

WAC Journal

February 1987

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A Monthly Publication of the Willamette Apple Connection, Inc.

An Apple II & Compatible User Education Group P.O. Box 7252 . Salem, OR 97303-0053 . (503) 585-0811

February Meeting Information

The meeting is scheduled for February 19th, 1987, with a starting time of 7:00 p.m.. The meeting will be held on the Chemeketa Community College campus, in Building 2, Room 112.

The topics will cover: the use of Copy II Plus' Disk Map function; FrEd Writer, a public domain word processor, and the approval of the 1987 operating budget. Of course, we will continue with the question and answer session; so, bring your problems, programs and solutions to the meeting. 'e hope we can help one another.

Please come and join us, we would like to see you and hear from you.

Access II Version 1.2 for Apple IIGS

Access II, a data communications software program for the Apple IIe and IIc is now available in Version 1.2. This new version has serial drivers which are also compatible with Apple IIGS hardware.

A system upgrade disk was included in the October 15 dealer mailing. Customers who have earlier versions of Access II can upgrade their current disks to Version 1.2 by copying the new software to their existing disks, or on to a new 3.5-inch 800K disk.

Board Sets Membership Dues

At the January 9th Board of Directors meeting, the dues schedule for the "Family" and "Student" memberships was established. A "Family" membership is \$12.00 per year, and a "Student" membership (those who are enrolled in school below the college level) is \$9.00 per year. Dues will be pro-rated to the month in which you join.

Also the Board set a policy of providing a WAC Journal for three months to individual interested in the user education group. If at the end of three months, the individual's dues are not paid, the mailing will cease.

Articles Needed for the WAC Journal

The Journal can only be as good as the information it contains. Many of the complaints that surface about a newsletter are centered around not applying to the readers. We need your submissions!

One monthly article we would like to write is "CUTTING to the CORE", which would help section for question and answers. If the answers can't be found then the question will be printed for a response from the readers.

Any other suggestions on the format and content of the WAC Journal are welcomed.

This months journal was compiled from articles listed on CompuServe, in the Apple User Group area of Micronetworked Apple Users Group (MAUG). This is the OFFICIAL contact area for Apple Computer, Inc. and the Apple User Groups around the world.

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MEETINGS

The Regular Membership Meeting is held on the third Thursday of the month, with a start time of 7:00 p.m. The meeting is held on the Chemeketa Community College campus, in Building 2, Room 112. The general public is invited to attend.

WAC JOURNAL
The journal is published Authors should monthly. submit their copy via MODEM to the Salem Public Library BBS (Apple SIG), or mail a diskette with the article diskette with written in ASCII text file **Apple Works** form. AppleWriter files by the 7th Hard copy of the month. should be mailed by the last day of the month preceding the publishing month.

DISCLAIMER

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Apple Computer Marks 10th Birthday with support for "Around the World Travel" Exhibit Cupertino, California, January 17, 1987.

Apple Computer, Inc. has announced that it will make a donation of \$250,000 to the Children's Discovery Museum of San Jose. The money will support the creation of one of the museum's major exhibits "Around the World Travel."

Apple's donation was announced at a press conference held on the day of its 10th birthday party at the Santa Clara Convention Center. Albert Eisenstat, senior vice president of Apple, stated, "It is particularly appropriate for us to make this donation to the Children's Discovery Museum as we reach this milestone in the history of Apple and the personal computer industry. As Apple has grown, so has the community that we call home. The notions of discovery and experimentation are at the heart of what has helped Apple become what it is today, and this museum is designed to encourage that same spirit.

"We're really making this donation to the children of our community, so they can learn about their world in challenging and creative ways."

Apple's donation is designated for the development of an exhibit called "Around the World Travel," which is described by museum executive director Sally R. Osberg as "an intercultural experience for children. It will give them direct awareness of cultural differences and similarities," she said, "and will incorporate sections on how environments, languages, and cultural symbols influence people. Using a variety of hands-on and explanatory media, children will have direct experiences with the living environments, arts, habits, and institutions of foreign cultures." She added that the cultures represented in the exhibit will reflect the diversity of groups that live within the San Jose area.

According to Eisenstat, it is also likely that Apple computers will be used in the exhibit as part of a telecommunications link between museum visitors and children in other parts of the world. "Besides just showing children what communications technology looks like, we hope they can actually use it to share ideas and information during their visit to the museum," he stated.

The design committee of "Around the World Travel" includes Apple co-founder Steve Wozniak, who is on the Board of Directors of the Children's Discovery Museum and is a major supporter of the project, and Yolanda Jenkins, Ph.D., also a museum board member and education market analyst at Apple. Other committee members include Ted Kahn, Ph.D. (Picodyne Corporation), Dave Thornburg (Innovision), and Pamela Thornburg (teacher, Redwood City School District).

The Children's Discovery Museum is described as "a place for children to learn by doing through participatory exhibits and programs." scheduled to open in late 1988 or early 1989.

Apple Continues Commitment to Apple II Line Cupertino, California. January 12, 1987.

Apple Computer, Inc. today continued to demonstrate its commitment to the Apple II product family by introducing an updated version of the Apple IIe personal computer, the most widely used computer in U.S. schools. The updated IIe, which is available immediately, has an expanded keyboard with built-in numeric keypad, includes improved training and reference materials and features Apple's new "platinum" color scheme.

Considered the workhorse of the Apple II product family, the IIe is the number one selling personal computer to elementary and secondary schools and a popular choice for families with school-age children. Schools have purchased more than one million IIe's since the computer was introduced on January 19, 1983.

The other members of the Apple II product line—the Apple IIGS and Apple IIc—are targeted at specific segments of the education and consumer markets. The Apple IIGS, Apple's high end flagship product, features a high-performance system with advanced color graphics and sound capabilities, fast processing speeds and large memory xpandability. The Apple IIc, Apple's starter system, has a built—in disk drive, ports and connectors, optional memory expansion, and a compact case.

"The introduction of an updated IIe completes the revitalization of the Apple II product family that Apple began in September by launching the IIGS, a memory expansion module for the IIc and several new peripherals," said Delbert W. Yocam, executive vice president and chief operating officer. "Three strong systems give educators and consumers a wide range of price and performance options and establish a foundation on which the Apple II family can grow far into the future," he said.

Apple IIe Offers Versatility in Education

A versatile, expandable architecture and the largest library of high quality educational software programs of any computer account for the popularity of the IIe in schools. The new IIe is completely compatible with all existing IIe software and peripheral equipment.

In kindergarten through eighth grades, IIe's are used to help teach all subjects including reading, anguage arts, mathematics, science, social studies and computer programming. In addition, ninth through 12th grade students also use the IIe's in areas such as computer science, business and vocational education, and for simulation exercises

in social studies and science. The open architecture of the IIe also makes it ideal for specially designed accessories that help students with disabilities learn and communicate more easily.

For teachers and administrators at all levels, the IIe is a low-cost workstation for classroom management, record-keeping, preparing instructional materials and their own desktop productivity applications. Since its introduction, the IIe has been a popular choice with independent developers, ensuring continual development of innovative software.

The IIe provides 128 kilobytes (K) of user memory (RAM), expandable to 1.2 megabytes (about 500 pages of text). Eight expansion slots accommodate a wide variety of accessories, such as floppy and hard disk drives, printers, modems, networks, memory expansion cards and co-processor cards, available from Apple and third-parties. The IIe displays 40- or 80-column text, as well as graphics in three different resolutions and up to 16 colors, on a wide variety of monitors.

The IIe also provides a path to the most powerful member of the Apple II family, the IIGS. The Apple IIGS Upgrade Kit, which will be available this month, gives the IIe all the capabilities of the Apple IIGS while maintaining compatibility with more than 90 percent of the thousands of Apple II software programs available.

New Features

The IIe's attached, typewriter-style keyboard has been redesigned to incorporate an 18-key numeric keypad, which makes entering numbers and performing calculations faster and easier. In addition, it has two programmable function keys, cursor-control keys and alpha-numeric keys in the QWERTY layout. It generates all 128 ASCII characters, of which 96 are printable in upper and lower case. To facilitate upgrading, the IIe keyboard is functionally equivalent to the IIGS keyboard.

Like the Apple IIGS, the IIe now features Apple's new platinum product color scheme: a light gray case that matches Apple's line of platinum peripherals and darker gray keycaps and accents.

The IIe comes with an owner's manual, a guide to AppleSoft Basic and two double-sided training diskettes, all of which have been newly revised.

To simplify installation, the IIe is now shipped with the Apple 80-Column Card installed in the appropriate expansion slot. Previously the card was packaged separately and the user installed it.

RECOVERING DELETED FILES by Bill Harkins, Southern Maine Apple Users Group

It seems as though hardly a month ever goes by when I don't get at least i call on this subject. Someone on the other end of the conversation says something like "I didn't mean to, but...." and their valuable file has been whisked out of existence. ("What about your backup?" "Backup???? Well, I meant to, but...") So in this series of articles, we will talk a bit about how to go about recovering from this disaster if possible. The first installment here will discuss the situation under the DOS 3.3 operating system.

In some cases, files cannot be recovered. These situations include when the disk they were on is initialized or written over. You are out of luck here. Extensive physical damage is another. Finally if you don't stop right away after discovering that you have deleted a file by mistake, some future file may reuse some of the disk space used by the old file and thus written over. In the case of text files, you may still salvage something even then as we will talk about later.

To proceed with this project you will need to learn a bit about the way DOS 3.3 organizes data on a disk and you should have available a "disk editor" which allows you to change data directly stored on a disk. There are several disk editors or "zappers" or "sector editors" in our public domain library and many commercial versions available. Some commercial ones that I have used and recommend are "Zap" on "BAG OF TRICKS (1 or 2)" from Quality Software or "The Inspector" from Alpha Logic Business Systems. Many copy programs such as Locksmith 6.0 have this function built in also.

DOS 3.3 divides each disk into 35 tracks which are concentric rings running from Track \$0 on the outside to Track \$22 (that's hexadecimal for 35) on the inside. Furthermore each ring is divided into 16 sections or sectors. Each sector holds 256 characters or bytes. Pieces of a file can be stored all over a disk, not necessarily in a bunch. DOS 3.3 keeps track of where things are stored by keeping a list of the sectors used by each file. This is called the Track Sector List and there is at least one for each file. There is also a special track reserved for keeping a directory of all track sector lists for each file name you use. This is the disk directory which is track \$11 (17 decimal). The directory starts at sector \$F and works down to sector \$1. Let's assume that we have a newly initialized disk with a Hello program on it and a short text file called TEST. This is what a display of what the disk directory sector should look like.

	TRACK: 11 00 01 02 03	SECTOR: 0F 04 05 06 07	
HEX	Ŏ8 Ŏ9 ŎĀ ŎB		ASCII
00:	00 11 0E 00 00 00 00 12	00 00 00 00 0F 02 C8 C5	
10:	CC CC CF AO AO AO AO AO	AO AO AO AO	LLO
20:	AO AO AO AO AO AO AO AO	AO AO AO AO	
30:	00 D4 C5 D3 A0 A0 A0 A0		.TEST
40:	AO AO AO AO AO AO AO AO	AO AO AO AO	
50:	00 00 00 00		

The next display shows how this display is changed when the file is deleted.

		'RAC		11		EÇTO		0F	
HEX	00 80	01 09	02 0A	03 0B	04 0C	05 0D	06 0E	07 0F	ASCII
00:	00	11 00	0E 00	00 12	00 0F	00 02	00 C8	00 C5	ĤĖ
10:	00 ÇC	CC	CF	AO	AO	AO	AO	AO	ĹĹĊ
20:	AO AO	AO AO	A0 A0	AO AO	A0 A0 02	AO AO	AO AO FF	AO AO OF	
30:	A0 00	AO D4	AO C5	AO D3	D4	00 A0	AO	ΑO	.TEST
40:	AO AO	AO AO	A0 A0	AO AO	AO AO	AO AO	AO AO	A0 A0	
50:	A0 00	A0 00	A0 00	A0	A0 00	A0 00	13	02 00	
	00	00	00	00	00	00	00	00	

Notice that the file name TEST is still there even though the file has been deleted. Actually the whole file is untouched, if you just deleted it (a possible security consideration). The only thing that is different is that 3 bytes before the file name you will now see a \$FF where there used to be a \$13. This is indicator that DOS 3.3 uses to show a deleted file. Before being changed to \$FF, this position held the Track number of the track which holds the Track-Sector list for this particular file. That along with the sector number in the next byte shows us the exact location of the list of sectors used by this file. Has the Track number now been lost? No, for DOS cleverly preserves the track number in the last byte of the file name before stomping on it with \$FF. Notice the \$13 after the the Hexadecimal bytes for "TEST" and the following spaces.

So to recover our file it is a relatively simple matter to replace the \$FF with the previous value of \$13 and also to replace the trailing \$13 with \$A0. The last step is required to put a space (\$A0) back in file name, otherwise DOS will not recognize this file as "TEST". Write the edited sector bac. on the disk and, Voila! You have your file back.

Now there are a few complications. The other thing that DOS 3.3 does when deleting a file is

mark the sectors used by the file as free for future use in what is known as the VTOC or Volume Table of Contents. Located in Sector 0 of Track \$11, the track bit map keeps a record of each sector on the disk and whether it is free or in use. Our method described above does nothing to fix this minor problem. If we did nothing, future saves on this disk might result in sectors used by this file getting used again by another file. The simplest way to avoid this problem is to LOAD the file into memory (your word processor if this is a text file), and delete the file off the disk (deliberately this time!). Then save the file again on that or another disk. This will properly assign the disk sectors for that file.

There is one other case which is easily recovered which may be of some interest to our readers. Suppose you have a large text file which you have worked on for many hours. Then you write a short file and accidentally save the short file with the same name as the large file you were working on. In most cases, things would look pretty bleak at this point. Your file has been overwritten and all that work (which you hadn't had time to back up yet) is gone! Not so! Most of your work can still be salvaged. To do this, we must trot out our trusty disk editor and look once again at the file nformation. Notice that the track-sector list for the file TEST is located in Track \$13 and Sector \$0F. If we now look at that sector we find

HEX	00 80	TRAC 01 09	CK: 02 0A	13 03 0B	SI 04 0C	05 0D		0F 07 0F
00:	00	00	00	00	00	00	00	00
10:	00 13 13	00 0C 08	00 13 13	00 0B 07	13 13 13	0E 0A 06	13 13 13	0D 09 05
20:	13	04	13	03 0F	13	02	13	01
30:	14	OC	14	OB	14	OE OA	14	0D 09
40:	14 14 14	08 04 00	14 14 00	07 03 00	14 14 00	06 02 00	14 14 00	05 01 00

This is the list of sectors used by this file. Notice that the first non-zero pair is \$13 and \$0E. That is the first sector used by this file. Now let's look at that sector ...

HEX		(: 13 S) 02 03 04 0A 0B 0C	ECTOR: 05 06 0D 0E	0E 07 0F	ASCII
00:		BD BD BD	BD BD BD BD	BD	=======
10:	BD BD B	BD BD BD	BD BD	BD BD	
20:	BD BD B	BD BD BD	BD BD BD BD	BD BD	
30:	BD 8D 8	BD BD BD BD D2 C5	BD BD C3 CF	BD D6	=RECOV
40:	ČČ Č5 I	C9 CE C7	A0 C4 A0 C6	C5 C9	ERING DE LETED FI
50:	DO DO C	23 AO AD 20 C C5 AO	AD A0 C9 C9	C1 A0	LES A PPLE II
60:	AO AO A	CD C9 CC 40 C9 F4	D9 8D A0 F3	8D E5	FAMILY It se
70:		73 AO E1 75 E7 E8	F3 A0 A0 E8	F4 E1	ems as t hough ha

Here we find the beginning of our text file (this article to be specific). Now suppose we accidently saved a small file on top of this one. The result would look like this...

HEX	TRAC 00 01 08 09	CK: 13 02 03 0A 0B	04 05	06 07	ASCII
00:	C1 C1	C1 C1	C1 C1	C1 C1	<u> </u>
10:	C1 C1 C1 C1	C1 C1 C1 C1	C1 C1 C1 C1	C1 C1 C1 C1	AAAAAAA AAAAAAA
20:	C1 C1 C1 C1	C1 C1 C1 C1	C1 C1 C1 C1	C1 C1 C1 C1	ААААААА ААААААА
30:	C1 C1	C1 C1 C1 C1	C1 C1 C1 C1	C1 C1 C1 C1	AAAAAAA AAAAAAA
40:	C1 C1 C1 C1	C1 C1 C1 C1	C1 C1 C1 C1	C1 C1 C1 C1	ААААААА ААААААА
50:	C1 C1 D0 D0	C1 C1 CC C5		C1 00 C9 A0	AAAAAAA. PPLE II
60:	C6 C1 A0 A0	CD C9 A0 C9	F4 AO	8D 8D F3 E5	FAMILY It se
70:	E5 ED E8 EF	F3 A0 F5 E7	E1 F3 E8 A0	A0 F4 E8 E1	ems as t hough ha

In this case I used a string of "A"'s for clarity. Notice that at the end of the string of A's (\$C1), there is a \$00. This is the signal to DOS that the file ends here (End Of File marker). Notice also that the rest of the file is still intact after that point. All we have to do now is replace the \$00 with a \$A0 which is a space or some other normal character and rewrite this sector back out to the disk. Now when you try to read this file, you will have recovered almost your whole file. The part that is truly lost is the beginning section, which was overwritten. With some word processors, you may lose up to the end of that sector which now contains \$00. Simply replace all the non-printing characters with spaces (\$A0) and you will still save something.

I hope this helps some of you who have lost files.



Manuals From Apple

Now you can order reference manuals separately through your local Authorized Apple Dealer! In Addition, Addison-Wesley has published several manuals which you'll find in bookstores and participating Apple dealers. Be sure to use the product code number when ordering your manuals.

	BY ADDISON-WESLEY

Code #	Description	Code #	Description
17724-2	AppleSoft Tutorial (with disk)	17722-6	AppleSoft Reference Manual
17721-8	BASIC Programming w/ProDOS (w/disk)	17728-5	ProDOS Technical Reference Manual
17720	Apple IIe Technical Reference Manual	17727	Apple IIc Technical Reference Manual
17739-0	ImageWriter Technical Reference Manual	17740	Instant Pascal Language Reference Manual
17741-2	Apple Numerics Manual	17731	Inside Macintosh, Vol. 1
17732	Inside Macintosh Vol. 2	17733	Inside Macintosh Vol. 3
05409-4	Inside Macintosh Vol. 4	17737	Inside Macintosh, Hardback Vol. 1-3

MANUALS PUBLISHED BY APPLE COMPUTER

Manuals Sold Through Dealer Price List

Apple II Product Line:

Code #	Description	Code #	Description
A2L4038	Apple IIc Owner's Manual	A2L2073	Apple IIe Enhanced Owner's Manual
Manuals S	Sold Through Media Exchange Program		
Apple II P	roduct Line:		

11001011	110aact Direct		
Code #	Description	Code #	Description
030-1264	Apple II Utilities Guide	030-1292	Apple IIGS Manua
030-1294	Apple IIGS Setup Guide	030-0408	80 Column Text Ca
030-1022	Apple IIc Reference Manual Part 2	030-2028	Apple II System Ut

030-1294Apple IIGS Setup Guide030-040880 Column Text Card Manual030-1022Apple IIc Reference Manual Part 2030-2028Apple II System Utilities Manual030-0209Apple II Plus Vital Importance Manual030-1030Apple II C Owner's Man. & System030-0814Apple IIc Reference Manual Part 1030-0115DOS 3.3 Manual	
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030-0536 DOS Programmer's Manual 030-0715 DuoDisk Owner's Guide	
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030-0563 Apple IIe Joystick Manual 030-0217 Language Card Manual	
030-1141 About your Enhanced Apple IIe 030-0975 Appleline Manual	
030-0961 Apple İlc Mouse Manual 030-0564 Apple Ile Numeric Keypad Manu	al
030-0466 ProFile Owner's Manual 030-0993 Apple IIc Scribe User's Manual Pa	rt2
030-0416 UniDisk Owner's Manual 030-1209 Apple II Mem Exp Card Users Ma	n.
030-0598 Apple II Monitor User's Manual 030-0463 Apple II Numeric Keypad Manua	1
030-0255 Universal Parallel Card Manual 030-1151 Unidisk 3.5 Manual	

Macintosh, Macintosh XL and Lisa Product Line:

Code #	Description	Code #	Description
030-0687	Macintosh Manual	030-1245	Macintosh Plus Internal Drive Manual
030-1246	Macintosh Plus Manual	030-0611	Lisa Cluster Controller Manual Part 1
030-0667	Lisa Cluster Controller Manual Part 2	030-1326	Mac 512K Enhanced Owner's Manual
029-0055	Lisa Motorola 16-Bit Micro Manual		

Apple /// Product Line:

Code #	Description	Code #	Description
030-0662	Apple /// Plus Read Me First Manual	030-0193	Apple /// Monitor Manual
030-0243	Apple II Mouse User's Manual	030-0143	SÖS Driver Manual
030-0441	SÔŜ Reference Manual Vol. 1	030-0442	SOS Reference Manual Vol. 2

Apple Peripheral Product Line:					
Code #	Description	Code #	Description		
030-1330	Apple IIc Memory Expansion Card Manual	030-3106	Apple Color RGB Monitor Manual		
030-3110	Apple Monochrome Monitor Manual	030-3118	SČŠI Card Manual		
030-2001	Apple Personal Modern User's Guide	030-0623	Cable and Connector Manual		
030-1224	Apple IIe/IIc Color Monitor Manual	030-3138	Hard Disk 20SC Manual		
030-1228	Hard Disk 20 Manual	030-2040	Apple 5.25 Drive Owner's Manual		
030-1313	ImageWriter II AppleTalk Manual	030-2002	ImageWriter II Owner's Manual		
030-2005	ImageWriter II Sheetfeeder Instrct	030-1292	LaserWriter Plus Manual		
030-1094	LaserWriter Owner's Manual	0 30-1327	Mac 512K Enhanced Disk Upgrade Manual		
030-0941	Domestic 9" Monitor Manual	030-0943	Multilingual 9" Monitor Manual		
030-0976	AppleColor Monitor Manual	030-0739	Apple II Dot Matrix Printer Manual		
030-0740	Apple /// Dot Matrix Printer Manual	030-0371	Parallel Card Manual		
030-0607	DMP Reference Manual	030-0076	Graphics Tablet Manual		

Please note: Manuals for products out of production (for example, the Apple ///) will be sold only while supplies last.

Willamette Apple Connection, Inc.

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Membership Application

*** ALL INFORMATION IS CONFIDENTIAL ***

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Type of mo	embership desired: (m) Educational Institut	narkone) tion ()Corporate	Patron
CHECK ANY AREA O	F STUDY THAT IS OF		
DATA BASES () SPREADSHEETS ()	PDSE-TE	LECOMMUNICATIONS WORD PROCESSING	
LANGUAGE(S)			
OTHER			
In what area(s) cou	ld and would you be w	illing to consult?	
What systems or software wo			

What system(s) do you now us	se? (optional)		
What software do you now use	e? (optional)		

Willamette Apple Connection Meetings start at 7:00 p.m. on the third Thursday of each month at Chemeketa Community College, Bldg. 2, Rm. 112 For more Information about WAC call: Lawrence Tucker (585-0811), Darwin Wuerch (364-4194) or Neal Layton (370-9321)

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