mini'app'les newsletter

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the minnesota apple computer user's group, inc.

September, 1994   Volume 17, Issue 8

SEPTEMBER 1994

Su	M	T	W	R	F	Sa
				7:00 **1** MEMBER	2	3
4	5	6	7	7:00 **8**	9	10
11	7:00 **12** 7:00 AM	6:30 **13**	14	7:00 **15**	16	17
18	7:00 **19** 4D	20	21	22	23	24
25	7:00 **26** ?	27	28	29	30	

Board of directors
Mini'app'les members welcome.
Mathews Ctr., 2318 29th Ave. S., Rm. C
Greg Carlson, 544-8252

Apple II/GS Main
Augsberg Park Library,
7100 Nicollet Ave., Richfield
Tom Gates. 789-1713

ClarisWorks SIG
Norwest Bank, 5320 Lyndale Ave. So.,
Denis Diekhoff, 920-2437

Macintosh Main
Location Pending, "Open Forum"
Mike Carlson. 377-6553

Filemaker Pro SIG
Location Pending
Steve Wilmes, 458-1513

Fourth Dimension SIG
6250 Excelsior Blvd #104
St. Louis Park "Marketing Info Systems"
Bob Demeules, 559-1124

Apple II Novice SIG
Location & Date Pending, "Open Forum"
Tom Gates, 789-1713

AppleWorks SIG
Location & Date Pending, "T.O. Grammer"
Les Anderson, 735-3953

HyperCard SIG
Location & Date Pending
Peter Fleck, 370-0017

Macintosh Novice SIG
Mirriam Park Lib, 1831 Marshall Ave..,
St. Paul, "Open Forum"
Tom Lufkin, 698-6523

Macintosh Consultants SIG
Byerly's, 3777 Park Center Blvd,
St. Louis Park
Mike Carlson, 377-6553

Mac Programmers SIG
Location & Date Pending
Gervaise Kimm, 379-1836

mini'app'les

The Minnesota Apple Computer Users' Group, Inc.
P.O. Box 796, Hopkins, MN 55343

Board of Directors:

President
Gregory L. Carlson
8216 32nd Ave. N.
Crystal, MN 55427
544-8252

Vice-President
Brian Bantz
10532 Kell Circle
Bloomington, MN 55437
835-3696

Secretary
Leroy Sorenson
2415 24th Ave. S.
Minneapolis, MN 55406
721-5638

Treasurer
Jacque Gay
5226 W. Nokomis Pkwy
Minneapolis, MN 55417
722-1239

Membership Director
Bob Demeules
1749 W. Medicine Lake Drive
Plymouth, MN 55441
559-1124

Operations & Resource   Erik
Knopp
1953 Midland Hills Rd.
Roseville, MN 55113-5314
636-3244

Publications Director
Steve Thompson
452-4208

Software Director
Owen Aaland
20804 County 10 Blvd
Zumbrota. MN 55992
Work: (507) 732-5090
Home: (507) 732-5697.

SIGs: Mac
Eric Jacobson
1410 Energy Park Drive #17
St. Paul, MN 55108
645-6264

SIGs: Apple II
Les Anderson
2147 Suburban Ave.
St.Paul, MN 55119-4160

Past President
David E. Laden
675 Wheelock Pkwy West
St. Paul, MN 55117-4151
488-6774

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Questions – Please direct questions to an appropriate board member. Users with technical questions should refer to the Members Helping Members section.

Dealers – Mini'app'les does not endorse specific dealers. The club promotes distribution of information which may help members identify best buys and service. The club itself does not participate in bulk purchases of media, software, hardware and publications. Members may organize such activities on behalf of other members.

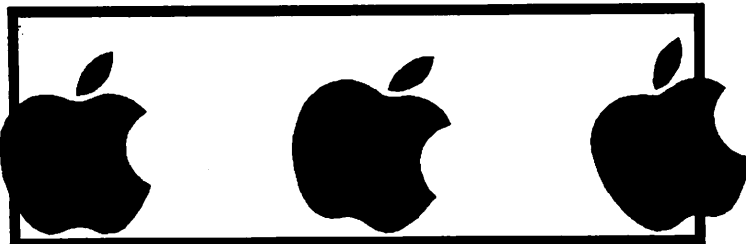**Advertisers** – See MultiForm mailer in the back of this issue.

Newsletter Contributions – Please send contributions directly to our Post Office, Box 796, Hopkins, MN 55343 or upload them to our BBS at 892-3317.

Deadline for material for the next newsletter is the 10th of the month. An article will be printed when space permits and, if in the opinion of the Newsletter Editor or Manager, it constitutes material suitable for publication.

Editor/Publisher: Tom Ostertag 488-9979

Mini'app'les BBS – 892-3317, 24 hrs. Settings: 8-1-0.

Mini'app'les Voice Mail – 229-6952

Members Helping Members

Need Help? Have a question the manual doesn't answer? Members Helping Members is a group of volunteers who have generously agreed to help. They are just a phone call away. Please call only during appropriate times, if you are a Member, and own the software in question.

If you would like to be a "Members Helping Members" volunteer, please leave your name & phone number on our BBS, or leave a voice-mail message at 229-6952, or use the MultiForm mailer near the back of this issue.

D-days (generally 9 a.m. to 5 p.m.)
E-evenings (generally 5 p.m. to 9 p.m.)
W-weekends (generally 1 p.m. to 9 p.m.).
In any case, call at reasonable hours and ask if this is a convenient time for them. We appreciate your cooperation.

Treasurer's Report July '94

Submitted by Jacque Gay ...Profit & Loss Statement

Income..
Memberships	$320.00
Advertising	$172.00
Total Income	$492.00

Expenses ....
Financial(Treasurer)	$14.50
Publications/Newsletter	$938.05
Software Production & Sales	$0.00
Hardware/Resource Support	$227.97
Membership and Promotion	$56.80
Total Expenses	$1,237.32

Net Profit/(Loss) ....**($745.32)**

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President's Report - August 1994

by Greg Carlson.

The club's SE got fixed. Thanks to a snafu at Solutronics! Here's a quick rundown of what happened. I brought the SE to them for an estimate. The estimate was a bit high for the value of the SE, and we decided not to fix the SE. In the meantime, Solutronics happened to get their wires crossed, and accidentally fixed the SE. Talking with their salesperson, she proposed that if we waited for a dead hard drive we could get the non-functional SE back eventually, but for the warranty cost ($100), we would get a new hard drive, and a new power supply. I jumped at that, and we now have a working SE again.

First Class Software BBS IS "online" now! I have ordered BBS in a Box software CD ROM (my donation) for us to put onto the BBS; Brian Bantz has ordered the next release of BBS in a Box - his donation (due out about February next year) for us to put in place when it comes. The newer version will come on 2 CD ROMs - if anyone wishes to donate another CD ROM drive, we will have the full new BBS in a Box available about that time. By the time you read this, it should be available at no charge for download for members.

First Class Client Software is available on-disk for $1.00 at the club meetings, or you can order it; or you can download it from the BBS. Be prepared for a long download - it's big!

Budget has been completed. If you are interested, we can make a copy of it available to you.

Macintosh Hardware System Update 3.0 will be available soon - keep your eye out for it. This contains a collection of bug fixes and the 32-bit System Enabler.

Well, that's about it for this month - happy computing...

Appleworks 5 — What to Expect

A partial list of new features:

SpreadSheet
 • memos (cell notes)
 • dynamic @Alert (reevaluates each recalc)
 • new @Today function
DataBase
 • background text in single record layout. You type in anything you want in normal, inverse or MouseText, and the data is overlaid on that background. You can make cool boxes and flashy screens.
 • mixed mode in Single Record Layout (SRL) pops up a scrolling list for the current category. As you cursor through, the SRL stuff is updated
 • DB Pix-style graphics command display single or double hires, PrintShop
 Word Processor
 • resizable split screens which are "remembered" as you switch around the desktop. In other words, you could have 10 differently sized windows and use OA-Q to move from file to file, each retaining their window setup.
 • print to screen. Handy for previewing mail merge, varying CPI, etc.

 • print Odd or Even. Handy for book printing
 • built-in Outliner
 • wild cards allow search for T?M to find Tim or Tom.
 • find text is remembered even when you switch desktop files
 Desktop
 • you can pick more than 12 files at a time and the desktop is automatically switched when full (12 files each)
 • improved version of WaitLess built-in

In addition there are various bug tweaks and little new features that are actually very handy. Some will be happy that the screen blanker delays are reset by mouse moves. Others will be thrilled that the OA-A command for file listings now offers a "Reverse" the order option so you can go largest to smallest, smallest to largest, youngest to oldest, oldest to youngest, etc. Other new features haven't been finalized or written. We're even still taking ideas, with no promises.

By the way, some will surely scream and holler that working on AW v5 has delayed AW v4.3 in some unjust way. Actually, it has accelerated the fixes in v4.3, since they had to be done in order to create a v5.0 foundation. AW v5 has also provided the financial justification to keep doing those free updates we hear so much about.

As for cost, it will be cheaper than AW v3 to AW v4, but it's not final yet. It will come on two 3.5" disks and include a delta manual (changes since AW v4). It requires at least a 256k enhanced IIe, IIc or IIgs.

AppleWorks v4.0 was late for several reasons which do not apply to AW v5. It also had some bugs due to major redesign which is not needed in AW v5, because we allowed for many of the AW v5 features while creating AW v4. There will only be a delta manual for AW v5 (changes since AW v4), no video, no fancy packaging, etc., so development time is slashed. Also, there's more of an agreement between marketing and programming as to what a realistic date is. I fully expect to ship in late September or early October. Most of the tough stuff is already finished now in July.

We're attempting to design AW v5 so that "EVERY" AW v4-compatible TimeOut app will work without change, but there may be a few minor exceptions. Again, the major structure change in AW was the redesign from AW v3 to AW v4. The

changes in AW v5 involve adding new features, not massive redesign of how everything fits together.

Randy and I also discussed including the AfterWork "engine"

and a couple of blanker modules in AW v5, and releasing a new batch of modules shortly after AW v5. Could be fun. I'm not sure if Randy will have time for that, though. It'll need

a little tweak to the Screen *Blanker* preferences screen, for sure.

Mini'app'les Board of Director's Meeting Minutes

July 7, 1994
Matthews Center, Minneapolis

Attendance

Members: Greg Carlson, Brian Bantz, Jacque Gay, Roy Sorenson, Erik L. Knopp, Les Anderson, Eric Jacobson ,Owen Aaland, Bob Demeules.

Excused: David Laden. Guests: Tom Gates, Nick Ludwig, Dick Peterson.

May meeting minutes were accepted; June meeting (no quorum) notes were reviewed.

Treasurer's Report
by Jacque Gay:

$670 for June (BBS software, insurance billings). Jacque reminded us we will set 1994 –'95 budget at the August meeting. Greg gave the President's report.

Vice President's Report
by Brian Bantz:

AMUG, publisher of BBS in a box hasn't responded yet. Brian will get Dick P. cables for the club CD. Erik K. will do the Voice Mail report, while Tom Gates agreed to keep voice mail updated and field messages.

Membership Director's Report
by Bob Demeules: summer doldrums.

Jacque said she found a volunteer coordinator and new member greeter.

Software Report
by Owen Aaland:

Bruce Thompson will help put out Mac disks, but Owen needs volunteers to take EDOMs to the Main Mac and Mac Novice SIG meetings. Owen will make the First Class software (to connect to new club BBS)

available on EDOM, and make it part of a new member kit.

Mac SIG Director's Report
by Eric Jacobson:

Eric wanted to know the procedure for starting a new SIG; he was directed to talk to David Laden. Discussion on the responsibilities of SIG Directors: one goal is to get more information from SIG leaders on future meetings and reports on past meetings to the membership on the BBS and newsletter.

Apple II SIG Director's Report
by Les Anderson:

Les also leads the AppleWorks SIG, and is looking for a volunteer to lead Main Apple SIG.

Publications Director:

The club needs someone to fill this position! A superb newsletter staff is already in place: interested members can call Jacque Gay for more information. Nick Ludwig has agreed to be ad coordinator, and already had drafts prepared for an ad rate brochure and media kit. Call Nick with any leads for advertisers for our newsletter.

Operations & Resources Director's Report
by Erik Knopp:

Erik is updating a list of all club hardware and software.

BBS Update
by Sysop Dick Peterson:

MacTemps wants to advertise on our BBS; the board thought that would be okay, but no decision was reached on BBS advertising rates. Discussion over when we should switch over to the new BBS: motion passed unanimously authorizing

Dick to switch on or about August 15. Dick will announce the change on BBS and send notice to newsletter. (Note: BBS phone number will not change; members can get First Class software by download, or on EDOM by mail or at SIG meetings.)

Fall Swap Meet Update
by Tom Gates:

There are two dates open at Apache Plaza; motion passed unanimously for preference of Nov. 19 (the Sat. before Thanksgiving). Members will now be charged the cost of table rental ($5 for half table).

Greg welcomed new board members, and reported the club SE needs replacement of power supply and hard drive ($300 estimate by Solutronics); board deferred action. Roy presented the executive committee's planning and goal setting for the next year.

Tom G. reported on a user group book discount (35% off!) available from MacMillan Books, which was accepted by motion unanimously. Tom will get info to newsletter, and a MacMillan rep may come to the Main Mac meeting.

A letter from Keven Kassulker with a lead on a community grant was reviewed, and Roy and Jacque volunteered to follow up. Logitech donated a ScanMan hand-held scanner to the club at their demo for the Main Mac SIG: Roy will send a thank you letter. Nominating a user group Ambassador will be discussed at next board meeting.

Quick Click Calc With Publish And Subscribe

by Mike Westerfield
Posted by Tom Gates

Westerfield pointed out that a spreadsheet for the IIgs was reasonable to do now, especially since AWGS 2.0 isn't going to be appearing any time soon.

Features:

True split screen. There can be a *billion* cells (limited by available memory). It can read AW 3.0, and will be able to read 4.0 (and 5.0) spreadsheet files. QCC cannot directly read AWGS spreadsheet files (because the format is not known, even to Claris, and has not been documented anywhere), but AWGS SS files can be exported to text or DIF, which CAN be read. QCC can do everything that AW3.0 SS can do. It can EXPORT to AW3.0 as well.

Data can be encrypted. The size of the spreadsheets can be limited to a specific size (no more than 100 rows and 10 columns, for example).

It has a neat graphing function, that does pie charts, bar charts, line charts of various types, will plot two kinds of data side by side. Line graphics can do "fits" of data to a line.

Colors can be changed on single cells, and not on the entire sheet (as with AWGS). Also, the height and width of individual cells (columns and rows, actually) can be modified to allow larger fonts, etc. to be in those cells.

The "publish and subscribe" feature automates copy and paste. The difference is that the changes from one SS will always be linked to make associated changes in the other documents that are subscribed to that original SS. It does it t rough the use of FILES, which means that the updates are available any time the subscribing file is opened.

Also does cell formatting by grades (A,B,C,D, etc) and let you do calculations on those letter grades (i.e., "B- + 1 = A-"). Can do date and time math.

"Cell notes" are available for any cell to remind you what a cell is for or does. (This is also a feature planned for AW 5.0).

Cells can be have lines drawn around them in varying thicknesses.

What does the future hold? It depends on the response to THIS product. There will be at least TWO other programs coming out, probably by the end of the year, that will help determine whether there will be further products. They would like to do further productivity products, but depends on whether or not there is enough response to THIS (and THESE) products.

If you buy, and don't like, it can be returned in 30 days.

New eDOMS for Appleworks and Ultra Macros

by Les Anderson

eDOM.97

Barrow Utilities Disk 3

This disk contains many useful macros and requires Appleworks 3.0 and Ultra Macros 3.1. They are not compatible with Ultra 4 unless modified. Complete documentation is included on the disk.

ADB.CLIP: A data base clipboard that stores as many "clips" as can fit in desktop memory and lets you view the clipboard contents. The clipboard contents can be saved in a file for future use. Appleworks 4 has a similar feature.

AWP.CLIP: An enhanced clipboard for the word processor, similar to ADB.CLIP.

CAL.MAKER: Creates a monthly appointment calendar.

SPACE.CHECK: Checks and places two spaces after periods to separate sentences.

GLOSS.MACRO: Lets you create and use your own glossaries with Appleworks. This is similar to the glossary in TO.DeskTools. A glossary is a standard paragraph that you can insert into a word processor.

UTLS.ASP: A collection of six useful tools for the Appleworks spreadsheet. These are menu-driven macros.

Convert formula to value: Does just that, with a loop in the macro to do several in a short period of time

Recalculate cells: Useful in large spreadsheets set to manual recalculate. This also has a loop to do several in a short period of time.

Change column width: This changes one column at a time, with the same loop structure to handle repeat business.

Draw a vertical line: This makes short work of drawing vertical dividers. It can use any keyboard character.

Draw a horizontal line: As above but horizontally, and only left to right!

Number cells: Numbers cells consecutively top to bottom, left to right, or bottom to top, right to left.

eDOM.98

Barrows Utilities Disk 9

This disk contains several macros for Appleworks. Side 1 is for UltraMacros 3.1, and side 2 is for Ultra 4.1 or later. Complete documentation on each macro is included on the disk.

The macros are:

ADB.FIND: Finds and replaces text strings anywhere in a data base file.

DATA.WRAP: Automatically "wraps" long data base entries into separate categories.

COPY.CAT: Copies the contents of any data base category to the clipboard. The data can be transferred to

a word processor or spreadsheet document or another data base file.

DATEBOOK: Creates a data base file you can use as a yearly datebook.

FORMAT: Six menu driven formatting tools for the Appleworks word processor. WYSIWYG formats on-screen documents so they approximate what you get on the printed page. DATE inserts a Print Date Command into a document. SINCERELY adds a standard letter closing. BEST WISHES adds an informal letter closing. SUPER PREVIEW makes it easy to use TimeOut SuperFonts to preview standard output from Appleworks.

JOURNAL: Creates a data base file you can use as a journal or diary. Also provides automatic word wrap foe categories.

LINE.SORT: Automatically sorts word processor lines into alphabetical order.

SUPER.READ: Stores up to nine word processor lines, data base entries, or spreadsheet cells in memory and recalls those entries in the order you specify. Useful when you want to transfer data within and between Appleworks modules.

Apple II History
PART 12 – PERIPHERALS & THE APPLE II ABROAD

Compiled and written by Steven Weyhrich (C) Copyright 1991, Zonker Software [v1.0 :: 31 Dec 91]

THE APPLE II ABROAD

Early on, Apple got involved in selling the Apple II in Europe and the Far East. To function in those parts of the world called for a change to handle a different voltage (240V instead of the 120V we use in the U.S.). Also, the language differences had to be overcome. It was easiest in Europe where, for the most part, the standard Roman alphabet was used. The primary differences were in symbols used together with letters for certain specific uses. Apple's Europlus][had a modified ROM, and certain ESC key sequences could generate the German umlaut symbol to go with certain vowels.[1]

When the IIe was released there were some other differences. The German version was built with a an external switch below the keyboard, allowing the user to change between a standard U.S. layout and a German layout. (American versions of the IIe lacked the switch, but had a place on the motherboard that could be modified to allow a Dvorak keyboard layout to be switched in instead of the standard keyboard). The IIe auxiliary slot, which was placed in line with the old slot 0 on American versions (but moved forward on the motherboard) was placed in front of slot 3

on German versions. This was because the European Apple IIe's also had added circuitry to follow the PAL protocol for video output used for televisions and computer monitors in Europe (in the U.S. the NTSC protocol is followed). Because of the extra space needed on the IIe motherboard for the PAL circuits, the auxiliary slot had to be moved to be in line with slot 3. Because the 80-column firmware was mapped to slot 3, if an 80-column card was installed in the auxiliary slot it was not possible to use any other card in slot 3. Versions of the IIe made for other European countries had similar modifications to account for regional differences.[1],[2]

When the Apple IIc came along, it was designed from the start to take the foreign market into account. If you recall, the U.S. version of the IIc had a standard layout when the keyboard switch was up, and a Dvorak layout when the switch was down. European versions were similar to the American layout with the switch up, and had regional versions that could be swapped in with the switch down. The British version only substituted the British pound sign for the American pound sign on the "3" key, but the French, German, Italian, and Spanish versions had several different symbols available. A Canadian version of the IIc was the same as the

American with the switch up, and had some other special symbols with the switch down. This version was unique because each keycap had the symbols for both switched versions. For example, the "3" key had the "3" and "#" symbols, plus the British pound symbol, making it a bit more crowded than a typical keycap.

The Apple IIGS continued the practice of making international versions available, but improved on the design by making the various keyboard layouts all built-in. On the IIGS it was selectable via the control panel, as was the screen display of the special characters for each type of keyboard.

APPLE II PERIPHERALS

Moving on, we will now take a look at hardware items that extend the capability of the Apple II. The ability to add an external hardware device to a computer has been there from the earliest days of the first Altair to the present. In fact, the success of a computer has inevitably led to hackers designing something to make it do things it couldn't do before. The more popular the computer, the more variety you will find in hardware add-ons. The Apple II, designed by a hacker to be as expandable as possible, was once a leader as a platform for launching new and unique hardware gadgets.

Today, in 1991, the Apple II unfortunately no longer holds the front position; it has been supplanted by the Macintosh and IBM crowd. However, the Apple II still benefits from the "trickle-down" of some of the best new devices from other computers (SCSI disk devices and hand scanners, for example). This is due partly to emerging standards that make it easier to design a single hardware device that will work on multiple computers, and in the case of the Macintosh, because of Apple's decision to make peripherals somewhat compatible between the two computer lines.

Trying to sort out all the peripheral devices ever designed for the Apple II series of computers into a sensible order is not easy. In this segment of the Apple II History I'll try to give an overview of hardware devices that were either significant in the advancement of the II, or unique, one-of-a-kind devices. Obviously, this cannot be a comprehensive list; I am limited to those peripherals about which I can find information or have had personal experience.

WHAT IS A PERIPHERAL?

A basic definition of a peripheral would be, "Something attached to a computer that makes it possible to do more than it could previously do." It is called a "peripheral" because it usually is connected to the computer after it leaves the factory. An argument could be made that something built-in is not a peripheral, but as things have changed over time there are some devices still called "peripherals" from force of habit, though they are now built-in (hard disks come to mind). Quite probably, in time many devices that were once considered optional accessories will become so essential that they will always be built-in.

Recall that the earliest computers came with almost NOTHING built-in. They had a microprocessor, a little memory, some means of data input and display of results, the ability to access some or all of the signals

from the microprocessor, and that was all. For those computers, the first things that users added were keyboards and TV monitors to make it easier to use them. Recognizing that the earliest hardware peripherals were keyboards and monitors highlights one fact: Nearly EVERYTHING that is sold as a peripheral for a computer is either an input device, and output device, or an interface to make it possible to connect input and output devices. Exceptions are cards to add memory, co-processor cards to allow it to run software from another computer, and accelerators to make the computer run faster.

EARLY PERIPHERALS

When we come to the release of the first Apple II, two important "peripherals" were built-in: A keyboard, and the circuitry to allow easy connection of a TV monitor. It had, of course, the slots for inserting expansion cards (none were available), a game port (for attaching the game paddles that were included), a pin that could be used to connect an RF modulator (so a standard television could be used instead of a computer monitor), and a cassette interface. Since there were no cards available to plug into the slots, you would imagine that the Apple II couldn't make use of any other hardware. However, those early users who had a need usually found a way around these limits.

To get a printed copy of a program listing, for example, was no trivial matter. First, there were very few printers available. Those who could, obtained old used teletypes salvaged from mainframe computers. These noisy, massive clunkers often had no lowercase letters (not a big problem, since the Apple II didn't have it either), and printed at the blazing speed of 10 cps (characters per second). To use these printers when there were yet no printer interface cards to make it easy to connect, hackers used a teletype driver written by Wozniak and distributed in the original Apple II Reference Manual (the "red book"). This driver sent

characters to the printer through a connection to the game paddle port. One part of being a hacker, you can see, is improvising with what you have.<3>

Another of the earliest devices designed for the Apple II came from Apple Pugetsound Program Library Exchange (A.P.P.L.E.). They were involved in distributing Integer BASIC programs on cassette to members of the group. To make it easier to send those programs to the person responsible for duplicating the cassette, Darrell Aldrich designed a means of sending the programs over the telephone lines. There were no modems available at the time, so his "Apple Box" was attached to the phone line with alligator clips and then plugged into the cassette port on the Apple II. To send a program, you first called up the person who was to receive it and got the computers on each end connected to the Apple Box. The sender then used the SAVE command in BASIC to tell the computer to save a program to tape. In actuality, the program was being "saved" through the cassette "out" port to the Apple Box, and onto the phone line connected. At the other end of that phone line, the data went into the other Apple Box, which was connected to the cassette "in" port on the other Apple II. That computer was executing the LOAD command in BASIC to "load" the program from the Apple Box. A.P.P.L.E. sold about twenty of these Apple Boxes at $10 apiece.<3>

INTERFACE CARDS

One of the first interface cards made for the Apple II was released, naturally, by Apple. The Apple II Parallel Interface Card was released in 1977 and sold for $180.<4> Wozniak wrote the firmware ROM, and managed to make it fit entirely in only 256 bytes. As a parallel device, it used eight wires to connect the computer with a printer, one line for each data bit in a byte. Various parallel devices also used one or more extra wires as control lines, including a "busy" line (so the

receiving device could tell the sending device to stop until it was ready for more), and a "ready" line (so the receiving device could tell the sending device to resume transmission). Because each of the eight bits needed a separate wire, the cables for parallel devices looked like ribbons and were not very compact. Most of the early printers available required this type of interface.<5> A problem noticed with Apple's card, however, was an inability to properly handle these "busy" and "ready" signals (a process known as "handshaking"). One solution offered by a reader of Call-A.P.P.L.E. magazine in 1979 was to add a couple of chips to the card. If that was not done, however, the only way to do printouts that were very long was to either buy a 2K print buffer that could be used with some early printers, or use the "SPEED=" statement in Applesoft to slow down the speed at which data was sent to the printer.<6>,<7>

Apple released the Centronics parallel printer card in 1978. Selling for $225, it was specifically designed to work with Centronics brand printers.<4> It was similar to the Parallel Printer Interface, but had fewer control codes. The "Centronics standard" used seven data bits and three handshaking bits.<8> It would automatically send certain control codes to the printer when a program sent the proper command (such as a change in line width). As such, it was limited to properly working only with a Centronics printer, but many companies made printers that used the same control codes and would work with it.<5>

In April 1978 the Apple II Communications Card came out, selling for $225.<4> It was intended for use with a modem, and worked for speeds from 110 to 300 baud. The low speed (by today's standards) was for several reasons. One was that most modems of the time were acoustic. With an acoustic modem you dialed up the number yourself, and when you made a connection you put the handset (that's the part you talk and listen with, for you

non-technical folks) into rubber sockets to seal out extraneous sound. A tiny speaker and microphone in the modem were then used to send and receive signals. This leads to a second reason for the low speeds of the time, which was that greater than 300 baud communications was not considered possible. In fact, the Phone Company was QUITE certain that speeds over 300 baud were not possible with any modem, although they would be glad to lease you a special data-quality phone line so you could get the best possible connection at 300 baud.

The Apple II Serial Interface Card ($195) appeared in August of 1978.<4> Serial devices required fewer data transmission lines, and so could work with more compact cables. Instead of sending each byte as eight simultaneous bits as was done in parallel devices, serial interfaces send each byte as a series of eight bits, which only took two wires; one to send and one to receive data. Like the parallel cards, there were a couple of other wires that went with the data lines to control handshaking. Also, serial cards needed a means of letting the sending and receiving devices identify when a byte began and ended, and the speed at which data was being transmitted. This meant that some additional information, such as "start" bits, "stop" bits, and "parity" bits, was needed.

The original version of the Serial Interface Card had a ROM that was called the P8 ROM. It contained the on-card program that allowed a user to print or otherwise communicate with the card without having to know much on the hardware level. The P8 ROM didn't support handshaking that used two ASCII control characters named ETX (Control-C) and ACK (Control-F), so a later revision called the P8A ROM was released. (ASCII stands for American Standard Code for Information Interchange). This worked better with some printers, but unfortunately the P8A ROM was not compatible with some serial printers that had

worked with the earlier P8 ROM.

The Apple Super Serial Card firmware was finished in January 1981. It was called "super" because it replaced both the older Serial Interface Card and the Communications Card. To change from one type of mode to another, however, called for switching a block on the card from one position to another (from printer position to modem position). The Super Serial Card was also able to emulate both the P8 and P8A Serial Cards, making it compatible with most older software written specifically for those cards.<9>

VIDEO CARDS

After getting a printer interface card (and printer), the next variety of peripheral cards popular for the Apple II and II Plus were ones that allowed display of 80 columns of text (which was rapidly becoming a standard outside the Apple II world). An early entry into this market was the Sup'R'Terminal card made by M&R Enterprises, the same company that made the Sup'R'Mod RF modulator for the Apple II. One of the most popular of the 80-column cards was the Videx Videoterm. Videx even made a display card that would display 132 columns card for the Apple II, but it never made much headway in the computer world (being supplanted by bit-mapped graphics displays, ala Macintosh).<3>

Many other companies made 80-column cards, but for the most part they were not very compatible with each other. One problem was deciding on a method to place the characters on the 80-column screen. With the standard Apple 40-column display, you could use either the standard routines in the Monitor, or directly "poke" characters to the screen. With these 80-column cards, they often used a standard from the non-Apple world, that of using special character sequences to indicate a screen position or other functions. For example, to put a character at row 12, column 2, a program needed to send an ESC, followed by a letter,

followed by 12 and 02. Similar ESC sequences were used to clear the screen, scroll it up or down, or do other things that Apple's built-in screen routines could do.

When the Apple IIe was released, with its RAM-based method of displaying 80 columns of text, nearly all the older 80-column cards disappeared from the market. As of 1991, only Applied Engineering still makes one for those remaining II and II Plus users that don't yet have an 80-column display.

One unique video product was made by Synetix, Inc. around 1983. Their SuperSprite board plugged into slot 7 (which had access to some video signals not available on other slots), and was promoted as a graphics enhancement system. It worked by overlaying the hi-res screen with animated "sprite" graphics (programmable characters that moved independently on any screen background). Since each sprite was on its own "plane" on the screen, they didn't interfere with each other. Also, it didn't take extra effort by the 6502 microprocessor to manipulate the sprites; once the programmer placed the sprite on the screen and started it moving, it would continue until told to change. This was much easier than trying to program a hi-res game using standard Apple graphics. Unfortunately, at the price of $395 it never took off. (It was hard for developers to justify writing programs for only a few users that might have this card). Another company later made a similar card called the StarSprite, but it suffered the same fate. Even Apple's own double hi-res graphics, introduced on the IIe, had the same problem with a small supply of supporting software until the IIc and IIGS market got large enough to guarantee that enough owners had the capability of displaying double hi-res.<10>

ROM/RAM EXPANSION CARDS

All peripheral cards released for the Apple II up to the time of the Apple II Plus were usable only in slots 1 through 7. Slot 0 was designed differently, and until the release of the Applesoft Firmware Card ($200) in 1979 nothing had been built to make use of it. The Firmware Card contained ROM that paralleled the upper 12K of Apple II memory. If you recall from the discussion in Part 3 of this History, Integer BASIC and the ROM version of Applesoft covered the same space in memory, and so could not co-exist. When it was clear that a floating-point BASIC (Applesoft) was what many people wanted, the II Plus came out with Applesoft in ROM. To make sure that the previous Apple II owners were not left out, Apple released the Applesoft Firmware Card to plug into slot 0. It had a switch that allowed the user to select which BASIC should be active. In one position, the motherboard ROM would be selected, and in the other position the Applesoft and Autostart ROM was selected. Because there were quite a few Integer BASIC programs that Apple II Plus users wanted to run, the Firmware Card also came out in an Integer BASIC version with the old Monitor ROM, that allowed II Plus users to simulate owning a standard II.<4>

One of the benefits of the Integer BASIC ROM was the lack of something known as a "RESET vector" in the Autostart ROM. The Autostart Monitor was called that because it would automatically try to boot the Disk II drive when the power was turned on, and jumped to a known memory location when the RESET key was pressed. This allowed the disk operating system to reconnect itself, but more importantly made it possible to create copy-protected software. Since the Autostart ROM made it possible for a programmer to do something on RESET that prevented a user from examining his program, it was popular with companies producing programs that they didn't want copied and freely given away. Usually, a RESET on a protected program would restart the program, erase the program from memory, or re-boot the disk. The Integer BASIC and Old Monitor ROM lacked this feature; a RESET would just drop the user into the Monitor. This, of course, was just what hackers and those who liked to break copy-protection wanted. The users with non-Plus Apple II's or with the Integer BASIC Firmware Card on a II Plus could prevent a RESET from restarting ANYTHING, allowing them to hack a program as much as they wanted.

The next card Apple released for slot 0 was called the Language Card. It was released in 1979 with Pascal, and expanded a 48K Apple II into a full 64K memory computer. It did not remove the upper 16K of ROM, but the card contained 16K of RAM that was electronically parallel to the ROM. Using "soft switches" (recall that these are memory locations that, when read or written to, caused something internally to change) one could switch out the ROM and switch in RAM memory. This extra memory was used to load the Pascal disk system, and under DOS 3.2 and 3.3, to load into RAM the version of BASIC that was not in the ROM. This was a more flexible alternative to the Firmware Card, and opened the way to other languages beyond BASIC for Apple II users.

Since the only way to get Apple's Language Card was to buy the entire Pascal system ($495), it was too expensive for many users. Other companies eventually came out with similar cards that did not require purchasing Pascal, and some of them designed the cards with more "banks" of memory, making 256K or more of extra memory available. Saturn Systems was one early suppliers of the large RAM cards. Typically, each 16K bank on the card would be switched in to the same memory space occupied by the Language Card RAM through the use of a special softswitch.<11>

CO-PROCESSORS

Although it did not go into slot 0, another significant card for the Apple II was the Microsoft Z-80 Softcard, which sold for around $300. It was a co-processor card,

allowing the Apple II to run software written for the Z-80 microprocessor. The most popular operating system for the Z-80/8080 processors was the CP/M (Control Program for Microcomputers) system. Although the Disk II use a different method of recording data than was used by Z-80 computers, Apple II users managed to get programs such as the WordStar word processor transferred to the Apple CP/M system. Microsoft worked to make it compatible with the 80-column cards that were coming out at the time, since most CP/M software expected a screen of that size.<3>,<12>

After the arrival of the IBM Personal Computer and its wide acceptance by the business world, there was interest in a co-processor for the Apple II that would run IBM software. A company called Rana, which had been producing disk drives for the Apple II for several years, came out with the Rana 8086/2 sometime in 1984. This was a system that plugged into slots on a II Plus or IIe, and would allow the user to run programs written for the IBM PC. It would also read disks formatted for that computer (which also used a completely different data recording system than the one used by the Apple II). One Rana owner, John Russ, wrote to A2-CENTRAL (then called OPEN-APPLE) to tell of his experience with it: "We also have one of the Rana 8086/2 boxes, with two [Rana] Elite II compatible drives and a more-or-less (mostly less) IBM-PC compatible computer inside it. Nice idea. Terrible execution. The drives are half-high instead of the full height drives used in the normal Elite II, and are very unreliable for reading or writing in either the Apple or IBM format ... And this product again shows that Rana has no knowledgeable technical folks (or they lock them up very well). We have identified several fatal incompatibilities with IBM programs, such as the system crashing totally if any attempt to generate any sound (even a beep) occurs in a program, or if inverse characters are sent to the dis-

play ... The response from Rana has been no response at all, except that we can return the system if we want to. Curious attitude for a company, isn't it?"<13> By August 1985 Rana was trying to reorganize under Chapter 11, and the product was never upgraded or fixed.

A co-processor called the ALF 8088 had limited distribution. It worked with the CPM86 operating system (a predecessor to MS-DOS) was used by some newer computers just before the release of the IBM PC.<14>

Even the Motorola 68000 processor used in the Macintosh came as a co-processor for the Apple II. The Gnome Card worked on the II Plus and IIe, but like other 68000 cards for the II, it didn't make a major impact, with the exception of those who wanted to do cross development (create programs for a computer using a microprocessor other than the one you are using).

The most successful device in this category was the PC Transporter, produced by Applied Engineering. First released in November 1987, this system included a card that plugged into any of the motherboard slots (except slot 3) and included one or more IBM-style disk drives. It used an 8086 processor and ran about three times as fast as the original IBM PC. It used its own RAM memory, up to a maximum of 768K, which could be used as a RAMdisk by ProDOS (when not in PC-mode). It used some of the main Apple memory for the interface code that lets the PC Transporter communicate with the hardware.

The PC Transporter has undergone some minor hardware changes and several sets of software changes (mostly bug fixes but a few new features). The major reasons for hardware changes came about because of the availability of cheaper RAM (the original RAM was quite expensive and difficult to obtain). Additionally, changes were made to make the onboard "ROM" software-based, which made it easier to distribute system upgrades that enhanced

hardware performance.<15>,<16>,<17> The major limitation for this product has been a reluctance by Applied Engineering to match the changes that have happened in the MS-DOS world and come out with a version of the Transporter that used a more advanced microprocessor (80286, 386, or 486). As of 1991 this is slowly beginning to become more of a limitation for those who wish to use both MS-DOS and Apple II software on the same Apple II computer, since advanced software NEEDING those more powerful processors is beginning to be released for MS-DOS.

ACCELERATORS

The two things that all computer users eventually need (or at least want) are more storage and faster speed. The 1 MHz speed of the 6502 and 65c02 chips is somewhat deceiving, when compared with computers that have processors running at a speed of 20 to 40 MHz. To put things into perspective: Since the 6502 does more than one thing with a single cycle of the clock on the microprocessor, a 1 MHz 6502 is equivalent to a 4 MHz 8086 chip. Therefore, an Apple II with an accelerator board or chip running at 8 MHz is equivalent to an MS-DOS computer running at 32 MHz.

One of the first accelerators for the Apple II was the SpeedDemon, made by MCT. This board used a faster 65c02 chip, with some high-speed internal memory that was used to actually execute the programs (since the internal Apple II memory chips were not fast enough). In essence, it put a second Apple II inside the one you could see, using the original one for input and output. Another speedup board was the Accelerator IIe by Titan Technologies (formerly Saturn Systems; they had to change their name because it was already in use by someone else). This board worked in a similar fashion to the SpeedDemon. Some users felt this product ran faster than the SpeedDemon, but it depended on

the application being tested. Both boards were attached to the computer by plugging them into a slot other than slot 0 on the motherboard.

In 1986 Applied Engineering introduced the TransWarp accelerator board. This product has lasted in the marketplace longer than any of the other ones, possibly because AE did far more advertising than the companies producing the older boards. The TransWarp did the acceleration using a different method. Instead of trying to duplicate all of the Apple II RAM within the accelerator, they used a cache. (If you recall from the segment on hard disk drives, a cache is a piece of memory holding frequently accessed information). Because they used the cache, the TransWarp did not require any high-speed RAM on the motherboard. Instead, any memory access was also stored in the cache RAM, which WAS high-speed RAM. The next time a byte was requested from RAM, the accelerator looked first into the cache memory to see if it was there. If so, it took it (far more quickly) from there; if not, it got it from motherboard RAM and put it into the cache. Early TransWarp boards ran at 2.5 MHz; later versions pushed this speed to 7 MHz (this was the top speed used by the TransWarp GS, released in November 1988 for the Apple IIGS).

The next step in accelerator technology was to put all the components of an accelerator board into a single chip. This happened when two rivals, the Zip Chip and the Rocket Chip, were released. The Zip Chip was introduced at AppleFest in May 1988, and the Rocket Chip soon after. Running at 4 MHz, the Zip Chip was a direct replacement for the 6502 or 65c02 on the Apple II motherboard. It contained its caching RAM within the housing for the processor, the difference being mostly in height (or thickness) of the integrated circuit. Installing it was a bit more tricky than simply putting a board into a slot; the 6502 had to be removed from the motherboard with a chip puller, and the Zip Chip

installed (in the correct orientation) in its place. Software to control the speed of the chip was included, and allowed about ten different speeds, including the standard 1 MHz speed (some games simply were too fast to play at 4 MHz, and software that depended on timing loops to produce music had to be slowed down to sound right). The controlling software also let the user determine which (if any) of the peripheral cards should be accelerated. Disk controller cards, since they used tight timing loops to read and write data, usually could not be accelerated, where many serial and parallel printer and modem cards would work at the faster speed. The Zip Chip even allowed the user to decide whether to run all sound at standard speed or at the fast speed.

The Rocket Chip, made by Bits And Pieces Technologies, was almost exactly the same as the Zip Chip, with a few minor exceptions. It was sold with the ability to run programs at 5 MHz, and could be slowed down BELOW the 1 MHz speed (down to 0.05 MHz). Later, when Zip came out with an 8 MHz version of their Zip chip, a 10 MHz Rocket Chip was introduced.

The rivalry between Zip Technologies and Bits And Pieces Technologies came from a mutual blaming of theft of technical information. The Bits & Pieces people insisted that they had done the original work on a single chip accelerator with the Zip people, but had all the plans and specifications taken away without their permission. Consequently, they had to form their own company and start from scratch to design their own chip. Zip, on the other hand, insisted that Bits & Pieces had stolen the technology from them. The problem eventually came to court, and it was decided that Zip Technologies was the originator of the technique and the Rocket Chip had to stop production.

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GOOD DEALS #12

by Ken Slingsby

This is the twelfth in a series of articles which list good deals and press releases that have been brought to our attention via a news source established by Apple Computer Co, AppleLink. It is hard to believe that already a year has gone by since this column started. This column is NOT the work of one person. Tom Mehle has been downloading the files from our AppleLink account. Yours truly condenses the articles and puts them into one file. The Newsletter staff - Tom Ostertag, Jacque Gay, John Hunkins and others - reformats the file and does the page layout. I want to thank all who have helped to keep this ball rolling. Please forgive me if I have left your name out.

Due to the constraints of space in our newsletter and time available, the articles have been greatly condensed. All were posted in their entirety on the Club's BBS. To read the full articles, plead or beg a friend who has access to the BBS to copy it for you.

As an aid in your review of the articles, I have divided them somewhat arbitrarily into DEALS and Press Releases. The DEALS include price, dates available, and the address of the publisher or author. Most of the DEALS are special limited time offers of a significant price reduction. They are presented here as a service of Mini'app'les. The PRESS RELEASES are to make you aware of the new products. You may have to hunt to find a dealer that supports the product.

Mini'app'les makes no claim as to the usefulness or quality of the products offered herein. The User Group does not endorse the products and is not supporting the products. The following is not paid advertisement. There may be other products mentioned on AppleLink not appearing here. If so, that is an omission, not a refusal of the product. As in all purchases, buyer beware!

There are at least two GOOD DEALS offered this month if several members want to pool their orders for a group purchase. If you are interested in coordinating a group purchase, please call Tom Gates at the number listed in the latest Newsletter. He has agreed to coordinate group purchases and try to avoid having multiple persons attempting to get the same discount. Then get the word out. You can use the BBS, this Newsletter, announcements at User Group meetings, and word of mouth to spread the details. If there is sufficient interest in group purchases, an opportunity will exist for someone to become a 'permanent' coordinator.

DEALS

AUGUST 1994 VENDOR OFFERS

Notes to Members: If you would like more information or order forms on products listed, please call the number given for the company who makes the product. Some prices do not include shipping or tax. Whenever you call and ask for information, or order a product, identify yourself as a Mini'App'Les User Group Member.

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ited to one per User Group member). Offer expires in 60 days. Call 1-800-225-4880 to order (M-F, 9:00-5:00 PST).

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Random House Electronic Publishing offers a 20% discount to User Group members on their hottest Macintosh books and book/disk packages. Titles include: The Complete HyperCard 2.2 Handbook by Danny Goodman, HyperTalk 2.2: The Book, Second Edition, by Dan Winkler, The Complete Applescript Handbook by Danny Goodman, Mac Screamer by Jan Garrington, Macintosh Slick Tricks by Maria Langer, Danny Goodman's Macintosh Handbook by Danny Goodman, and Multimedia Power tools by Peter Jerram. Call 1-800-793-2665 and refer to User Group Code 017-99.

Rocky Mountain Computer Outfitters (previously known as Mac's Place)

Various products with exclusive User Group member prices. Refer to the flyer in the August Mailing. Also, with any purchase from the flyer User Group members are eligible to receive 5% off SIMMS.

Tenon Intersystems

MACHTEN. Selected by Unix World's Open Computing magazine as "A Best Product of the Year". MachTen turns PowerBooks into UNIX laptops and Power Macs into high-performance Unix workstations. Since Tenon's UNIX runs alongside of System 7 you still have the Finder desktop and can run all your favorite Mac applications. User Group August special is 50% off Tenon's List price. Tenon Intersystems offers a 30-day money-back guarantee. Refer to their flyer in the August mailing for a complete list of available products or call 1-800-6-MACH-10.

PRESS RELEASES

A NEW QUICKTIME

NEW YORK, New York (PC EXPO)—June 28, 1994—Apple Computer, Inc. announced three major developments regarding its industry- standard multimedia software, QuickTime. First, Apple previewed today at PC Expo a new version of the software—QuickTime 2.0 for Windows—that will work on Windows-based personal computers. Second, the company announced that QuickTime 2.0 for Macintosh is now shipping. The company also announced that it is licensing Intel's Indeo video Release 3.2, the latest release of Intel's software-based PC video technology for inclusion in Macintosh and Windows versions of QuickTime 2.0.

QuickTime makes it possible for users to view and edit video, music, text, animations, and other dynamic information on their computer. It offers developers a cross-platform standard for sharing multimedia content between Apple Macintosh and Windows-based personal computers.

QuickTime 2.0 for Windows—due out in the fall of 1994—will include support for full-motion, full-screen video, as well as audio compression, text, and music for people who use Windows-based personal computers. QuickTime 2.0 for Windows will also support MPEG, a standard that allows for smoother, higher- quality video, and DCI, a software technology jointly developed by Intel and Microsoft, designed to accelerate video playback on Windows-based personal computers. As a result, customers with Windows-based computers can now enjoy exceptionally high-quality video.

Apple also announced that QuickTime 2.0 for Macintosh is now shipping. QuickTime 2.0 for Macintosh, like QuickTime 2.0 for Windows, supports larger, faster video, music, and MPEG. Developers can license QuickTime 2.0 for Macintosh immediately for redistribution with applications, titles, and media clip libraries that support QuickTime. The cost is $300.

DOS Compatibility Card for Power Macintosh Systems

NEW YORK, New York—June 28, 1994—Continuing its commitment to cross-platform compatibility through both software and hardware, Apple Computer, Inc. today demonstrated a Power Macintosh system running a prototype DOS compatibility card with a DX2/50 microprocessor. The technology demonstration here at PC Expo illustrates a potential hardware solution that provides DOS and Windows compatibility on the Power Macintosh platform. When installed in a Macintosh computer, the card would allow people to run thousands of Macintosh, DOS and Windows programs as well as exchange files with DOS and Windows users. Apple currently provides DOS and Windows compatibility for its Power Macintosh line of personal computers through Insignia Solutions' SoftWindows software product. Cross-platform compatibility has also been provided by Apple's Macintosh Quadra 610 DOS Compatible system, announced at Fall Comdex last year where it received Byte Magazine's Best System of Show Award.

Apple Introduces New Version of Macintosh PC Exchange

Apple Computer, Inc. today began shipping Version 2.0 of Macintosh PC Exchange , a compatibility-software utility for computer users working in a mixed platform environment. Macintosh PC Exchange, which is part of Apple's new Utility Series product line, enables users to easily exchange files between an Apple Macintosh and a PC-compatible computer. This software recognizes DOS, Windows,

OS/2 and Apple II ProDOS formatted floppy disks. The enhanced version of Macintosh PC Exchange now recognizes SCSI fixed and removable storage drives, such as those from Bernoulli and SyQuest.

Version 2.0 of Macintosh PC Exchange uses only a small amount of system memory when it is not in use, thereby freeing up memory for other programs. Macintosh PC Exchange also lets users customize the utility to launch a compatible Macintosh application when opening DOS files.

System Requirements Version 2.0 of Macintosh PC Exchange can be used by customers with an Apple Macintosh or a PowerBook with a minimum of 3MB of RAM, or a Power Macintosh computer with a minimum of 8MB of RAM. Also required is an Apple SuperDrive (or compatible) floppy disk drive, and a hard disk drive. Macintosh PC Exchange can run on any version of the System 7 operating system.

Version 2.0 of Macintosh PC Exchange is available from a wide range of software resellers. Suggested retail price in the U.S. is $79.00. For current Macintosh PC Exchange customers, an upgrade kit is available through Apple authorized software resellers and the Apple Order Center at 1-800- 769-2775, extension 5917. The U.S. suggested retail price for this upgrade is $35.00. Version 2.0 of Macintosh PC Exchange will also be distributed as part of the next Macintosh operating system release, System 7.5.

CUPERTINO, California—July 11, 1994—Apple Computer, Inc. today lifted the veil on the next release of the operating system for the company's flagship Macintosh personal computers. Called Macintosh System 7.5, the new release is based on customer feedback, and incorporates an array of new capabilities designed to enhance the productivity of people using a Macintosh. Macintosh System 7.5 brings significant improvement to the Macintosh operating system in what Apple believes

are five key areas for computer usage in the future: Active Assistance, Personal Productivity, Compatibility, Collaboration, and Advanced Printing and Graphics.

Active Assistance:

For example, Apple Guide is a built-in, interactive guide that leaps beyond traditional help systems by guiding the user, one step at a time, from query through the completion of a task. It provides on- screen visual cues to highlight items so that the user can proceed through to the next step. Apple Guide can be customized to lead users through tasks that are unique to their company or organization.

A new Scriptable Finder , based on the AppleScript technology, lets users easily automate system tasks with scripts. For example, people can use one of the many scripts included in Macintosh System 7.5 to set up a File Sharing "drop" folder that automatically enables File Sharing, specifies privileges and creates a folder that can be shared with others on a network.

Personal Productivity Macintosh

Drag and Drop makes it even simpler and faster for users to implement basic computing tasks by moving objects around the Macintosh screen to get things done. For example, when a user drags text or graphics to the desktop, a clippings file is automatically created. Another feature, Hierarchical Menus, enables faster and easier access to items that are kept in folders under the Apple menu by displaying sub menus of recent documents and applications that have been used. In addition, an improved Find File capability presents a list of all found files and the path to an individual file, as well as allows the user to drag-and-drop the file to a new location, or even open the file.

Compatibility

Macintosh PC Exchange and Macintosh Easy Open, for example, are a set of utilities that allow MS-

DOS, Windows and OS/2 data files to be opened and edited with compatible Macintosh applications. MacTCP offers built-in TCP/IP (Transmission Control Protocol/Internet Protocol)—a major and pervasive communications protocol for UNIX networking—at the software level. TCP/IP is also the standard protocol for the Internet communications network.

Collaboration

Today, the Macintosh is the most networked brand of personal computer, due in part to Apple's pioneering efforts to develop and build in collaborative tools and technologies. With Macintosh System 7.5, collaborative technology becomes part of the standard Macintosh operating system.

For example, PowerTalk —Apple's first collaboration solution for individuals—allows users to send electronic mail, share files and digitally "sign" and forward documents from within an application. PowerTalk includes the universal desktop mailbox—a single mail box for all incoming and outgoing mail—including on-line services, fax, voice, electronic mail from various sources, and documents from any application.

Advanced Graphics and Simplified Printing

QuickDraw GX offers easier printing, color management, typography and document portability. For example, to print a document in QuickDraw GX, a user can simply drag the file to the desktop printer icon. The print queue status can easily be viewed and rearranged by double clicking on the printer icon. As well, the user can easily drag the document to a different printer icon.

A new type of document file-format in QuickDraw GX also allows users to create a file that can be opened, viewed and printed from any other Macintosh with QuickDraw GX installed, without having the original fonts or application installed.

Advanced features of QuickDraw

GX that will appeal to the publishing community include sophisticated typography, international support for languages such as Kanji or Arabic and enhanced color matching.

System Requirements On a 680x0-based Macintosh computer, Macintosh System 7.5 requires a minimum of four megabytes of RAM to run the core elements with most applications and a minimum of eight megabytes of RAM to use PowerTalk and QuickDraw GX. When installed on Power Macintosh systems, Macintosh System 7.5 requires a minimum of eight megabytes of RAM for the core elements and 16 megabytes to use PowerTalk and QuickDraw GX.

Apple plans to make Macintosh System 7.5 available in CD-ROM and floppy disk formats. The CD-ROM package is expected to include an "Extras" folder containing third-party applications such as "mail gateways" for PowerTalk communications, printing extensions that allow customizing print output, and other utilities.

CUPERTINO, California—July 13, 1994—Apple Computer, Inc., today announced that it has begun shipping version 2.0 of Newton Connection Kit for Windows. The new version makes it simple for users to exchange their Newton information with many popular Windows applications.

Customers will now be able to easily move and share their existing information from many popular Windows personal information managers (PIM), word-processors, spreadsheets and databases to the Newton MessagePad , and vice-versa. For example, a user's Lotus Organizer information can be moved and shared directly with the MessagePad's address book and calendar and vice versa.

Special Software Offer

In a limited special offer, the Newton Connection Kit v 2.0 for Windows will include several sample StarCore Newton applications while supplies last: Columbo's Mystery Capers, Silicon Casino, GoFigure, Fortune 500 Guide To American Business and Dell Crossword Puzzles and Other Word Games (demo versions). In addition, Newton Book—an electronic book containing descriptions of numerous Newton commercial and shareware applications—will be included in the special offer, as will Newton DataViewer, which enables import/export of spreadsheet data. The Newton DataViewer allows users to manipulate Windows spreadsheet data on their Newton MessagePad via horizontal and vertical scrolling, sorting by column, and exporting back to the Windows spreadsheet.

Newton Connection Kit v 2.0 for Windows is expected be available in computer retailers, campus resellers, consumer electronics stores and K-12 institutions. The Apple price of Newton Connection Kit v 2.0 for Windows is US$99. Pricing will vary outside the U.S. Apple intends to send all registered purchasers of Newton Connection Kit v 1.0 for Windows an upgrade to v 2.0 at no charge. Registered users can expect to receive their upgrades in the latter part of July 1994.

QUICKCAM by CONNECTIX

July 14, 1994, San Mateo, CA-Connectix Corporation announced a low-cost video camera, named Connectix QuickCam©. QuickCam connects to the serial port of the Macintosh, and provides four-bit grayscale video in image sizes up to 240x320 and at up to 15 frames per second.

QuickCam has a suggested retail price of US$149, but is expected to have a street price of less than $100. The camera will be shown for the first time at Macworld Boston (Bayside Expo Center, Booth 1618, August 2-5), and will ship later that month when FCC certification is complete.

With QuickCam, Macintosh users will be able to record QuickTime movies, capture still pictures in PICT format, and record sound from QuickCam's built-in microphone. Unlike higher-cost alternatives, QuickCam provides digital input directly into the Macintosh through the serial port; no digitizer or AV model is necessary to record video. This results in a lower cost to the user and does not require the additional equipment necessary to decipher NTSC or PAL video, which all other camera alternatives use. Moreover, QuickCam draws its power off the Macintosh's serial port, which means that there is only one simple cable to hook up to start using QuickCam. Owners of early Macintosh models, such as the Mac II, IIx, IIcx, IIci, and IIfx, will also appreciate the fact that QuickCam includes a voice-quality microphone.

800/950-5880 415/571-5100 415/571-5195 FAX Software included QuickTime movie recorder/editor, PICT capture desk accessory, After Dark screen saver modules, Desktop gallery accessory

Compatible All Macintosh models that are QuickTime capable.

A NEW POWERBOOK

CUPERTINO, California—July 18, 1994—Apple Computer, Inc. today announced the PowerBook 150, the most affordable member of its award-winning PowerBook line of notebook computers. Priced at $1,449, (U.S. Apple Price) the PowerBook 150 is designed for higher education students, home and small office users, and desktop users with casual second system needs as well as for customers who are entering the mobile computing world for the first time.

Engineered for affordability and weighing in at only 5.5 pounds, the new PowerBook 150 replaces the PowerBook 145B, boasting enhancements that include a software bundle incorporating ClarisWorks and the PowerBook Mobility Bundle, a larger display, larger hard drive, and increased RAM expansion.

Affordable, Easy-to-Use Multimedia Macintosh Computer

CUPERTINO, California—July 18,

1994—Beginning today, multimedia computing is going mainstream. Apple Computer, Inc. rolled out a suite of Macintosh multimedia computer products that make it much easier—and more affordable—for people to create, use, and combine graphics, text, music, video and images on a computer.

The new Macintosh 630 systems are designed specifically for multimedia usage and are priced as low as $1,300. These computers come equipped with a 66/33MHz Motorola 68LC040 microprocessor, a minimum of four megabytes of RAM, expandable to 36 megabytes, and either a 250 or 350 megabyte hard disk. The Macintosh 630 comes standard with an infrared remote control, a CD-ROM drive, three expansion slots and room for an internal TV-Tuner.

But more importantly, these systems let people customize their computers by easily adding multimedia accessory cards and peripherals, priced under $300, to create a multimedia computing environment that meets their specific needs. Also introduced today, these new multimedia solutions—the Apple Video System, Video/TV System and Presentation System—allow customers to capture

video with a single button, watch TV in a window, and display presentations to a large screen TV. For those customers who want to access the Information Superhighway, Ethernet or a 14.4K baud internal modem can also be added.

Apple's Macintosh 630 computers are configured and marketed under three brand names-Performa, Macintosh LC, and Macintosh Quadra- -targeted to meet the varied computing needs of customers in the home, education, and business environment respectively. The Macintosh 630 line of computers can be easily upgraded to PowerPC technology via a PowerPC processor upgrade card.

Macintosh Quadra 630: Entry Business Macintosh Ideally suited for entry business applications, the Macintosh Quadra 630, with FPU, is a low cost work horse featuring flexible customization. Apple Price/CPU Only 4/250$1,279.00

• Performa 630 Series: Flexible, Multimedia Computer for the Home

The Performa 630 series of computers are all in one configurations ideal for the first time computer buyer. Bundled with a variety of software, the Performa series offers a

compete solution in one box.
• Performa 630 4/250/modem/14" monitor $1,499.00 - 1,549.00
• Performa 630CD 8/250/CD/modem/14" monitor $1,899.00 - 1,949.00
• Performa 635CD 5/250/CD/modem/15" monitor $1,899.00 - 1,949.00
• Performa 636 (Higher education only) 4/250/assumes 14" monitor $1,399.00 - 1,449.00
• Performa 636CD (Higher education only) 8/250/CD/assumes 14" monitor $1,649.00 - 1,699.00
• Performa 638CDV 8/250/CD/Modem/15" monitor/video-in/TV$2,299.00 - 2,349.00

Macintosh Multimedia Solutions (All accessory cards are user-installable) Apple Price

• Apple Video System $149.00
• Apple Video/TV System $249.00
• Apple Presentation System $299.00
• Macintosh Fax Express Modem $199.00
• Apple Multiple Scan 15" Monitor$505.00
• AppleDesign Keyboard$85.00

Macintosh System 7.5 Overview

Mike Pruneau, Apple Computer

Here we saw some of the features in the beta release of System 7.5, which is coming soon, with System 8 in the next year or so. It was demonstrated on a PowerMac, with 16 megs of RAM. He gave an overview of Apple's plans for the rest of the 90's. They admit that with as much power as the Macintosh offers today, it STILL is too hard for many people to figure out. There are STILL people who will NEVER read a manual that explains how to use their computer, even if the manual is written in as clear and concise fashion as possible.

Furthermore, there will be a continuing revolution in communica-

tion, with Internet—>"Data Superhighway", Multimedia—>Interactive TV, etc. He made a good comparison: "If it is easy enough for my mom to use without being told how, it is easy."

System 7.5 has 70 new features, some of which were demonstrated. It is compatible with nearly everything out there now. Offers a built-in PC exchange capability, in which an MS-DOS formatted 1.4 meg disk inserted into a SuperDrive will appear directly on the desktop and be able to be opened, etc, just like a Mac disk (and as some currently available extensions allow you to do).

Mac "Easy Open" is a new exten-

sion that determines or asks which application should open a file if it can't be figured out.

Drag and Drop is an enhancement on Cut and Paste. Instead of having to select something (an object or text), Cut/Copy it to a clipboard, and then Paste into another document, you can now select it and just drag it directly to the other document. Many of the features of the Finder are now scriptable (in fact, this is how the advanced help feature works, which is significantly better than "balloon help" was).

You can lock up to two folders from prying eyes.

You can implement "Sticky Memos", which look like post-it

notes stuck to the screen.

It will support up to four 4 Gigabyte volumes.

There will be a thread manager, for better multitasking.

There is a graphic calculator desk accessory that was impressive. It will take an X/Y/Z (three variable) equation, and display its graph in a window, even doing rotation of the shape that the equation defines. On the Power Mac it executed VERY quickly, almost immediately.

System 7.5 will also implement a better FindFile (similar to GS, in giving the locations of matching files with their pathnames, but with more capabilities than the GS version).

You can now print a document by dragging the document onto a LaserWriter icon on the desktop (just like the Lisa used to do).

The minimum recommended memory needed for System 7.5 will be 8 megs, JUST for the system (if you install EVERYTHING), and they recommend 16 megs if you want to do any serious work. It offers features that are, admittedly, available now through inits and extensions, but these will be built into the system and should work properly together.

On the PowerMac "power" demo (with a 601 PowerPC chip), he showed a PhotoShop application that had what appeared to be a ball, with tiny bumps (similar to a golf ball), with raised lettering. Using the mouse, you could move a light source anywhere around on this object, and it displayed the shadows properly. The rendering was as fast as it would be in real life, and included the ball changing smoothly from one color to another.

During the Mac System 7.5 presentation everyone kept ribbing the Apple marketing guy giving the presentation about how some new feature he was describing looked "gee, just like the Apple IIgs...." These included a thermometer bar during boot and the improved Find

File dialog, plus a couple of other minor features we've been used to using on the IIgs for years. Remember when the Mac got a Fonts folder?

Mac System 7.5 also offers hierarchical menus in the Apple menu for folders and other various utilities as a standard (you no longer need to use a third party extension for it).

An Apple II CD From DigiSoft

Submitted by Tom Gates
Reprinted from GEnieLamp Apple II

The HFS FST is terrible. It is really slowing us down on the creation of this CD. It looks like we now will be having 2 HFS partitions and one ProDOS partition, in hopes that two smaller HFS partitions will be handled in a more stable and usable manner by the FST. At any rate, the CD is right about to be premastered. However, the HFS FST's bugs have caused us to lose so much time that there is a chance that the premaster might not be back until after I go on vacation for 3 weeks in August. If this is the case then the CD will not be released until mid/late September, because it takes 3-4 weeks to master and replicate the CD after the premaster is complete and tested. However, if the premaster gets back in time, the CD can be replicated while I am on vacation, and it should ship the

106MB	of Applications	2MB	of Finder Extensions
119MB	of disks (selfbooting, non-ProDOS, etc.)	3MB	of NDAs
		35MB	of Graphics
15MB	of Sounds	5MB	of Cracks, Cheats, and
31MB	of Stacks		Deprotects
25MB	of Text	2MB	of BASIC programs
33MB	of TrueType Fonts	8MB	of AppleWorks

And a lot more! It looks like the price will probably fall around $60, since this whole project has taken a LOT more time than we first expected.

Apple II Hybrids

By Jay Curtis
Reprinted from GEnieLamp Apple II
Submitted by Tom Gates

EMULATION SOFTWARE AND APPLE II HYBRIDS

The idea of emulating a computer's functions with software and running the emulation on a foreign hardware system is nothing new. One example, which we have already mentioned, is Insignia Solution's "Soft PC" emulator for the Mac. As it turns out, Insignia is now a major player in the Power Macintosh line with a "Soft Windows" emulator. However, software emulation of foreign hardware goes much further back than the development of Insignia's "Soft PC". For example, the first BASIC programming language for an 8080 series microprocessor and architecture (the Altair computer) was written, not on an Altair, but on an EMULATION of an 8080. This BASIC was developed by none other than Bill Gates, president of Microsoft Corporation. The 8080 emulation that Gates used to write his BASIC was prepared by his friend and colleague Paul Allen.

Paul Allen's 8080 emulation ran on a DEC PDP-10 minicomputer. As the story goes, Gates and Allen had to work night and day for eight weeks to develop Gates' BASIC in order to cover a stretcher that Gates told to the Altair's developer, Ed Roberts, about having a BASIC he could sell that would run on the Altair. According to the story, Gates had no idea if his BASIC would really run on the Altair after he and Paul Allen had finished it, because the BASIC was, after all, developed on an 8080 emulation. Paul Allen was given the job of flying from Boston to Albuquerque and installing the BASIC on Ed Robert's Altair. As it turned out, the BASIC worked perfectly.(1)

It should be mentioned that Gates' early experience in programming for the 8080 also led him to promote the development and sales of a CP/M, co-processor card for the Apple II. Microsoft Corporation called these cards the "SoftCard," and they sold more than 100,000 of them for Apple IIs. "SoftCard" owners could not only run their Apple II software, but they could also run Digital Research's CP/M operating system and all of the desktop programs that were being written for CP/M by MicroSoft at that time. With his "SoftCard," Gates hoped to jump onto Apple's Apple II bandwagon by selling some of his software to Apple II owners.(2)

Microsoft wasn't the only company, however, to develop a CP/M card for the Apple II. The same SoftCard technology, which uses the Zilog, "Z-80" 8080 clone, is also found in Applied Engineering's Z-80 coprocessor cards. Additionally, there were other CP/M cards made for the Apple II and also made for PCs. Past and current users of CP/M must number in the hundreds of thousands. No doubt, some of those who are reading this article have a CP/M card which they still use. There were a huge number of programs written for CP/M, including earliest versions of WordStar and dBase, popular programs which never appeared for the

Apple II's native operating systems.

Apple II users who are lamenting the discontinuation of the Apple II line should take heart by observing what has happened to CP/M. While it is unlikely that CP/M is still being used on many native systems, it nevertheless continues to have a life of its own on Apple and PC hybrid systems that use a CP/M card. CP/M has its own bulletin board here on GEnie where CP/M users can obtain help and advice on software and hardware. A few, very capable telecommunications programs were developed for CP/M that were favored by Apple users.

In the case of the Apple II, continuation of the Apple II's operating systems, user environment and software is probably now dependent upon the development of a software emulation for the Power Macintosh computer or Power PC. Both of these systems use the Motorola RISC (Reduced Instruction Set Computing) "PowerPC" chip. This chip is arguably the fastest and most powerful CPU yet devised for personal computers.

The PowerPC is a 32-bit microprocessor with a "superscalar" design that incorporates three independent instruction pipelines or execution units. These are called the "FPU" (floating point unit), "IU" (integer unit), and "BPU" (branch processing unit). The PowerPC's ability to simultaneously process multiple instructions insures significant speed gains over other chips. Additionally, the chip supports a 64-bit wide data bus and 32-bit external address bus, capable of addressing up to 4 Gigabytes of system RAM. The basic PowerPC chip, the MPC-601, runs at a blindingly fast 60 Mhz in the base "Power Mac 7100/60."(3)

Because of its power, small size, and cool operating temperature, it seems likely to many computer watchers that the PowerPC will gain a significant market share in personal computers over the Intel x86 series processors within coming months. The chip is not only very powerful, but it is especially well-suited for

multitasking and for running emulation software at acceptably fast speeds. The first Macintosh versions of this computer are currently running a hybridized version of System 7, especially configured to make use of the PowerPC's native architecture. In the future, as more and more of the Mac operating system is translated into PowerPC code, software is guaranteed to run faster and faster.

Many programmers on GEnie have expressed their interest in the idea of writing an Apple II emulator for the Power PC or Power Mac, and at least one programmer on GEnie has announced that he is actively working upon a IIgs emulation for the PowerPC. Quality Computers has announced in its publication ENHANCE that they are looking into development of an Apple II emulator. However, as of this writing, no Apple II emulation has yet been offered for sale for the PowerPC architecture.

Software emulations of the Apple II already exist for use on other architectures, however. One emulation, designed to be run on 286 and 386-level PCs, can even be downloaded right here on GEnie (#23169; APL2EM.ZIP). The program reportedly runs DOS 3.3 and uses disk image files for 5.25 disks and drives. It is said to work acceptably with all types of Apple II software except communications software. (There is some speculation that its emulation is based on an illegal copy of the Apple II ROMs, however.) In addition to this PC-ready Apple II emulator, there are commercial versions of Apple II emulators for the Mac. For example, a company called Pegasus Technology wrote and marketed an Apple II emulator called "II In A Mac."

Pegasus sold its "II In A Mac" emulation software for $149. You can download a review of the Pegasus emulator from the GEnie Macintosh software library. "II In A Mac" offered a surprising number of features well before Apple's introduction of its IIe PDS card. These features included emulation of IIe 64K

ROMs, 128K of memory with emulation of an auxiliary slot card, emulation of a printer port, a modem port, an 80 column card, and emulation of 5.25" drives. "II In A Mac" used the Mac's native 3.5" drive directly, while "disk image" files were also used to simulate disks in 5.25" Apple II drives on the Mac's hard drive. In order to get software from real 5.25" disks onto the Mac's hard drive, the user was required to use a cable transfer, modem, or 3.5" disk copy methods.

Popular 8-bit Apple II programs such as ProTERM, AppleWorks and ProSel were said to have run successfully under the Pegasus Apple II emulation, although they were reported to be painfully slow on the Mac's 68000 and 68020 Motorola processors. The 68030 processor was said to run "II In A Mac" at an acceptable speed, however.

According to information published in July's GEnieLamp A2, a similar program to "II In A Mac" will soon be available for commercial sale. Like the Pegasus software, this emulation program, called "STM," will also run on native Macintoshes. No announcement has yet been made about a (native) Power Mac version of "STM." The program reportedly emulates a 64K Apple II+ with the DOS 3.3 System Master. While the initial report seems to indicate that "STM" has somewhat less power than "II In A Mac," the emulation offers something that "II In A Mac" did not offer. It will come on a CD-ROM disk, and it will be bundled with a great deal of original Apple II software. Like "II In A Mac," "STM" will use disk image files to emulate 5.25" drives and disks, and it will apparently also use similar methods to the Pegasus software for copying files from native Apple II disks.

In this writer's opinion, STM's marketing innovations may best illustrate how a future, enhanced Apple IIe (or even a IIgs) emulation might ultimately be packaged and sold. In order to determine how programmer's view the idea of writing

and selling a full-function Apple IIe or IIgs emulation for the Power Mac, an informal survey was recently sent to 18 programmers who post messages frequently on GEnie's A2 programmer's bulletin board. The programmers were guaranteed anonymity in exchange for their honest responses to the survey. Many of those who were polled are people who have written very popular IIe and IIgs shareware and commercial software, stuff that nearly all of us in the Apple II community possess and use.

The survey asked the programmers to respond to questions about the likelihood of whether Apple IIe and/or IIgs emulators will be produced and sold for the PowerPC. The respondents were asked to rate probabilities for each question from "low" to "high" by marking a Likert-type scale from "1" to "4" for each of the questions asked. The respondents gave an Apple II emulator for the PowerPC an above-average chance of being written and sold. An Apple IIe-only emulator for the Power PC was also given an above-average chance. However, an Apple IIgs emulation was given virtually no chance of being written and sold.

Some programmers felt that no COMMERCIAL version of an Apple II emulator for the PowerPC would be made available for sale, but, they said, a SHAREWARE or FREEWARE version would be written and made available for the PowerPC architecture on bulletin board services. This would be done, they predicted, by hobbyists or by others as a "labor of love" and as an exercise in learning the PowerPC architecture. One programmer predicted that Apple Computer, itself, would write and sell a IIe emulation which would be based upon the Mac LC's PDS card and system software.

The survey also asked additional questions about the problems and advantages connected with writing an Apple II emulation for the Power Mac or PC. Three problems were cited most frequently by the respon-

dents. First, most felt that the market for a IIgs emulation was too small to justify the development costs in view of the tremendous time and effort involved in writing the emulation. A IIe emulation was felt to be more likely, however, in view of the IIe's larger potential market and greater simplicity. The next problem that was frequently cited concerned access to Apple's ROM code for either a IIe or IIgs. Several felt that Apple simply would not cooperate with programmers by making the ROM code available from either system for an emulation.

As evidenced by the existence of previous 8-bit, Apple II emulators, the ROM code for an 8-bit Apple II could probably be obtained without Apple's assistance. In addition to those Apple II software emulators we've already mentioned, the Franklin, Laser, and Trackstar card were Apple II hardware knockoffs that also used emulated 8-bit, Apple II ROMs. However, no IIgs knockoff has ever been done, and many of the programmers surveyed felt that the IIgs ROM-based toolset would be very difficult, if not impossible, to duplicate from scratch.

The third and final problem, cited most frequently by the programmers, concerned management of 5.25" disk drive software. Because the best market for a IIe emulator would be public schools, it would be important to provide a means of accessing the huge amount of educational software found on 5.25" disks in the schools. If there were no way to attach and access a 5.25" disk drive to a Power Mac or Power PC system, then the disks would have to be copied. However, much of the educational software that people would like to run under a IIe emulation is copy protected. Therefore, while disk image files might provide a potential means of accessing this software on a Power Mac system, it may simply not be possible to copy a lot of it, without assistance from the software manufacturers.

Interestingly, the ability to access 5.25" educational software, such as

MECC software, was also cited as one important, potential ADVANTAGE of an Apple II emulator. Another advantage, frequently mentioned by the respondents, was that a IIe or IIgs emulation would provide a relatively painless way for some Apple IIe or IIgs users to migrate to the Power Mac or PC platform. Some mentioned that, in the unlikely event that IIgs emulation software could become available, the postscript printing capabilities of the IIgs would come in quite handy for those users whose budgets would not allow the immediate purchase of Mac or Power Mac desktop printing programs.

None of the survey's respondents mentioned the ability to run IIgs game software as an advantage of developing a IIgs emulation. While most of the programmers felt that an Apple II emulator could be sold for no more than the current price of an Apple IIe PDS card (currently about $125-$139), one programmer felt that a full IIgs emulator could bring as much as $200. It seems reasonable to ask, however, if a IIgs emulator might not bring MORE than that, if the IIgs emulator could be bundled together with excellent shareware and commercial game software. A IIgs emulator could potentially expand the selection of games that would be available to PowerPC users and could ultimately help to resurrect many games that are no longer being sold. Ultimately, some of the best games might even be ported to native PowerPC code.

Having asked the experts about the likelihood of an Apple II emulator, I would now like to stick my

neck out and make my own predictions. First, an Apple IIe-specific emulator will almost certainly appear within the next 12 to 18 months for the PowerPC. It will possess at least as much power, speed and capability as the LC's IIe PDS card and system software. Apple will probably produce the emulator, or they will license their IIe ROM code to another company who will produce the emulator with Apple's guidance and blessings. Apple's purpose will be to provide further incentives to public schools (still a significant part of Apple's market) to begin to purchase Power Macs. If Apple does not produce a IIe emulator, then a shareware version of the IIe will almost certainly be produced.

New software tools, which may make it relatively easy to port system software and applications, hover just over the horizon. They will become available specifically because of the tremendous increases in computing power that are promised by the new generation of RISC hardware now being introduced. One such tool, known as "FlashPort" already exists for IBM's RS/6000 workstation. Echo Logic, owner of FlashPort, is reportedly planning an MPC-601 version of the software, which is capable of translating the binary instructions from software written for one processor into equivalent binary instructions for another processor.(5)

A IIgs emulator will be a while in coming, but it may eventually make an appearance. CD-ROM is fast becoming a computer industry standard, and eventually most computers will come with a built-in CD-ROM drive. Considering that a com-

pact disk can store such tremendous volumes of data, it seems possible that an enterprising software vendor may choose to bundle several computer emulations (such as the Commodore series, Amiga and Apple IIgs) together with the best of their software on a single CD — a sort of 'goldie oldies' disk for nostalgic computer users.

While all Apple II users now enjoy the benefits of a mature computer system and software, the future also continues to look bright. New, promising technologies are making their appearance. Software and hardware capabilities are steadily increasing while the relative cost of personal computing is going down with increased competition and sales volume. The Apple II still has a long life ahead, possibly in new, exciting, incarnations.

NOTES

(1) Wallace, J. & Erickson, J. Hard Drive, Bill Gates and the Making of the Microsoft Empire. John Wiley, N.Y. 1992. p. 74.

(2) Wallace, J. & Erickson, J. p. 158.

(3) Thompson, Tom. "Power PC Performs For Less". Byte. August, 1993. pp. 59-64

(4) It should be noted that because of its unique architecture, even the base MPC-601 probably runs native applications faster than a 60 Mhz Pentium will run its own native applications. Even more powerful PowerPC chips are planned for later this year and next year. Faster, 66 mhz and 80 mhz, versions of the MPC-601 are also currently available.

(5) Thompson, Tom. p. 70

Tip For IIGS AppleTalk Users

Submitted by Tom Gates
Reprinted from GEnieLamp Apple II

I just solved a problem that's been annoying for almost six months now, and thought I'd share it with everyone. Talk about traps for young players, AND OLD ONES!

My IIGS has three boot parti-

tions, which I select with a RamFAST, depending on what I'm doing during that session. One of these is a fast boot (ie. very few INITs/DAs etc.) which starts AppleTalk and logs on to my Macintosh automatically and uses AppleShare to gain access to one of

the Mac's drives.

About six months ago, the boot process started getting slower and slower, until it got to the stage where it was taking up to 30-40 seconds longer than I thought it should have. I checked the Zip GSX, and for

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Which personal computer(s) do you use?

❑ Apple II
❑ Apple III
❑ Apple IIe
❑ Apple IIc
❑ Apple IIc+
❑ Apple IIGS
❑ Laser
❑ "Toaster" Mac – 68000 (128K,512K, 512Ke,Plus,SE,Classic)
❑ Other 68000 (Mac Portable, Powerbook 100)
❑ "Desktop" Mac – 68020 (II, LC)

❑ "Toaster" Mac – 68030 (SE/30, Classic II,Color Classic,Color Classic II,LC 520, LC 550, Mac TV)
❑ "Desktop" Mac – 68030 (IIx,IIcx)
❑ "Desktop" Mac – 68030 (IIsi,IIci,IIfx,LC II,LCIII,IIvx)
❑ "Desktop" Performa – 68030 (400,405, 410,430,450,460,466,467,600)
❑ "Toaster" Performa – 68030 (200,275, 550,560)
❑ "Toaster" Performa – 68040 (575,577, 578)

❑ "Desktop" Quadra 68040 (605,610,630, 650,660AV,700,800,840AV,900,950)
❑ "Desktop" Centris (610,650,660AV)
❑ Powerbook – 68030 (140,145,145B, 160,165,165c,170,180,180c)
❑ Powerbook – 68040 (520,520c,540, 540c)
❑ Powerbook Duo 68030 (210,230,250, 270c)
❑ Powerbook Duo 68040 (280,280c)
❑ PowerMacintosh (6100,7100,8100)
❑ Other_____

What attachments or peripherals do you use?

❑ QuickDraw printer
❑ PostScript printer
❑ Modem
❑ Scanner/digital camera
❑ Drawing tablet
❑ Voice mail
❑ MIDI
❑ Other_____

What are your areas of special interest?

❑ Business applications
❑ Household applications
❑ Educational applications
❑ Desktop Publishing
❑ Programming
❑ Networking
❑ Games
❑ Other_____

❑ Check if you want your name withheld from commercial and other non-club mailing lists
❑ Check if you are interested in volunteer oppertunities (see other side)
❑ Check if you were refered by a club member. Please give name

_____

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eDom Orders

Prices:

5.25" eDom: $3.00
5.25" System: $1.00
3.5" eDom: $5.00
3.5" System: $3.00
Mac System 7: $15.00
(Prices include 6% Minnesota sales tax)

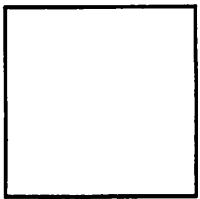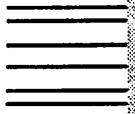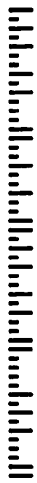| Disk size	e Dom	Title or Description	Qty.	Price @	Total

Total merchandise	
Double price for non-members	
Add $1/disk shipping ($4.00 max)	

Make checks payable to "Mini'app'les"

Grand Total:

Current Apple System Software

	Version	Date	Format
Apple II, II+, IIc, IIe			
Dos 3.3 System Master	n/a	09/10/85	5.25"
Apple II System Disk	3.2	07/16/90	5.25/3.5"
ProDOS 8	1.9	07/16/90	5.25/3.5"
Apple IIGS			
GS/OS System (6 disks)	6.0	4/92	3.5"
HyperMover(2disks)	n/a	n/a	3.5"

2nd fold

Attention:

Dear Mini'app'les
Please direct this to the:
☐ Membership Director
☐ Software Director

Mini'app'les
P.O. Box 796
Hopkins, MN 55343-9905

‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖

Last Fold – Seal with Tape

1st fold

around 30 seconds or so, the cache light was almost hard on. Check the Zip settings! Nope, the AppleTalk switch made no difference. Either did changing any of the slot speed switches. Re-install 6.0.1? No difference. Remove EVERY INIT and DA (including the Apple ones, except for Control Panels NDA and the AppleShare related Control Panels. Same problem.

I didn't have time to look any further, so I forgot about it.

Recently it had been getting worse, so I decided to take another look. I dropped into debug during the "hard on delay" ;-) and found it madly polling the serial ports. Why?

Perhaps it's confused! Delete CDev.data. Same problem. Check out ATInit and AppleShare.Prep. Ahh!

Because my Mac had been reformatted a number of times, the server name had changed. The IIGS was trying to log on to every past server name which I'd used, and was "madly polling" waiting for them all to come online.

Even though only the current name appears in the AppleShare Control Panel, setup data STILL contains the old information! I deleted "ATInit" and "AppleShare.Prep", went in and logged on to the Mac again, and rebooted with the new parms. The IIGS booted to the desktop, with the Mac volume mounted, in under 10 seconds!

Sooo... If you think AppleShare is pretty slow, try deleting "ATInit" and "AppleShare.Prep", reboot, re-logon, and reboot again. Both of these files are in "*:System:System.Setup".

Regards, Richard
(RICHARD.B, CAT9, TOP14, MSG:14/M645;1)

Adjournment:

Next executive board meeting July 21 at Jacque's.

Next board meeting 7 pm, Thursday, August 4, East Lake Library, 2727 E. Lake St., Minneapolis.
Submitted by Roy Sorenson, secretary.

Ongoing Deals for Mini'app'les members

Submitted by Tom Gates

The following businesses have agreed to provide ongoing discounts to members of Mini'app'les. When you contact these companies, please identify yourself as a member of Mini'app'les to qualify for these discounts. For questions related to these discount offers, please contact Tom Gates - (612) 789-1713 evenings and weekends.

APC Power Protection Products

Surge Protection strips, Battery backups, line conditioners, etc. Contact Keith Kalenda at Business Security Products (612) 789-1190 1/3 off SurgeArrest line of products 25% off BackUPS, SmartUPS and related products

MacMillan Pubishing

35% discount off computer books from QUE, Sams, New Riders Publishing, Hayden and Brady. Catalogs available thru Mini'app'les or by contacting Marcie at 1-800-428-5331 x3744. To place orders, contact Melissa at 1-800-428-5331 x4673.

MacMillan Publishing produces frequent listings of new titles that have been added to their catalog. Mini'app'les will attempt to have these available on the BBS.

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