M	Telecommunications SIG
DISABLEDSIG	Macintosh
EDSIG	Lisa
FORTH SIG	Assembly

We're A Service Organization

WAP began in December 1978 with informal meetings in the homes, basements, stores, and libraries of a few recent purchasers of the new Apple computer. None of the founding members had any experience with the Apple, although some of them were knowledgeable with computers. "There was a general understanding that a users' group could help all participants to meet their varied goals," state David Morganstein and Bernie Urban.

In five years, WAP has evolved into one of the world's premier Apple Users' Groups, due to the dedication of their committed volunteers.

One example of WAP's devoted volunteers is the *Hot Line,* a long list of members who have special expertise in specific products or applications. These volunteers accept calls at their homes from any member who needs help—sometimes as late as midnight!

ABBS and Journal

Two other exceptional services of WAP are the club's electronic bulletin board system and its comprehensive monthly journal. WAP's ABBS provides an electronic mail and information service to all members who request an ID number from the club office. WAP is planning to expand their BBS system and even offers public domain telecommunications software from their club library! (See our chapter on "Free Software," pages 67 .)

Each new member of WAP receives a comprehensive *New Member Reference Book,* edited by Betsy Harriman and other volunteers, which includes everything a new member needs to know. The topics range from the software library and meeting schedule to a Chip Map and Troubleshooting Guide of the Apple II and II+ systems.

The Reference Guide is typical of the quality of WAP publications. *The WAP Journal,* edited by Bernie Urban, is completely user-written and includes helpful reviews, listings, applications articles, and regular columns. "We cover a wide variety of needs and interests, from beginners to experts," says Bernie.

A recent issue featured seven detailed articles by members of the DISABLEDSIG about Apple applications for handicapped users, as well as articles on CP/M, DIF, Programmable Function Keys, and much more.

All-Day Apple Affairs

Three to four-hundred members meet monthly in a large auditorium for "all-day Apple affairs." People show up at 8:30 A.M. to join or make purchases from WAP's public domain software library and discounted product list. From 9-10 A.M., members can participate in a large question-and-answer session or attend small demonstrations of hardware and software products. After a business meeting at 10 A.M., everyone congregates to hear the main speaker.

WAP meetings can get pretty exciting, such as the February meeting with Steve Wozniak, who flew out from California to present WAP with one of the first Macintosh computers only a few days after its official announcement!

WAP's SIGs cover a wide variety of needs and interests. Members of the Appleseeds start as young as five years old; other groups deal with business and scientific applications. "A perennial favorite is our Pascal SIG," says David, "better known as 'PIG'!"

Free Software and Member Services

WAP's variety of activities are coordinated by just two full-time member/employees, Bernie and Genna Urban, and many volunteers. Member services include group purchase plans for software and equipment, Call-A.P.P.L.E. discounts, and access to WAP's excellent software library. The ever-expanding public domain software library currently contains more than one hundred disks, with fifteen programs or more per disk. The cost is nominal: only $5.00 at meetings or $7.00 mail order. The disks are arranged by categories, which include Games, Utilities, Business, Graphics, Education, CP/M, FORTH, DOS, Pascal, and many other subjects.

WAP also organizes a regular series of tutorials that members can attend for $10. The tutorials cover specific software packages or applications, hardware products, Pascal, assembler, "and whatever else people want."

Community Service

WAP's dedicated volunteers also take their services to the community. Recently WAP volunteers provided free income tax preparation services for low income families. They're also coordinating a software offer to local schools of ten programs per disk for only the cost of the media! WAP's DisabledSIG serves as an information source for handicapped users all over the world. Their newsletter can be downloaded directly to Braille printers for blind users. The SIG's chairperson is deaf and communicates through the club's ABBS electronic mail service.

Another thing WAP members have in common, says Dave, is a desire to help others. "Many of us work in bureaucratic jobs where we're well-paid but don't get a lot of satisfaction. We don't want to make a buck with our club activities, we want the satisfaction and fulfillment of helping people. I've been accused of being the Billy Graham of the micro world! The truth is that WAP is full of wonderful people."

Mini-Profile 6

SRI Apple Users' Group
Stanford Research Institute
Menlo Park, California

EMPHASIS: Scientific Research

ADDRESS:
Stanford Research Institute
c/o Steven Leach
333 Ravenswood Ave.
Menlo Park, CA 94025

OFFICERS:
Steven Leach, President

PHONES:
(415) 859-3146–home

DUES: $4.00/year

MEMBERS: 50

MEETINGS:
Third Wednesday of each month at 12 Noon, SRI facilities

SIGS:

Laboratory SIG
EDSig

Scientific Research with the Apple

SRI's Apple Users' Group is typical of the many small but powerful groups that are interested in special applications. Many of SRI's employees are involved with science and research. In addition to the interests they share with other Apple users, they have a special investment in using the Apple as a laboratory tool.

"Our members include experimental scientists, electrical engineers, people who use data base systems extensively, programmers, and people who are mainly interested in word processing. Although most of us are scientists, we're not computer hackers. Our group includes beginners and we're interested in all applications."

SRI researchers, in fact, were responsible for developing the prototype of the "mouse" now used with the Lisa and Macintosh systems. SRI scientists also developed a laser printer and have done important work with FORTH.

"Our meetings usually include five to ten minutes of business and announcements about new products or programming tricks," says Steven. "The main speaker then talks for thirty to forty-five minutes on varied topics, such as hardware, software, telecommunications, the Lisa computer, the Syntauri musical keyboard and an optical keyboard and an optical card reader that uses the Apple."

Apple in the Laboratory

The SRI group's main interest, however, is using the Apple for scientific research. "We use the Apple extensively for data acquisition and to analyze data, run experiments, look at models, and test applied theories. In one recent experiment, we used the Apple to monitor the corrosion of materials under high temperature. The Apple looked at the data periodically and created graphs, parameters, equations, and cross-and auto-correlation functions to analyze the products under temperature stress."

SRI's Apple Group is actively collaborating with the new international IAC Laboratory SIG, whose president is a research scientist in Australia. The group is helping to put together an international Lab SIG newsletter and will also exchange public domain software with other scientists.

"We swap user-written programs that can fit any equation to any set of data, do graphing routines with data editing on the page, perform cross-and auto-correlation functions, and specialized programs for fast wave-transformation and other tasks."

All scientific Apple users are welcome to get in touch with the SRI group, either directly or through the IAC Lab SIG, to exchange software and techniques that employ the versatile Apple as a laboratory tool.

"Our goals are to provide an educational forum where working scientists can exchange ideas and public domain software. Our members can also take advantage of our journal library, meet knowledgeable people, get support, and generally participate in information transfer throughout SRI and through the IAC International Lab SIG."

Mini-Profile 7

A.P.P.L.E.
Apple Puget Sound Program Library Exchange
Kent, Washington

EMPHASIS: Everything For Your Apple

ADDRESS:
Memberships and Orders:
A.P.P.L.E.
21246 68th Ave. South
Kent, WA 98032

OFFICERS:
Dick Hubert, President and Executive Director
Ken Smith, Director

PHONES:
Dick Hubert, Ken Smith and Administration (206) 872-2245

24-Hour Member Service toll-free order number: (800) 426-3667

A.P.P.L.E. Programming/Technical Assistance Hotline: (206) 872-9004, 9 A.M. to 3 P.M., 6 P.M. to 10 P.M. seven days a week

BBS:
Apple C.R.A.T.E. BBS, 24-hour (206) 872-6789

MAGAZINE:
CALL A.P.P.L.E., Val Golding, editor, 12 issues/year, $45.00
(includes membership & other services), $60.00 for first class mail,
$60.00 for Canada, West Indies, Central America, Colombia,
Venezuela, $66.00 South America, Europe, North Africa, $72.00
South Africa, Australia, Asia; $100 institutions, schools

MEMBERS:
25,000 members in 70 countries

MEETINGS:
Third Tuesday of each month at 7:30 P.M., A.P.P.L.E. office

SIGS:
Apple III
Investment
Telecommunications
Education
DBase
FORTH
Graphics

DEPARTMENTS:

Order Desk
Tracing
Member Information
Education, Classes
Retail Store
Dealer Services
Marketing
Technical Support
Testing and Evaluation
Operations

Largest Apple Users' Group

One day in 1978, thirteen new Apple owners decided to have a meeting
at a local computer store in Washington. "Somehow, we kept on
growing," says Marketing manager Kevin Donohoe. That's a bit of an

understatement, because the Apple Puget Sound Program Library Exchange is now the largest Apple Users' Group in the world, with 25,000 members in the United States, Canada, Japan, Germany, and England. A.P.P.L.E. combines a local users' group for people who live in the Puget Sound area with a variety of sophisticated services for Apple users everywhere.

One member service is the *CALL A.P.P.L.E.* Magazine, an eighty to one-hundred page monthly glossy that provides information, commentary, and program listings for Apple users from beginners to experts. A recent issue featured special articles for teachers and blind users, software reviews on educational programs, games, a technical section, a "Hi-Res Slide Show," "Exploiting TASC," and much more.

All articles in the magazine are available for reprinting and distribution by other users' groups, as long as credit is given to *CALL A.P.P.L.E.*

BBS and Hotline

A.P.P.L.E. provides its members with a twenty-four hour BBS for announcements, information, and electronic mail. "We encourage all our members to take advantage of this service," says Donohoe.

Members can also access a Technical Hot-Line seven days a week from 9 A.M.-3 P.M. and 6-10 P.M. to talk to experts who can help with programming and equipment problems. The hot line is designed to answer general questions and suggest possible solutions to programming problems and related subjects. The service is staffed by volunteer consultants.

Local Meetings and Classes

Members who live in the Puget Sound area can attend monthly meetings and participate in local classes and workshops. "Most of our local members are people in technical fields. Many of our members have master's degrees and seventy percent of our membership in general has a B.A. or B.S. Lots of our local people are hard-core, old-time users who work in the aircraft industry. They're really interested in how the Apple works," says Donohoe.

New members who want to participate in training and classes can contact Charles Stillman, the A.P.P.L.E. Education Director, for attendance at reduced prices.

Public Domain Software and Products

A.P.P.L.E. has assembled a large collection of two hundred fifty disks. Their software library includes games, utilities, CP/M programs, adventure games, and astronomy programs. Disks containing fifteen programs or more are available for only $4.00 mail order and $3.00 for walk-ins.

A.P.P.L.E. also provides members with a large selection of commercial hardware and programs at discounted rates. Most products are 20-30% below list retail price; a $499 printer may sell for $325, a graphics tablet for $30 less than retail, memory boards, interfaces, disk drives, diskettes, and many other products are also available.

For whatever you need—just call A.P.P.L.E.

Mini-Profile 8

L.O.G.I.C.
Loyal Ontario Group Interested in Computers
Ontario, Canada

EMPHASIS: Service and Software Development

ADDRESS:
L.O.G.I.C.
P.O.B. 696, Station B
Willowdade, Ontario
Canada
M2K 2P9

OFFICERS:
Auby Mandell, President and IAC Regional Director for Canada
Charles Smith, Editor
John Hallman, Vice President
Bill McKay, Secretary
Karen Smith, Treasurer

PHONES:
Auby Mandell, (416) 593-9862
Brenda McKay, Administrative Assistant and L.O.G.I.C. office,
    (416) 881-8120
Charles Smith, *Maple Orchard* and IAC Software Committee
    Chairman, (416) 477-3575

BBS:
(416) 455-5192, 24-hours

MAGAZINE:
Maple Orchard, Charles Smith, editor, 100-page quarterly, with
membership

DUES:
$30/first year, $20/year following (includes *Maple Orchard*)

MEMBERS: 1500

MEETINGS:
Wednesday evening, monthly (contact club office for schedule and
meeting place)

SIGS:

New Owners	Handicapped SIG
Telecommunications	Lisa
VisiCalc	
Stock Market	
Medical	
Games	
BASIC	
PASCAL	

"Loyal Computer Users in Canada"

L.O.G.I.C. acquired its name when the group applied for non-profit status and found that Canadian law would not permit them to use "Apple" in their name. Bureaucratic regulations aside, L.O.G.I.C. members are indeed loyal to the Apple computer. L.O.G.I.C.'s President is also IAC Regional Director for Canada; editor Charles Smith also serves as Software Committee chairman for the IAC. L.O.G.I.C. members range from the Atlantic to the Pacific, and even to the Arctic.

Services for Members

The group publishes a one hundred page quarterly, usually a theme issue. Previous issues have dealt with "How to Program in Machine Language," "Understanding and Using DOS" and "Memory Management." Articles are combined with program listings. Says editor Charles Smith: "We try to provide members with solid information, although I've been accused of being too technical."

L.O.G.I.C.'s rapidly expanding public domain software library includes fifty to one-hundred CP/M and DOS disks, one hundred twenty-five disks in PASCAL and Logo, about fifty disks of FORTH programs, and tutorials in Applesoft and machine language. The club reviews all software and provides documentation if the disk's documentation isn't adequate. The software catalog is available for $3.00; disk prices range from $5–$10.00 with documentation.

L.O.G.I.C. is responsible for much of the software now in the IAC library. "We wanted to upgrade the quality of public domain software and hired professional programmers at almost volunteer rates to improve and standardize the programs in our library," says L.O.G.I.C. officer Charles Smith. "We also review the programs carefully to ensure that they are user-contributed and not copyrighted software."

"Users' group membership is changing rapidly to people who are more interested in applications than in programming, and there's a great demand for high-quality public domain software. It used to be 'Buyer Beware'! Now, people expect software that really works!"

Meetings and SIGS

Over four-hundred L.O.G.I.C. members congregate monthly on a Wednesday evening. They review new products and announcements from 7:30 P.M.–8 P.M., then have a "Help Wanted" question-and-answer session for assistance with programming and hardware. A speaker gives a presentation for about an hour on varied topics such as Data Bases, Memory Management, and Lisa. At 9:15 P.M., members demonstrate the latest library disks, followed by a secondary session on a specific application.

Active SIGS

SIGs are responsible for many member services and community activities. The New Owners' SIG meets twice monthly at a local dealer for hands-on instruction and exchange of public domain software. (Although Canadian Apple dealers won't service "clones," owners of Franklin and other Apple look-alikes can also attend.)

The Handicapped SIG has developed programs that enable handicapped users to control various instruments. The active Medical SIG consists of forty to fifty pediatricians who use the Apple for a variety of applications, including in the Intensive Care Unit. Members review software and develop specialized programs to exchange with other professionals. User-developed software includes payroll/billing, programs for monitoring patients, educational software to train nurses, residents, and interns in Intensive Care Unit shock support, and educational software for kidney transplant patients. Medical SIG members have presented software at international medical meetings and will make their software available to other professionals on request.

The Telecommunications SIG, chaired by Rick Mili, is responsible for the new L.O.G.I.C. BBS, which went on-line in December 1983.

L.O.G.I.C.'s BBS

"We realized that a BBS would be a wonderful way to keep in touch with our geographically scattered members," says Charles Smith. The

BBS operates twenty-four hours daily at three hundred baud and includes six new programs every week for downloading, as well as announcements and electronic mail.

The BBS is the result of negotiations between the club and the Envoy Electronic Mail system. Members can sign up for the Envoy program with the Canadian telephone company for $5.00/monthly. The system ties in the user with the main L.O.G.I.C. data base in Ontario, but the member is charged for only a local call. Interested members can get on-line with public domain telecommunications programs from the L.O.G.I.C. library, including D.C. Hayes Micromodem software,and PASCAL and CP/M terminal programs that use the Christensen protocol. (See our section on "Free Software.") For more information on Envoy, contact the club office or the Trans Can representative in Toronto: George Tkachuk at (416) 581-2087.

Community Activities

The indefatigable L.O.G.I.C. enthusiasts participate in an annual Canadian computer fair and also organize many community services. Members are currently providing software and support to area libraries that own Apples, and also support Apple use at a home for handicapped children. The club is looking into producing educational programs on the Apple for cable television and wants to support a BBS network for Toronto social agencies. Another project is to donate Apples to more organizations for the handicapped. "All it takes is time, money, and lots of hard work," says Charles Smith, who knows.

Users' Groups

ALABAMA

Applebamians
Thomas Moore
POB 1588
Anniston AL 35630

Apple Corps of Birmingham
Roland Turrentine
1037 F Huffman Rd
Birmingham AL 35215

West Alabama Users
Barry Collins - Pres
1009 W Jackson ST
Demopolis AL 36732

Quad Cities Apple Byters
Leslie R Tate
RT 6 Box 304
Florence AL 35631

Coosa Valley Apple Club
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Ashland OR 97520

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Corvallis OR 97330

Apple Blossom
Walter Leja · Pres
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Eugene OR 97520

Salem Area Computer Club
Ed Sigurdson
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Salem OR 97303

Tillamook Computer Computer
Bell's Office Machines
1906 Third St
Tillamook OR 97141

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Chns Hardy
32 Union Ave
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Apple of North Hills
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1378 Freeport Rd
Blawnox PA 15238

Sperry Computer Club
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Township Line & Jolly Rd
Blue Bell PA 19424

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La Salle College
Philadelphia PA 19141

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Pittsburgh PA 15220

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Aiken SC 29801

Lowcountry Apple Corps
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1660 San Rittenberg Blvd
Charleston SC 29407

CSC Apple Users Group
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Holston Apple Computer Club
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Kingsport TN 37663

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Dallas TX 75206

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Lake Jackson TX 77566

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San Angelo Apple Users Group
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San Antoino TX 78240

Temple Apple Users Group
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Wasatch Front Apple Club
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Essex Jct VT 05452

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1821 Aspen Ln
Green Bay WI 54303

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Lacorsse WI 54601

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New Richmond WI 54017

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416 529 4363

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604-923-6765

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416-223-0599

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316-8055 Anderson Rd
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Naples Italy 80122

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Ringo
RC Sheldon/United Shipping Co
S.A.G.3-3-3
Akasaka.Minato-ku Toyko Japan 107
03 585 1176

Apple Unlimited
Bellamy
402. 5-7-13 Tajiri
Ichikawa. Chiba Ken Japan 272 01

Dept Of Orthopedic Surgery
Takatoshi Ide-U. Sch Medicine
1167 Ashi Machi
Kurume Fukuoka Japan

Hajikko Apple Club
Kunihiko Masutani
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03 718 7986

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1-29-20 Yamaye-cho
Suita
Osaka Japan 564

Baked Apple
K Yamada Kohsei HSP
5 Chome 2-7 Tachibana
Sumida-Ku/Tokyo Japan 131

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Highland Apple Users Group
Harold Frederick
POB 79 Goglik Teachers College
Goroka EHP New Guinea Papua

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148 Legaspi St Malati Metro-
   Manila
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Makati Manila Phillipines

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Dhahran Saudi Arabia
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   2NZ

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ALMOST FREE SOFTWARE
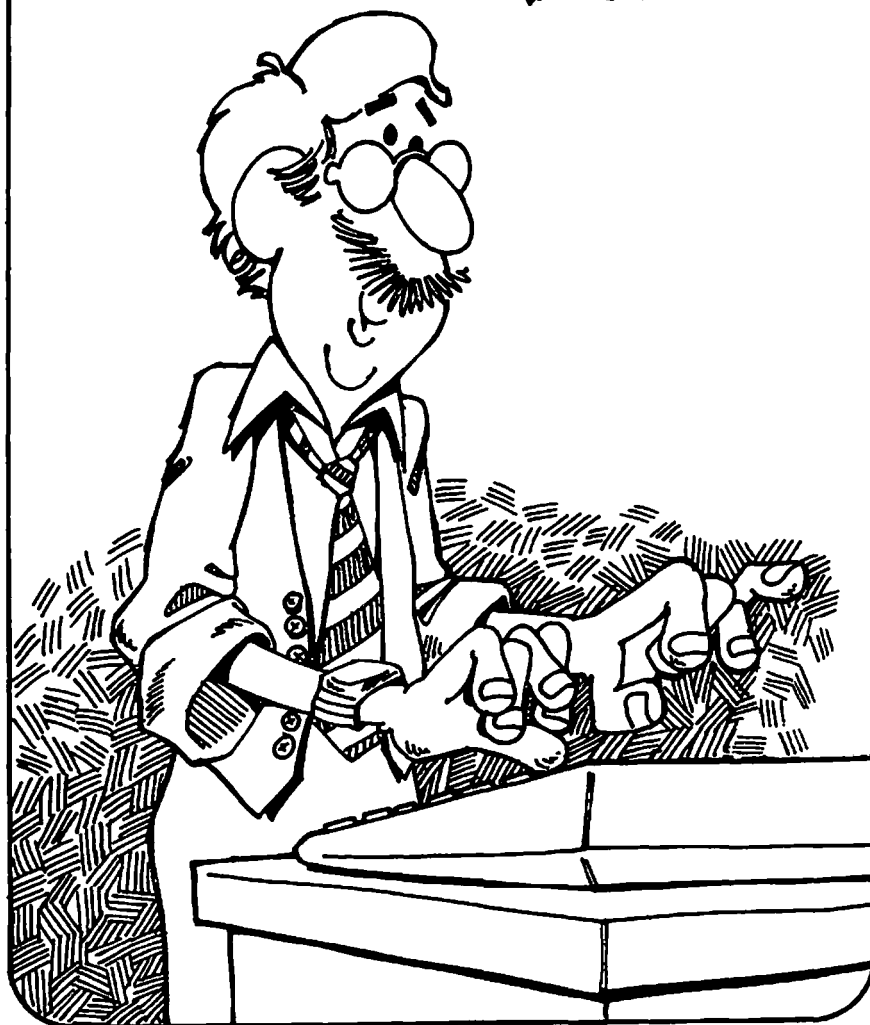
ALMOST FREE SOFTWARE

MAGAZINES

Magazines are a valuable resource for the Apple computer owner. The ones we list in the following pages offer program listings to turn your computer into anything from a word processor to a game machine. Informative articles that are designed to help you get more use from your computer and help you make intelligent software, hardware, and book buying decisions are also found in these publications.

These magazines are available on the newsstand or on a subscription basis. Regardless of where you get them, you'll find a wealth of Apple information and Almost Free Software.

Write to these publications for more information.

USERS' GROUP PUBLICATIONS

APPLE ORCHARD
International Apple Core
908 George Street
Santa Clara, CA 95050

APPLE ORCHARD is the monthly journal of the International Apple Core. The publication draws on contributions from experts and users from the 450+ plus clubs that belong to the IAC. *Apple Orchard* is a premier resource for the Apple owner.

APPLE BARREL
HAAUG
c/o Robin Cox
5401 Chimney Rock #607
Houston, TX 77081

Apple Barrel is the publication of the Houston, Texas area Apple Users' Groups. It consistently offers high-quality articles from which selections are often excerpted by the IAC and other users' groups.

The WAP JOURNAL
Washington, D.C. Apple Pi, Ltd.
8227 Woodmont Ave.
Suite 201
Bethesda, MD 20814

The monthly journal of this incredibly active group offers detailed and helpful articles for a variety of users, including special information on applications for the handicapped and education.

CALL A.P.P.LE
21246 68th Ave. South
Kent, WA 98032

The monthly glossy publication of the world's largest Apple Users' Group offers articles by international experts. Regular features include "The Computer in the Classroom," software reviews, "Apple Language Review," Business Feature Section," and much more.

MAPLE ORCHARD
L.O.G.I.C.
P.O.B. 696, Station B
Willowdale, Ontario
Canada
M2K 2P9

The quarterly publication of the Ontario, Canada Users' Group is especially strong on technical information and program listings. Issues are usually organized around themes.

THE CIDER PRESS
San Francisco Apple Core
1515 Sloat Blvd., Suite #2
San Francisco, CA 94132

Cider Press keeps readers up to date on the activities of this veteran California group. Monthly issues feature regular tutorials on BASIC and PASCAL, along with lots of other useful "how to" information.

APPLE PUBLICATIONS

NIBBLE
P.O.B. 325
Lincoln, MA 01773

Nibble offers a monthly magazine that is filled with program listings and technical information. An exceptional value is the *Nibble Express* anthologies. Each anthology includes articles on all Apple and Apple-compatible machines and offers as much as $400 worth of programs. Vol. I is available for $12.95; Vol. 2 for $14.95 and Vol. III for $17.95. Add $1.75 for postage; $2.50 outside the United States.

IN CIDER
Wayne Green, Inc.
80 Pine Street
Peterborough, NH 03458
(603) 924-9471

In Cider is highly recommended by knowledgeable users. Subscriptions are available for $24.95/year, $38.00/two years, and $53.00/three years. The magazine will also be offering public domain software on disk in the near future.
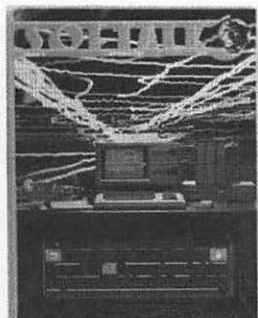
SOFTTALK
P.O.B. 60
N. Hollywood, CA 91603
(213) 980-5074

Softtalk is sent free to Apple owners who request it—just send your name, address, and computer serial number. In addition to an informative magazine, subscribers can take advantage of special book and software offers.

ON THREE
P.O.B. 3825
Ventura, CA 93003
(805) 644-3514

On Three is an exceptional value for Apple III owners. The magazine costs $30.00 for twelve issues, and disks of public domain software are available for $9.95, or only $7.50 for a series of three disks. The company also offers disk drives, the Apple III clock, game ports, and other Apple III equipment at discounted rates for subscribers.

APPLE USERS' ENCYCLOPEDIA
Book Company
San Francisco, CA

For more information, contact:

Joyce Conklin/Don Scellato/Gary Phillips
San Francisco Apple Core
1515 Sloat Blvd.
San Francisco, CA 94132
(415) 566-2342

The Apple Encyclopedia is a valuable guide compiled by veteran Apple Core members Conklin, Scellato, and Phillips. The book covers Apple II, Apple II +, Apple IIe, Apple III, hardware, BASIC CP/M, DOS, PASCAL, business and other topics from A to Z. Each topic is cross-referenced for easy reading. The guide features in-depth reviews on hardware and software, articles on how to upgrade your system, and other useful information. "This is the ultimate single source of Apple information, organized alphabetically with excellent cross-referencing," says Joyce Conklin. The *Apple Encyclopedia* retails for $19.95.

WINDFALL
Database Publications Ltd.
West Sussex, England
Telephone: 061-456-8383
           061-456-8500

Windfall is a publication for Apple users in the United Kingdom that includes helpful tips, reviews, news and activities, and feature stories on Apple applications.

OTHER PUBLICATIONS

THE COMPUTERIST'S
DIRECTORY
15350 River Road
Guerneville, CA 95446

ON-LINE COMPUTER
TELEPHONE DIRECTORY
Box 10005
Kansas City, MO 64111

TURTLE NEWS
1208 Hillsdale Drive
Richardson, TX 75081

COMPUTE!
PO Box 5406
Greensboro, NC 27403

CREATIVE COMPUTING
Call toll free
800/801-8112

ELECTRONIC GAMES
Box 1128
Dover, NH 07801

INFOWORLD
275 Cochituate Rd.
Box 837
Framingham, MA 01701

KEEPING PACE
466 Rosewood
Pittsburgh, PA 15236

POPULAR COMPUTING
70 Main Main Street
Peterborough, NH 03458

SOFTLINE
11021 Magnolia Blvd.
North Hollywood, CA 91601

SOFTSIDE
100 Pine Street
Holmes, PA 19043

FREE SOFT... BY PHON...

READ BEFORE DIALING

75
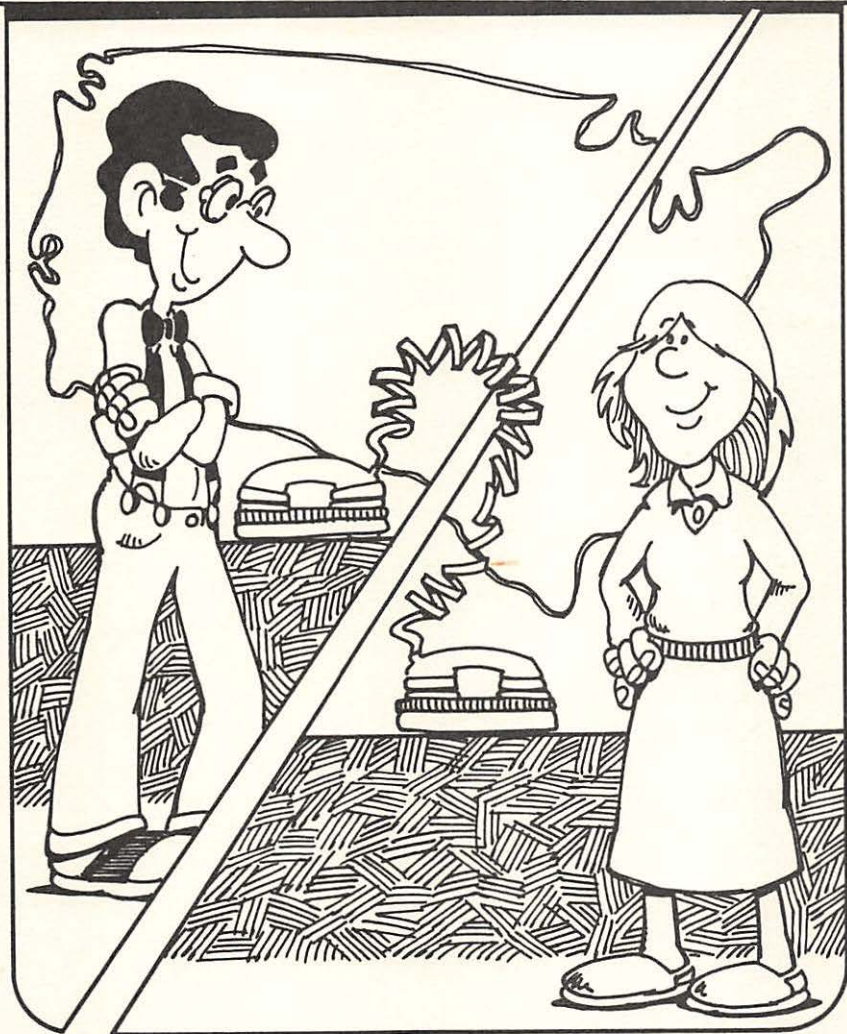
READ BEFORE DIALING

The MODEM (MOdulator/DEModulator) is an inexpensive device that allows you to use your Apple computer to communicate with other computers through regular telephone lines. It has brought the age of telecommunications and FREE software within your reach.

A diverse network of services and recreations is now as close to you and your Apple computer as your telephone. Hundreds of information services and electronic bulletin boards (BBS's) are standing by at this moment waiting for you. Most of the ones you'll learn about in this book cost no more than the price of an ordinary phone call.

IN THIS SECTION WE WILL SHOW YOU:

• The FREE software and services that are available to you.

• A representative list of FREE software available from Public Domain Bulletin Boards.

• MODEM and telecommunications terms fully explained.

• A MODEM review, highlighting features of some of the most popular MODEMS...plus, the names and addresses of major MODEM manufacturers.

• The communications software you'll need to [1]upload and [2]download programs. We also show you how and where to get some sophisticated communications programs FREE.

• An in-depth look at some of the best commercial communications software now available for your Apple computer.

• Special systems like ''DIAL-YOUR-MATCH'' and ''CONFERENCE TREE'' are introduced.

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[1]Upload: To send a program from your Apple computer to a distant computer over the phone lines.
[2]Download: To receive a program over the phone line, temporarily capture it in your Apple's memory, then permanently save it on disk for later use.

- What to expect when you're in contact with a typical BBS.

- How to set up your own BBS: This section shows you where to get FREE BBS software, what's available commercially, and features an interview with Ed Svoboda, a fifteen-year-old communications pioneer!

- Resources for Apple III owners.

- Publications of interest to telecommuters.

- A comprehensive RCP/M BBS phone directory filled with valuable information.

- A comprehensive phone directory of over 500 numbers that put you in touch *today,* with BBS and recreational systems.

Free Bulletin Board Services (BBS)

Apple Users' Groups, hobbyists and entrepreneurs throughout the world are operating electronic Bulletin Boards and information terminals. These are loaded with easy-to-access features that allow you to *increase your software library* and expand the usefulness of your computer.

A list of BBS phone numbers, downloaded from the *Peoples' Message System* in Santee, California, is included at the end of this chapter. This list includes BBS's that cater specifically to Apple users (ABBS, A-C-C-E-S-S, CONFERENCE-TREE, GABBS, NET—WORKS, ONLINE, and PMS) and many other numbers that put you in touch with services offering Apple BASIC programs ready for downloading, and others loaded with a wealth of Apple computing knowledge, free for the asking. You'll learn about these, and more, in this section.

RCP/M

If your Apple computer is equipped with CP/M you're in for a big treat. Hundreds of well established Bulletin Board Systems across the country, called RCP/M's, have massive files ready for downloading.

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And, excellent CP/M terminal software is in the public domain! We'll show you what's available on the RCP/M network, provide you with a list of valuable phone numbers, walk you through a typical RCP/M BBS, and tell you how to get FREE public domain terminal software.

The FREE Electronic Classified Ad

The Message Center is the heart of each electronic Bulletin Board. Do you have information to share with other Apple enthusiasts? Something to sell? Looking for some programming help or some new or used equipment? You'll probably find what you want listed in the "computer classified ad department", the electronic Message Center.

Later in this section you'll learn how to retrieve and place messages on a wide selection of electronic bulletin boards. Here's what a typical message looks like:

MSG#0326   DATE: 12/12/83   TIME: 18:26
FROM: Mary Dillon; Cupertino, CA Educators
TO: All
SUBJ: Classroom reading program

> Looking for (Apple) reading skills programs for 1st grade
> students. Please leave message on this BBS if you can help.

Using this service offers many exciting possibilities. Learn about the latest Apple news, or leave a message for a friend, it's all free!

FREE Public Domain Software

Public domain software is either uncopyrighted software that has been contributed by a fellow Apple enthusiast, or copyrighted software that has been put on a BBS with the author's approval.

SAVE PROGRAMS TO DISK

We'll show you how to change your Apple computer into a communications terminal. You'll find 'Terminal Software' in this section that allows you to call a BBS, check its list of available software, and download public domain programs to *your* computer, adding it to your software library.

All types of programs are available: utility programs that ease your programming chores, adventure and arcade games, educational software, business software, communications software, and home management software. There are even public domain programs available that allow you to set up your own BBS!

We contacted many ABBS (Apple Bulletin Boards) and found valuable programs in each of their files that meet a wide variety of needs.

Just to show you the range of programs available FREE from *all types* of BBS systems throughout the world, we contacted *Data Tech 007* RCP/M BBS in San Jose, California by calling 408-238-9621 and "asked" what categories of software were available for downloading. There is something for everyone at this typical BBS as this list of "available sections" shows:

```
                       AVAILABLE SECTIONS

        SYSTEM.........PROGRAMS RELATED TO THE RBBS SYSTEM
        RBBS...........SOURCE FOR PUB. DOMAIN BBS PROGRAMS
        REQUESTS.......PROGRAMS REQUESTED BY USERS
        COMMUNICATIONS.MODEM PROGRAMS
        UTILITIES......CP/M UTILITY PROGRAMS
        ZCPR...........FULL ZCPR2 LIBRARY
        APPLE..........APPLE RELATED PROGRAMS
        IBM............IBM-PC RELATED PROGRAMS
        OSBORNE........OSBORNE RELATED PROGRAMS
        XEROX..........XEROX RELATED PROGRAMS
        MORROW.........MORROW DESIGNS RELATED PROGRAMS
        TELEVIDEO......TELEVIDEO RELATED PROGRAMS
        C.............."C" LANGUAGE PROGRAMS
        BASIC..........BASIC (MBASIC AND CBASIC) RELATED PROGRAMS
        LISP...........LISP LANGUAGE LIBRARY
        GAMES..........VARIOUS GAME PROGRAMS
        PICTURES.......LIBRARY OF PRINTER GRAPHIC PICTURES
        NEWSTUFF.......VARIOUS FILES OF THE LATEST AQUISITIONS
        BUSINESS.......BUSINESS RELATED
                       PROGRAMS(GEN LEDG,
                       DATABASE, ETC.)
        MISCELLANEOUS..MISCELLANEOUS PROGRAMS
        HELP...........UTILITY HELP FILES
        FORTH..........FORTH ASSEMBLERS AND LIBRARIES
        HAM............PROGRAMS FOR RADIO AMATUERS
        ADA............ADA COMPILER
        NEEDED.........FILES NEEDED BY ALL RBBS USERS
        HACKERS........UTILITIES NEEDED BY PROGRAMMERS
        DOCS...........DOCUMENT FILES ON VARIOUS SUBJECTS
        ENGINEERING....UTILITIES USED FOR ENG. CALCS.
```

We'll show you how to find out what's in the section you're interested in and how to select from hundreds of excellent programs.

Some BBS's offer "computer posters", graphic designs and portraits of famous people like Albert Einstein and Raquel Welch. These posters can be printed out using a standard printer, then displayed proudly on the wall of your computer room.

Other BBS's offer a broad spectrum of public domain software, from challenging games like BLASTER, to educational programs like TYPER, a typing tutorial.

A complete word processing program can be downloaded from some BBS's. Soon you will be writing the great American novel on your computer, using FREE software!

When you call a BBS, you can also get an updated listing of other Apple or RCP/M BBS's, talk via the keyboard to the SYSOP (System Operator), upload your programs to the system, get current Apple related news, or take part in conference with other Apple enthusiasts.

The BBS network has software and features for every Apple computer owner. It's all FREE, and as close as your telephone! *This section will show you where it is and how to get it.*

Before You Move On

Once you've been bitten by the "computer communications bug" you'll discover many new and interesting recreations and services. We found an interesting one, that we'd like to share with you. It's called, DIAL-YOUR-MATCH.

DIAL-YOUR-MATCH

DIAL-YOUR-MATCH is another good example of the many FREE services available to Apple communicators. This confidential "find-a-mate by modem" service is available FREE in more than 25 locations throughout the U.S. You enter a code name, answer a brief questionnaire, and check back periodically to see if you've been matched with the romance of your life.

A complete listing of all available DIAL-YOUR-MATCH terminals can be found in the BBS phone directory at the end of this chapter.

The BBS phone directory also includes a complete listing of CONFERENCE TREE BBS's. Many topics are covered on a typical CONFERENCE TREE. You can call up, select the topic of your choice, and add to the expanding tree of information found on this service. Or, if you like, you can start a new conference about a topic of your own choosing. Once you've made contact with a CONFERENCE TREE BBS, the service will walk you through its easy to follow procedures.

THE LIST IS GROWING

The list of FREE services available to Apple computer owners is growing daily. Entering this exciting world is as easy as buying a modem, hooking it up, and dialing your phone.

READ ON!

Read on, and learn how you can enter this exciting world of computer communications.

Downloading a Program from a BBS

FIVE EASY STEPS TO FREE SOFTWARE

1. Call up a friendly BBS.

2. Look over the BBS's files and choose the public domain program you'd like to download.

3. "Tell" the BBS to send the program to your computer's (RAM) memory.

4. Store the program on your disk or tape.

5. You have now added a new program to your permanent software library...ENJOY!

④ STORE PROGRAM ON DISK OR CASSETTE

② LOOK

③ PROGRAM IS SENT FROM BBS TO YOUR COMPUTER.

```
T.V. MONITOR

DISK OR CASSETTE     APPLE COMPUTER (RAM)     MODEM & PHONE     RCV / SEND

                     KEYBOARD
```

("TALK" TO BBS VIA KEYBOARD)

⑤ LOAD, RUN AND ENJOY YOUR NEW PROGRAM.

① CALL UP BBS

PHONE LINES ──────►

```
B.B.S.

DISK FILES     COMPUTER     MODEM     RCV / SEND
```
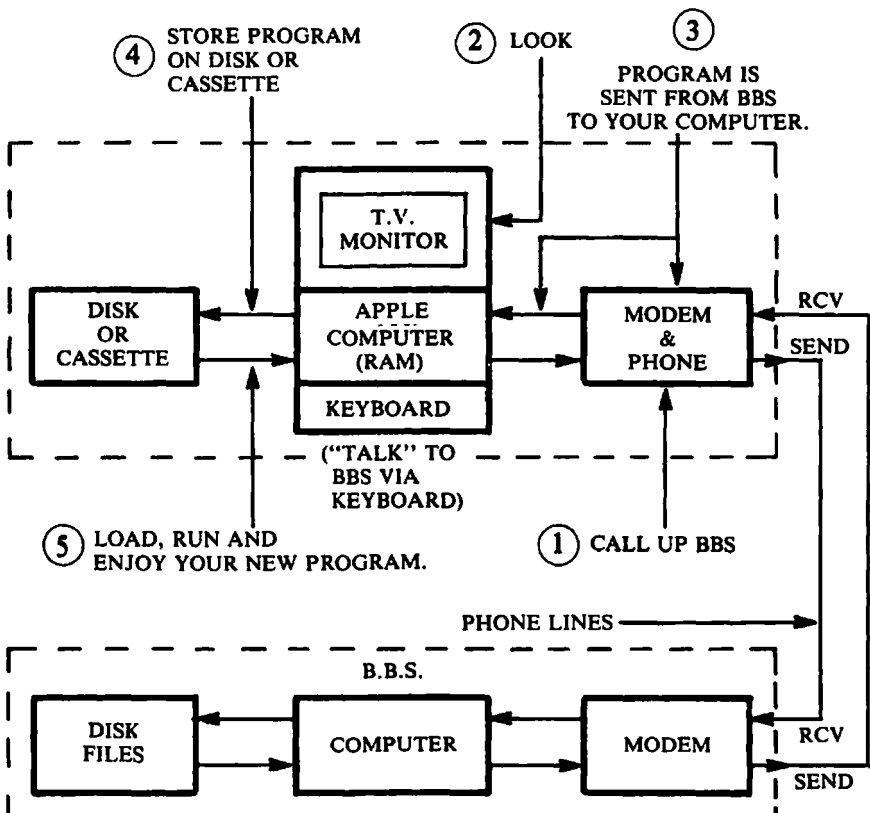
Uploading Your Program to a BBS

SHARING YOUR PROGRAM WITH OTHER APPLE ENTHUSIASTS

1. Transfer your program from disk or cassette to your computer's (RAM) memory.

2. Call up a friendly BBS and "ask" to upload your program.

3. Send your program to the BBS.

   Your program is added to the BBS's public domain software file for use by other Apple enthusiasts.
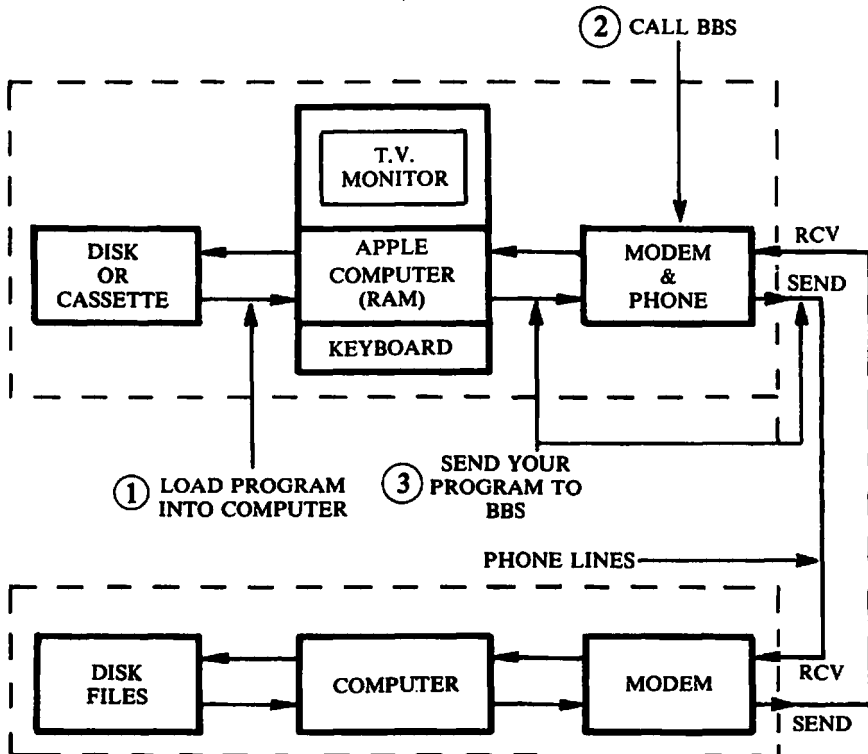
MODEMS
Modem Terms and Features

Now that you have an idea of all the FREE services and recreations available to Apple communicators, it's time to start thinking about buying a MODEM. Before you run down to your local computer store, take a few minutes to read this short chapter. It will familiarize you with MODEM telecommunications terms and help you select the *right* MODEM for your needs.

MODEM

"MODEM" is the abbreviated combination of the two words MOdulator and DEModulator (Modulator = encode and transmit, and Demodulator = Receive and decode).

A MODEM is used to interface between your computer and a telephone line. It enables your computer to communicate with other computers.

MODEMS FOR YOUR APPLE COMPUTER

When you're shopping for a modem you'll be presented with three basic choices: an acoustically-coupled modem, a conventional direct connect modem or a plug in modem-on-a-card.

An acoustic modem is equipped with two soft rubber cups that accept a telephone's handset and form a tight seal around both the mouthpiece and earpiece. This type of modem can only be used with "standard" business type telephones. Fancy phones with odd shaped mouth and earpieces, like the "Princess" model, won't fit securely into the specially designed rubber cups. A tight, sound-proof fit between telephone and modem is critical for proper operation. Extraneous noise can distort the data transmission.

Acoustic modems are generally less expensive than direct-connect modems and are quite suitable for up and downloading information to your computer. However, because acoustic modems are an older technology they are limited to a slower (300 baud) rate of transmission. Most acoustic modems require that you purchase an RS-232 serial interface card, and don't have the ability to automatically answer the phone.

To use an acoustic modem you pick up the phone, dial a BBS number, listen for the tone, and insert the phone's headset into the two rubber cups to establish contact.

Conventional Direct-Connect Modem
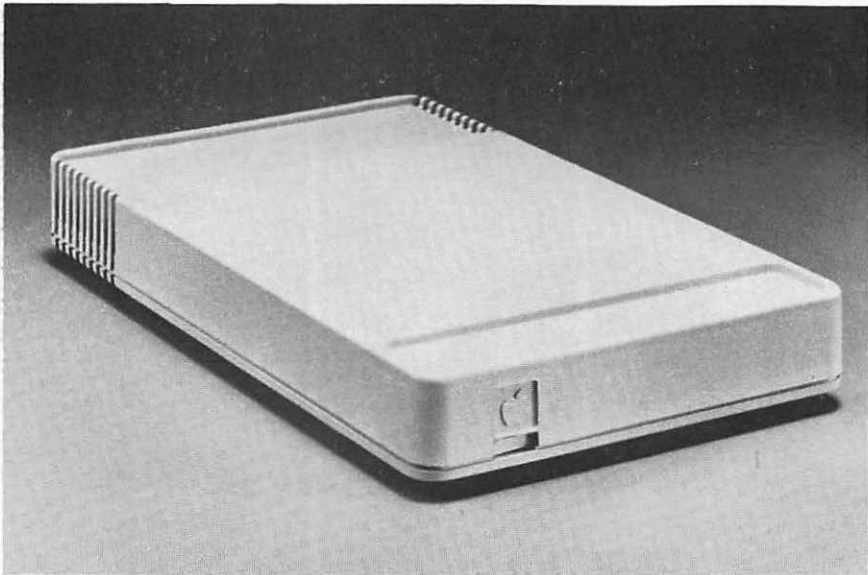
A conventional direct-connect modem usually requires an RS-232 serial interface card. The modem plugs directly into a telephone wall jack. This eliminates any possible noise problems and allows for the "automatic answer" feature, necessary for operating your own BBS. Make sure that your home is equipped with a modular phone jack, you'll need this for connection.

MODULAR WALL JACK

"Y" JACK →

MODEM   PHONE
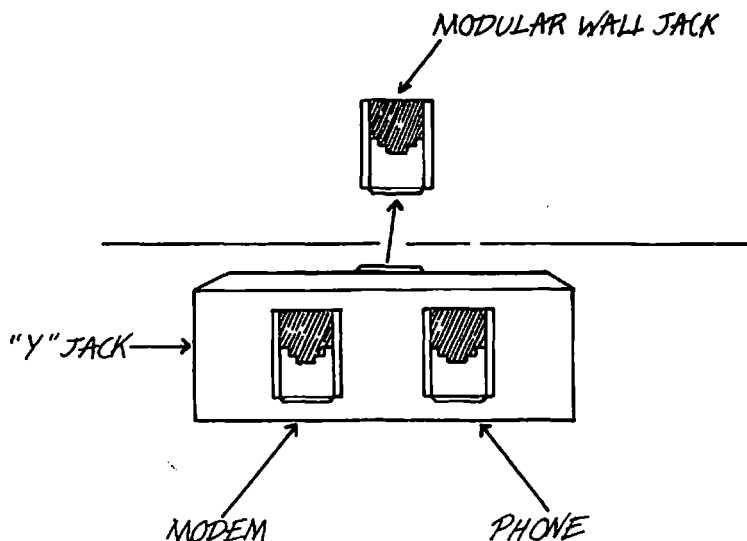
A phone is usually plugged into a modular wall-jack *with* the direct-connect modem via an inexpensive "Y" jack. (You can purchase a "Y" jack at any phone store and at most department stores.) Some manufacturers build this "Y" connection into the modem. This dual hookup gives you the option to manually dial up the BBS or service of your choice.

When connection is made you will hear a tone, an indicator will light on the modem, and communications can begin.
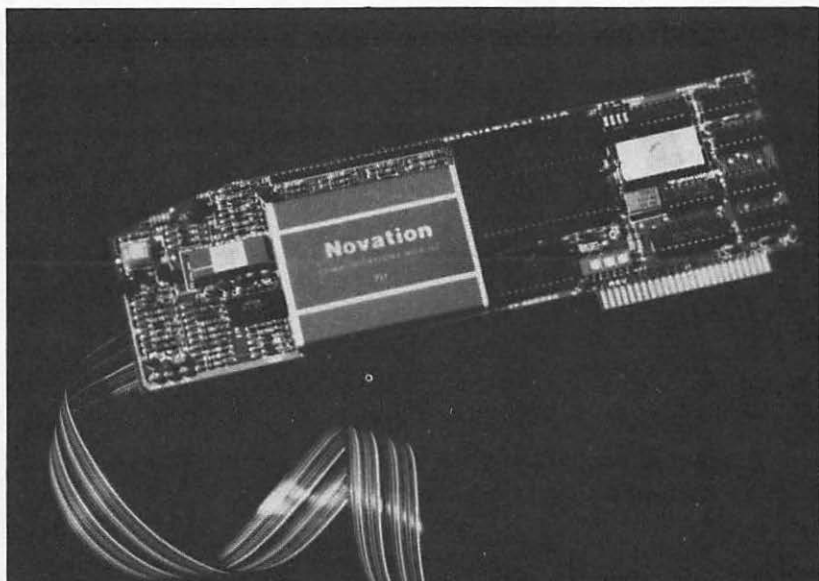
A number of manufacturers have recently introduced direct-connect modems that plug directly into an Apple card slot. These innovative modems *do not require separate RS-232 cards.*

Automatic Dialing

Some direct-connect modems offer an automatic dialing feature. You store commonly called phone numbers in the modem's terminal software. When you turn on your system your screen displays a menu listing of these BBS's or services. By typing the number to the left of a listing the modem will automatically dial the phone number of your choice. Here's what a typical autodial menu list might look like:

AUTODIAL

    1. OXGATE RCP/M
    2. COMPUSERVE
    3. MCI MAIL
    4. WACKO ABBS
    5. PMS SANTEE

Data/Voice Switch

Most direct-connect modems allow you to select either Data or Voice operation by pressing a switch.

The Data position lets you automatically dial out using your computer's keyboard, or autodial software.

The Voice selection allows you to use your phone to dial with.

Other Options

Other options available on some direct-connect modems include unattended receive, automatic disconnect, and unattended automatic dialing and passing of data with other systems.

Self-Test

A test switch is provided on some modems that allows you to determine if your system is functioning correctly, or if there is a problem at the other end of the connection.

Carrier Detection

When you make contact with another computer it responds by transmitting a carrier tone. Most modems let you know that you're in contact by emitting a tone or turning on a light or LED.

Telecommunications Terms & Concepts

BAUD RATE

A baud rate is simply a measure of how fast a modem communicates. Most BBS services available to Apple computer owners operate at 300 Baud. This translates to a rate of 30 characters per second. But there is a growing trend, especially in the world of Apple CP/M, towards faster 1200 Baud communications (approximately 120 characters per second).

1200 baud modems are more expensive than 300 baud units. But, if you can afford the initial outlay, a 1200 baud unit can save you phone-bills and connect-time money in the long run.

DUPLEXING

Most modems, or the terminal software needed to operate the modem include the ability to operate either in full-duplex or half-duplex mode.

Half-Duplex

Half-duplex is like Ham radio communications, where only one party can talk at a time. This can be compared to a single-track railroad with only one train traveling on the track at a time, in one direction at a time.
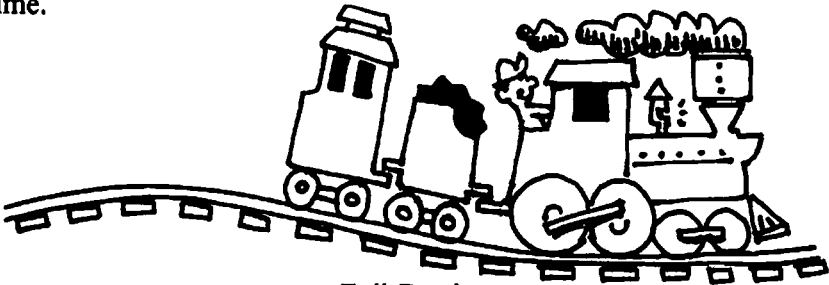
Full-Duplex

Full-duplex communications is similar to a telephone conversation, where both parties can talk simultaneously. A good way to visualize this is to compare full-duplex to a two-track railroad system. Communications flow in both directions simultaneously.
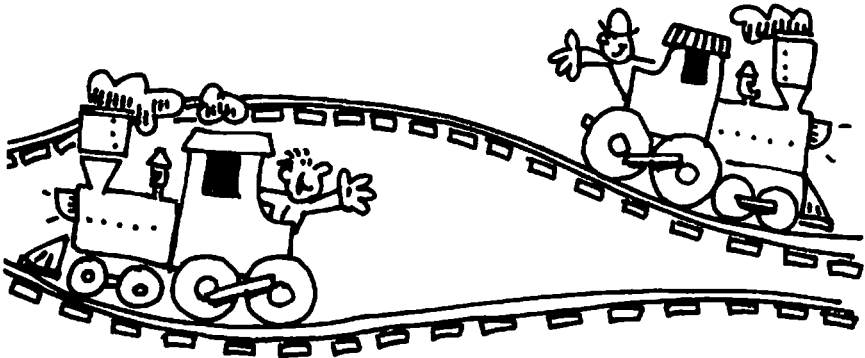
HOW DATA IS TRANSMITTED

The Main Troop

Data transmission via modem can be compared to a cavalry troop. The Main Troop, containing one character is in the center of the formation. Each character, or binary word, is made up of seven or eight bits, or troops.

| stop bit | parity | 7 or 8 bits | start bit |
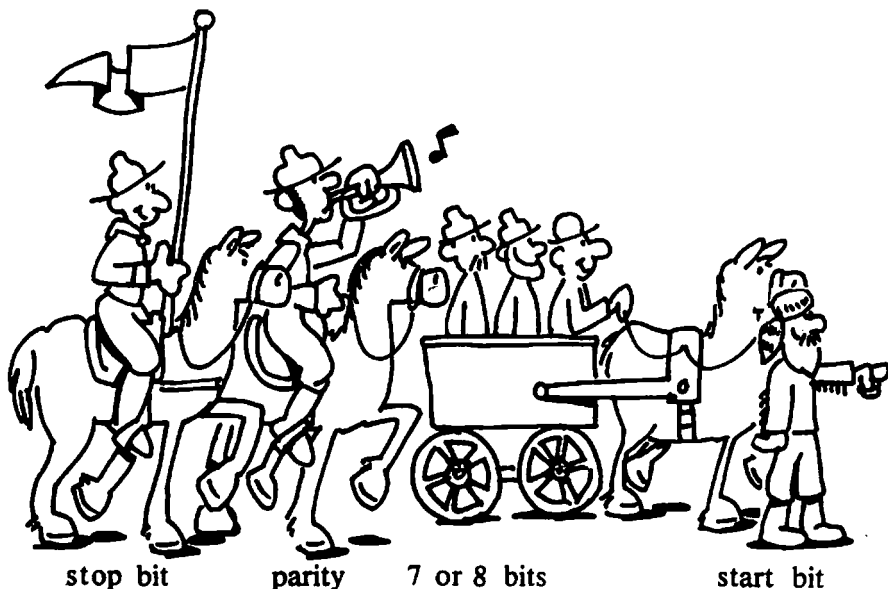
The Start Bit

A scout, called a Start Bit, leads the way. This one bit of information "tells" the receiving terminal that the main troop is on its way.

The Parity Bit

A bugler, called a Parity Bit, rides directly behind the Main Troop. The Parity Bit is used to check for errors in transmission. If there's a problem, it "blows its horn," and allows corrective retransmission to occur.

You'll encounter three types of parity (error checking) used in the different systems you contact; Odd Parity, Even Parity, or None.

Odd Parity

In Even and Odd Parity the value of the Parity bit can be either 1 or 0. In Odd Parity, the parity bit at the end of each binary word is set to 0 if the binary word contains an odd number of 1's, or set to 1 if the word contains an even number of 1's. The total value of transmitted data will always equal an odd number.

Even Parity

In Even Parity, the Parity Bit will always make the total value of transmitted data equal to an even number.

If a bit, or bits of information is lost, or distorted beyond recognition during transmission, the Odd or Even criteria won't be met at the receiving terminal.

Special software, called "Protocol Software", is available that uses the bugler's error information to sense a problem in transmission. If an error is detected, the receiving terminal automatically asks the transmitting terminal to retransmit the bad batch of data.

None (No Parity)

Some systems don't do any error checking. No bugler rides behind the Main Troop.

Stop Bit

A flag bearer, called a Stop Bit, rides at the very end of the calvary formation. It's job is to simply tell the receiver that all the troops have arrived safely.

RS-232 Interface

Many modems require what is called an "RS-232 interface" to operate with your Apple computer. Commercial interface units are available and relatively inexpensive.

Apple Computer offers their "Apple Super Serial Card." Other manufacturers of RS-232 interface cards include:

Mountain Computer, Inc.
300 El Pueblo Road
Scotts Valley, CA 95066
408-438-6650

Prometheus Products, Inc.
45277 Fremont Blvd.
Fremont, CA 94538
415-490-2370

You'll find advertisements for other similar products in many of the magazines listed in the "Almost Free Software" section of this book. Browse through these magazines, and after you've found an interface unit that appeals to you, write or call the manufacturer and get as much information as you can. Be sure to shop around, and compare before you buy.

Talk To The Modem Manufacturer

Below, is a listing of modem manufacturers. We've placed an asterisk (*) next to those we know produce modems-on-a-card.

It is a good idea to send each manufacturer a short letter requesting information on their line of Apple compatible modems. Ask them to send you their brochures, then sit back in the comfort of your home and make your selection. You might also ask where their nearest distributor or retail outlet is. This can save you a lot of leg work. All the manufacturers we spoke to were extremely helpful and responded with literature within a few days.

Apple Computer, Inc.
20525 Mariani Ave.
Cupertino, CA 95014
408-996-1010

Bizcomp
532 Weddell Drive
Sunnyvale, CA 95089
408-745-1616

ESI Lynx
123 Locust Street
Lancaster, PA 17602

*Hayes Microcomputer
    Products, Inc.
5923 Peachtree Industrial Blvd.
Norcross, GA 30092
404-449-8791

Kesa Company
774 San Miquel Avenue
Sunnyvale, CA 94086

Lexicon Corporation
1541 N.W. 65th Avenue
Ft. Lauderdale, FL 33313

MFJ Enterprises, Inc.
921 Louisville Road
Starkville, MS 39759

Microbits
434 W. 1st Street
Albany, OR 97321

Micromint, Inc.
917 Midway
Woodmere, NY 11598

The Micropheripheral Corporation
2643 151st Place N.E.
Redmond, WA 98052
206-881-7544

*Novation Inc.
18664 Oxnard Street
Tarzana, CA 91356
213-996-5060

*Prometheus Products Inc.
45277 Fremont Blvd.
Fremont, CA 94538
415-490-2370

Racal Vadic
222 Caspian Drive
Sunnyvale, CA 94086
408-744-0810

*Transend Corporation
(SSM Microcomputer Products, Inc.)
2190 Paragon Drive
San Jose, CA 95131
408-946-7400

U.S. Robotics, Inc.
1035 West Lack
Chicago, IL 60601

Universal Data System
5000 Bradford Drive
Huntsville, AL 35805
205-837-8100

TERMINAL SOFTWARE

Congratulations! You have a modem, it's hooked up to your Apple computer and you're ready to call up a friendly BBS and get FREE software by phone! But, first you'll need TERMINAL SOFTWARE to turn your Apple into a communications terminal.

You are going to encounter some strange new words in this chapter, words you've never heard before. Some of the text *may* look "technical." Don't panic! You are an explorer entering a new world, a world filled with exciting, educational, and rewarding experiences. All those "technical" sounding words will become second nature after you've made your first calls from your computer terminal.

We've found that "diving right in" is the best way to get comfortable with this new way of communicating. Don't worry about making mistakes while you're on-line with another computer...IT'S ONLY A MACHINE...you can't hurt it...and it can't hurt you!

To help smooth your way, we show you what software you need, where to get it, and what you'll experience once you're on-line with that distant computer.

*We were unable to find any *public domain* terminal software for standard Apple computers that allow you to download and upload files. However, we did find a wealth of FREE public domain terminal software for Apple computers equipped with CP/M. If your Apple is equipped with CP/M, or if you are considering adding a CP/M card to your computer, be sure to read the "World of CP/M Communications" section of this book.

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* "At the time of writing it was discovered that many users' groups are expanding their software libraries to include public domain communications software. One such club is the San Francisco Apple Core. Read more about this, and other users' groups in our Users' Group Section. We plan to update this book on a regular basis. Please send any information on public domain terminal software to Apple Update '85. (See page 222.)"

Most modem manufacturers include FREE terminal software with their modems. However, *most of these terminal programs will not allow you to download or upload files.* Hayes Microcomputer Products, Inc., Novation, Inc., SSM Microcomputer Products Inc., and other modem manufacturers offer "smart Terminal Software" at an added cost.

Smart Terminal Software

Smart Terminal Software allows you to up or download. There are a number of excellent commercial software packages available for your Apple computer. To give you a head start, we've listed the main features and suggested retail price of terminal software produced by four manufacturers.

Before You Buy

Before you buy any terminal software:

1. Look through Apple related magazines (see our Almost Free Software section on page 69), and select a number of terminal software manufacturers.

2. Write or call manufacturers, get their latest literature, and compare features and prices.

3. If possible, get a "hands-on" demonstration at your local computer retail store.

4. Get help from your local Apple Users' Group. Talk to experienced communicators in the Communications Special Interest Group.

1. DATA CAPTURE IIe and DATA CAPTURE 4.0

Southeastern Software
7743 Briarwood Drive
New Orleans, LA 70128
504-246-8438

DATA CAPTURE IIe. . . . $90.00

DATA CAPTURE IIe is a full feature smart terminal software disk package for your Apple IIe computer. It features 300/1200 baud operation, and 80 or 40 column display. (It automatically takes advantage of the Apple IIe 80 column card if it is present.)

This terminal software comes with an easy to read, and logically ordered 70 page instruction manual that uses "on-line" step-by-step tutorials to walk you through advanced applications.

One Key Commands

DATA CAPTURE IIe offers one key commands (referred to in some programs as macros) that save you typing frequently used phrases when you log-on to a remote computer.

One key command can be used to log-on to your favorite BBS, retrieve quotes from Dow Jones, or access any area of the Source or Compuserve. You can save each set of one key commands to disk so they'll be loaded every time you start up *DATA CAPTURE IIe.*

Editor

The *DATA CAPTURE IIe* software can be used off-line as a text editor to:

- Enter text into the Capture Buffer for later transmission to another computer.

- Enter text into the Capture Buffer for output of short notes and letters to your printer.

- Edit text.

- Display any text file to the screen or printer.

- Edit text that you have received.

DATA CAPTURE 4.0....$65.00

DATA CAPTURE 4.0 is an easy to use smart telecommunications program for your Apple II/II+ and the Hayes MICROMODEM II or the Apple COMMUNICATIONS CARD.

Features include:

- An Apple II smart terminal program that is fully copyable and modifiable.

- Incoming data files are automatically captured regardless of length.

- Data in the memory buffer can be viewed, edited, printed, saved to or loaded from disk, or transmitted to the remote system at any time.

- Unattended mode of operation lets you call your Apple from another location and send data to it, or load data from it.

- Fully compatible with Apple III in emulation mode.

2. Transend 1, Transend 2 and Transend 3

SSM Microcomputer Products Inc.
2190 Paragon Drive
San Jose, CA 95131
408-946-7400

Transend 1....$89.00

Features:

- Fully compatible with Apple II/IIe, including 80 column support and upper/lower-case keyboard.

- Supports a variety of 110, 300 and 1200 baud modems.

- Transmission of data from keyboard, disk, or capture buffer.

- System configuration mode offers storage of up to 8 default configurations for quick transmission to frequent destinations.

- Keyboard macros store log-on and password data for automatic connection to other computers.

Transend 2. . . . $149.00

Transend 2 offers all the options of Transend 1 plus the following features:

- Error detection and automatic retransmission for error-free data exchange.

- User-created transmit lists allow you to send a series of files with one command.

- Estimator determines the length of each transmission in advance, so you can schedule a convenient time to send all your transmissions.

Transend 3. . . . $275.00

This is the "top-of-the-line", and includes all the features of the Transend 1 and 2 plus the following:

- Unattended operation permits automatic receiving and filing of incoming data.

- Clock/calendar scheduling lets you schedule your correspondence for any future time. (Additional hardware required. Check with manufacturer.)

- Multiple addressing capabilities to direct information to up to 128 people at different locations.

- Automatic redialing.

- Password file protection.

- Text editor to format and create documents of up to 10,000 characters.

- Personal appointment scheduling and tickler file for time management.

3. ASCII EXPRESS....$129.95

Southwestern Data Systems
10761 Woodside Avenue, Suite E
P.O. Box 582
Santee, CA 92071
619-562-3670

ASCII EXPRESS is a full feature communications package for operation under Apple DOS 3.3 with a minimum of 48K RAM.

Features:

- Supports all Apple compatible printer interfaces, and with most, provides internal "ring" buffering to compensate for slower printers.

- Supports all Apple compatible serial interfaces at all baud rates up to 9600 baud.

- Supports all Apple compatible screen display devices—80 column cards, external terminals as well as the standard 40 column screen.

- Supports the deaf TTY standard (BAUDOT).

- Text editor with full line editing features.

- Auto save option allows you to receive files larger than its already large data buffer.

Apple Pascal & Z-80-CP/M

P-TERM $129.00

Z-TERM $149.95

Southwestern Data Systems also produces excellent terminal software for Apple computers equipped with *Pascal* or the CP/M Apple equipped with a Z-80 microprocessor card.

We Found A Great Starter Package!

B.I.T.S *$39.95

*Available at this *special price* by mail order:

Computer Confidence Inc.
20863 Stevens Creek Blvd.
Bldg. B-5, Suite D-1
Cupertino, CA 95014

B.I.T.S. (BASIC Interactive Terminal Software) was written by Craig Vaughan of Software Sorcery, Inc., McLean, Virginia. Software Sorcery is the publisher of the *ABBS* Bulletin Board Software, one of the most versatile and widely used Apple Bulletin Board Systems (see our list of BBS's at the end of this chapter), and has recently introduced *MAGUS,* an electronic mail service.

(You can call MAGUS at 703-471-0611/0612 or contact Craig's ABBS by calling 703-471-0610.)

40 Column Display

B.I.T.S. was written for the Apple II and II+ computers with 40 column display. However, it works well with the Apple IIe in 40 column mode.

What hardware you'll need:

An Apple II equipped with Applesoft ROM Card, or a standard Apple II+ or IIe computer. You will also need a D.C. Hayes Micromodem II, *or* a serial card and modem/coupler combination. Three of the serial cards that are supported are:

1. The APPLE Communications Card
2. California Computer Systems Asychronous Card
3. The AIO Card by SSM

The software also supports the Double Vision, Sup 'R' Terminal by M & R, Videx Videoterm, and the ALS Smarterm 80 column display boards.

B.I.T.S. Features

- The Software comes with a complete text editor that allows you to compose your message prior to going on-line.

- Auto Dial: List those most commonly called numbers, and B.I.T.S. will dial the number of your choice at the press of a button.

- Configure to upload, download or send electronic mail to virtually any BBS or commercial system.

- Save to disk, and/or printer

- Documentation: Two manuals come with the software. One walks you through the terminal software operation, and the other shows you, step-by-step, how to get the most out of the text editor.

The B.I.T.S. Menu options look like this:

A. EXIT TERMINAL MODE—STAY ON LINE
B. EXIT TERMINAL MODE—HANG UP PHONE
C. DIAL UP A REMOTE SYSTEM
D. TURN COPY (ON)
E. SAVE BUFFER TO DISK
F. TRANSFER FILE TO REMOTE STATION
G. TURN (OFF) LINE FORMATTING
H. SET (HALF) DUPLEX MODE
I. CLEAR BUFFER
J. PRINT BUFFER
K. TURN PRINTER (ON)
   CTRL B—SEND BREAK
   ESCAPE—SEND ESCAPE

B.I.T.S. with its accompanying text editor is an excellent first terminal software package. It's just perfect for "getting your feet wet" at a reasonable price. After you've become a communications pro, you may want to move up to a more sophisticated package. However, you may find that B.I.T.S can do it all for you.

CP/M Communications

We've listed most of the Remote CP/M Software Exchanges (RCP/M) in the United States, beginning on page 105 .

Any Apple Can Talk To An RCP/M

You can contact an RCP/M whether or not your Apple is equipped with CP/M.

A typical RCP/M Bulletin Board is divided into two sections:

1. Bulletin Board

The first section is a standard bulletin board, that allows you to send and retrieve messages and get the latest computer news. *You can access this section with any Apple operating system using virtually any terminal software.*

2. Software Exchange

The second section is the Software Exchange. This is where you'll find a wealth of FREE public domain software, and also be able to contribute your own programs to fellow communicators.

Most of the software found on a typical RCP/M is designed to run with a CP/M operating system. However, there are some RCP/M's that have AppleSoft Basic programs, and text that can be captured/downloaded and used by all Apple owners.

Free CP/M Terminal Software
MODEM7 & MDM7

"MODEM7" and "MDM7" are two of the most popular public domain terminal software packages for use with RCP/M BBS's.

One way to get a copy of this free software is by requesting it from any of the RCP/M's on our listing. Make sure you tell the system operator (SYSOP) that you are using an Apple computer (versions of this software are available for almost all personal computers). Normally you will be asked to send a blank disk and a self addressed and stamped return mailer.

You can also find a copy of MODEM7, MDM7 and other communications software in most users' group public domain libraries. Refer to the Users' Group Section of this book for more details.

Remote CP/M Software Exchanges

12/20/83 revision by Steve Sanders

This list summarizes all operating Remote CP/M software
exchange systems which use Christensen protocol,
(XMODEM), for file transfers and are available to the
general public for the exchange of public domain software.

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Send update information to:

Kim Levitt - HOLLYWOOD RCPM/MBBS
(213) 653-6398
or
Jud Newell - TORONTO RCP/M SYSTEMS
(416) 232-0442
(416) 232-0269
(416) 231-1262
or
Steve Sanders - TAMPA BAY BANDIT BOARD RCP/M
(813) 937-3608

[Leave msg on BBS
and/or upload file using XMODEM.]

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CODE KEY

Unless otherwise indicated, all systems are up 24 Hours a
day, seven days a week with no callback. (Hours listed
after sysop name(s), all times listed are local time.)
(Callback systems are indicated with a "cb" directly
before the system phone number.)

Alternate Long Distance Services: (shown after phone
number) I=ITT / M=MCI / S=Sprint / W=Western Union

Baud Rates: (shown after sysop name(s) or hours)
(PMMI=1-7)   1=110 / 3=300 / 4=450 / 6=600 / 7=710
B=Bell 212A 1200 / V=Vadic 1200

Disk Capacity: (total disk space shown after baud rates)
K=Kilobytes / M=Megabytes

(See notes at end of list for more information)

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NORTHEAST

[Maine]
Programmer's Anonymous RCP/M .... (207)
839-2337 SW
    Ralph Trynor; (3B;180K); Osborne Software; (Gorham)

[Massachusetts]
Andover Cnode .... (617) 470-2548 SW
    Layne DuBose; (1-7;18M); All C User's Group volumes on-line,
    plus best of CPMUG. Also some Osborne, RS M100, 8088/8086
    software; (Andover)
Milford RCPM/CBBS .... (617) 478-4164 W
    Howard Moulton, Jr.; (3B;180K); system is Osborne 1;
(down?)
Milford S-100 User's System .... (617) 478-6062 W
    Howard Moulton, Jr.; (no answer when in use);
(3B;1.1M); access
    password = "PDBIN" (must be upper case only); IMSAI
S-100 w/Z80;
    (Apparently down due to malicious mischief, need
confirmation.)
SuperBrain RCPM .... (617) 862-0781 IMSW
    Paul Kelly; M-F 7P-7A, wknd 24 hrs; (3BV;300K);
Superbrain
    CP/M programs; (Lexington)
Bellingham RBBS .... (617) 966-0416 W
    Jim Devoid; (no answer when in use); (3;180K); Heath
H8 system

[New Hampshire]
Nashua, NH RCP/M & C-80 BBS .... (603) 888-4488 MSW
    Steve Peterfreund; (134B;1.9M); DEC, Communications,
Ham, C;
    (So. New Hampshire)

[New York]
C U R A RCP/M .... (212) 625-5931 MSW
    Brian Callahan; (3B;10M); Kaypro, Osborne, Zram,
Softbox; (Fort
    Greene, Brooklyn)
Remote CP/M Facility of Dolgeville, NY .... cb (315) 429-8185 W
    Peter A. Polansky; (346B;500K); 8086, 68000; (Upstate
NY)
CNY Technical RBBS/RCPM .... (315) 437-4890 IMSW
    Mark Howard; 5P-8A M-F, 24 hrs wknd (3;26M); Soon to
support
    1200 baud; Collection point for CP/M Plus software;
Also
    supports Atari, Apple, Kaypro, and IBM-PC; (Syracuse)
KUG of Central NY RBBS-RCP/M .... (315)

106

468-2887 SW
     Ben Silverstein; (3B;10M); A Kaypro-Network System;
     Special interest in Kaypro-related programs.;
(Syracuse)
 CONN-80 QX-10 RCP/M............................... (516)
567-8267 IMSW
     Tom Vande-Stouwe; (3B;15M); Epson QX-10 and Osborne
software
     (FOG Library on line); also the message base for the
Long
     Island Osborne Network; (Long Island)
 Johnson City, NY SJBBS .... (607)
797-6416 SW
     Charles; Eves, etc.; (3;2M); (Upstate NY)
 Rochester RBBS.................................... (716)
323-1214 IMSW
     Arnie McGall; (3BV;2.4M) (Update NY)
 Bearsville Town SJBBS .... (914)
679-6559 W
     Hank Szyszka; (1-7;4M); (Upstate NY)
 Woodstock RCP/M RBBS .... (914)
679-8734 W
     John Doak; (134B;2.8M); (answers after 3rd ring), Ham
radio
     software. CPMUG, RCPM library available.

 [Quebec, Canada]
 Montreal RCP/M.................................... (514)
481-6329
     Pierre Benard; M-F 6P-8A, wknd 24 hrs; (3;1.M)

 [Rhode Island]
 Providence RCP/M .... cb (401)
751-5025 MSW
     Mark Rippe; 10A Sat-10P Sun; (3;1.2M); Msg system down

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 EAST CENTRAL

 [Maryland]
 Pikesville RBBS/RCPM .... (301)
484-2831 ??
     John Madill; (3?;??); DEC, Rainbow, IBM-PC; Sponsored
     by local Computerland store; (Baltimore)
 BHEC RBBS/RCPM .... (301)
661-2175 IMSW
     Walt Jung, Charlie Schnepf, Harry Barley; (34B;10M);
(Baltimore)
 St. Mary's College RCP/M .... (301)
863-7165 W
     Thomas Loker, Jonathan Crawford; (3B;20M); Epson QX10
system;
     Have special interest sections for different
computers;
     Educational programs; (St. Mary's City)

Mid-Atlantic Kaypro Users Exchange .... (301)
865-5025 SW
     Mike Barrett; (3;200K); RCP/M for MAKUE of MD; Special
interest
     in Kaypro; (Mt Airy)
 Microcomputer Electronic Information Exchange ..... (301)
948-5718 MSW
     John Junod, Lynne Rosenthal; (3;64K); (Gaithersburg)

 [New Jersey]
 CP/M-Net (tm) East (The Second!) .... (201)
249-0691 IMSW
     (Sysop anonymous); (3B;20M); (Piscataway, NJ)
 RIBBS of Cranford, New Jersey .... (201)
272-1874 MSW
     Bruce Ratoff; (1-7,B on request;3M); bulletin board of
SIG/M,
     (Special Interest Group/Microcomputers, ACGNJ)
 KUGNJ1 RBBS Atlantic Highlands, NJ .... (201)
291-8319 MSW
     George Frankle; (3B;400K,(10M soon)); RBBS of Kaypro
User Group
     of New Jersey; (Password="KUGNJ1"); (Atlantic
Highlands, NJ)
 Flanders, NJ RCPM .... (201)
584-9227 W
     Ken Stritzel; (3B,1-7 on request;26M) Latest SIG/M
releases
 The C-Line .... (201)
625-1797 SW
     David Fiedler; M-F 8P-9A, wknd 24 hrs; (1-7;2M);
UNIX/UNIX-like
     systems, C software; (Northwest NJ)
 Paul Bogdanovich's RBBS .... (201)
747-7301 SW
     Paul Bogdanovich; M-F 6P-11P, wknd 8A-11P; (1-7;1M)

 [Pennsylvania]
 Allentown RBBS/RCPM System .... (215)
398-3937 IMSW
     Bill Earnest; (1-7BV;10M); bulletin board of the
Lehigh Valley
     Computer Club
 ChurchBoard BBS .... (215)
932-8829 ??
     Byl Levering; (3B;??); Church related messages;
messages
     only until 1/1/84 then will support XMODEM
 State College, PA. CUG-NODE .... (814)
238-4857 W
     Joe Shannon; (3;3M)

 [Virginia]
 OxGate-007 Grafton VA .... (804)
898-7493 SW
     Dave Holmes; (3;200K); CP/M, TRS-80 & Apple software;

(Tidewater)

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MIDWEST

[Illinois]
Logan Square RCPM ....
.... (312) 252-2136 IMSW
    Earl Bockenfeld; (1-7;1M); Special interest databases.
Daily
    change on B; (Chicago)
 Palatine RCPM .... (312)
359-8080 IMSW
    Tim Cannon; (3B;4.8M); Disks on B, C & D are changed
daily;
    (Chicago area)
 Xerox Midwest RCPM/RBBS .... (312)
384-0013 IMSW
    David Lowy; (12A-6P, other hrs no answer if in use);
(3B;980K);
    Mainly for Xerox PC users, but all welcome. Password
required
    for system access; (Xerox 820-II system); (Chicago)
 Prairie View RCP/M .... (312)
537-7888 IMSW
    Don Castella; 6P-8A Mon-Fri, 24 hrs wknd; (1-6B;3.6M)
Heath H89
    3 sets of disks changed daily (Chicago area)
 AIMS, Hinsdale, Ill .... (312)
789-0499 IMSW
    Mark Pulver; (1-7B;10M); Running both PMMI and Hayes
1200
    modems, 1200 detect at second c/r then 3 sec delay to
switch
    modems. (Chicago)

 [Indiana]
 Bloomington RCPM/RBBS .... (812)
334-0609 IMSW
    Bob Jacobs; (3B;2M); (four carriage returns to bring
up sys);
    current public domain software, amateur radio
(satellite).

 [Missouri]
 St Louis HUG RBBS .... (314)
291-1854
    John Griffith; 1A-9A daily, 24 hrs on Sunday; baudrate
    and disk size unknown; H-89 system

 [Kansas]
 Wichita RBBS/RCPM .... (316)
682-9093 SW
    George Winters; (8P Fri-11P Sun); (3B;300K); member of
FOG
    OPEK (Osborne Portable Enthusiasts of Kansas) chapter.

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Mission, KA RCPM .... (913)
362-9583 SW
    Bill Parrott; (3B;7M); Heath/DG Super 89 system
Ft. Leavenworth RBBS .... (913)
682-3328 W
    Greg Bridgewater; (3;1M); Running TRS-80 with Omikron;
(this
    is the Pickerington, OH. RBBS in a temporary new
location,
    will return to Ohio (at old # (614) 837-3269) in
December '83.)
AlphaNet RCP/M RBBS .... (913)
843-4259 MW
    Larry Miller; 6P-9A daily; (3;700K); B drive changes
daily;
    (Lawrence)

[Michigan]
Schooner Cove (Ypsilanti) RCP/M .... (313)
483-0070 SW
    Michael Wesley; (3;644K); B: changed daily, sysop will
mount
    any disk on request. (Ann Arbor-Detroit area)
MINICBBS/Sorcerer's Apprentice Group .... (313)
535-9186 IMSW
    Bob Hageman; (1-7;500K); Sorcerer software and
hardware;
    (Detroit area)
Southfield, MI, RBBS/RCPM .... (313)
559-5326 IMSW
    Howard Booker; (3;2.7M); BDS C programs, doc. files.
Royal Oak CP/M .... cb (313)
759-6569 IMSW
    Keith Petersen; (1-7,B on request;10M); (Detroit area)
Tony's Corner RBBS .... (313)
754-1131
    Tony Bauman; (3B;??); TRS-80 Model I system
XEROX CORP RBBS ....cb (313)
827-2266
    Brad Harper; If calling during working hours - call by
    voice first, after 5P call, hang up after recorder
starts
    and call back immediately.
Technical CBBS .... (313)
846-6127 IMSW
    Dave Hardy; (1-7;3M); RCPM sysops desiring access to
passworded
    RCPM Clearing House system should leave msg on TCBBS;
(Detroit)
OPTEC RBBS .... (616)
897-8628
    Jerry Persha; baud/disk unknown; Open system; interests
    in prof and amateur astronomy relating to photometry.
    (Lowell, MI)

[Minnesota]

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TCRCP/M Twin Cities RCP/M ........................ (612)
333-5947 IMSW
     Larry Linde; (3B;5M); RBBS written in 'C'; (5 Mhz Big
Board);
     (Minneapolis)


[Ohio]
Dayton RCPM/RBBS ................................. (513)
256-7227 SW
     Dave Robling; (1-7;1M); (Dayton)
West Carrolton RCP/M ............................. (513)
435-5201 SW
     Rich Malafa, Bob Drake; (1-7;11M); (Dayton)
Cincinnatti RBBS ................................. (513)
489-0149 SW
     Henry Deutsch; 6P-6A daily; (1-7;1.8M)
Columbus CBBS .................................... (614)
272-2227 IMSW
     John Walpole; (1-7;300K); BDS-C programs


[Wisconsin]
Beer City BBS .................................... (414)
355-8839 IMSW
     Jim Miller, Mike Wesolowski and Tim Winslow;
(1-7;5M,16M);
     Running on three seperate systems. Call system for
individual
     board times. Heath, Osborne, TRS80 Software;
(Milwaukee)
Fort Fone File Folder ............................ (414)
563-9932 W
     Al Jewer, Shawn Everson, Ron Fowler; (1-7;20M); (Ft.
Atkinson)


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SOUTH

[Alabama]
NACS/UAH RBBS/RCPM ............................ cb (205)
895-6749 W
     Don Wilkes; (1-7;700K); (Huntsville)


[Florida]
Astronomer's RBBS & RCPM ......................... (305)
268-8576 W
     Chuck Cole; (no answer when in use); (3B;492K);
Astronomy &
     science special interests: CFAS, AAVSO, ISRG, IAPPP,
SERAL, and
     CANDL; (will have 2.4MB on-line soon); (Titusville)
Oracle 002: Silicon Beach RCP/M................... (305)
439-5754 IMSW
     Steve Sanacore; (3;256K); Apple CP/M; (West Palm Beach)
Winter Park, Florida RCPM/RBBS ................... (305)
671-2330 IMSW
     Larry Snyder; (3B;20M); Special interests in Compupro
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hardware,
     communications, dBase II, C-86, CPM816 and MPM816.
     (Compupro 816 CP/M-80); (Suburb of Orlando)
 Hackers BBS and RCP/M .... (305)
676-3573 W
     Alex Soya; (3B;15M); new releases of CPMUG and SIG/M
software;
     Information exchange re: hardware problems & fixes,
especially
     S-100 machines; CPM86 and CPM68K software; (will have
20MB disk
     soon); (Melbourne)
 CCPB-RCP/M Computer Club of the Palm Beaches ..... (305)
967-0344 SW
     Mark Fay; (system I: TU & TH 9P-12P; SU 12A-12P);
(1-7;1.8M);
     Interest in libraries of recent and classic CP/M
software.
     Jim Flora; (system II: M, W & F 9P-12P); (1-7;1.2M);
Interest
     in ASCII printer graphics, CB80, and general CP/M
software;
     (NOTE: Phone answered voice other hours.) (West Palm
Beach)
 Tampa Technical RCP/M .... (813)
254-4637 IMSW
     Scott Holtzman; (3B;7M); Special interest UNIX and
'C'; (Tampa)
 Tampa RCP/M .... (813)
831-7276 IMSW
     Charlie Hoffman; (3B;20M); New 20MB hard disk;
Interest in 'C';
     SIG/M-CPMUG releases; Tampa Bay CP/M User's Group
 Tampa Bay Bandit Board RCP/M .... (813)
937-3608 IMW
     Steve Sanders; (3B;10M); KAYPRO-NETWORK Headquarters;
     Kaypro, Osborne, VAX, modem, SIG/M-CPMUG releases,
ZCPR2.
     Sysops desiring access to K-Net BBS leave message on
system.
     >>> THIS SYSTEM IS ALSO A COLLECTION POINT FOR UPDATES
TO THIS
     LIST. PLEASE SEND THE INFO. AS A FILE AND/OR MESSAGE
TO SYSOP.

 [Georgia]
 Atlanta RCP/M-RBBS .... (404)
627-7127 IMSW
     Jim Altman; (3;1.8M); soon to be 200mb?; Interest in
'C',
     SIG/M, CPMUG releases; (Atlanta)
 Acropolis BBS/RCPM .... (912)
929-8728 SW
     Tony Stanley; (3B;10M); Kaypro, Heath/Zenith, CPMUG
and SIG/M
     software; member of Kaypro network; BBS for local

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Kaypro and
     Heath/Zenith user groups; (Warner Robins, GA)

  [Kentucky]
  Ovation Network RCP/M............................ (606)
276-1957 IMSW?
     Jay Denebeim; (no answer when in use); (3B;5M); Heath
89
     Kaypro Lexington User's Group (KLUG); a KayPro-Network
system
     (Lexington)
  Physicians Responsive RCP/M...................... (615)
967-6889 IMS
     Dudley Fort; (3B;800K); Medical management programs;
special
     interest in anything medically oriented;
KayPro-Network system
     (Winchester)

  [Louisiana]
  Redstick RCPM .... (504)
275-7846 IMSW
     Ken Shutt; (3;1.6M); CP/M+, Operating systems; (Baton
Rouge)

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  CALIFORNIA

  [Northern California]
  OxGate-005 Fresno Micro Fone .... (209)
227-2083 IMSW
     Bob Robesky; M-F 7P-7A, wknd 24 hrs; (3BV;22M);
Standard and
     new CP/M 80/86, MP/M 8-16, 'C', dBASE II, etc.
  Merced HUG CBBS/RCPM .... (209)
383-6417
     Clinton Cook; M-Th 6P-12P, wknd 24 hrs; (B2;2M); System
     powered down until modem lock; Interest in CP/M, modem,
     Basic programs; (Merced, CA)
  San Jose DataTech Node 007 / Piconet Node 003 ..... (408)
238-9621 IMSW
     Al Mehr; (3B;20M); ZCPR2, CP/MUG, SIG/M software
  Oxgate-002 RCP/M Milpitas .... (408)
263-2588 IMSW
     Mel Cruts; (system hrs may be erratic due to heat);
(1-7;12M);
     (south SF bay area)
  PicoNet #4 Wizard's Keep RBBS-RCP/M .... (408)
281-7059 IMSW
     Rick Hobbs; (3;20M); Will answer technical questions
on Osborne
     1; (San Jose)
  OxGate-001 Monte Sereno, CA .... (408)
354-5934 IMSW
     Chuck Metz & Paul Traina; (3B;20M); (San Jose area)
  POTPOURRI BBS & RCP/M Oxgate-012, San Jose, CA .... (408)

378-7474 IMSW
    Wayne Masters; (3B;20M); Engineering Applications,
Compilers,
    Assemblers, disassemblers & free JRT Pascal. Special
software
    for sysops on A10; leave name and system phone #.
    ((System PRIVATE as of 12/01/83))
 OxGate-dBASE II RCP/M Campbell, Ca. .... (408)
378-8733 IMSW
    Roger D. Brown; (3B;4M); dBASE II is available on this
system
    to demonstrate software from independent software
developers.
    System will soon be converting from OxGate to a BBS
written in
    dBASE II. (San Jose area)
 Skyhouse Systems .... (408)
578-6185 IMSW
    Kirk De Haan; (no answer when in use); (3B;30M); Will
help with
    TELEVIDEO systems; (San Jose)
 Oracle-003: "BAYLIST" System .... cb (408)
730-8733 IMSW
    Eric Sarti; (3;256k); Bay Area BBS List HQ, many
programs are
    available by request; (south SF bay area)
 Oracle-001: Network Headquarters .... (408)
732-9190 IMSW
    Ed Svoboda; (3B;40M); New releases, Communications,
16-bit,
    'C', utilities, Apple, Osborne, Otrona, Kaypro,
CompuPro
    computers. Sysop is inviting users groups to start SIG
    sections for BBS/downloading purposes. Distributes
Oracle
    BBs. (Now has 40M & 1200 baud) (south SF bay area)
 CrosNest II (DataTech Node 014) .... (415)
 341-9336 IMSW
    Wilbur H. Smith; (3;2.8M); (Box 962, San Mateo, Ca.
94403)
    CDOS, CP/M hardware/software
tipes/bulletins/educational
    utilities and communications software (SF Bay area)
 RBBS of Marin County .... (415)
383-0473 IMSW
    Jim Ayers; M-F 5P-8:30A, wknd 24 hrs; (1-7;10M); Now
up with 10
    meg drives A:-E:, user areas 1-2 w/ SIGM and CP/MUG
pgms;
    (SF bay area)
 Rich & Famous RCP/M .... (415)
552-9968 IMSW
    Stephen Price, Ralph Nishimi; (3B;760K); games,
communications;
    (San Francisco)
 DataTech Network Headquarters System .... (415)

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595-0541 IMSW
     Edward Huang; (3BV;1M); (Box 290, San Carlos, CA 94070)
     Hub of DataTech Network. Heath/Zenith/TRS-80, utilities
     and communications software. (SF Bay Area)
 Palo Alto RCP/M .... (415)
949-2563 IMSW
     Jim McMurry; (M-F 8A-11P, wknd 24 hrs); (3B;382K (10M
soon));
     Kaypro II system;"Heavy Metal" BBS; member of
KayPro-Network.
 Napa Valley RBBS/RCPM .... (707)
257-6502 W
     Dave Austin; (1-7;1.2M); Features: Apple, Atari,
Compupro,
     Morrows, Osborne, TRS, CP/M software; interest in
BDS/Aztec C,
     dBase II, Ham Radio; (Napa)
 Fairfield RBBS/RCPM .... (707)
422-7256 W
     Mark Bournival; (3(1200 soon);3M); CPMUG & SIG/M,
general CP/M
     software; (Northstar w/ 8" drives); (Sacramento area)
 Critical Mass RBBS/RCPM .... (707)
884-4221 MS
     Ken Mobert; (3;26M); Oxgate system; (Gualala)

 [Southern California]
 Los Angeles RCP/M .... (213)
296-5927 IMSW
     Bob McCown; (1-7;2.5M); System features catalog of the
latest
     CP/M, Apple, Atari, TRS-80 and IBM PC software; (west
LA)
 PatVac .... (213)
306-1172 IMSW
     "Pavlov's Cat", (Harris Boldt Edelman); (3B;366K); a
magazine
     for the Real Programmer whose defenses are down; often
abused
     by the locals. Now supporting 1200 baud (212A).
(Venice)
 Granada Engineering Group RCP/M .... (213)
360-5053 IMSW
     Webber Hall; (3;1M); (Granada Hills)
 The MOG-UR'S HBBS .... (213)
366-1238 IMSW
     Tom Tcimpidis; (3B;19M); 11 different boards, varied
interests.
     Database use welcome to all systems, operating systems
and
     users; (San Fernando valley, LA area)
 Temple City RBBS/RCPM .... (213)
445-7058 IMSW
     Al Krug; 24 hrs; (3B;10M); Now using Kaypro 10; Kaypro
area
     on Drive B3; ZCPR2 on Drive C0.

Bankers & Hackers BBS/RCPM .... (213)
498-6581 IMSW
    Don Appleby; (3B;1.8M); N* system with NZCPR
G.F.R.N. Data Exchange (RBBS) .... (213)
541-2503 IMSW
    Skip Hansen; (3BV;2.4M); ham radio-related pgms;
(Palos Verdes)
ComputerFood Press MBBS/RCPM .... (213)
559-9033 IMSW
    Sysop ?; (3B;??); Interests computers for small
businessmen
Pasadena RBBS .... (213)
577-9947 IMSW
    Rich Berg; (1-73BV;3.98M); Note: system power off
until modem
    carrier lock. (does not recognize CR's for 15 secs
after lock,
    while system auto boots), Heath H89; (LA area)
Hollywood RCPM/MBBS .... (213)
653-6398 IMSW
    Kim Levitt; (no answer if in use); (3B;382K); System
run
    under ZCPR2; Headquarters for (MBBS) Micro Bulletin
Board
    System (tm) software; (Los Angeles)
    >>> THIS SYSTEM IS ALSO A COLLECTION POINT FOR UPDATES
TO THIS
    LIST. PLEASE SEND THE INFO. AS A FILE AND/OR MESSAGE
TO SYSOP.
Woolf Software BBS .... (213)
704-1871 IMSW
    Jeff Woolf; (3;600K); soon 1200 baud & 2M; "MOVE-IT"
as well
    as XMODEM protocol supported; Communications; all
welcome.
La Canada RCPM/RBBS .... (213)
790-3014 IMSW
    Chris Hays; (no answer if in use; allow 4 rings for
autoboot);
    (3B;1.3M); electronics, communications software; (LA
area)
Pasadena CBBS .... (213)
799-1632 IMSW
    Dick Mead; (1-7;8.3M); (LA area)
Glendale RBBS/RTPM .... (213)
957-5195 IMSW
    Larry Davis; (M-F 7P-7A, wknd 24 hrs); (3;752K); TPM,
CP/M
    software for Epson QX-10; (LA area)
Hawthorne RBBS .... (213)
973-2374 IMSW
    Mike Haefner; (3B;370K?); IBM-PC based system; (LA
area)
Barstow RCP/M .... (619)
256-3914 W
    Bill Wood; (34BV;5.5M); H89 system. (does not see CR's

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for 8
    secs after carrier detect, while system auto boots)
 San Diego RCPM .... (619)
273-4354 IMSW
    Brian Kantor; (3BV;2.4M); (San Diego)
 SABA-HOM-LINE CBBS .... (619)
692-1961 IMSW
    Don Saba; (3B;2M); Special interest in Apple CP/M
 MVHUG RCPM .... (714)
495-9384 MS
    Bob Mathias; 7:30P-5A Tu-Sat, 24 hrs Sun & M (3B;10M);
    Run by Mission Viejo Heath Users group; Pascal/Mt and
Janus
    Ada public domain; (Mission Viejo)
 G.F.R.N. Data Exchange (RBBS) Garden Grove .... (714)
534-1547 SW
    Doug Laing; (3BV;5M); amateur radio, Apple/CPM;
(Garden Grove)
 San Dimas RBBS/RCPM .... (714)
599-2109 MSW
    Stu Anthony; M-F 8A-7P, wknd 24 hrs, (try anytime);
(3B;964K);
    Xerox 820-II
 AnaHug RCPM/CBBS .... (714)
774-7860 IMSW
    John Secor; (3B;10M); hobby computing, ham,
electronics
    hobbyists; Now has 300/1200 212A baud; (Anaheim)
 Thousand Oaks Technical RCP/M (RIOS) .... (805)
492-5472 MSW
    Trevor Marshall; (36B;48M); (baud rate set at log on
or with
    NEWBAUD); active bulletin board; Now has 48MB, drives
A:-N:,
    most software in subdirectories, use MOUNT to access
them. Most
    of SIG/M on-line. Drive H: has 16-bit software.
 Simi RCP/M .... (805)
527-2219 SW
    Pete Mack; (M-F 7P-7A, wknd 24 hrs); (3-6,B;20M);
General
    interest programs plus special interest in 'C'; Also
interested
    in 88/86 PC software; (Simi Valley)
 Gil Berry's Simi RBBS .... (805)
527-8668 SW
    Gil Berry; (no answer if in use); (3;270K); Apple][
system;
    engineering, robotics, science, music; (Simi Valley)
 SIMIAPPLE/RCPM .... (805)
584-6054 W
    John Damico; M-F 7P-11P, wknd 24 hrs; (3;6M); interest
in
    modem, rcpm and amateur radio software; (Simi Valley)
 LOBO MAX-80 RBBS .... (805)
964-6626 W

Tom Marazita; 24hrs (more or less)
(3B;2.4M); MAXIMUL (Max-80
     User's League) software, CP/MUG, SIG/M, dBase, PASCAL,
'C';
     (Goleta)

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SOUTHWEST

 [Colorado]
 Boulder, Colorado RCPM .... (303)
499-9169 MSW
     Jack Riley; daily 12P-6A, hard disk up 7P-12A Wed, Sun;
     Keyword-based bulletin board, high-level language
software,
     graphics, numerical analysis & UNIX info,MX-80
graphics,
     typesetting; (1-7BV;32M)
 Pinecliffe RMP/M RBBS .... (303)
642-3034 MSW
     Craig Baker; Irregular hrs, 24 hrs. soon, (try
anytime);
     (3B;16M); Login by using "LOGIN" program. On-line
databases on
     such topics as nuclear power, Retrieval system,
MP/M-II mods,
     interest in active discussions; (Pinecliffe)
 Denver CUG-NODE .... (303)
781-4937 MSW
     ? Sysop; (1-7;1M)
 Lakewood RCPM/RBBS .... (303)
985-1108 MSW
     Gary Shaffstall; (3B;38.4M); (300 baud restricted-send
SASE to
     P.O. Box 28146, Sta 16, Lakewood, CO 80228 with up to
6 char
     password); (Denver area)

 [New Mexico]
 Mesilla Valley RCP/M .... (505)
522-8856 MSW
     Phil Cary; (34B;10M); special interest in CB80; (Las
Cruces)

 [Texas]
 Metroplex RCP/M.................................. (214)
739-1935 IMSW
     Steve Holtzclaw; (3B;26M+); SIG/M-CPMUG software;
drive D: is
     changed daily with new releases; now supports LUX LBR
     utility. (Dallas)
 Dallas RCP/M CBBS .... (214)
931-8274 IMSW
     Dave Crane; M-F 6P-8A, wknd/holidays 24 hrs;
(3B;2.4M); pgms
     for and discussions of application of micros to

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science &
     engineering, especially earth sciences.
 Ft Worth RCP/M-Metroplex KUG BBS................... (817)
467-5110 IMSW
     Gary Spencer; (3B;800K); 7P-7A M-F, 24 hrs on
weekends; SIG/M-
     CPMUG releases; B drive changed daily; a
Kaypro-Network system
     (Arlington)
 Computers Unlimited RBBS/RCPM .... (817)
547-8890 IMSW
     Jack Kinn; (3B;20M); Full XMODEM; (Copperas Cove TX)
 El Paso RCPM/CBBS .... (915)
598-1668 MSW
     Sigi Kluger; (1 hour time limit); (B;12M); NOTE: 1200
baud ONLY;
     Interest in N* and latest releases

 [Utah]
 Northern Utah CP/M Users Group RBBS (NURBBS) ...... (801)
776-5024 MSW
    Brett Berg; (346BV;3M); Big Board II, CPMUG library;
(Roy, UT)

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 NORTHWEST

 [Alberta, Canada]
 Edmonton RCPM .... (403)
454-6093
     Dave McCrady; (no answer when in use); (3BV;3.8M)
 Stadium RCP/M .... (403)
479-3450
     Gary McCallum; (3;???K); (Edmonton)

 [British Columbia, Canada]
 Frog Hollow CBBS/RCPM .... (604)
937-0906
     David Bowerman; (1-7;1.2M); (Vancouver)

 [Montana]
 Helena Valley RBBS/RCPM .... (406)
443-2768 W
     Marion Thompson; (no answer when in use); (3B;1.2M);
Photo-
     typesetting service, special interest in S-100;
(Helena)

 [Oregon]
 Chuck Forsberg's RCPM .... (503)
621-3193 SW
     Chuck Forsberg; (3BV;??K)
 Beaverton, Oregon RCPM .... (503)
641-7276 SW
     Dave Morgan; (1-7;26M); Special Interest in Computer
Art

[Washington]
Olympia RCPM .... (206)
357-7400 W
    Tim Linehan; (3B;18M); Interest in 'C', database pgms,
& string
    manipulation; Most CUG software on-line.
Yelm RBBS & CP/M .... cb (206)
458-3086 W
    Dave Stanhope; (1-7;250K); (Olympia)
Northwest Computer Society RCP/M .... (206)
621-8665 W
    George Blat, Wayne Campeau, Jim Mitchell; (3B;34M);
SMUG RCPM/RBBS .... (509)
255-6324 W
    Bruce Jorgens, David Schmidt; (3B;26.5M); Spokane
Microcomputer
    Users' Group; Interest: Kaypro, Osborne, 'C', dBase II
and CP/M
    86 software, also ZCPR2; (Liberty Lake)

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HAWAII

[Hawaii]
HAWAII RCP/M RBBS .... (808)
422-8406 S
    George Sofaly; (3B;800K); (New number, now 24 hrs &
1200 bps);
    Kaypro-Network system; interests in Kaypro; (Honolulu)

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OVERSEAS

[Australia]
SOFTWARE TOOLS RCPM 61-2-997-1018
(Australia)
    Bill Bolton; (300 baud CCITT V21 standard;4.8M);
(Sydney)
MICOM CBBS 61-3-762-5088
(Australia)
    Peter Jetson; (300 baud CCITT V21 standard;500K);
(Melbourne)

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PRIVATE/FEE SYSTEMS

  The following systems have a password requirement and may
charge
an annual or timed fee. Access to these systems is
available on a
pre-registration and/or fee basis.

CP-MIG .... on MicroNet, type 'R CP-MIG' or
GO PCS-47'
    Dave Kozinn, Tom Jorgenson, Charlie Strom arranging to

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have MN
     carry much new CPMUG and SIG/M software, plus a
newsletter
     and a CP/M-oriented CBBS. COMPUSERVE users have full
access to
     CP-MIG.
  Toronto Ontario RCP/M Systems ... (416) 232-0442 232-0269
231-1262 M
     Jud Newell; (3BV;46M); allow limited access without
registra-
     tion; (three systems available); (Toronto, Ontario,
Canada)
     >>> THESE SYSTEMS ALSO A COLLECTION POINT FOR UPDATES
TO THIS
     LIST. PLEASE SEND THE INFO. AS A COMMENT ON LEAVING
SYSTEM. SEE
     ALSO NEW-SYS.OPS FOR INFORMATION ON OBTAINING SYSOP
ACCESS.
  Arlington RCPM/DBBS of Virginia .... (703)
536-3769 IMSW
     Eliot Ramey; M-F 10P-3P, wknd random; (1-7;800K);
(Washington
     DC area); (Minimum $5.00 subscription fee.)
  Anchorage Remote CP/M (ARCPM) .... (907)
349-7996
     Rodger Ellis; (3B;15M); By paid subscription, $6.50/mo.
     Limited to 100 members. Several memberships still
vacant.
     Call (907) 349-6882 voice. Or write ARCPM, 740 W. 71st
Ave.,
     Anchorage, AK 99502 for membership application.

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                       NOTES

1. Call-back systems are those where a computer and real
people share the same telephone line. To contact the
people, just dial & let the phone ring until you get an
answer. To contact the computer: (1) dial, (2) let the
phone ring once, (3) hang up just before the 2nd ring, &
(4) re-dial.

2. Note that the 212A/Vadic 1200 baud modems may not be
compatable with yours. Some of the above systems are
using Vadic 3451 Triple modems, compatable with both
Bell and Vadic Standard. Sign on the first time at 300
baud to determine the system capabilities. Note also that
PMMI's can sometimes be used over 300 baud with 1200
baud systems. PMMI baud rates are: 110, 300, 450,
600, 710 and are indicated above as "1-7".

3. Whether a program exchange system is accessible by an
alternative long-distance service should be considered
when planning to modem over long programs. Charges on ITT
Longer Distance, MCI, Sprint and Western Union Metrofone
are 50-60% of Ma Bell's regular long distance rates.

(Note, however, that you might sometimes have trouble
going 1200 baud.)

Using the new SPRINT "Universal Service" (avail. in
certain areas only), you can call anywhere in U.S.,
(including Alaska, Hawaii, Puerto Rico and the Virgin
Islands). Cities on Sprint network are cheaper, but
non-network cities can be called at a rate cheaper than Ma
Bell. (Numbers shown with an "S" indicates number is on
SPRINT network.) (MCI and ITT also have similar service
available now.)

Western Union METROPHONE service will call anywhere in
the continental United States, (not Alaska, Hawaii, PR or
VI).

4. Total on-line disk capacity is shown for reference.
Check the system documentation for exact details when
logging on.

5. All times listed are local time, please observe
operating hours for systems with scheduled availability

YOUR FRIENDLY BBS
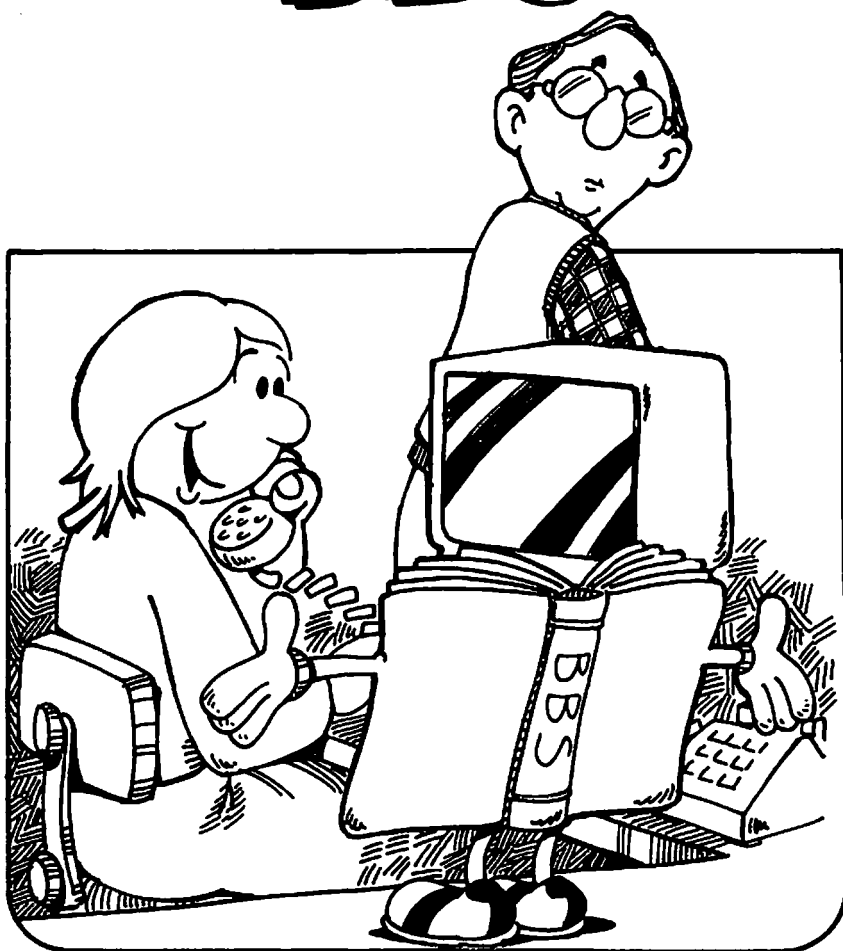
YOUR FRIENDLY BBS

A number of Bulletin Board Services cater specifically to the Apple computer owner. They can provide you with FREE Apple public domain software, message centers, and helpful Apple-related tips and information. In this chapter, we'll take a tour through an RCP/M BBS. An RCP/M operates as a typical BBS on one level, and uniquely as a CP/M software exchange on another. By exploring an RCP/M you'll learn how to get the most out of contacting *any* BBS.

More Bulletin Boards

There are more than five hundred *other* Bulletin Board Services located throughout North America that you can contact.

Even though many of these BBS's are designed to operate with other computers (Atari, IBM, TRS-80, etc.), you can still get on-line with them to leave a message, chat with the system operator (SYSOP) or review the latest computer news and events.

To help you explore this fascinating world, we've included a directory of these bulletin boards. Call them up and take advantage of the services they have to offer. It will expand your horizons. You might discover that some of these BBS's have special Apple download sections.

You've Made Contact!

You've just made your first contact with a BBS. Your heart beats faster, your fingers poise over your computer's keyboard ready to respond to any question that might appear on the screen. You want to call in friends and family to show them this marvel of communications, but a cold sweat breaks out on your forehead as you are asked to supply a "6 character USER CODE". "What's the right answer? What's a 'User Code' anyhow?"

Your first contact with a BBS can be exciting instead of traumatic. We've done it before and we'll help guide you through your first BBS experience.

DIFFERENT BULLETIN BOARDS HAVE A LOT IN COMMON

First, you should know that most BBS's ask the same kinds of questions at sign-on, and accept the same types of commands when you're past the sign-on stage. This makes it easy for you to call up and "talk" to virtually any type of BBS.

We'll show you how to sign-on to a RCP/M BBS, share a few helpful hints, then list the RCP/M BBS commands and explain each command's function. Then you can make your first contact with confidence!

Calling a BBS

SIGNING ON

After you "dial" a BBS using a telephone, you will hear a few rings followed by a steady tone, or an indicator light will glow if you are using a direct-connect modem. You've got 'em! If you are using an acoustic modem, plug your handset into the two rubber cups. If you have a direct-connect modem, communications will begin automatically, or at the flip of a switch.

HELPFUL HINT 1

If your screen remains blank after you think that contact has been made, press ENTER a few times. That usually get the BBS's attention!

Now that you've got the BBS's attention it will start bossing you around. The first thing that most BBS's may ask you to do is: PRESS RETURN. After you've done that, the BBS will probably start bragging about itself. Oracle RCP/M of Sunnyvale, California begins each transmission by welcoming you to the service, telling you about its hours, bragging a bit, and listing Bulletins of interest to most callers. Have patience, the BBS operators are providing you with a great FREE service and get a kick out of showing off a little.

WHAT'S YOUR NAME?

If you know your name, this part is really easy! After the introductory messages most BBS's will ask for your name, then the city and state you are calling from. Answer these questions and your screen will say something like: "WAIT A MINUTE, I'M CHECKING MY FILES." So...wait a minute.

WHAT'S THIS "PASSWORD" STUFF?

Some BBS's seem downright impertinent. Instead of asking for your name, they'll ask you for a password! Don't panic! The reason some bulletin boards want their users to have passwords is so they can keep out the "riff-raff". Since you're not riff-raff *you qualify for a password* and getting one is usually very simple and straightforward.

You'll usually be asked to enter about six alphanumeric characters. My password is my birthdate....41741 (April 17, 1941). Every time you call this BBS, use your password to get into its system. If you use a different password for each BBS that requires one, things could become a bit confusing, so don't forget to write it down next to the BBS's phone number. It's like remembering your secret code for your friendly ATM (Automated Teller Machine) at the bank. Use something simple.

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* Null: A null creates a pause that allows a printer with no buffer memory to keep pace with transmitted data. Most modern printers have built-in buffer memories and don't require nulls.

Please don't get a new password each time you log on to the same BBS. It clogs up their records and makes it difficult for the BBS to serve you.

YOU'RE NOW INSIDE THE BBS!

You've made it! You've seen the BBS's grand opening show, "logged-on", and are ready to start using all the FREE services this BBS has to offer.

If you have asked something like: "IS THIS YOUR FIRST TIME HERE?," *answer "YES" and you'll be given complete instructions.* To stop these instructions as they whiz by on your screen, you usually press the CONTROL key plus the "S" key. To allow the message to continue to scroll, just press CONTROL plus the "Q" key.

If you are a smarty and answered "NO", this is what you might see:

A,B,C,D,E,F,G,H,K,L,O,Q,R,T,U,W,Z

Looks like alphabet soup! Actually, these letters represent the keys you press to communicate with the BBS.

For example if you press the letter "B" you can read the bulletins. If you press the letter "R" you may be able to retrieve and read messages from the bulletin board.

Remember, most systems are very similar. Almost all of these letter abbreviations will work on any system. Just to play it safe, answer "YES" to review the instruction when the bulletin board asks if this is your first visit. We called the Oracle RCP/M BBS (408-732-9190), as first-time users and were shown their list of BBS commands.

We've reprinted an *edited* version of our contact so you can familiarize yourself with a BBS *before* you call one up. Reviewing this material will help you make your first contact with virtually any type of BBS with confidence.

Welcome to the Oracle Network Headquarters! This system allows you to exchange electronic mail and public domain software with other users.

Just about any computer or terminal can be used to send and receive electronic mail but for file transfer you'll need a CP/M-based or PC DOS-based system with communications software that supports the Ward Christensen Protocol. *If you are in need of, or are unsure if you have this sort of software, ask the SYSOP.*

Oracle Command List:

B =   Read Bulletins: Reprints System Operator's bulletins to users.

C =   Enter CP/M (Software Exchange)

D =   Date and Time

E =   Enter Message to system. After entering 'E' all other commands are self explanatory.

F =   List of Current Features

G =   Good-bye. This is the command used to exit this system.

I =   Read Public Contribution Info

J =   Jump to CP/M (same as "C")

K =   Kill a Message: Deletes your message from the system.

M =   Message Alert (msgs for you?)

O =   Oracle BBS Systems List

P =   Change Password

Q =   Quick Summary of Messages

QN =   Quick Summary of New Messages

R =   Retrieve Individual Message

RF =   Retrieve Forward Sequential

RN =   Retrieve New Messages

RNS =   Retrieve New Msgs Selective

RS =   Retrieve Selective

S =   Full Summary of Messages

SN =   Full Summary of New Messages

T =   Toggle Bell

U = User List

W = Read Welcome Message

X = Toggle Novice/Expert Mode: Sifts to and from the Expert User Mode. After pressing "X" you qualify as an Expert User, and will *not be shown* the menus as each input prompt.

= Message Statistics

Commands may be strung together, separated by semicolons. For example, 'R;123' retrieves message #123.

COMMANDS YOU MIGHT ENCOUNTER ON OTHER SYSTEMS

C – is very often used to allow you to "chat" with the System Operator.

BYE or Q – replaces "G" to say "goodbye".

DOWNLOAD or D – is used on some systems (ABBS) to download programs.

UPLOAD or U – is used on some systems (ABBS) to upload programs.

Moving into the RCP/M Software Exchange Section

After you've browsed through the bulletin board section of an RCP/M, its time to enter "C" or "J" and move right into the heart of the host computer's operating system.

When you arrive, you'll see something like this: "AO"

"AO" means that you are in touch with Disk Drive AO (or user area AO).

Here's a list of typical commands you'll use once in the CP/M area:

Oracle Software Exchange Commands

Type "BYE" to exit this system

Type "CHAT" to call the SYSOP.

Enter CONTROL + 'C' to interrupt and break out of any level of this system.

Type "DIR" for directory of files on current drive and user area.

Type "DIR A:*.* $UOAD" for a global directory of all files on system.

Type "DIR A:*.* $UOADL" to also include files inside libraries.

Type "B:" to access drive B. (Drives A through F available)

Type "USER 2" to access user area 2. (User areas 0 through 9 available)

Type "TYPE filename.ext" to type out a file on the screen.

Type "XMODEM S filename.ext" to send file TO YOU with Christensen Protocol.

Type "XMODEM L libraryname filename.ext" to download from a library.

Type "XMODEM R filename.ext" to receive a file FROM YOU.

Type "XMODEM RP filename.ext" to receive file in SYSOP's private section.

Type "RBBS" or "ORACLE" or "BBS" to reenter main message base.

Type "BYE" to log off and disconnect.

Type "LDIR libraryname" to view directory of a library.

Type "LTYPE libraryname filename.ext" to type out a file in a library.

Type "B:WHATSNEW" to see list of latest files.

When we called the Oracle BBS, here's what was available in each user area.

Disk Map [as of 12/15/83]

```
A0: System COM Files
A1: Communications Software
A2: File Squeezing and Unsqueezing Utilities
A3: Library Utilities
A4: Submit and Submit-like Utilities
A5: Text Files
A6: Fixes and Modifications
B0: Public Upload Area
B1: Bulletin Board and Remote CP/M software
B2: Assemblers, Compilers, Disassemblers
B3: Word Processing and Printing
B5: General Utilities and Systems Hackers Software
B6: Disk Utilities
C0: Apple CP/M
C1: Osborne I and Executive
C2: Heath/Zenith Systems
C3: KayPro Software
C4: CompuPro/Godbout
C5: Northstar
C6: Access Matrix
D0: SoftSIG: Software Review Special Interest Group
D1: BASIC Programs
D2: Fun and Games Section
D3: Engineering/Science
E0: BD Software 'C' Programs
E1: dBASEII software
E2: Computerized Pictures and Humor
F0: IBMSIG: IBM Special Interest Group
F1: CP/M-86 Section
```

Look At The Directory

Once you know what type of programs are available, go to the section of your choice by typing the section's identifier. For example, if you want to download Apple programs you'd just type CO: <RETURN>.

When you arrive, your screen will display: CO>

Next, type DIR and press RETURN and you'll see of list of all the programs in the section. Here's a sample list that shows what you might expect:

```
>>> DRIVE:C  USER:0  FILES:19
SPACE USED:140K  (6972K FREE) <<<


 -APPLE  .COO    OK : APLVIDEX.AQM   4K : APMODEM2.AQM  28K
: APZCPR60.DQC   4K
 AP-CP/M .FIX    4K : APLVIDEX.OBJ   4K : APMODM73.OBJ  12K
: ZCPR2-A6.LBR   8K
 APBDSC  .PAT    8K : APMBOOT .AQM   4K : APPLECPM.DQC   4K
: ZCPR2-AP.LBR  12K
 APCASE  .AQM    4K : APMD1200.LBR  16K : APPLHALT.AQM   4K
: ZTRMPTCH.TQT   4K
 APHAYES .450    8K : APMEMMAP.TXT   8K : APZCPR56.DOC   4K
:
```

Deciphering Filenames

CP/M filenames are divided into two parts. The first is the name, which must start with a letter ("A" through "Z"), and can be up to eight characters long. The second part of a filename is its file type. A period separates the name from its type.

The file type identifies each file. Here is a list of typical file types:

File Types

.TXT–Text files in ASCII (CHARACTERS)

.COM–System files executable under CP/M. COM files cannot be uploaded or downloaded.

.OBJ–These files are .COM files that have been renamed so you can download them. After you download an .OBJ file change its file type to .COM and RUN it on your CP/M or CDOS system.

.ASM–Assembler source file in ASCII.

.ASC–An ASCII file similar to TXT files, but usually a BASIC program that has been saved in ASCII.

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.BAS–A BASIC program usually saved in compressed binary format. (May be any version of BASIC.)

.Z80–An assembler file for Z80 processor in ASCII form.

.C–A 'C' language source file in ASCII.

.LST–A listing file in ASCII. Usually a list of things.

.DOC–Document files in ASCII usually explaining the use and history of the program of the same name.

.CAT–A Catalog file in ASCII showing a list of programs etc.

.LBR–A library file containing several files internally that have been specially grouped together under one file name.

.-Q--Any of the above names files with a "Q" in the middle position, for example "DQC" in place of "DOC" is a squeezed file. This means that the file has been compressed for easier storage and downloading. After you download this type of program, you must unsqueeze it using the USQ utility. (Download and save the USQ utility when you first use an RCP/M system.)

Read The Documentation

It's always a good idea to read the documentation for the program of your choice before you download it. Just look for a .DOC file, use the following command, and the documentation will appear on your screen:

TYPE FILENAME.DOC   RETURN

Remember, the word "TYPE" must be entered before the filename.

Download A File

The download and upload portion of an RCP/M BBS is controlled by a program called "XMODEM". To tell the RCP/M to send you a file:

1. Type the command: "XMODEM S" followed by the filename and extension as listed on the directory. Here's what your entry might look like:

<div align="center">XMODEM S BASEBALL.BAS</div>

2. Press RETURN and XMODEM will "tell" you it has opened its file and is ready to transmit the *BASEBALL.BAS* program to your Apple.

3. Press the appropriate key (software dependent) and the XMODEM program at the RCP/M will send you the program. When the download is complete, your Apple will automatically store your new program to the device you've selected.

<div align="center">• <i>Uploading A File</i></div>

1. Before calling the BBS, load your program into your computer's buffer.

2. Call the RCP/M and access its upload section.

3. Type the command: XMODEM R followed by the filename and extension. In this example you would type:

<div align="center">XMODEM R GREAT.BAS</div>

then press RETURN.

4. Press the appropriate key on your computer's console and your program will be sent to the RCP/M BBS. When the upload process is finished, your computer should automatically return to the TERMINAL mode.

<div align="center"><i>Get On Line Today</i></div>

Read your terminal software instructions, review this section, and you're well prepared to call that BBS. Remember, if you ever need help it's as close to you as your telephone. Just call up the system operator at the nearby BBS and chat via modem, or leave a message on the BBS's message board.

We've found that the people who use and operate the FREE BBS systems are ready and willing to give a hand to a newcomer. (We've gotten plenty of help.) Don't be shy, get on line today and start experiencing this exciting new communications medium. And,

Have fun with
Your new FREE Software!

Getting The Program To Work

Many terminal programs save downloaded Applesoft programs in the form of text files. Text files cannot be executed by the computer. This appendix describes how to convert a text file (of an Applesoft program) into an Applesoft file that is directly executable on an Apple II+ or Apple IIe computer.

1. Using a text editor remove all text except that of the Applesoft program.

2. Save the edited text file back to the disk under a new name such as *"TEMP1"*.

3. Leave the text editor and boot up the system master disk. Your Apple should now display the Applesoft cursor].

4. Type the command *NEW* and hit return.

5. Now type the command *EXEC TEMP1* and hit return. This causes each of the Applesoft basic commands in the text file *TEMP1* to be entered one by one into the Apple's memory as if they had been typed at the keyboard.

6. The Applesoft program is now in memory ready to be run. You should however first save the program on disk for future use. Choose a new name for the program and save it. If you don't choose a new name you obtain an error message *FILE TYPE MISMATCH*. This is because you are trying to save an Applesoft file to a Text file.

7. In the future you can now directly run the program.

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How To Start Your Own BBS

Interview With
Ed Svoboda
Oracle Network Headquarters

Software is available, free, from many users' groups that let you start your own BBS using a *standard* Apple computer. Call, write, or better yet, join the group nearest you and ask for their latest BBS starter package.

If your Apple is equipped with CP/M, or if you are interested in starting an RCP/M BBS, then read on. We're sure you'll find our interview with Ed Svoboda both fascinating and informative.

Fifteen-year-old Ed Svoboda of Sunnyvale, California is the youngest student at Stanford University. He is also a telecommunications pioneer who operates *Oracle Network Headquarters,* a sophisticated RCP/M BBS of his own design.

How Ed Got Started

Ed started with an Apple II equipped "with a full house", including CP/M, a 16K language card, "and everything else." About a year ago he bought an acoustic modem (without auto-answer capabilities) and began exploring the world of telecommunications.

At first he only knew about CompServe, "which was fun, but was expensive on a student's budget." Soon, he discovered through friends that there were privately owned and operated electronic bulletin board systems. After some exploration, Ed dialed a system that offered free public domain software to start a BBS, downloaded the program, and proceeded to modify and improve it.

Ed next acquired an Apple CAT/Novation 300 baud direct connect modem to answer the phone, downloaded more public domain electronic mail software and went on the air.

Growing Pains

"I started getting lots of calls and decided that I needed more disk storage to keep track of the callers and to store public domain software files for downloading, "which really eats up a lot of disk storage."

Ed has since upgraded his system to 8" inch drives, "which lasted four months," and now has an 11 MB Corvus hard disk!

Ed next decided to modify his software to include a "Checksum" protocol that checks for transmission errors and virtually guarantees error free transmission and reception. "The original software didn't have this. My little brother would pick up the phone while someone was on-line and mess everything up. I would have to start all over again."

The Living' Is Easy with CP/M

Ed says that "communications are easy under CP/M. There's a wide variety of public domain CP/M software available and it's easy to transfer sophisticated software using the 'Christensen Checksum protocol' that's commonly in use. You're also not limited to 40 columns, and you have upper and lower case print on the screen."

Start Your Own Oracle BBS

About six months ago, Ed wrote his own "Oracle" software-and electronic mail program. This two part system allows users to take advantage of a comprehensive mail and message service, then go from the BBS to CP/M for direct file transfer. Ed also told us that "Public domain software for Apples is mostly CP/M." The programs available on his system include utilities for hobbyists, games, and business applications.

Ed was fast to point out that "User's don't need a CP/M system to communicate with the Oracle BBS and leave messages, but they will need CP/M to take advantage of this large public domain software library.

Here's what you need to start your own Oracle BBS:

- 64K Apple II, II +, or IIe
- CP/M card
- Auto answer modem such as the Hayes Smartmodem or Apple CAT Novation
- 80 column card
- Printer is optional "but really nice to have"
- "the more disk drives the better—two minimum"
- FREE Oracle program, which takes up 46K (the message file can be any size)

Ed says that, "Oracle BBS software is available FREE on request for people who want to start their own BBS, as long as they don't do anything strange with it!"

For your free copy, just leave a message for Ed (SYSOP) at *Oracle Network Headquarters:* 408-732-9190.

Operating A BBS Is Really Enjoyable

"Operating my BBS is really enjoyable, watching my system grow and get more complex and sophisticated is a never-ending experience. There's always something you can change to make it better."

Apple III Terminal Software

If you've got an Apple III, there are plenty of software packages available to help you enter the exciting world of telecommunications. Here are just a few:

Apple Access III: Transforms your Apple III personal computer into a conversational terminal that can communicate with a variety of computers and timesharing systems. This program allows the Apple III to emulate Digital Equipment Corporation's VT-100 and VT-52 terminals. By connecting a modem to your Apple III it allows communications at 110, 300, 1200, 2400, 4800 or 9600 baud. Apple Access III includes recording to disk and file transmission. The Apple III Computer's local processing power gives you the added advantage of being able to "download" data from remote systems and work with it off-line. From Apple Computer: $150.

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Apple Access 3270: Apple Computer now offers 3270 communications capability for your Apple III. Apple Access 3270 is designed to work exclusively with an Apple 3270 Cluster Controller Emulator. Apple Access 3270 emulates the keyboard and operations of an IBM 3278 model 2 terminal with the added capability to download and upload from a host computer. With Apple Access 3270 and the Apple 3270 Cluster Controller, your Apple III computer can now communicate with any other computer that supports IBM 3270 communications. From Apple Computer.

Micro/Courier III: Communications program for the Apple III from MicroCom, available through Apple Computer.

Micro-Terminal: Turns your Apple III into an intelligent terminal. Includes: macros, file transfer, protocol selection, built-in editor and more. From MicroCom, 1400A Providence Highway, Norwood, MA 02062. 617-762-9310. $100.

SWI Apple III Communication System: Allows your Apple III to act like a Burroughs TD830 intelligent terminal. Communicates with the Burroughs computer using the standard "poll-select" and "point to point" protocols. System will support asynchronous switched (dial-up), compatible with Bell 202 modems, and synchronous. Most of the Burroughs functions are provided, including the status line and multiple pages. The SWI Apple III D.C. spooler is a file transfer program that works with the Burroughs main frame file transfer program. The user can upload or download between Apple III and mainframe to floppy disc or ProFile. For further information contact: Core Technology Corp., 134 W. University, Suite 203, Rochester, Michigan 48063. 313-651-6421. $600.

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        PUBLIC ACCESS MESSAGE SYSTEMS
               (P.A.M.S.)
            Updated 10/22/83

  Compliments of Peoples' Message System, Santee CA.

            ( 6 1 9 )  5 6 1 - 7 2 7 7

        Compiled and maintained by Bill Blue
        (with a lot of help from his friends)

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            *   denotes 24-hour operation
            +   denotes 8-12 hour DAYTIME operation
                 ONLY
            -    denotes 8-12 hour NIGHTTIME
                 operation ONLY
            !   new system or new number to
                 existing system
            $ Supports VADIC 1200 baud operation
            &   Supports 212A 1200 baud operation
            %   Supports BAUDOT operation
            #1   denotes original system of that type
            dd. denotes game oriented messages
            dl. download/program exchange system
            ml. mail/information exchange only
            rb. denotes call, let ring once and
                 call back
            rl. religious orientation

            Regular updates of this list may be
            found on CompuServe MAUG XA4, The
            Source PUBLIC 112, and most
            participating independent P M S systems.

        Current filesize is 40,248 bytes.

         ABBS Akron Digital Group, Akron,
OH..........(216) 745 7855*
         ABBS Analog, Port Coquitlam, BC,
CN.........!(604) 941 0041*
         ABBS Apple-Mate, New York,
NY................(201) 864 5345
         ABBS Byte Shop, Ft. Lauderdale,
FL...........(305) 486 2983
         ABBS Byte Shop, Miami,
FL...................(305) 261 3639
         ABBS Calvary Mission Church, Mnpls,
MN.......(612) 472 3985*rl.
         ABBS CCNJ, Pompton Plains,

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NJ................(201) 835 7228
          ABBS Charlotte,
NC.........................(704) 364 5245*
          ABBS CODE, Glen Ellyn,
IL..................(312) 882 2926*
          ABBS Colortron Computer, Racine,
WI..........(414) 637 9990*
          ABBS Compumart, Ottawa, Ontario,
CN.........(613) 725 2243
          ABBS Computer Room, Kalamazoo,
MI............(616) 382 0101
          ABBS Gamemaster, Chicago,
IL................(312) 475 4884*
          ABBS Ketchikan,
AK.........................(907) 225 6789
          ABBS LINX, Lincoln,
NE.....................(402) 476 1177*dl.
          ABBS New York,
NY.........................!(516) 473 1005*
          ABBS New York,
NY.........................!(212) 877 7703*
          ABBS Nessy Game System, Itasca,
IL...........(312) 773 3308*
          ABBS Nessy Flynn's BBS, Crystal Lake,
IL.....(815) 455 2406
          ABBS Omaha,
NE...........................(402) 339 7809
          ABBS Pacific Palisades, Los Angeles,
CA......(213) 459 6400
          ABBS Peoria,
IL...........................(309) 692 6502
          ABBS Phoenix,
AZ...........................(602) 898 0891
          ABBS Pirates Cove, Long Island,
NY...........(516) 698 4008
          ABBS Rogers Park, Chicago,
IL................(312) 973 2227
          ABBS Software Sorcery, Herndon,
VA.........&(703) 471 0610*
          ABBS South of Market, San Francisco,
CA......(415) 469 8111 so.
          ABBS The Pulse, Dallas,
TX...................(214) 631 7747*so.
          ABBS Teledunjon III, Dallas,
TX..............(214) 960 7654
          ABBS Turnersville,
NJ.......................(609) 228 1149
          ABBS Vancouver, BC,
CN.......................(604) 437 7001
          ABBS Vermont, Essex Junction,
VT.............(802) 879 4981*
          ABBS Video Adv. Movie Marquee, Evanston,
IL..(312) 475 5282
          ABBS West Palm Beach,
FL...................(305) 848 3802
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           ACS Arlington Heights,
IL.................#1(312) 392 2403
           ACS Chicago,
IL...........................(312) 445 1130

           A-C-C-E-S-S Annapolis,
MD....................(301) 267 7666*
           A-C-C-E-S-S Phoenix,
AZ...................&(602) 957 4428*
           A-C-C-E-S-S Call-A-Lawyer, Phoenix,
AZ.......(602) 275 6644
           A-C-C-E-S-S Scotsdale,
AZ...................(602) 998 9411*
           A-C-C-E-S-S Wyckoff,
NJ......................(201) 891 7441*

           AMIS A.R.C.A.D.E. Sterling Heights,
MI.......(313) 978 8087*
           AMIS Clarendon Hills,
IL.....................(312) 789 3610*
           AMIS GRAFEX Cupertino,
CA....................(408) 253 5216
           AMIS G.R.A.S.S. Grand Rapids,
MI............(616) 241 1971*
           AMIS IBBBS San Jose,
CA......................(408) 298 6930
           AMIS M.A.C.E. Detroit,
MI.................#1!(313) 589 0996*
           AMIS T.A.B.B.S. Sunnyvale,
CA...............(408) 942 6975

           ARMUDIC Washington,
DC.....................#1(202) 276 8342
           ARMUDIC Computer Age, Baltimore,
MD.........(301) 587 2132

           BBS IBM Hostcomm Atlanta,
GA.................(404) 252 4146
           BBS IBM Hostcomm Fairfax,
VA.................(703) 978 9592*
           BBS IBM Hostcomm Fairfax,
VA...............!(703) 385 7373*
           BBS IBM Hostcomm Fairfax,
VA...............!(703) 385 8384*
           BBS IBM Hostcomm Springfield,
VA............(703) 425 7229*
           BBS IBM Hostcomm Houston,
TX................(713) 890 0310*
           BBS IBM Hostcomm Toronto, Ontario,
CN........(416) 499 7023*
           BBS IBM PC Annandale,
VA.....................(703) 560 0979*
           BBS IBM PC Atlanta,
GA....................!(404) 928 3005
           BBS IBM PC Atlanta,
GA....................(404) 252 9438*
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              BBS IBM PC Beltsville,
MD..................(301) 937 4339*
              BBS IBM PC Bethesda,
MD......................(301) 460 0538*
              BBS IBM PC Carlotte,
NC......................(704) 365 4311*
              BBS IBM PC Computer Society, Boston,
MA......(617) 353 9312-
              BBS IBM PC Culver City,
CA..................&(213) 649 1489*
              BBS IBM PC Niles,
IL..........................(312) 991 8887*
              BBS IBM PC Dale City,
VA.....................(703) 680 5220*
              BBS IBM PC Gaithersburg,
MD..................(301) 251 6293*
              BBS IBM PC Great Falls,
Va..................&(703) 759 5049*
              BBS IBM PC Madison,
WI......................(608) 262 4939*
              BBS IBM PC Rockville,
MD......................(301) 949 8848*
              BBS IBM PC Vienna,
VA.......................(703) 560 7803*
              BBS IBM PCmodem Chicago,
IL.................&(312) 882 4227*
              BBS IBM PCmodem Chicago,
IL..................(312) 376 7598*
              BBS IBM PC SIG, San Diego,
CA...............!(619) 268 0437*
              BULLET-80 Boston,
MA.......................&(617) 266 7789*
              BULLET-80 Chesterland,
OH.....................(216) 729 2769
              BULLET-80 Danbury,
CT.......................#1(203) 744 4644
              BULLET-80 El Paso,
TX.......................(915) 565 9903*
              BULLET-80 Fayetteville,
GA..................(404) 461 9686
              BULLET-80 Hattiesburg,
MS.....................(601) 264 2361*
              BULLET-80 Holstein,
IA......................(712) 368 2651
              BULLET-80 Langhorne,
PA.....................(215) 364 2180
              BULLET-80 New York,
NY......................(212) 740 5680*
              BULLET-80 Orange County, Anaheim,
CA.........(714) 952 2110
              BULLET-80 Seymour,
CT.......................(203) 888 7952
              BULLET-80 Springfield,
IL....................(217) 529 1113
              BULLET-80 Waterford,
MI....................!(313) 628 4350*
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            BULLET-80 Pirate Place, Newport Beach,
CA....(714) 644 7942


            CBBS AMRAD, Washington,
DC...................(703) 734 1387*
            CBBS Aurora Computer Peripherals, Aurora,
CO.(312) 897 9037*
            CBBS Baton Rouge,
LA.........................(504) 273 3116*
            CBBS Boston,
MA...............................(617) 646 3610*
            CBBS Cedar Rapids,
IA.........................(319) 364 0811*
            CBBS Chicago,
IL.........................#1(312) 545 8086*
            CBBS CPEUG/ICST Gaithersburg,
MD.............(301) 948 5717
            CBBS Lambda, Berkeley,
CA...................(415) 658 2919 so.
            CBBS Lawrence General Hospital, Boston,
MA...(617) 683 2119
            CBBS LICA LIMBS, Long Island,
NY.............(516) 561 6590*
            CBBS London, England..(European standard)..(044)
1 399 2136
            CBBS Long Island,
NY.......................(516) 334 3134*
            CBBS MAUDE Milwaukee,
WI....................(414) 241 8364*
            CBBS MicroStar, Worcester,
MA................(617) 752 7284
            CBBS NW, Portland,
OR.......................(503) 646 5510*
            CBBS PACC, Pittsburgh,
PA...................(412) 822 7176*
            CBBS Prince George, B.C.,
CN................(604) 562 9515
            CBBS Proxima, Berkeley,
CA...................(415) 357 1130
            CBBS RAMS, Rochester,
NY....................(716) 244 9531
            CBBS Rosemont,
MN...........................(612) 423 5016
            CBBS St. Petersburg,
FL......................(813) 866 9945*
            CBBS Strictly Software, Honolulu,
HI.........(808) 944 0562
            CBBS TSG, Tucson,
AZ......................!(602) 574 0327*


            COMNET-80 Akron,
OH.......................&(216) 645 0827*
            COMNET-80 Las Vegas,
NV.....................&(702) 870 9986
            COMNET-80 Mt. Clemens,
MI...................&(313) 465 9531
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                COMNET-80 North Wales,
PA....................(215) 855 3809 so.
                COMNET-80 Riverside,
CA.....................&(714) 359 3189
                COMNET-80 Riverside,
CA....................&(714) 877 2253
                COMNET-80 Wichita Falls,
TX.................(817) 767 5847

                CONNECTION-80 Centereach,
NY..................(516) 588 5836
                CONNECTION-80 Fremont,
CA....................(415) 651 4147*
                CONNECTION-80 Gaithersburg,
MD.............!(301) 946 1252*
                CONNECTION-80 JACS, Jacksonville,
FL.........(904) 353 5227*
                CONNECTION-80 Lansing,
MI....................(517) 339 3367
                CONNECTION-80 Laval BELE, Laval, Quebec,
CN..(514) 622 1274*
                CONNECTION-80 Manhattan,
NY...................(212) 991 1664
                CONNECTION-80 Orlando,
FL....................(305) 644 8327*
                CONNECTION-80 Peterborough,
NH..............(603) 924 7920
                CONNECTION-80 Winter Garden,
FL..............(305) 894 1886*
                CONNECTION-80 Woodhaven,
NY...................(212) 441 3755*
                CONNECTION-80 Tampa,
FL.....................(813) 977 0989

                CONFERENCE-TREE Berkeley,
CA.................(408) 475 7101
                CONFERENCE-TREE Computerland, Honolulu,
HI...(808) 487 2001*
                CONFERENCE-TREE Cookville,
TN...............!(615) 528 5039*
                CONFERENCE-TREE Flagship, Rockaway,
NJ.......(201) 627 5151*
                CONFERENCE-TREE Hayward,
CA.................(415) 538 3580
                CONFERENCE-TREE Kelp Bed, Los Angeles,
CA....(213) 372 4800
                CONFERENCE-TREE Minneapolis,
MN..............(612) 854 9691
                CONFERENCE TREE Phoenix,
AZ...................(602) 931 1829*
                CONFERENCE-TREE San Francisco,
CA..........#1(415) 861 6489
                CONFERENCE-TREE Santa Monica,
CA.............(213) 394 1505
                CONFERENCE-TREE Sausalito,
CA................(415) 332 8115
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        CONFERENCE-TREE Tacoma,
WA...................!(206) 759 0615*

        DIAL-YOUR-MATCH
#1..........................(213) 842 3322 so.
        DIAL-YOUR-MATCH
#3..........................(912) 233 0863 so.
        DIAL-YOUR-MATCH
#4..........................(213) 783 2305 so.
        DIAL-YOUR-MATCH #8, San Francisco,
CA........(415) 467 2588 so.
        DIAL=YOUR-MATCH
#9..........................(213) 345 1047 so.
        DIAL-YOUR-MATCH #11, Carlsbad,
CA............(619) 434 4600*so.
        DIAL-YOUR-MATCH #12, Houston,
TX.............(713) 556 1531*so.
        DIAL-YOUR-MATCH
#14.........................(201) 272 3686 so.
        DIAL-YOUR-MATCH
#16.........................(206) 256 6624 so.
        DIAL-YOUR-MATCH
#17.........................(415) 991 4911 so.
        DIAL-YOUR-MATCH
#18.........................(617) 334 6369 so.
        DIAL-YOUR-MATCH
#20.........................(919) 362 0676 so.
        DIAL-YOUR-MATCH #21, Freehold,
NJ............(201) 462 0435 so.
        DIAL-YOUR-MATCH
#22.........................(213) 990 6830 so.
        DIAL-YOUR-MATCH #23, Omaha,
NE..............(402) 571 8942 so.
        DIAL-YOUR-MATCH #26, Clovis,
CA..............(209) 298 1328 so.
        DIAL-YOUR-MATCH #33, Poway,
CA..............(619) 748 8746*so.
        DIAL-YOUR-MATCH #37, Flint,
MI..............(313) 736 1398 so.
        DIAL-YOUR-MATCH #38, Austin,
TX.............(512) 451 8747 so.
        DIAL-YOUR-MATCH #39, Chicago,
IL.............(312) 243 1046 so.
        DIAL-YOUR MATCH
#46,........................!(318) 222 2032-so.


        FORUM-80 Augusta,
GA..........................(803) 279 5392
        FORUM-80 Cleveland,
OH....................&(216) 486 4176
        FORUM-80 El Paso,
TX.........................(915) 755 1000*
        FORUM-80 Ft. Lauderdale,
FL.................(305) 772 4444*
        FORUM-80 Hull, England..................(011) 44
482 859169
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            FORUM-80 Kansas City,
MO...................&(816) 931 9316
            FORUM-80 Las Vegas,
NV.......................(702) 362 3609*
            FORUM-80 Linden,
NJ..........................(201) 486 2956*
            FORUM-80 Medford,
OR.........................(503) 535 6883*
            FORUM-80 Medical, Memphis,
TN.................(901) 276 8196*
            FORUM-80 Monmouth, Brielle,
NJ...............(201) 974 1196*
            FORUM-80 Montgomery,
AL.......................(205) 272 5069
            FORUM-80 Prince William County,
VA...........(703) 670 5881*
            FORUM-80 San Mateo,
CA.....................&(415) 348 2139
            FORUM-80 Seattle,
WA.......................(206) 723 3282
            FORUM-80 Sierra Vista,
AZ....................(602) 458 3850*
            FORUM-80 Westford,
MA.......................(617) 692 3973
            FORUM-80 Wichita,
KS.....................&(316) 682 2113*

            GABBS Armadillo Media, Houston,
TX...........(713) 444 7098*
            GABBS Food for Thought, Omaha,
NE...........!(402) 551 4618*
            GABBS Mindstore, Terra Haute,
IN............!(812) 235 0909*
            GABBS The Great Apple, Houston,
TX...........(713) 455 9502*
            GABBS Vox Populi, Houston,
TX...............!(713) 772 6096*

            GREENE MACHINE Golden State BBS, Novato,
CA..(415) 897 2783
            GREENE MACHINE Riverside, CA..
..............(714) 354 8004
            GREENE MACHINE Chicago,
IL...................(312) 622 4442 so.
            GREENE MACHINE Corsair, WPB,
FL..............(305) 968 8653
            GREENE MACHINE Rome,
NY.....................(315) 337 7720
            GREENE MACHINE Sunnymead,
CA................!(714) 924 2229*
            GREENE MACHINE Yuma,
AZ.....................&(602) 726 7533*

            HBBS Heath/Zenith, Grand Rapids,
MI.........&(616) 531 0890
            HBBS MOG-UR, Granada Hills,
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CA..............&(213) 366 1238*

        MCMS C.A.M.S. Chicago,
IL.................#1&(312) 927 1020*
        MCMS J.A.M.S. Lockport,
IL...................(815) 838 1020*
        MCMS P.C.M.S. Wheaton,
IL..................&(312) 462 7560*
        MCMS Goliath, Minneapolis,
MN................(612) 753 3082
        MCMS NC Software, Minneapolis,
MN............(612) 533 1957*
        MCMS WACO Hot Line, Schaumburg,
IL..<pvt>....(312) 351 4374*
        MCMS Word Exchange, Springfield,
IL..........(217) 753 4309*

        NET-WORKS ABC, Kansas City,
MO...............(816) 483 2526
        NET-WORKS Adventure's Inn, Lake Forest,
IL...(312) 295 7284*
        NET-WORKS AGS, Augusta,
GA....................(404) 733 3461*
        NET-WORKS Apple Gumbo, Shreveport,
LA........(318) 861 1012*
        NET-WORKS Apple Juice, Drien,
IL.............(312) 685 9573
        NET-WORKS Apple Net, Chicago,
IL.............(312) 963 5384
        NET-WORKS Apple-Technical, Chicago,
IL.......(312) 935 3091
        NET-WORKS Armadillo, Grand Forks,
ND.........(701) 746 4959
        NET-WORKS Assembly Line, Louisville,
KY......(502) 459 5531-


        NET-WORKS Asylum, Edwardsville,
IL...........(618) 692 0742
        NET-WORKS Baud-ville, Louisville,
KY.........(502) 423 0695-
        NET-WORKS Beach BBS, Pensacola,
FL...........(904) 932 8271
        NET-WORKS Big Apple, Miami,
FL...............(305) 948 8000
        NET-WORKS Briar-Net, Houston,
TX.............(713) 782 5706*
        NET-WORKS Brooklyn,
NY......................(212) 410 0949
        NET-WORKS C.A.M.S., Decatur,
IL.............!(217) 875 7114*
        NET-WORKS Charleston,
WV.....................(304) 345 8280
        NET-WORKS Chipmunk, Hinsdale,
IL.............(312) 323 3741*
        NET-WORKS Coin Games, Los Angeles,
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CA........(213) 336 5535
          NET-WORKS COMM Center NW3NAGAD, Laurel,
MD...(301) 953 3341
          NET-WORKS Computer Market, Honolulu,
HI......(808) 524 6668-
          NET-WORKS Computer Pro, Ft. Worth,
TX........(817) 732 1787
          NET-WORKS Computer World, Los Angeles,
CA....(213) 859 0894*
          NET-WORKS Dayton,
OH........................(513) 223 3672
          NET-WORKS Eclectic Computer Sys., Dallas,
TX.(214) 239 5842
          NET-WORKS Forth Dimension, St. Louis,
MO.....(314) 532 4652
          NET-WORKS GBBS Metro Detroit,
MI.............(313) 455 4227 so.
          NET-WORKS Greenfield,
IN....................!(317) 326 4152*
          NET-WORKS Honolulu,
HI....................!(808) 524 6652
          NET-WORKS Hawaii Connection, Honolulu,
HI....(808) 423 1593*
          NET-WORKS Jolly Roger, Houston,
TX..........(713) 468 0174*
          NET-WORKS Livingston,
NJ....................(201) 994 9620*
          NET-WORKS MAGIE, Galesburg,
IL...............(309) 342 7178
          NET-WORKS Magnetic Fantasies, Los Angeles,
CA(213) 388 5198
          NET-WORKS MicroBBS, Chelmsford,
MA.........!(617) 889 4330
          NET-WORKS Micro Ideas, Glenview,
IL..........(312) 998 5066
          NET-WORKS Mines of Moria, Houston,
TX........(713) 871 8577*
          NET-WORKS N A G S, Alton,
IL................(618) 466 9497
          NET-WORKS Nick Naimo, Newburgh,
IN.........#1(812) 858 5405
          NET-WORKS Pirate's Harbor, Boston,
MA........(617) 720 3600
          NET-WORKS Pirate's Harbor, Cambridge,
MA.....(617) 494 1985
          NET-WORKS Pirate's Lodge, New City,
NY.......(914) 634 1268
          NET-WORKS Portsmouth,
NH....................(603) 436 3461
          NET-WORKS RJNET, Warnville,
IL...............(312) 393 4755
          NET-WORKS Softworx, West Los Angeles,
CA.....(213) 473 2754
          NET-WORKS The Dark Realm, Houston,
TX........(713) 333 2309*dd.
          NET-WORKS The Dragon's Lair NW, San Jose,
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CA.(408) 996 7464
          NET-WORKS The Shadow World, Houston,
TX......(713) 777 8608*
          NET-WORKS The Silver Tongue, St. Joseph,
MO..(816) 232 3153
          NET-WORKS The System, Houston,
TX............(713) 785 7996-
          NET-WORKS The Weekender, Houston,
TX.........(713) 492 8700*
          NET-WORKS Toronto, Ontario,
CN...............(416) 445 6696*
          NET-WORKS Warlock's Castle St. Louis,
MO.....(618) 345 6638
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KS...(913) 432 5544*
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CO...................$&!(303) 755 5380*ml.


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          PET BBS S.E.W.P.U.G., Racine,
WI.............(414) 554 9520*
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WY.........(307) 637 6045*
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AK........................(907) 344 8558
          PMS - Apple Bits, Kansas City,
MO...........(816) 252 0232*
          PMS - Century 23, Las Vegas,
NV..............(702) 878 9106*
          PMS - Chicago,
IL...........................(312) 373 8057*
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CA.......(619) 582 9557*ml.
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         PMS - Floppy House, San Diego,
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NY................(607) 797 6416-
           RCP/M Software Tools, Sydney, Australia......61
02 997 1018*
           RCP/M Sunnyvale,
CA......................(408) 730 8733-
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                RCP/M Technical, Thousand Oaks,
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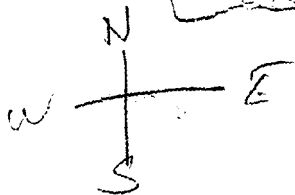
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MRC BBS, Mountain View,
CA..................!(415) 968 1093
NBBS Norfolk,
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         OARCS Portland,
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         Omega, Phoenix,
AZ...........................(602) 952 2018*
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WA.....................(206) 763 8879*
         SIGNON Reno,
NV................<pw=FREE>....(702) 826 7234

$(702) 826 7277
         SISTER Staten Island,
NY....................(212) 442 3874*
         SOBBS Poor Man's BBS, Houston,
TX...........(713) 453 7931*
         SOBBS Test Mode, Houston,
TX................(713) 522 5516
         Stellar III, Phoenix,
AZ....................(602) 833 0740*
         Steve's BBS/Game Palace, Shawnee Mission,
KS.(913) 648 5301*
         Stuart II BBS, Boulder Creek,
CA...........!(408) 338 9511*
         Sunrise Omega-80, Oakland,
CA...............(415) 452 0350
         Switchboard, Alexandria,
VA.................(703) 765 2161*
         System/80 San Leandro,
CA.................!(415) 782 4402
         Talk-80 ROBB, Portsmouth,
VA.................(804) 484 9636
         TCUG BBS, Washington,
DC....................(703) 836 0384*
         Tech-Link, Forest Glen,
MD.................(301) 565 9051*
         TECOM-80, Tampa,
FL.........................(813) 839 6746
         Telcom 7 New Fairfield,
CT..................(203) 746 5763*
         Telemessage-80, Atlanta,
GA.................(404) 962 0616
         The Garden of Eden, Phoenix,
AZ.............(602) 991 0144*
         The Interface, Los Angeles,
CA..............(213) 477 4605
         The Software Bank, Northridge,
CA..........!(213) 701 7670
         Toledo Apple Users BBS, Toledo,
OH.........!(419) 537 9777*
         Treasure Island, Royal Oak,
MI..............(313) 547 7903
         TVG Systems, Burnaby, BC,
CN.................!(604) 738 1640*
         Vanmil, Milwaukee,
WI........................(414) 271 7580*
         VERGA 80, Santa Ana,
CA....................(714) 547 6220
         Voyager, Phoenix,
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AZ........................(602) 247 6034
          Vic-20 Online, Houston,
TX..................(713) 944 6597*
          Visiboard, Wellesley,
MA...................(617) 235 5082
          WAPABBS, Charlotte,
NC......................(704) 373 7966*
          Westside Download, Detroit,
MI.............!(313) 348 4479
          XIO, Houston,
TX..........................(713) 495 1422-
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EDUCATIONAL RESOURCES

FREE (AND ALMOST FREE) SOFTWARE & EDUCATIONAL RESOURCES
For Parents and Educators

Welcome to Free Educational Software

If you are a parent, you want your computer to be more than a game machine; you want it to be a significant part of your child's education. If you are a teacher, you may already have some ideas about the potential of the computer as a learning tool in your classroom. How can parents and educators reach their goals effectively and economically?

One way is to take advantage of the public domain educational software and expertise available—for free or at a nominal charge— from educational BBS's and users' groups that are springing up all over the world.

Included in these resources are people and organizations that are using the computer to benefit learners of all ages and those who have physical or learning disabilities. With modified equipment and software, computers can enable blind people to "see" and deaf people to "hear." Physically limited individuals can learn to program, do word processing, and "telecommute" to their jobs, even if they can't use the computer keyboard! Students of all ages can learn at their own pace, using computers as an infinitely patient teaching tool.

This is an exciting time to be a parent, educator, or child. There are lots of people willing to share their enthusiasm, specialized knowledge, and software with you and your family for free or for a nominal charge!

Computers Help Children Learn

Children learn from every contact with a computer. Even when they're playing an arcade game, they're getting comfortable with the machine,

developing game-winning strategies, and improving eye-hand coordination.

What's Educational Software?

Software that has been designed for educational uses—that teaches a subject, improves sequential learning skills, and/or provides a planned learning experience—falls into four categories:

1. Computer-Aided Instruction

Computer-Aided Instruction (CAI) was the first educational application for computers. CAI software teaches through question-and-answer drills. "Microscope," for example, is a CAI game that uses hi-res graphics to teach students the parts of a microscope. "The States and Capitols" game is another example of CAI. CAI software can be boring or lively, judgmental or supportive, depending on the person who wrote it.

Good CAI programs take advantage of sound and graphics and provide children with an appropriate reward. Well-written CAI software encourages children and gives them lots of chances to get the right answer. Avoid any program that criticizes children or tells them they're "stupid" if they don't get the right answer!

CAI isn't the most creative application for computers in education, but it can be very useful. Your children or students can practice skills and drill themselves on information at their own pace. Computers have lots of patience!

2. Learning Games

Learning games are programs that combine recreational features with learning skills. Their goal is to present learning as a game with the kind of sounds, graphics, action, challenges, and rewards you would find in a program written for entertainment. Learning games are the hottest new development in commercial educational software. If you want to see examples of learning games, look for the GameWare series by Spinnaker Software Corp., innovative educational games from The

Learning Company, and the Discovery Games from the Children's Television Workshop. You can also find less sophisticated, but highly enjoyable learning games in public domain software libraries.

3. Simulations

Simulations are programs that "simulate" a real situation where the child has to make decisions and see the consequences of his or her actions. In "Cartels," the player is in charge of a multimillion-dollar company. In "Lemonade," the player learns about math and money while managing a lemonade stand. "Hammurabi" is another public domain simulation that puts kids in the role of the ruler of ancient Sumeria. They must make important decisions about economics, crops, and feeding their subjects or risk an uprising. Another popular simulation game is "Oregon Trail," which simulates a pioneer wagon trip from Missouri to Oregon.

4. Programming Languages

A fourth kind of educational software is programming languages designed for kids and beginners. PILOT and Logo are programming languages that are simple and easy to learn. Kids can write stories, create dialogues, and draw colorful pictures with "Turtle Graphics," while learning to program.

Classroom Management Software

Teachers can use software that is designed for classroom management to create their own lessons, keep a data base of grades and student information, or do routine record-keeping.

How Can You Get Free Educational Software?

Now that you know what kinds of educational software are available, how can you get it FREE or for a minimal charge?

The rest of this chapter is devoted to organizations and resources that disseminate public domain software to parents and educators. Just as valuable are the bulletin board services, users' groups, and publications that allow you to communicate directly with other educators.

These resources will also help you to evaluate software, so you get only the best in public domain or commercial software. You can also share special needs and experiences in teaching and learning with computers.

Apple Users' Groups

Your first resource for educational software and information is your Apple Users' Group. Almost all of the users' groups listed in this book include educational software in their libraries.

International Apple Core

The International Apple Core (see "Mini-Profile 1") has an excellent library of public domain educational software donated by Apple educators from all over the world. They offer "Educational 3Paks": three disks for only $24.95 that contain tutorials on Applesoft and Machine Language. They also offer many other educational programs for as little as $7.95 and have regular educational features in *Apple Orchard* Magazine. Their International Educational Special Interest Group can put you in touch with other educators from Jersey City to Zanzibar.

IAC-Education Special Interest Group
908 George Street
Santa Clara, CA 95050
(408) 727-7652

Apple-CAN Educational
Special Interest Group/L.O.G.I.C.

Apple-CAN is a consortium of Canadian Apple Users' Groups, including L.O.G.I.C. The L.O.G.I.C. group is an active organization in Toronto that is responsible for developing, standardizing, and doumenting much of the educational software in the IAC and other club libraries.

Apple-CAN EDSIG
Box 696
Station B
Willowdale, Ontario
Canada
M2K 2P9

Apple for the Teacher

This educators' users' group publishes an informative newsletter on grants, software reviews, and educational applications and serves as a software and information exchange for teachers.

Apple for the Teacher
2331 Rainbow Ave.
Sacramento, CA 95821

A.P.P.L.E.

The Apple Puget Sound Program Library Exchange (see "Mini-Profile") offers discounted prices on software and equipment to member individuals and schools. They also sell public domain educational software for as little as $7.95 for fifteen programs. Their magazine, *Call A.P.P.L.E.*, regulary features excellent articles on educational applications and program reviews.

A.P.P.L.E.

21246 68th Ave. S.
Kent, WA 98032
(206) 872-2245

Washington Apple Pi

Apple Pi is an exceptionally active and dedicated users' group in Washington, D.C. (see "Mini-Profile"). They have an excellent public domain software library and an active EdSIG and Logo SIG. They publish an informative magazine and also maintain an electronic bulletin board system for electronic mail, news and communications with the DISABLED SIG.

Washington Apple Pi, Ltd.
8227 Woodmont Ave.
Suite 201
Bethesda, MD 20814
(302) 654-8060

The Young People's Logo Association

YPLA is an educational resource organization that supports PILOT, versions of the Logo language on several machines, and other languages that feature "Turtle Graphics." They also encourage the formation of YPLA learning centers all over the world and actively support people and organizations who are using computers to help the handicapped.

YPLA is not completely free, but it's an excellent value. Membership in the organization costs $25 for adults and $9 for students.

Turtle News & Free Software

Once you become a member, you receive the monthly "Turtle News," which includes programs in PILOT and Logo. YPLA also offers a program exchange, so you can exchange software that you've developed at home or in school for a free tape or disk of member-contributed programs. Or you can send $10 for a cassette or a disk full of public domain PILOT and Logo programs. YPLA now offers a forty-five page catalogue of public domain software for members, and their library is growing all the time!

YPLA doesn't have a BBS—yet. They're actively pursuing this project so that "Turtles" all over the world can get on-line with each other.

For more information about YPLA, contact:

James H. Muller
1208 Hillsdale Drive
Richardson, TX 75081
(214) 783-7548

ICCE (International Consortium of Computer Educators)

ICCE is a "grass-roots umbrella organization" dedicated to furthering instructional computing and the effective and proper use of computers in education. Currently, thirty-three educators' groups belong to ICCE with over fifteen thousand individual members world-wide. Member organizations will soon be linked by a BBS that group officers can access.

ICCE organizes educational conferences and publishes *The Computing Teacher* and many valuable and low-cost booklets for parents and educators.

The Computing Teacher

The Computing Teacher is a valuable journal that is published nine times a year. Each issue is full of application stories by every kind of teacher who uses computers, programs, reviews, conference announcements, and news. A recent issue featured an in-depth article on how to teach programming, "Some Logo Drawing Ideas," articles by computer-using teachers of learning disabled and handicapped students... and more!

ICCE's booklets (in size and contents they are more like small paper-back books) cost from $1.50 - $3.00 for individual copies. They are packed with useful information for parents and educators. To become a member of ICCE, receive *The Computing Teacher,* and receive ordering information for booklets, write:

ICCE Dept. 383
135 Education
University of Oregon
Eugene, OR 97403

Want to Form an Educators' Group?

ICCE supports the formation of educators' groups and provides assistance and guidelines. If you would like to form an educators' group, or if you're involved in a group that would like to join, write or call:

David Moursund, President
ICCE
135 Education
University of Oregon
Eugene, OR 97403
503-686-4414

ICCE does not disseminate public domain software as an organization, but many of their members do. (See CUE/SOFTSWAP, page 176.) There may be an ICCE member group near you!

ICCE Organization Members

Alaska Association for Computers
  in Education (AACE)
Kathleen L. Castle, Adult Education
Coordinator, The Northern Institute
650 W. International Airport Rd.
Anchorage, AK 99502
(907) 563-3174

Alberta Assoc. for Educ. Data Systems
Ann Brebner, President
838 Education Tower, University of Calgary
2500 University Dr. NW
Calgary, Alberta, Canada T2N 1N4
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Assoc. for the Development of Computer-
  Based Instructional Systems (ADCIS)
Dr. Gordon Hayes, Executive Director
ADCIS—Miller Hall 409
Western Washington University
Bellingham, WA 98225
(206) 676-2860

Computer Education Society of Ireland
Mary Devlin
85 Limetrees Road East,
Douglas, Cork, Ireland

Computers, Learners, Users, Educators
  Association (CLUES)
Henry J. Petersen, Executive Director
50 Nellis Drive, Wayne, NJ 07470
(201) 696-3157

Computer-Using Educators (CUE)
Don McKell
P.O. Box 18547, San Jose, CA 95158
(408) 288-7642

Computer-Using Educators of British
  Columbia (CUEBC)
Barry Underwood
509 Alder St., Campbell River,
B.C., Canada V9W 2N9
(604) 287-8346

Computer-Using Educators of Kentucky
  (CUE-KY)
Janet Parker
School of Education
University of Louisville
Louisville, KY 40292
(502) 588-6431

DIDACOM
Inno Broekman
Avenbeeck 98, 2182 RZ
Hillegom, The Netherlands

Educ. Computing Consortium of Ohio
Ellen Richman, Coordinator
4777 Farnhurst Road, Cleveland, OH 44124
(216) 291-5225

Educational Computing Organization of
  Ontario (ECOO)
Robert E. Drake, President
252 Bloor Street West
Toronto, Ontario, Canada M5S 1V6

Educational Microcomputer Users' Group
  of Central New York (EMUGCNY)
Jane McCrohan
Roxboro Middle School
Mattydale, NY 13211
(315) 457-4618 (H)

Educators Interest Group of the San Diego
  Computer Society
Melvin L. Zeddies
P.O. Box 81537, San Diego, CA 92138

Florida Assoc. of Science Teachers (FAST)
Carol Collins, President
15817 Country Lake Drive
Tampa, FL 33624

Idaho Computer Educators' Assoc. (ICEA)
Jay Larson
Lewis Clark State College, Continuing Ed.
8th Avenue and 6th Street
Lewiston, ID 83501

Illinois Association for Educational
Data Systems (ILAEDS)
Lyle B. Smith, President
Computer Science Department
Northern Illinois University
DeKalb, IL 60115
(815) 753-0378

Indiana Computer Educators
David A. Flowers
Ft. Wayne Comm. Schools, Adm., Cwt.
1230 So. Clinton St.
Ft. Wayne, IN 46802
(219) 425-7228

Manitoba Association for Educational
Data Systems (MAN-AEDS)
E. Boorsma, Secretary-Treasurer
1577 Wall Street
East Winnipeg, Manitoba, Canada R3E 2S5

Michigan Association for Computer Users
in Learning (MACUL)
Lary R. Smith, Communications Sect.
33500 Van Born Road, Wayne, MI 48184
(313) 326-9300, ext. 562

Minnesota Assoc. for Educ. Data Systems
Sue Talley
1925 W. County Rd. BS
St. Paul, MN 55113
(612) 638-2340

National Institute for Microcomputer
Based Learning (NIMBL)
Stanley Silverman, President
348 Plymouth Ave.
Brightwaters, NY 11718

New Hampshire Association for Computer
Education Statewide (NHACES)
Ann Knight, Acting President
University of New Hampshire
Computer Services
Durham, NH 03824
(603) 862-3527

Northwest Council for Computer Education
(Oregon, Washington and Northern Idaho)
Howard Bailey
Computing Center
Eastern Oregon State College
LaGrande, OR 97850
(503) 963-1582

Oklahoma Educational Computer
Users' Program (OECUP)
Richard V. Andree
Department of Mathematics
The University of Oklahoma
601 Elm St., Room 423
Norman, OK 73019
(405) 325-3410

Pennsylvania Learning Resources
Association (PLRA)
George H. Zook, Director, IMS
Lancaster-Lebanon I.U./IMS
P.O. Box 5026, Lancaster, PA 17601
(717) 569-8561

Saskatchewan Assoc. for Computers in Educ.
Duncan Campbell
Mt. Royal Collegiate, 2220 Rusholme Road
Saskatoon, Saskatchewan, Canada S7L 4A4

The Science Teachers' Assoc. of Ontario
Warren Sirrs
1032 Harness Ave.
Ottawa, Ontario, Canada K1V 6P2
(613) 733-6552

Society of Data Educators (SDE)
Robert Behling
Bryant College, Smithfield, RI 02917
(401) 231-1200

Texas Computer Education Association
Vicki S. Smith
201 Kinkaid School Dr., Houston, TX 77024

The Utah Council for Computers in Educ.
Dr. Larry C. Christensen
1295 North 1200 West, Mapleton, UT 84663
(801) 798-2151

West Australian Computer Educators
P.C. Farrell, President
12 Lilac Place
Dianella, 6062, Western Australia
276-5891

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Educators in Europe

Apple educators are active all over the world. If you're in Europe, be sure to get in touch with:

CEGOS
Tour Chenonceaux
204 Rond Point du Pont de Sevres
92516 Boulogne, France
Tele: (1) 620-60-00

and

Education Nationale
110 Rue de Grenelle
Paris 75007, France
Tele: (1) 550-10-10.

CUE/SOFTSWAP

Computer-Using Educators (CUE) is a California-based group of educators that has over five thousand members in forty-nine states, four provinces, and twelve nations outside the United States. Because of their active membership and strategic position in "Silicon Valley," California, CUE is in close contact with new developments in the industry, can evaluate new educational software, and frequently influences the decisions of manufacturers about educational issues.

CUE also publishes a bi-monthly newsletter and organizes several major conferences per year. CUE's many volunteer workers make it possible for the organization to offer membership and a bi-monthly newsletter for the unbelievable price of $8.00!

Public Domain Software from SOFTSWAP

A joint project of CUE and the San Mateo County Office of Education is the SOFTSWAP project. SOFTSWAP is dedicated to the dissemination of public domain educational software for several of the major personal computers, including the Apple. About one-fourth of

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the programs are drill and instruction, but their large software library also includes many creative simulations and learning games. Each "dissemination" disk contains from five to twenty-eight programs for grades K-12.

SOFTSWAP is staffed by four part-time employees, student aides, and lots of volunteers. The project's Chairperson, Ann Lathrop, is a leader in the area of educational software evaluation.

One of the features that makes SOFTSWAP unique, says Ann, is the careful evaluation they give to the program library. "Every program is reviewed by at least two educators for friendliness, content, ease of use, and other criteria that matter to teachers."

Dedicated Volunteers

The SOFTSWAP Program is made possible by the efforts of dedicated educators. The Apple public domain software library was originally the responsibility of Leslie Grimm, now a successful programmer and designer of educational games for The Learning Company in Menlo Park, California.

Bev Saylor and Bev Hamilton, fifth and sixth-grade classroom teachers in South San Francisco, now coordinate the Apple library. "It's a massive task to personally evaluate every program, coordinate the other volunteers, and screen out piracy," they say. "We look at every program to see how effective it is in the classroom and to weed out negative feedback and bugs. We also make sure that there's sufficient documentation on the disk for the teacher to use the program easily."

The results are phenomenal. SOFTSWAP is getting ready to release its fifty-first disk of Apple educational software!

"Public domain software is a great resource for the classroom teacher. It gets you started, gives you a lot of new ideas, and enables you to introduce new activities and applications to your classroom without investing a lot of money and time."

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SOFTSWAP's APPLE Library

SOFTSWAP currently offers forty-five Apple disks and six more disks are nearing completion! The disks hold a variety of programs for every curriculum including the entire *Blocks Author Language System and Graphics Library* and *The Hollister Multi-Level Math Drill and Practice Package.* It's a real software bonanza for Apple educators!

How to Get SOFTSWAP Software

There are two ways to get software from this terrific educational resource if you can't visit their Microcomputer Center in Redwood City, California. One way is to "swap" software by sending your *original* program to SOFTSWAP on disk or cassette tape in exchange for any disk or cassette of your choice. SOFTSWAP welcomes program exchange and is happy to add your original contributions to their ever-expanding library.

Or you can send $1 for their software catalog and order the Apple dissemination disks of your choice for $10 per disk. The cost of the disks pays for copying, mailing, and more free software for educators.

SOFTSWAP is happy to share their software. You are welcome to copy and give away all the software you receive, as long as you don't try to sell it.

Find Out More About SOFTSWAP

To find out more about this wonderful library of free educational software, write:

Ann Lathrop, Chairperson
Microcomputer Center, SMERC Library
San Mateo County Office of Education
333 Main Street
Redwood City, CA 94063

Send $1 for each software catalog. Listings of new acquisitions are also published in CUE's newsletter and *The Computing Teacher.*

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Send $10 for each Apple dissemination disk.

CUE's Newsletter

CUE's newsletter is also a gold mine of programs, teaching ideas, software and book reviews, news items, product announcements, and discussions of educational issues and policies that are relevant to educators everywhere. To become a member of this dynamic organization and receive their newsletter, write:

Don McKell
Computer-Using Educators
CUE Membership
P.O. Box 18547
San Jose, CA 95158

and send a check to CUE for $8.00 for U.S. membership, $10.00 for Canada, $20.00 for other countries, and $20.00 for institutional subscriptions and memberships.

CUE Welcomes Editorial Contributions

CUE welcomes your editorial contributions. If you would like to contribute announcements, letters, programs, teaching ideas and curricula, reviews of software or hardware, humor, quotable quotes or anything else of interest to computer educators, submit material to:

Dr. Sandy Wagner, Editor
CUE Newsletter
127 O'Connor St.
Menlo Park, CA 94025

Lots and Lots of Resources

There are more resources for Apple educators than we can list! Here's an additional list of organizations and software exchanges—and we're just scratching the surface!

Math and Science

Public domain math and science software is now being developed and disseminated for the Apple. Contact:

Department of Technology and Society
College of Engineering and Applied Sciences
State University of New York at Stony Brook
Stony Brook, New York 11794

Microcomputer Software Exchange (Northeastern Section of MAA)
Dr. Thurmon Whittey
Department of Mathematics and Computer Science
University of Hartford
West Hartford, CT 06117

TABS Project—Math Education
Dr. Suzanne K. Damarin
Arps Hall 202-A
1945 N. High
Columbus, OH 43210
(614) 422-1257

CAI Resources

CAI Newsletter
Coordination Center for CAI
California State University, Fresno
Fresno, CA 93740
(209) 294-3923

CAI Materials for Basic Skills Development
Ellen K. Leahy/CAI Specialist
Learning Center
Bronx Community College
City University of New York
U Ave. and W. 181 Street
Bronx, New York 10453

Paideia School
Kathy Stone or Paul Hayward
1509 Ponce de Leon Avenue
Atlanta, GA 30307

¿Habla Español? Free Bilingual Software

The Monterey Institute of Technology is Mexico's major teacher training college. They have developed an extensive library of Spanish software for the Apple. M.I.T. is now working with Apple Computer's International Sales Support Group to make their extensive collection of Spanish software available to educators everywhere.

For more information, contact:

Dr. Fernando Jaimes
Monterey Institute of Technology
(Instituto Tecnologico Y de Estudios Superiores de Monterey)
Sucursal de Correos "J"
Monterey, Nuevo Leon
Mexico

Telex Number: 382975 ITESME

English as a Second Language

The American Language Academy is another innovator in using Apples. The school has developed courseware to teach English as a second language to foreign students, based on CAI techniques. For more information on their Vocabulary and Grammar Mastery Series, contact:

David Wyatt, Director
CAI
American Language Academy
Suite 200
11426 Rockville Pike
Rockville, MD 20852
(301) 984-3400

The U.S. Department of Education is now sponsoring a new source for public domain software for educators. The National Diffusion Network has been funded to identify high quality educational programs and to help interested schools to locate, adapt, and disseminate them. The programs that qualify are available to all educators at minimal cost.

According to Dr. Raymond H. Hartjen, NDN's Executive Director, "NDN's software represents complete teaching systems, including teachers' guides, student work books, validated pre and post tests, wall charts, and other aids."

An NDN representative in each state will assist in the search and acquisition of educational programs "with proven track records."

For more information on the NDN, your state's representative, and the software now available, contact:

Dr. Lee Wickline
National Diffusion Network
Department of Education
Suite 714-Brown
Mail Stop 30
400 Maryland Ave. S.W.
Washington, D.C. 20202

or

Educational Alternatives Inc.
P.O. Box 265
Port Tobacco, Maryland 20677

Send $1.00 to cover postage and handling for the NDN brochure.

SW from Boston

The Boston Computer Society has nineteen subgroups that make up its organization. For information about their Apple group and software library, write to:

Boston Computer Society
Apple Users' Group
Three Central Plaza
Boston, MA 02108

More Software Exchanges

Center for Math Literacy
San Francisco State University
1600 Holloway Ave.
San Francisco, CA 94132

Georgia Micro Swap
Department of Math Education
University of Georgia
Building 105, Alderholt Hall
Athens, GA 30602

The Micro Swap went through a recent period of inactivity because of insufficient personnel. They plan to be back on line in spring-summer 1984 with their excellent collection of educational software for the Apple. They encourage teachers to contribute original programs in exchange for other software. Programs will also be available for a minimal fee and membership dues.

Micro X Change
Suite 101
222 East Carrillo St.
Santa Barbara, CA 93101

Apple SWAP
Armstrong Middle School
605 Sycamore
Starkville, MS 39759

Apple Avocation Alliance
721 Pike St.
Cheyenne, WY 82001

EMUG
Educational Microcomputer Users' Group
State U. New York at Oswego
102 Council Place
Liverpool, NY 13088
Jane McCrohan
(315) 457-4618

SW Bonanza for Freeloaders!

American Software Publishing Company
1010 16th St. N.W.
Washington D.C. 20037
Sheryl A. Nutting
(202) 887-5834

This company offers three hundred disks of educational programs, including CAI, games, and administrative software. The "Freeloader 500 Software Library" includes more than two thousand five hundred programs for the Apple II and III. The cost is $500.00 for seven binders plus listings and documentation. Individual binders cost $75.00/each.

ComputerTown! International

ComputerTown, USA is a computer literacy movement that now has centers throughout the United States.There are also a series of ComputerTown projects in the British Isles, and a center in Germany. For information, support, and software exchange, contact:

ComputerTown! USA
1263 El Camino Real
Menlo Park, CA 94025
415-323-3111

An Electronic Bulletin Board for Educators

The Far West Laboratory for Educational Research and Development has teamed up with Computer-Using Educators to create an electronic bulletin board specifically for educators. Users can ask questions, exchange ideas, leave messages, and share news about computers in the classroom.

The system is a "Living Tree" BBS. You climb a "tree" of information, branching out to explore areas of special interest to you. To give you an idea of what it's like to talk to a "Living Tree," we called up Far West's BBS for you. Following is a transcript of our conversation with the BBS for educators.

INTRODUCING THE LBBS

WITH THE LIVING BBS BEING SUCH A NEW PRODUCT, IT'S LIKELY THAT THIS IS YOUR FIRST VISIT WITH US.

BEFORE GOING FURTHER, YOU SHOULD LEARN HOW TO FREEZE THE ACTION ON THE SCREEN. TO STOP THE ACTION TEMPORARILY, HOLD THE "CONTROL KEY" DOWN AND PRESS "S", FOR STOP. PRESSING "CONTROL-S" AGAIN WILL START THE ACTION.

NOW YOU ARE READY TO BROWSE AROUND THE DATABASE...

WHEN YOU SEE AN ITEM OF INTEREST, TYPE THE NUMBER THAT IS NEXT TO IT, FOLLOWED BY [RETURN]. FOR EXAMPLE, TO SELECT ITEM #3, PRESS "3" THEN [RETURN]. THAT'S HOW YOU GO DEEPER, BUT HOW DO YOU COME BACK OUT?

THE "S" OR SURFACE COMMAND WILL MOVE YOU OUT ONE LEVEL. IF YOU TYPE "7S", YOU WILL MOVE OUT SEVEN LEVELS. THE "S" COMMAND IS VERY IMPORTANT.

THE "M" COMMAND DISPLAYS THE CORRECT MENU. THIS IS USEFUL WHEN THE MENU HAS SCROLLED OFF THE TOP OF YOUR SCREEN.

TO MAKE A NEW MESSAGE, USE THE "N" COMMAND. TRY IT ON THE QUESTIONNAIRE.

READ THE QUESTIONS AND RESPOND USING THE "N" COMMAND.

IF YOU WISH MORE DETAILED INFORMATION, LEAVE YOUR NAME AND ADDRESS IN THE "SYSOP'S" MAILBOX. WE WILL SEND YOU A HELPFUL BROCHURE, EXPLAINING ALL THE COMMANDS.

1:STOP THE ACTION
2:COMMAND MENU
3:THE HELP COMMAND—?
4:TALK TO AN EXPERT
5:HINT: REMEMBER THE "S" COMMAND!
LIVING BBS (Q ? S M N @ X): @

[TERMINAL MODE, @@@ TO EXIT]

@@@

[TERMINAL MODE OFF]

LIVING BBS (Q ? S M N @ X): S

→SUMMIT OF THIS LBBS

1:INTRODUCING THE LBBS
2:MISCELLANEOUS SECTION
3:QUESTIONS & ANSWERS
4:SPECIAL INTEREST GROUPS
5:BITS & BYTES
6:USER MAILBOXES
7:USER PASSWORDS

LIVING BBS (Q ? S M N @ X): 4
→ SPECIAL INTEREST GROUPS

IF YOU'D LIKE TO START A NEW SPECIAL INTEREST GROUP ON THIS BULLETIN-BOARD...LEAVE A MESSAGE HERE!

1:OSBORNE 1 USERS AND HOBBY GROUP
2:MORE COMPUTERS IN PUBLIC SCHOOLS!

LIVING BBS (Q ? S M N @ X): 2

→ MORE COMPUTERS IN PUBLIC SCHOOLS:

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FROM: JOHN ALLAIN
MSG #28, 23-FEB-83

I HAVE A FRIEND, HE GOES TO HIGH SCHOOL
(SOPHOMORE).
HE IS INTERESTED IN COMPUTERS AND
WOULD LIKE VERY MUCH TO HAVE MORE
COMPUTERS IN SCHOOL, BUT THEY WON'T
LET HIM USE THE COMPUTERS UNTIL YOU GET
TO BE A JUNIOR. HIS TALENTS ARE GREAT, BUT
THE SCHOOLS WON'T GIVE HIM A CHANCE. I
REGRET THIS; I THINK HE SHOULD USE HIS
TALENT TO THE TOP OF HIS ABILITY. WHAT
DO YOU THINK ABOUT COMPUTERS AND
PUBLIC SCHOOLS?

LIVING BBS (Q ? S M N @ X): S
→ SPECIAL INTEREST GROUPS

1:OSBORNE 1 USERS AND HOBBY GROUP
2:MORE COMPUTERS IN PUBLIC SCHOOLS!

LIVING BBS (Q ? S M N @ X): S

→ SUMMIT OF THIS LBBS

1:INTRODUCING THE LBBS
2:MISCELLANEOUS SECTION
3:QUESTIONS & ANSWERS
4:SPECIAL INTEREST GROUPS
5:BITS & BYTES
6:USER MAILBOXES
7:USER PASSWORDS

LIVING BBS (Q ? S M N @ X): 3
→ QUESTIONS & ANSWERS

WHEN A PROBLEM OR ISSUE ARISES IN THE
CLASSROOM, PRESENT THE TOPIC HERE. POSE
YOUR QUESTION AND, PERHAPS, ONE OF OUR
OTHER READERS CAN OFFER SOME HELP.

REMEMBER—YOU CAN BE ANONYMOUS.
SIMPLY EDIT YOUR MESSAGE, DELETING
LINES 0-2 WILL REMOVE YOUR NAME.

WE WANT THIS BULLETIN BOARD TO BE A
SOURCE OF HELP TO ALL EDUCATORS. TAKE
ADVANTAGE OF THE TECHNOLOGY TO
CONVERSE WITH OTHER EDUCATORS. ASK
QUESTIONS...OFFER SUGGESTIONS. THIS IS
WHAT IT IS ALL ABOUT.

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1:WHAT KIND OF GRADEBOOK?
2:EQUIPMENT UNIFORMITY
3:BANK STREET WRITER
4:QUESTIONNAIRE

LIVING BBS (Q ? S M N @ X): 4
→ QUESTIONNAIRE

WE WOULD LIKE TO KNOW MORE ABOUT THE
PEOPLE WHO USE OUR BBS. PLEASE RESPOND
TO SOME OF THE QUESTIONS.

1:WHERE ARE YOU CALLING FROM?
2:WHAT IS YOUR TITLE/ROLE?
3:DO YOU USE COMPUTERS IN SCHOOL?
4:IF SO, IN WHAT APPLICATIONS?
5:HOW DID YOU LEARN ABOUT THE LBBS?

LIVING BBS (Q ? S M N @ X): S

→ QUESTIONS & ANSWERS

1:WHAT KIND OF GRADEBOOK?
2:EQUIPMENT UNIFORMITY
3:BANK STREET WRITER
4:QUESTIONNAIRE

LIVING BBS (Q ? S M N @ X): S

→ SUMMIT OF THIS LBBS

1:INTRODUCING THE LBBS
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4:SPECIAL INTEREST GROUPS
5:BITS & BYTES
6:USER MAILBOXES
7:USER PASSWORDS

LIVING BBS (Q ? S M N @ X): 2
→ MISCELLANEOUS SECTION

GOT A MESSAGE, BUT YOU'RE NOT SURE
WHERE TO PUT IT? THEN PUT IT HERE IN THE
"MISCELLANEOUS SECTION"!

1:WHAT IS SOFTSWAP?
2:OTHER BULLETIN BOARDS
3:REMINDERS
4:COMPUTER EVENTS

LIVING BBS (Q ? S M N @ X): 2
→ OTHER BULLETIN BOARDS

TWO ADDITIONAL BULLETIN BOARD SYSTEMS
FOR EDUCATORS:

EDUCATIONAL TECHNOLOGY PEOPLES
MESSAGE SYSTEM IN SAN DIEGO (619/265-3428)

THE MEAD SCHOOL FOR HUMAN
DEVELOPMENT IN GREENWICH, CT
(203/629-4375)

LIVING BBS (Q ? S M N @ X): S
→ MISCELLANEOUS SECTION

1:WHAT IS SOFTSWAP?
2:OTHER BULLETIN BOARDS
3:REMINDERS
4:COMPUTER EVENTS

LIVING BBS (Q ? S M N @ X): 4
→ COMPUTER EVENTS

    HERE ARE SOME DATES YOU MAY WANT TO
    REMEMBER:

    MARCH 10-12—THE USE OF MICROCOMPUTERS
    IN SPECIAL EDUCATION, HARTFORD, CT
    (703/620-3660)

    MARCH 14-15—MACUL '83, DEARBORN, MI
    (313/326-9300)

    MARCH 18-20—WEST COAST COMPUTER FAIRE,
    SAN FRANCISCO CIVIC AUDITORIUM & BROOKS
    HALL (415/851-7077)

LIVING BBS (Q ? S M N @ X): X

IF YOU ARE COMFORTABLE WITH THE BASIC
LBBS COMMANDS, THEN YOU SHOULD TYPE "Y"
(FOR "YES"), OTHERWISE, TYPE "N". IF YOU'RE
HESITATING...GO AHEAD AND GIVE IT A TRY!

ARE YOU AN EXPERT USER (Y/N) ?N

LIVING BBS (Q ? S M N @ X): Q

CALL IT A DAY (Y/N) ?Y

CALL AGAIN SOMETIME.
OUR PHONE NUMBER: 415/565-3037

HANGING UP NOW.

Any interested educator or parent who has access to a modem can use the BBS.

Dial:

415-565-3037

If you want to talk to the SYSOP, call:

Kendra Bonnett
415-565-3221

For more information on the BBS, write:

Carolyn Cates/Kendra Bonnett
Far West Laboratory
1855 Folsom Street
San Francisco, CA 94103

More BBS's for Educators

*Make sure to read the chapters on telecommunications: "Read Before Dialing" and "Your Friendly BBS," page 123 for an overview of electronic communications, how to obtain terminal software, and other resources.

Bulletin board services and networks for educators are springing up all over the country. The following is a list of additional BBS's that educators with modems can dial up at no charge:

Ed Tech PMS—(619) 265-3428, available evenings and weekends. This BBS is operated by the San Diego State University Department of Educational Technology (and active members of CUE's San Diego chapter).

Kids' PMS—(619) 578-2646, available almost 24 hours daily. This BBS is a message board designed for children. It features jokes, puzzles, and other kid-oriented computer activities. Darlene and Lee Tydlaska are the "Sysops," or system operators.

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Notre Dame BBS—(219) 239-5875, operated by Prof. Barry Keating and used principally by students and teachers at Notre Dame. This BBS is also known as "The Leprechaun."

Bullet-80—(203 629-4375, available 24 hours daily. This BBS is operated by the Mead School for Human Development in Greenwich, Connecticut, The "Sysop" is Bob Jackson.

Other Educational Networks

There are several worthwhile commercial resources for educators who telecommunicate.

EdSig is the nationwide bulletin board and electronic message center available on CompuServe. EdSig also offers software downloading. The charge is $5.00 per hour, which is billed to your CompuServe account and credit card. Contact a local computer store for information on starting a CompuServe account.

The Knowledge Index offers access to educational data bases at reduced charges during evenings and weekends. The information includes Psych Abstracts, ERIC, the Microcomputer Index, the International Software Database, and newspaper and magazine databases. The charge is $24/hour, billed to your credit card. For more information, call or dial:

(800) 227-5510 or (415) 858-3796—California residents.

*Also see our section on resources for handicapped computer users on page 205.

Apple Logo: The Language For Learning

Apple Computer, Inc. was the first company to introduce Logo to the educational market. Apple Logo, a powerful educational tool, is available from retailers in a package that includes an Apple Logo diskette, a back-up diskette, and two manuals: *Introduction to Programming through Turtle Graphics* and *The Apple Logo Reference Manual.*

As more teachers, parents, and children become familiar with Logo, organizations are being formed that provide support and promote the exchange of public domain software.

What's So Special About Logo?

If you haven't already worked with Logo, you may be wondering what the fuss is all about.

Logo is a programming language based on an artificial intelligence language called LISP. Seymour Papert, one of Logo's most influential developers, combined features of LISP with the theories of the Swiss educator and psychologist, Jean Piaget. Papert's main goal, explained in his popular book *Mindstorms* (Basic Books, 1980), is to have children controlling the computers instead of letting computers control children. In the process, children learn problem-solving and come to feel completely comfortable with mathematical concepts.

The result—Logo—is both a programming language and a learning tool. As a programming language, Logo is "friendlier" and easier to learn and use than BASIC. BASIC is a more abstract language that children usually can't begin to learn until sixth or seventh grade. Some children (and adults) never really learn how to program with BASIC.

Because of Logo's friendly English-like commands and "structured" approach, children as young as three and four have been able to program. Some educators believe that Logo will replace BASIC as a first programming language.

As a learning tool, Logo helps children to develop problem-solving skills. Kids can enjoy creating graphic designs on their computer screens. At the same time, they are actually learning "structured programming," becoming computer-literate, and seeing geometry in action.

"Logo is much more than a programming language," says educator Judy Morton of the St. Louis, Missouri, School District. "It's an environment for learning."

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Programming Piece by Piece

In Logo, children construct their programs out of building blocks called "procedures."

A six-year-old child writes a brief series of instructions that draws a box on the screen. She then names her procedure "BOX." Every time she wants to use this box shape in a project, she simply writes the command "BOX," and the shape appears on the screen.

She can combine the box with other shapes, make patterns by placing boxes at different angles on the screen, or use "BOX" as a building block for a larger program.

She can easily build a house by combining her procedures, such as "BOX," "WINDOW," and "DOOR."

Logo encourages kids to break down every problem or project into smaller pieces called "modules," or "subprocedures." The child then learns to organize all the pieces in a way that will produce the desired result. They are using structured programming to solve a problem.

The ability to work with procedures that the child creates and names, and the easy English-like commands, are only two of the features that distinguish Logo as a programming language.

Seeing Geometry in Action

According to M.I.T. educator Dan Watt, part of Logo's strength comes from the fact that the user controls the computer. "Logo users can draw on a monitor, create animated cartoons, invent video games and interactive quizzes, or compose poetry and music. Logo builds a bridge between abstract reasoning and actual experience, sidestepping many of the conceptual difficulties people have in learning to program a computer."

One of the features that enables children to control the computer and see mathematical concepts in action is the "turtle."

.The "turtle" is a shape on the screen that you use like a pen. You control the turtle by commanding it to go FORWARD, BACK, LEFT, RIGHT, UP or DOWN. Using these simple commands, you can draw almost any geometric shape.

When a child tells the turtle to go LEFT 90, he sees the result immediately on his screen. Abstract numbers and angles turn into concrete objects.

Says Watt: "To draw a stick figure of a person, a learner encounters many of the key ideas in geometry, algebra, and general problem solving, as well as important concepts of computer programming. Far from being limited to introductory activities, turtle graphics can incorporate the complex mathematical concepts of trigonometry, calculus, and topology."

Resources and Free Software for Logo

FOLLK (Friends of Logo, LISP, and Kids) is a San Francisco based non-profit organization that supports all versions of Logo.

FOLLK's goal is to spread the word about Logo and LISP, the languages of learning to "folk of all ages, interests, and levels of computer expertise. Their projects and services include the FOLLK-Lore meets, curriculum advising for educators, the FOLLK-Net Bulletin Board System, group and individual workshops in LISP and Logo, and the unique FOLLK-Flash hotline service.

You don't have to live in California to be "one of the FOLLKs." Out-of-town members can still take advantage of their newsletter and other services.

FREE SOFTWARE

FOLLK has developed a public domain software library that steadily expands. They are also publishing software, such as a Logo utilities disk and a Logo demonstration disk. All the software is available for a small charge or in exchange for your own original contribution.

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ANSWERS TO QUESTIONS

FOLLK-Flash is a question and answer service for members. If you have a problem you can't solve, call the FOLLK phone number, leave a message, and a member of the organization will get back to you with an answer within 24-48 hours.

If you or your school has access to a modem, you can dial up the FOLLK-Net, the organization's 24-hour BBS. FOLLK-Net provides a variety of services, including a public message board so you can tele-communicate with other Logo users.

Regular members pay $25.00/year; students and seniors pay only $15; institutions pay $100. Subscriptions to the newsletter only are available for $7.50/year.

For more information about FOLLK, write or call:

FOLLK
254 Laguna Honda Blvd.
San Francisco, CA 94116
(415) 753-6555

YPLA (Young People's Logo Association)

See page 172 for information on this invaluable resource of FREE public domain Logo software.

The Center for the Study of Technology in Education

This new organization, based in St. Louis, Missouri, is dedicated to serving the needs of Logo-using educators.

"Logo is a learning tool, not an end in itself," states Judy Morton, Director of the Center. "It creates a learning environment where children can really learn to think and to solve problems."

USING LOGO IN THE CLASSROOM

Some of the problems that the Center is endeavoring to solve are the lack of Logo curriculum activities for teachers. "Everyone talks about the power of Logo. But how can teachers really use Logo as a teaching tool in the classroom? We're working on ways that teachers can use Logo as part of their normal curriculum. We want to support learning with Logo, not get in the way of the subject matter that the teacher has to cover. Teachers need tools that resemble the SRA reading materials. They are made to be integrated into normal classroom activities."

The center emphasizes Logo tasks that are related to the subject matter that is being taught. One Center project is the development of "task cards". The "task cards" present problems that are related to subject matter and that require simple programming. "The student then breaks the problem down into smaller sections and solves the problem. During the process, the student reports to the teacher so he can discuss problem-solving techniques and receive guidance, if necessary."

For example, children as young as three years old can be introduced both to Logo and the concepts of left and right. "Logo is especially effective in grades K-5," Dr. Morton says. "One school district I work with has created Turtle Geometry materials for three to five-year-old children who can't even read yet. They made a giant grid out of plastic that the kids can move around on. It works like a combination of a compass and a roulette wheel. The kids learn about left and right, forward and back; learn about numbers by moving a certain number of spaces in each direction; and absorb concepts about angles and geometry. They can then transfer their learning to using Turtle Geometry on the computer."

Support For Educators

Teachers can write directly to the center to receive materials and task cards and to exchange ideas about ways of using Logo in the classroom setting.

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For more information, write or call:

Dr. Judy Morton
The Center for the Study of Technology in Education
Lindell & Skinker Blvds.
St. Louis, MO 63130
(314) 889-5150

The Micro Computer Research Center

Teachers who live in the Northeastern United States now have an additional resource for Logo. The Micro Computer Research Center at Columbia University's Teacher's College is now offering Logo courses as part of the Masters degree program in Computers in Education.

Additional seminars and summer programs, open both to educators and parents, teach Logo procedures and introduce gifted young children to computers.

Teachers who live in the New York/New Jersey/Connecticut tri-state area can write to the center for more information on upcoming classes and seminars:

Ursula Woltz
Assistant Director
The Micro Computer Research Center
Box 18
Teachers College
Columbia University
West 120th St.
New York, NY 10027

Additional Logo resources include:

Boston Computer Society
Logo Users' Group
One Center Plaza
Boston, MA 02108

Center for Children and Technology
Bank Street College
610 West 112th St.
New York, NY 10025

Friends of the Turtle
P.O.B. 5537
Eugene, OR 97405

Logo in Compute!

David Thornburg, a prolific author, inventor, and Logophile, writes a "Friends of the Turtle" column for *COMPUTE!* that is full of free software, resources, and teaching ideas.

For current and back issues of David's "Friends of the Turtle" column, see *COMPUTE!* If the magazine is not available at your local newsstand or at your favorite computer store, write:

COMPUTE! Publications
P.O. Box 5406
Greensboro, N.C. 27409.

For more reading about Logo, see:

Seymour Papert, *Mindstorms: Children, Computers and Powerful Ideas,* New York: Basic Books, 1980.

Dan Watt, "What Makes Logo Exciting?", *Popular Computing,* August, 1983.

Dorothy Heller, "User-friendly languages of the future," *Interface Age,* December 1981.

Also see our section on "Almost Free Software", page 167 for more Logo resource materials.

Apple Computer, Inc. Supports Educators

"Education is only ten percent of the personal computer market," says Apple Computer's Chris Bowman, "but it's twenty-five percent of ours! We're committed to educational support. We believe that forty to sixty percent of the installed educational base worldwide are Apple computers."

Corporate staff meet monthly with educational publishers and hold a monthly luncheon for educators, which is an open forum for teachers from all over the country. Apple publications, the Apple Foundation, and special programs such as "Kids Can't Wait," "Apple Horizons," and "School Bus" also provide resources for educators.

The company directly supports Apple-using educators by offering services through its dealers, manufacturers' representatives, and distributors. Full-time Educational Sales Specialists, based in Regional Sales Offices all over the world, provide liaison and training directly to teachers in the classroom.

The International Apple: Apples in New Zealand

Paul Dickinson is one of Apple's international group of educational specialists. His work is typical of the activities of Apple's educational representatives in the field. Like most of Apple's field staff, Paul comes from a teaching background (an instructor at Onehunga High School).

As Educational Services manager, Paul keeps in touch with all New Zealand schools and offers seminars on word processing, PILOT, Logo, Pascal, and VisiCalc that are tailored to the school's needs. He also consults with curriculum specialists to help integrate computer courses into the curriculum, encourages public domain software exchange, publishes an educational newsletter, and directs the monthly Apple Educational Users' Group meeting in Auckland.

"About eighty-nine percent of New Zealand's high schools use Apples," he says. To better serve educators, he is working to develop an electronic bulletin board system for software exchange and

electronic mail. "The BBS will also provide a data base of information relevant to educators." Paul plans to have "The New Zealand Beginning" on-line during 1984, with two-thousand-five-hundred programs ready for downloading!

Apple computers entered New Zealand through applied math courses. Now, schools are also using computers for social studies and computer literacy and large installations of ten to twenty computers in a school are not uncommon. "The move is away from BASIC; teachers are using Pascal and Logo more and more. Apple Logo is excellent for teaching mathematical concepts, as well as programming." "Computer Studies" is now part of the syllabus for "Sixth Form" secondary students in twenty-five percent of New Zealand's schools, and fifty to sixty elementary schools now have computer labs.

All this without government funding, says Paul. "All the computers in the schools have been purchased by local fund raising in the community, although the Education Department will provide some matching funds to convert classrooms into computer labs." Fraser High School in Hamilton, for example, underwrote a vigorous fund raising campaign to start a computer lab by selling "debentures." They now have seventeen Apples that are used for adult evening classes, as well as computer studies.

In addition to working directly with secondary schools, Paul also publishes the *Apple Blossom* newsletter four times yearly.

If you'd like to keep in touch with these sophisticated computer users, ask for a copy of *The Apple Blossom,* CED Distributors Ltd., P.O. Box 31-245, Milford, Auckland, New Zealand.

You can also communicate, exchange information, and trade software with Apple educators down under through *The Electric Apple,* an independent publication from New Plymouth Girls High School:

The Electric Apple
P.O. Box 3105
New Plymouth
New Zealand

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There are educational specialists like Paul in distributorships and regional sale offices all over the world. To find the representative nearest you, contact:

Apple Computer, Inc.
20525 Mariani Ave.
Cupertino, CA 95014

Apple Publications

Apple Computer also makes two publications available to educators through their dealers.

The Apple Guide to Personal Computers in Education is a comprehensive paperback book that covers: "Getting Started with Personal Computers," "The Software Decision," "Funding Personal Computer Purchases," "Writing a Bid," "Resource Groups for Personal Computer Users," "Personal Computers in Special Education," and a bibliography and glossary of computer terms.

Educators can also receive the *Education News,* an information service for educators and trainers. The monthly newsletter provides news on Apple educational happenings all over the world, product announcements, public domain software resources, and application stories.

Both of these publications are available through your Apple dealer, or through writing:

Publications
Apple Computer, Inc.
20525 Mariani Avenue
Cupertino, CA 95014

Free Kit and Competition

To encourage schools to form educational users' groups, Apple is offering FREE computer club kits to the first ten thousand schools in the United States and Canada that request them. The kit includes an advisor's manual for elementary and secondary teachers, fold-open posters, recruiting posters, information on the computer competition, and guidelines for publicity, parent involvement, fund-raising, and club management.

Schools that form clubs will also receive the bi-monthly Apple Computer Club newsletter and can purchase more materials at nominal costs. Telephone support service with a few toll-free numbers is also available.

Don't worry if you're not among the first ten thousand. This comprehensive and colorful kit will be available for $25.00 after the competition is over.

The competition will recognize students for excellence in personal computer applications—either new programs or creative uses of existing software. No programming knowledge is required!

Finalists will receive over $100,000 worth of computer equipment, cash and travel.

To receive a Free Club Kit and enter the student competition, send a letter on your school letterhead. The letter should come from a prospective club advisor (teacher, parent, or administrator). You don't need to own an Apple or even a computer, but have twelve interested kids ready to go.

Apple Computer Clubs
Box 948
Lowell, MA 01853
(617) 452-9979

Free Logo Tool Kits

Thirty Logo programs are now available *free* from Apple Computer, Inc. through supporting dealers. The programs enable the user to save Logo pictures on disk, print pictures on a variety of dot matrix printers, debug programs easily, control floor turtles, use and write machine-language programs for controlling turtles and other devices, create musical compositions using the Apple as a musical keyboard, and experiment with text-editing and word processing.

The programs were chosen from contributions from Apple Logo users who ranged in age from young children to adults. Documentation is included on the disks and you can make as many copies as you like.

The Apple Education Foundation: Teachers Can't Wait!

The Apple Education Foundation began as the "Foundation for the Advancement of CAI" in 1979. The original goal of the organization was to encourage development of educational software for the Apple II and II+ for special education, museums, and grades K-12.

The Foundation officially became part of Apple Computer, Inc. in 1982. "Our focus has changed," says Patricia Barruss, Associate to the Director. "Teacher training is now a prime target. We don't want to reinforce ineffective learning. We do want to support and encourage new ways of learning with microcomputers."

The Foundation has provided a series of teacher training grants during 1983, providing equipment for model teacher training sites that will be resources for both educators and the community.

"Computers can be used as an electronic flash card in the classroom, or as an opportunity for a new kind of learning. Computer literacy is a byproduct, not a goal," Patricia states. "The goal is how to make learning exciting and to help kids be in control of their learning."

Dr. Barbara Bowen, the new Director of the Foundation, is coordinating the effort to set up models of excellence in education. The Foundation received over fourteen hundred applications in two months of schools that wanted to participate.

The schools team up with local universities to share resources. Each site receives modems and thirty Apple IIe computers.

Guidelines for the 1984 equipment grants are available in Spring 1984. Applicants are sent complete informational packages and are asked to submit a "concept paper" about the goals of their proposed project.

To receive the guidelines, simply send a postcard with your name and address to the Foundation.

The Apple Education Foundation
Apple Computer, Inc.
10201 N. DeAnza Boulevard
Cupertino, CA 95014

"This is a crucial time in education," says Barrus, "and we want to help make a difference."

The Apple Canada Education Foundation

Apple Canada has announced a new foundation to support educators. The national non-profit organization will give away over $250,000 annually to Canadian researchers, software developers, teachers and schools throughout Canada.

Apple Canada hopes to encourage networks for innovative learning projects, similar to the goals of the Apple Education Foundation in the United States.

"We're especially interested in student-programmed simulations that teach skills and procedures, such as the Logo microworlds, software that provides intellectual tools...and tools providing access to activities such as music composition," says Gareth Jones, Foundation Coordinator.

To receive information and a Foundation application form write to:

Apple Canada Education Foundation
33 Yonge Street
Suite 1120
Toronto, Ontario
M5E 1S9
Canada

Apple Computer, Inc. anticipates Education Foundations throughout the world in the next two years.

FREE RESOURCES FOR HANDICAPPED AND LEARNING DISABLED STUDENTS

Computers offer a wonderful opportunity for people who have physical or learning limitations. As teaching tools, computers are endlessly patient companions to the more than twenty percent of school age children with special needs. Modified equipment and software can compensate for physical limitations. Computer software can also be used in novel ways. Word processing software, for example, can enable students who lack fine motor skills to easily express their ideas in print.

Says Dolores Hagen, the mother of a handicapped child and publisher of a newspaper for disabled computer users.

"Microcomputer technology has the potential to literally wipe away the effects of many handicaps. Today, a microcomputer can bring speech to the non-vocal, telephone use to the deaf, grade II Braille or voice to the blind, environmental control to the physically handicapped, remove the paper and pencil blockade for the learning disabled and improve the quality of life for the mentally handicapped. As both a teaching tool and a prosthesis to reduce the effects of the handicap, this tool must be introduced to and used by these children."

ICCE Has Resources for the Handicapped

ICCE (International Council for Computers in Education) publishes several excellent booklets on computing resources for handicapped students.

A Teacher's Guide Book

Learning Disabled Students and Computers: A Teacher's Guide Book is available from the ICCE for $2.50/copy.

A Comprehensive Resource Guide

ICCE also publishes a comprehensive resource guide, *Computer Technology for the Handicapped in Special Education and Rehabilitation,* for $7.00/copy. The guide categorizes and summarizes the available literature on computer technology for special education and rehabilitation.

For ordering information, write:

> ICCE
> 135 Education
> University of Oregon
> Eugene, OR 97403

Networking

There are also several networks for learning disabled and handicapped teachers and students.

> SpecialNET (Special Education Community Network)
> National Association of State Directors of Special Education
> 1201 16th St., N.W.
> Washington, DC 20036
> (202) 833-4218

> HEX (The Handicapped Educational Exchange)
> Richard Barth
> 11523 Charleton Drive
> Silver Springs, MD 29092
> (301) 681-7372

Community Health Information Project

The *Community Health Information Project* is an electronic BBS for handicapped computer users in cooperation with the Center for Independent Living and other organizations for the physically limited, including victims of cerebral palsy. For more information, contact:

> Joel Yudkin
> Community Health Information Project
> (415) 968-8798

DEAFNET

Deafnet, a government-funded pilot project, can provide selected community organizations with public domain software for setting up a BBS for deaf people.

Deafnet Brings Computers to the Deaf

Previously, the whole world of computers—or anything else that uses the ASCII code—was closed to deaf people. One of the goals of our project is to open up that world," states Hal Huntley of SRI International. Many TTD's (devices that enable deaf people to use the telephone) were designed to use a BAUDOT code. One of DEAFNET's challenges has been to develop software that translates BAUDOT into the ASCII code that computers and computer telecommunications use.

The project's goal is to introduce the DEAFNET system and train community leaders to use it in twenty major cities in the United States before the project's grant ends in October 1984.

Deafnet can make its public domain network software for the deaf available to selected community groups by special arrangement. For more information, contact:

> Hal Huntley
> DEAFNET
> SRI International
> 333 Ravenswood Ave.
> Menlo Park, CA 94025
> (415) 326-2816 (voice)
> or
> (415) 326-1802 (TTD)

Apple "Computer of Choice"

Many organizations, schools, and individuals have chosen the Apple Computer to use in applications for the handicapped. One of these is *The Erie Independence House,* where a training program for disabled people uses three Apple computers.

Erie Independence House is a living facility for people who are mentally alert but physically disabled. EIH uses a unique Apple computer program to train their disabled residents to acquire marketable skills. The training sessions are three-month-long courses that run from 2 to 6 P.M., five days a week. Students become familiar with the Apple, software and programming techniques, and develop programming skills. Says a student, "This is the best thing that ever happened to anyone in a wheelchair!"

As an instructor points out, "The machine can't tell that the person sitting in front of it is in a wheelchair. Our students will be able to go as far as their imaginations can carry them."

For more information about EIH's unique training program for the disabled, contact:

Mike Hale
956 West Second Street
Erie, PA 16507
(814) 459-6161

CLOSING THE GAP

To coordinate the activities of handicapped computer users, Dolores Hagen publishes *Closing the Gap,* a bi-monthly newspaper. *Closing the Gap* covers computer applications, products, software, and hardware modifications for learners with special needs. Hagen also produces workshops and manuals for special education teachers, tailored to the specific needs of the group.

Hagen has recommended the Apple II and IIe as "the most useful microcomputers in special education." She cites the Apple's adaptability to peripherals and modifications and the availability of specialized software.

For more information about using the Apple with disabled learners or individualized special education workshops, contact:

Dolores Hagen
CLOSING THE GAP
P.O. Box 68
Henderson, MN 56044
(612) 665-6573

Subscriptions to the newspaper are $15.00 in the U.S.A., $22.00 in Canada, and $33.00 for air mail to other countries.

Apple Special Interest Groups

A number of Apple Users' Groups are actively involved with programs and support for handicapped users. One way to keep in touch with Handicapped Special Interest Groups all over the world is to contact International Apple Core (See Mini-Profile, p. 24). They have an international group for the handicapped and frequently feature articles in *The Apple Orchard* that are of interest to disabled users.

IAC
908 George Street
Santa Clara, CA 95050
(408) 727-7652

The chairperson for IAC's Handicapped Special Interest Group is Dr. Ann Pettit. Dr. Pettit teaches university courses in Muncie, Indiana and is an expert on physical therapy:

Dr. Ann Pettit
IAC Handicapped SIG
(317) 288-7733

Call-A.P.P.L.E.

Call-A.P.P.L.E., the publication of the Apple Puget Sound Program Library Exchange (see Mini-Profile, pp. 45), often publishes articles about Apple applications for the disabled.

For example, December 1983's issue featured "Apple III Revolutionizes Braille translation" by Evelyn Iritani. The article describes a revolutionary new software program that uses the Apple

III to transcribe English into Braille *two hundred times faster* than the traditional system. The program, which transcribes four to five hundred words a minute, was developed by a student at the University of Washington in Seattle in cooperation with Professor John Sherman. The U of W's Office of Independent Study also plans to offer the country's first Braille college-level correspondence course and is thinking of opening a Braille Center with a library and computer center.

To keep up with exciting news items, such as the University of Washington's new Braille transcription computer program, contact A.P.P.L.E. about membership:

Apple Puget Sound Program Library Exchange
21246-68th Ave. S.
Kent, WA 98032
(206) 872-2245

Washington Apple Pi's DisabledSIG

One of Washington Apple Pi's many community-oriented activities (see Mini-Profile, pp. 39) is their DisabledSIG. The SIG's coordinator is deaf. He communicates with members using electronic mail on the club's electronic bulletin board system.

The Journal of WAP, the group's monthly magazine, offers monthly reports from the DisabledSIG and many other informative items for handicapped Apple users. Their December 1983 issue featured articles on: DP-10, a new print display device that enlarges displays for the visually impaired; voice technology for the handicapped; an excellent bibliography on "Computers and the Handicapped;" movement keyboards for the handicapped; and "Handicapped Babies On-Line," an article on using Apple computers to help disabled infants improve their skills.

To get in touch with WAP's active DisabledSIG and informative journal, contact:

Washington Apple Pi, Ltd.
8227 Woodmont Avenue
Suite 201
Bethesda, MD 20814
(301) 654-8060

If you're on-line with a modem, call WAP's ABBS at:

(301) 657-4507

The current chairperson for WAP's DisabledSIG is Curt Robbins. Call him on:

ABBS WAP428

or write:
8805 Barnsley Court
Laurel, MD 20708

The National Paraplegia Foundation

The NPF is developing a variety of computer projects to bring computing skills to paraplegics and to implement hardware modifications that enable paraplegics to operate the keyboard with only a headpointer. Jack Kishpaugh, foundation president, was one of the winners of the first Johns Hopkins University competition to aid the handicapped. For more information, write to:

National Paraplegia Foundation
3400 Hulen
Ft. Worth, TX 76107
(817) 737-6661

Logo and Handicapped Learners

Logo is a valuable learning tool for special-needs and handicapped students.

An excellent book on Logo and special-needs students is:

Special Technology for Special Children, Baltimore
Paul E. Goldenberg
University Park Press, 1979.

Community Affairs Grants from Apple

Apple Computer, Inc. offers special grants of equipment and training so that non-profit organizations can take advantage of technology to benefit their communities. Grants have gone to organizations all over the United States, including groups that support the handicapped. The grant categories are:

Citizen Action
Research & Development
Support for the Handicapped
The Arts

To be eligible, an organization or network must be:

• small or medium-sized with an annual budget of $500,000 or less.

• non-profit

(Individuals, educational institutions, most government agencies, and religious or political groups are not eligible.)

To get more information about Apple's Community Affairs Grants, contact:

Coordinator
Apple Community Affairs
20525 Mariani Avenue
M/S 23L
Cupertino, CA 95014
(408) 973-2974

"Well-Net" and "Lands of Ah's"

One of the projects made possible by a Community Affairs grant is"Well-Net," a microcomputer network of groups and individuals that support the disabled in California's Santa Clara Valley. The groups include the Community Health Information Project's CHIP Network, Physically Limited Services, the Center for Independence for the Disabled, and the United Cerebral Palsy.

A similar network supports disabled people in isolated rural areas in Kansas. Participating organizations include: Topeka Independent Living Resource Center, Independence Inc., Rehabilitation Programs, and Operation LINK.

Apple Resource Guide for the Disabled

Apple Computer, Inc. greatly expanded and revised an earlier resource guide. The new publication, *Personal Computers and the Disabled: A Resource Guide* is an invaluable collection of information, case histories, and resources. The guide contains:

Apples Help the Deaf Bridge the Gap
Computer Technology Breaks Down Barriers for the Blind
Personal Computing offers New Potential to
    Children with Special Needs
Computers Brighten the Future for Motor and
    Speech Disabled Persons
Products for Special Needs
Organizations
Resource Materials
Resource Directory
Trace Center Software Registry

The guide also lists and reviews both hardware and software products for special needs, describes organizations, lists newsletters and resource materials, and provides a comprehensive resource directory of organizations.

RESOURCE DIRECTORY

Adaptive Peripherals
4529 Bagley Avenue North
Seattle, WA 98103
(206) 633-2610

American Foundation for the Blind
15 West 16th Street
New York, NY 10011
(212) 620-2000

BI-COMM Systems
2963 Yorkton Court
St. Paul, MN 55117
(612) 481-0775

Blind Service Association
28 East Jackson Blvd.
Chicago, IL 60604
(312) 987-0099

Canadian Medical & Biological
     Engineering Society
Secretariat
1142 Elmlea Drive
Glouster, Ontario
Canada K1J 6V9
(613) 993-0475

Closing the Gap
P.O. Box 68
Henderson, MN 56044
(612) 665-6573

Communication Outlook
Artificial Language Laboratory
Computer Science Department
Michigan State University
East Lansing, MI 48824
(517) 353-0870

Computer Aids
Bill Grimm
P.O. Box 5502
Fort Wayne, IN 46895
(219) 456-4053

Cyberon Corp.
1175 Wendy Road
Ann Arbor, MI 48103
(313) 994-0326

EKEG Electronics Co.
P.O. Box 46199, Station G
Vancouver, B.C.
Canada V6R 4G5
(604) 685-7817

Dr. Russ Fine
University of Alabama at Birmingham
Department of Rehabilitation Medicine
University Station
Birmingham, AL 35209

John Giem
1904 Westfield Drive
Fort Collins, CO 80526
(303) 223-0844

Grover & Associates
Creekside Center, Suite D116
7 Mount Lassen Drive
San Rafael, CA 94903
(415) 479-5906

The Handicapped's Source
A Division of Computability Corporation
J.A. Reston Corporation
60 Page Road
Clifton, NJ 07012
(800) 631-7277
(201) 777-2700

IEEE Service Center
445 Hoes Lane
Piscataway, NJ 08854
(201) 981-0060

International Apple Core
908 George St.
Santa Clara, CA 95050
(408) 727-7652

Iowa Braille and Sight Saving School
1002 G Avenue
Binton, IA 52349
(319) 472-5221

Margaret Irwin
California School for the Deaf–Fremont
39350 Gallaudet Drive
Fremont, CA 94538
(415) 794-3687

Bill James
5903 Danny Kaye
Box 3207
San Antonio, TX 78240
(512) 696-8750

Koala Technologies
3100 Patrick Henry Drive
Santa Clara, CA 95050
(408) 986-8866

Dr. Robert Stepp
P.O. Box 5002
Champaign, IL 61821
(217) 359-7933

Al Stoughton
Danyl Corporation
1509 Glen Avenue
Moorestown, NJ 08057
(609) 234-8000

Street Electronics Corporation
1140 Mark Avenue
Carpinteria, CA 93013
(805) 684-4593

Tash Inc.
70 Gibson Drive
Unit 1
Markham, Ontario
Canada L3R 2Z3
(416) 475-2212

Telesensory Systems Inc.
455 North Bernardo Avenue
P.O. Box 7455
Mountain View, CA 94043-5274
(415) 960-0920

Trace Research & Development Center
University of Wisconsin
314 Waisman Center
Madison, WI 53706
(608) 262-6966

The Universe Electric Research Co.
339 Innisfail Drive
St. Louis, MO 63119
(314) 961-7253

University of Illinois at Urbana
School of Chemical Sciences
Urbana, IL 61801
(217) 333-3839

University Park Press
233 East Redwood Street
Baltimore, MD 21202
(301) 547-0700

VISUALTEK
1610 26th Street
Santa Monica, CA 90404
(213) 829-6841

Voice Machine Communications, Inc.
1000 South Grand Avenue
Santa Ana, CA 92702
(714) 541-0454

Votrax Division of Federal Screwworks
500 Stephenson Highway
Troy, MI
(313) 588-2050

Washington Regional Library for the
        Blind and Physically Handicapped
811 Harrison Street
Seattle, WA 98129
(206) 464-6930

Washington Research Foundation
Suite 322
U District Building
1107 NE 45th Street
Seattle, WA 98105
(206) 633-3569

Zygo Industries, Inc.
Customer Service Division
P.O. Box 1008
Portland, OR 97207
(503) 297-1724

Peter Kosel
1345 56th Street
Sacramento, CA 95819
(916) 457-6812

Laureate Learning Systems, Inc.
1 Mill Street
Burlington, VT 05401
(802) 862-7355

Massachusetts Association for the Blind
200 Ivy Street
Brookline, MA 02146
(617) 738-5110

Media Services
Child Development and Mental
    Retardation Center, WJ-10
University of Washington
Seattle, WA
(206) 543-4011

Minnesota Educational Computing
    Consortium
3490 Lexington Avenue North
St. Paul, MN 55112
(612) 638-0627

The Micromint, Inc.
561 Willow Avenue
Cedarhurst, NY 11516
(516) 374-6793

National Crisis Center for the Deaf
University of Virginia Medical Center
Charlottesville, VA
(804) 924-0211

National Research Council of Canada
Publication Sales and Distribution
Ottawa, Ontario
Canada K1A OR6
(613) 993-1996

Prentke Romich Co.
8769 Township Road 513
Shreve, OH 44676
(216) 567-2906

Raised Dot Computing
David Holladay
310 South 7th Street
Lewisburg, PA 17837
(717) 523-6739

Research Services (Rehabilitation
    and Development)
Atlanta Veterans Administration
    Medical Center
1670 Clairmont Road
Decatur, GA 30033
(404) 321-6111

R/M Systems, Inc.
22903 Fern Avenue
Torrance, CA 90505
(213) 534-1880

Rocky Mountain Software, Inc.
214-131 Water Street
Vancouver, B.C.
Canada, V6B 4M3
(604) 681-3371

Scott Instruments
1111 Willow Springs Drive
Denton, TX 76201
(817) 387-9514

Ted Serota Engineering Consultants
P.O. Box 43286
Birmingham, AL 35243
(205) 822-3425

Readers of the guide can also access the Trace Center Software Registry to find computer software adapted for rehabilitation, or use the special form to register their software with the Center.

Personal Computers and the Disabled is available from Apple dealers and distributors all over the world. If you can't obtain copies from your local dealer, contact:

Apple Computer, Inc.
20525 Mariani Ave.
Cupertino, CA 95014
(408) 996-1010   TLX 171-576

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EDUCATIONAL, ALMOST FREE SOFTWARE

Magazines

Magazines and newsletters are valuable resources for Apple-using educators. We've listed journals that offer valuable advice on computer classroom use, a wide variety of educational applications, and, last but not least, actual program listings.

Some of these magazines are available on the newsstand, some only on a subscription basis, but regardless of where you get them you'll find a wealth of Apple information and educational, almost free software. Be sure to check the section on "Almost Free Software" for general-interest magazines that also contain programs and articles of interest to educators.

Write to these publications for more information.

USERS' GROUP PUBLICATIONS

This list focuses on Apple Users' Group publications of special interest to educators. They feature program listings, articles by educators, and contributions from both children and adults.

International Apple Core:
Apple Orchard
908 George Street
Santa Clara, CA 95050

San Francisco Apple Core:
Cider Press
1515 Sloat Blvd., Suite 2
San Francisco, CA 94134

Washington Apple Pi, Ltd:
The WAP Journal
8227 Woodmont Avenue
Suite 201
Bethesda, MD 20814

A.P.P.L.E.:
Call A.P.P.L.E.
21246 68th Avenue South
Kent, WA 98032

EDUCATIONAL JOURNALS

Classroom Computer News
341 Mt. Auburn Street
Watertown, MA 02172

The Computing Teacher
Department of Computer Information Science
University of Oregon
Eugene, OR 97403

Creative Computing
Box 789-M
Morristown, NJ 07690

CUE Newsletter
The Newsletter of Computer-Using Educators
127 O'Connor Street
Menlo Park, CA 94025

School Microware Reviews
Dresden Associates
Box 246
Dresden, ME 04342

Educational Computer
Box 535
Cupertino, CA 95015

The Journal of Courseware Review
Advancement of Computer-Aided Education
Box 28426
Portland, OR 97204

Pipeline Conduit
University of Iowa
Box 388
Iowa City, IA 52244

Educational Computer features the column "Free & Inexpensive Software," by Dr. Robert Price. Submit software, and reviews for publication to:
Dr. Robert Price
College of Education
Texas Technical University
Box 4560
Lubbock, TX 79409

SPECIAL INTEREST PUBLICATIONS

ACM SIGCUE Bulletin
Association for Computing Machinery
P.O. Box 12015
Church Street Station
New York, NY 10249

Apple Education News
Apple Computer Inc., Mail Stop 18-C
20525 Mariani Avenue
Cupertino, CA 95014
(Subscriptions free.)

Collegiate Microcomputer
Rose-Hulman Institute of Technology
Terre Haute, IN 47803

Communication Outlook
Artificial Language Laboratory
Computer Science Department
Michigan State University
East Lansing, MI 48824

Computers & Education: An International Journal
Pergamon Press Inc.
Maxwell House, Fairview Park
Elmsford, NY 10523

The Computerist's Directory
15350 River Road
Guerneville, CA 95446

On-Line Computer Telephone Directory
Box 10005
Kansas City, MO 64111

Turtle News
1208 Hillsdale Drive
Richardson, TX 75081

Electronic Games
Box 1128
Dover, NH 07801

Keeping Pace
466 Rosewood
Pittsburgh, PA 15236

Microcomputer Index
Microcomputer Information Services
2464 El Camino Real
Box 247
Santa Clara, CA 95051
(Index to microcomputer articles)

Softline
11021 Magnolia Blvd.
North Hollywood, CA 91601

Softside
100 Pine Street
Holmes, PA 19043

Software Review
Microform Review, Inc.
520 Riverside Ave.
Westport, CT 06880

Small Computers in Libraries
Graduate Library School
University of Arizona
1515 E. First St.
Tucson, AZ 85719

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MORE ALMOST FREE SOFTWARE

Many commercial publishers of educational software sell products that are very moderately priced. They're not free—but they can be an excellent value.

Sunburst Communications
Room Y
39 Washington Avenue
Pleasantville, New York 10570
(800) 431-1934

Sunburst Communications publishes some moderately priced course-ware ($19.95-$35.00) for the Apple, including computer literacy programs, CAI programs, and Newberry Award children's books with accompanying computer activities.

MICRO-ED, Inc.
P.O. Box 444005
Minneapolis, MN 55344
(800) 944-8750

MICRO-ED has a comprehensive catalog of educational software for the Apple. Although prices vary, there are programs that sell for as little as $7.95.

STERLING SWIFT Publishing Company
7901 South IH-35
Austin, TX 78744

STERLING SWIFT publishes a substantial catalog offering, educational software, books, and teaching aids for the Apple.

OPPORTUNITIES FOR LEARNING, Inc.
8950 Lurline Avenue, Dept. 5KR
Chatsworth, CA 91311

OPPORTUNITIES FOR LEARNING offers a comprehensive catalog that includes Apple related books, software and computer accessories.

MINNESOTA EDUCATIONAL COMPUTING CONSORTIUM

The Minnesota Educational Computing Consortium (MECC) is an organization dedicated to assisting Minnesota schools and colleges that use computers. MECC has developed classroom-tested educational software that is available free for educators in the state of Minnesota and, for reasonable prices to parents and educators elsewhere.

Their extensive Apple courseware selection includes programs for computer literacy and computer science, language arts, mathematics, music, science, and social studies.

MECC also publishes an informative newsletter and sponsors several computer conferences for educators every year.

To request an MECC catalog, write:

MECC Distribution Center
2520 Broadway Drive
St. Paul, MN 55113

Parents and educators within Minnesota should request the catalog for MINNESOTA RESIDENTS.

MORE USEFUL INFORMATION

Before you buy any commercial software, check out:

Courseware Reviews
This is a large volume containing classroom-based evaluations of microcomputer programs by the California Library Media Consortium for classroom evaluation of microcomputer courseware.

SMERC Library Microcomputer Center
San Mateo County Office of Education
333 Main Street
Redwood City, CA 94063

Courseware reviews cost $10.00 per volume (ten percent discount for orders of 10 or more copies).

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The SMERC Library also houses the valuable CUE/SOFTSWAP program library. Check with SMERC about the newest edition of *Courseware Reviews.*

Computers: A Comprehensive Guide
Yes!Bookshop
1035 31st St. NW
Washington, D.C. 20007

This annotated bibliography on computer education and applications sells for $2.00/copy!

APPLE UPDATE '85

We're planning to update *Free Software* regularly, but we can't do it without your help!

Please help us keep this valuable resource book current and meaningful for all Apple computer users.

USERS' GROUPS

If you've started a new Apple Users' Group please let us know the details. We'd also like to know more about activities and developments in your club. If your club publishes a newsletter, please put us on your mailing list!

TELECOMMUNICATIONS

Please send us new BBS phone numbers, new products, new telecommunication software—any information that will give future readers the most up-to-date information about this rapidly growing field.

EDUCATION

Please let us know about your new Apple educational project(s). We want to publish this information in the next *Free Software*.

CORRECTIONS

Events change rapidly in the computer field. If you've found any inaccurate information in this printing, we'd like to know. We'll be sure to correct it in our future revised edition.

NEED HELP?

Write to us at "UPDATE '85" and we'll try our best to answer your questions.

YOUR NAME IN PRINT

All contributors to the next issue of *Free Software* will be listed in the acknowledgment section of the book.

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Please rush _____ set(s) of programs, including complete documentation to:

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Address_____

City/State_____ Zip_____

Mail this coupon to, and make check or money order payable to:

COMPUTER CONFIDENCE, INC., 20823 STEVENS CREEK BLVD.
BLDG. B-5, SUITE D-1, CUPERTINO, CA 95014

Please allow 4 weeks for delivery; California residents add sales tax

A description of this Software can be found on page 101

FREE SOFTWARE
for your APPLE

$8.95

Helps You

- Get in touch with educational, entertainment, and business resources.
- Access large libraries of FREE public domain software.
- Be in touch with Users' Groups worldwide.
- Contact electronic bulletin board services (BBS's).
- Purchase the right MODEM.
- Get FREE communications software.
- Communicate with other MODEM users.
- Obtain FREE computer recreational services.

"This book made me realize what a helpful appliance my Apple computer is. Now I know how to get lots of FREE software and technical support for my business."
Bennet Klankin, Appliance Marketing Manager, Boston, MA

"*Free Software for your Apple* gave us an education in networking and resources for teachers. This book really expanded our computer horizons."
Dan & Pat Brodsky, Educators, Saint Louis, MO

"*Free Software* opened up a whole new dimension for our family and enabled us to enjoy our Apple computer. This book introduced us to the exciting world of telecommunications and Users' Groups–more new friends and FREE software than we ever thought possible!"
Brenda Adams, Beautician, San Diego, CA

Printed in the U.S.A.
ISBN: 0-86582-123-2

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