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D.A.U.G.

Newsletter

DuPage Apple Users Group

JULY 1986

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		GUESS WHO		
	JULY MEETING			
		(1) On Nay 17th of this year he received a Bachelor of Electrical Engineering and Computer Science degree from the National Computer Science degree from the science degree degree from the science degree deg		
When: 7:30 PM, July 08.1986		University of California at Berkeley.		
Where: Lincoln Center		(2) He first enrolled at that university 15 years ago.		
935	Maple Ave			
Downers Grove, 111		(3) He also attended the University of Colorado, San Jose		
		State University, and	De Anza College.	
Topic: GAME NIGHT		(4) His dog's name is Rocky Raccoon.		
		(5) His wife's maiden	name is Clark.	
7:30-7:45	Opening remarks			
7:45-7:55	Dem of Current Dom	(6) The name that appe	ars on his diploma	is Rocky Clark.
7:55-8:05	Nin-review of a Program			
8:05-8:15	Q & A Dissussion	(7) The opening remark of his commencement speech was "I'm		
8:15-8:30	Break	glad to have a degree so that I can now go out and get a good		
8:30-8:35	Door Prize	paying job."	-	
8:35-9:45	Gages-			
	Zargon	(8) He ended his speech with "Buy an Apple!"		
	Load Runner			
	plus more	₩ho is he?		
(If you have a special game		RPS (6/18/86)		
	ng it to the meeting)			
			OFFICERS	
			**======	
	Other Dates to Remember	President:	Ed Danlev	969-4433
		V/P Program	Randy Paulin	366-3274
July 8: Regular meeting - Game night		V/P Membership	Jim Cormack	960-5691
1#: Board Meeting (7PM, Downers Grove Library)		Secretary	Albert Hilliger	860-2626
✓ 22: Appleworks Sig (7PM, Wood dale Library)		Treasurer	John Sandora	352-3059
Aug 12: Regular meeting -		Librarian	Detlef Adolff	766-7741

Editor

Directors

Don Smith

Bob Konikow

Ralph Stein

629-5033

968-3897

985-7850

- 20: Board Meeting (7PM, Downers Grove Library)
- 26: Appleworks Sig (7PM, Wood Dale Library)
- Sept 9: Regular meeting
 - 17: Board Meeting (7PM,Downers Grove Library) 23: Appleworks Sig (7PM, Wood Dale Library)

DAUG NEEDS YOUR HELP



The only way to have a good newsletter each month is to get input from members. You don't have to be a HACKER to contribute something. I really cannot write 7 pages each month without your help. Things we can use are:

\$\$ Software reviews-games, business programs, public domain,etc. \$Article or book reviews- from newspapers, magazines, books, etc.(except Nibble) \$\$ Short programs or routines-you have written \$Programming tips & hints \$Trivia-computer facts, cartoons, questions \$Anything else of interest

Articles can be given to any of the officers at the regular monthly meeting. They can also be mailed directly to the Newsletter Editor at the following address:

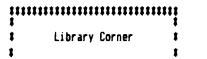
> DON SMITH 20 S. LODGE LANE LOMBARD, ILL 60148

The deadline for submission of these articles is the date of the board meeting (see the schedule on page 1). As an added incentive for you to submit an article, you will be entitled to a free DOM during each month you submit an article.

Please have each submission consist of the following: 1) a printed copy of your article 2) a diskette containing your article 3) the word processor used to create your article 4) proof read your submission for spelling etc. 5) your name and telephone number Your cooperation is needed and appreciated.

APPLEWORKS SIG IN PROCESS

With the increasing number of members using Appleworks, there has been some interest in starting up a special interest group of members (ie a SIG) on this topic. Our librarian Detlef Adolff is has set up an Appleworks Sig in the Wooddale area using a room at the Wooddale Public Library (Foster & Wooddale Rd, Wooddale). Anyone interested in joining this Sig effort please contact him at the next meeting or call him.



Blank Diskettes

Remember that blank diskettes are available for purchase from the Librarian at club meetings. The cost is **\$6.40** for 10 diskettes plus tax. The diskettes come in multiples of 10 and include Tyvek sleeves.

Mac DoH's

Beginning next month we will have Public Domain programs available on 3.5" disks for the Macintosh. Watch this space for more details.

Future Disks

Here are some of the DoM's coming up in the next few months. There is a disk from Canada with mini-assembler instructions, utilities and tutorials. We will have two different public domain modem programs. Two additional disks of Print Shop Graphics are already prepared. Lots of good disks coming up why not recruit a new member for the club and get your disk for free?!

Treasurers Report	June 86		
Previous Balance	906.26		
Membership	72.00		
Monthly Dom's	175.00		
Total Revenue	247.00		
Expenses			
Operational Expenses	57.25		
Capital Expenses	31.41		
Newsletter + Stamps	0.00		
Diskettes	0.00		
Other Club Membership	0.00		
Rent	0.00		
Prize Fund	0.00		
Total Expenses	88.66		
Net Income	158.34		
Ending Balance	1064.60		
•			

John W.Sandora

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(cont., from last month by Jim Upchurch)

As the program is LISTed, the WRITE command writes it to disk as an EXECable TEXTfile. THE PROGRAM YOU ARE TRYING TO WRITE TO THE TEXTFILE CANNOT HAVE A LINE NUMBER 0, which must be reserved for the TEXTfile writing program.

I put the TEXTfile writing program above onto almost every disk I have as a TEXTfile named "EXECUTARY." Then when I have a program in memory I want to write to disk as a TEXTfile, I just EXEC EXECUTARY and then type RUN.

When you RUM the program, naturally it encounters its new line 0 first; you'll get a "FILE NAME?" prompt, in response to which you type in the name you want the new TEXTfile to have.

Then press RETURN and the writing-to-disk process will follow automatically. The TEXT command near the end of line 0 restores the normal width screen, and END prevents the remainder of the program from RUNning.

I put EXECUTARY on disk as a TEXTfile originally with a word processor. It is very much a public domain program, but I want to point out that I got this particular version from the wonderful new publication "Open-Apple" published by Tom Weishaar, 10026 Roe, Overland Park, Kansas, 66207. You will learn more about your Apple in one issue than from 3 years worth of InCider or A+.

Incidentally, you have to put a program into TEXTfile form to upload it to Compuserve, and the EXECUTARY program works fine for that purpose.

OTHER EXECFILE USES

Making a diskful of EXECable subroutines is a very valuable investment of your time if you do any programming, and "typing" the subroutines into memory is a very good use of the EXEC command. But it's far from the only one.

You can use an EXEC file to make your Apple do many things. This is accomplished by using those ProDOS/DOS and Applesoft commands that are described as "immediate mode" commands. These are commands that will work when you type them in directly from the keyboard.

"Deferred mode" commands only work when used from within an Applesoft program. Almost all immediate mode commands can also be used in deferred mode, but a deferred mode command by definition only works from within a program. Let me give a very simple demonstration.

HOME is an immediate-mode Applesoft command. So is PRINT. So is VTAB which sets the vertical cursor position. So is CATALO6 (use CAT if you're in ProDOS). Using your word processor, type the following as shown:

HOME <CR> VTAB 10 <CR> PRINT "EXECUTING" <CR> CAT <CR>

Of course, <CR> means press Carriage RETURN. When you finish, save this short EXEC file to disk in TEXT file form; name it HOME.CAT. Now, exit your word processor and boot up the disk you saved HOME.CAT to. Type EXEC HOME.CAT.

As the file EXECS, the screen will clear (HOME), the cursor will move to about midscreen (VTAB 10), the word EXECUTING will appear (PRINT "EXECUTING"), and the disk catalog will then be displayed (CAT; if you're in DOS use CATALOG).

Well, all that does is show you it works. You can give your Apple a series of immediate mode Applesoft and ProDOS/DOS commands without ever touching the keyboard by EXECing a TEXTfile containing those commands.

Let me suggest a more interesting use for ProDOS fans.

Your 128k Apple in ProDOS has a RAMdisk available, a portion of memory that is set aside to emulate in many respects a 3rd disk drive. You can save programs there, and run them from RAMdisk instantaneously, without noisy and boring disk access.

You can do this by a series of typed-in immediate mode commands (LOAD /SCRATCH/HEX.DEC.CONVERT [sigh!] SAVE /RAM/HEX.DEC.CONVERT [sigh!] LOAD /SCRATCH/STARTUP [yawn] SAVE/RAM/STARTUP [choke!gasp!]...etc.etc, ad nauseam.)

Or you can let an EXEC file do it. How? Here's how to load a series of Applesoft programs into RAMdisk when you boot up.

Let's say you have a ProDOS disk named /SCRATCH you use frequently, and that it has a large number of short Applesoft programs on it, and enough directories and files that you have to search a little bit for those short utility programs you frequently use when working off that disk.

Let's say those three programs are HEX.DEC.CONVERT, START.ADDR.LOCATE, and WRITE.DATA. Let's say it would be helpful to have those three at your fingertips, in the RAMDISK, while working in main memory. Write the following EXEC file and save it to the disk named /SCRATCH as a textfile called RAMLDADER:

LOAD/SCRATCH/HEX.DEC.CONVERT SAVE/RAM/HEX.DEC.CONVERT LOAD/SCRATCH/START.ADDR.LOCATE SAVE/RAM/START.ADDR.LOCATE LOAD/SCRATCH/WRITE.DATA SAVE/RAM/WRITE.DATA CAT/SCRATCH PRINT"RAM PROGRAMS INSTALLED" PRINT"MAIN MEMORY EMPTY" NEW

Now, write the following Applesoft program and save it to the disk named /SCRATCH as a program named STARTUP:

10 HOME: HTAB 10: VTAB 10: PRINT*LOADING RAM* 20 PRINT CHR\$(4); "EXEC /SCRATCH/RAMLOADER"

Now, when you boot up /SCRATCH, its startup program will EXECute the TEXTfile named RAMLOADER.

That file will, one after the other, load the programs you wanted into main memory, then save them to the RAMdisk, then catalog the disk in the bootup drive, tell you the RAM programs are installed and that main memory is empty, then empty the main memory through the NEW command. And you never had to touch a single key!

You can add a very useful step to this EXEC file.

RUN is also an immediate mode Applesoft command. If you want another program on your /SCRATCH disk to RUN on bootup, after you have EXEC'd the RAMDISK full of programs, simply omit the NEW command and add to the end of the above EXECfile the command RUN xxxxx, with the x's of course being the name of the Applesoft BAS program you want to RUN immediately after bootup.

And there's more. EXEC is an immediate mode DOS/ProDOS command, so you can EXEC other TEXTfiles by putting such instructions into a textfile.

Just look through any Applesoft and ProDOS/DOS command summary you have around, and check out all the immediate mode commands. This should begin to give you some ideas about the variety of functions available through EXEC files.

I hope you find some of this stuff helpful. I myself am just beginning to discover the remarkable power of EXECing TEXTfiles full of immediate mode commands in order to control my Apple. Mac A.P.P.L.E.

Many DAUS members are familiar with "Call A.P.P.L.E.," a magazine published by one of the oldest independent Apple user organizations originally known as the "Apple PugetSound Program Library Exchange," but for the last year or so also referred to as the "A.P.P.L.E. Co-op." They are now publishing a second magazine for Macintosh users: "Mac A.P.P.L.E. -- News for the Rest of Us." I found the premier issue, dated March 1986, on the magazine rack at Oak Brook Computer. It's identified as a monthly publication, but more recent issues were not available at that store.

The magazine looks very much like Call A.P.P.L.E. but of course with both articles and ads specialized for the Macintosh, including mention of discounted prices for selected products available to members of the A.P.P.L.E. Co-op. It's described as the successor to "32 Little Apples," a publication of their Lisa/Mac S16, and perhaps that's why it seems to be written for those who have had a Macintosh for some time. I noted some emphasis on use of Apple's LaserWriter printer in both ads and articles which seemed to me to be inconsistent with the idea of "News for the Rest of Us." The cost of a LaserWriter is about \$6000 which is a bit (or maybe several bytes) too expensive "for Many of Us" if not "for the Rest of Us." Anyway, its an interesting magazine with well written articles. although the issue I saw is too small (about 40 pages including ads) to justify the \$2.50 price tag.

--- Ralph P. Stein ---

HELP LINE

The following members have volunteered to answer questions by phone on the subjects listed. Please be considerate when calling for help. Think through your question; collect all the information; and don't call later than 10 p.m. If you'd like to help, let us know.

Apple Writer IIe: Chuck Jonah, 985-5497 Applesoft: Chuck Jonah, 985-5497 Appleworks: Detlef Adolff, 766-7741 DOM Infro: Detlef Adolff, 766-7741 DOS: Chuck Jonah. 985-5497 Interface: Rufus Teesdale, 469-8836 Mach Lang: Chuck Jonah, 985-5497 Hacintosh: Randy Paulin, 366-3274 Nodems: Rufus Teesdale, 469-8836 Magic Window: Ed Danley, 969-4433 Supertext: Dave Dohmeier, 941-1645

SYLVIA PORTER'S PERSONAL FINANCIAL PLANNER

Occasionally DAUG receives commercial programs to review for its members. That's how we got this one. Since I'm interested in how personal financial planning is done, I volunteered to try the program and report back my impressions in a Newsletter article. I soon discovered that it does much more than planning, much much more, and since I don't have an avid interest in using a computer to balance my check book and such, I almost decided to return the program for someone else to try out. I mean, you know, the pay isn't that good. But I persevered. Did my duty, so to speak. Well, up to a point at least, as you will see.

The program is one of several published by Timeworks, Inc. (Deerfield, Illinois). The version we received has a 1984 copywrite date. I called Timeworks and was told that this is the current version but that some revisions are planned. I was also told that purchasers of the current version will be able to obtain free updates. There are versions for the IBM PC and for the Apple IIc and 80 Column Apple IIe. A printer with interface card in slot 1 is required. The suggested retail price for the Apple versions is \$100.

The purpose of the program is to help a family record and manage their personal finances by providing the equivalent of a specialized Database with report preparation capabilities. There are three partially related files to record (1) Financial Transactions, (2) Month by Month Yearly Budget, and (3) Assets and Liabilities. After data is entered into each of these files the user can print-out an Income and Expense Statement, a Balance Sheet and, after additional information is entered, a Personal Financial Plan. A graphics option is available to view yearly budgeted amounts compared to actual amounts spent as bar graphs or cross reference charts. The program also has a check writing option using NEBS Inc. continuous feed check forms, as well as checkbook reconciliation and the ability to display detailed summaries of all financial transactions.

Data entry into the three files referred to above must adhere to the fixed formats supplied by the program. These formats seem to be sufficiently general and flexible to cover nearly all family requirements. For example, although Financial Transaction data are formated for 5 checking accounts and 10 charge accounts and can't be changed, activity in savings accounts or money market funds can be entered as checking accounts. In fact, the main difference between the program's identification of checking and charge accounts seems to be that balances in the former are positive numbers in the usual sense whereas balances in the latter are positive when money is owed --i.e. a credit in a charge account will show as a negative number. Data entry requires entering account IDs, and transaction Reference and Index numbers each with their own special format and codes. Index numbers, for example, must be correctly assigned for each transaction to permit valid interactions with budget, asset and liability categories. The user must refer to the documentation to obtain these codes and numbers.

The program operates under DDS 3.3 and comes on two double sided disks labeled sides 1, 2, 3, and 4. Side 1, the start up and main program disk, is copy protected; the others are not. A backup disk is available for \$7.70 postpaid. Use of the program requires the preparation of three separate data disks for the three files mentioned above. Preparation of these data disks consists of first using the DOS 3.3 INIT command and then a special Initialization (also called INIT) by the program for each of the three types of data. An optional fourth data disk can be used to store report formats. If more than about 900 transactions must be recorded then a second Transaction Data disk will be required. Use of the program requires frequent swapping of both program and data disks even on a two drive system. Operation with a single drive is an option, but 1 didn't have the stamina to try it that way. Use of a Hard disk, Apple's Uni-disk, or extended memory as a RAM disk are not covered in the documentation. (A Hard disk option is available for the IBM PC version.)

Actually I didn't have the stamina to try all of the program's features and options even with two disk drives. After nearly five hours of manipulating the equivalent of four program disks and three data disks while simultaneously finding ay way through over 150 pages of documentation and attempting to simulate the periodic detailed coded and indexed entries required of a user, I finally ran out of steam. Also, 1 probably spent too much time wondering why the program was so large. It's contained in binary files occupying over 1600 sectors. Although it does a lot of work and has many modern "user friendly" features including pull down menus, usefull on-screen prompts, error messages in overlapping windows, and even a resident four function calculator and memo pad, there are other programs that do as much if not more but are not as large. Appleworks, for example.

The Financial Planning portion of the program seems to me to be more show than substance. However, having had some recent experiences with professional Financial Planners, I may have expected too much from a \$100 program that does so many other things. I had expected use of the information available in the three data files to do projections of income and useable asset growth, and then match these with the requirements of stated future financial goals preferentially treated according to assigned priorities. Why else, I thought, would one want to spend the time typing in all that detailed coded and indexed information? My expectations waned somewhat when I realized that the asset/liability data did not include information such as current rates of return on investments, and interest rates and terms of loans. The program does not use the information available in the Data files to do projections of future income and available assets. Instead, the user enters information such as funds now available, inflation rates and rates of return independently in separate Worksheets for each financial goal. Some guidance as to where to get these figures is given on the Worksheet displays, but without reference to the information in the Data files. Priorities are also assigned, but seem to be used only for cosmetic purposes. Not only is there no interaction with the information in the Data files, but neither are there interactions among projections made for each of the financial goals. Instead, accounting for these

extremely important interactions must be done by the user outside of the program which, because of the way information is reported back, is cumbersome. For example, most of the important results of the goal projections made by the program are available to the user only by printing-out an entire Financial Plan report which, as described below, is lengthy and time consuming. Also, the procedures used to do these projections, which the user should know about in order to do meaningful adjustments of goals, are not described. (Here's a general opinion: you should think twice before using a program that does calculations for you, the results of which you view as important, without knowing exactly how it does those calculations and why.)

The program provides for printing "Your Financial Plan." I suspect its intended to be the "piece de resistance" of the entire package. Before this can be done the user must of course complete the financial goal Worksheets, and then enter additional information pertaining to family members and insurance. The program's income statement and balance sheet report formats must then be modified and saved on the Budget Data disk. The resulting print-out, which requires several disk swaps during printing, is a detailed summary report which includes financial statements from nearly all of the information contained on the Data disks as well as results from the Financial Plan projections arranged in various tabular forms. But let me repeat. The information from the Data disks, as well as the newly entered insurance summary, are not used by the program to do Financial Planning. My trial report resulted in 10 pages not counting the title page and table of contents. Very impressive.

The documentation is adequate, although it serves a dual purpose for both 1BM PCs and Apples and favors the former. Error trapping is fairly good. But there's at least one annoying bug (I didn't thoroughly search for others). Dates must be entered with the NM/DD/YY format. The program checks for proper MM and DD (double digits are required) but doesn't check the YY. For example it will allow a user to get by with no year entry at all. If that error is made at the beginning of the program, attempts later on to enter dates in the Financial Goal worksheets will result in peculiar effects with no indications as to what is wrong.

Now to summarize. Except for the Financial Planning portion of the program, I think it does what it's supposed to do quite well. But who should, or would want to, use this program? Clearly, it's only for those who, for their personal finances, have the incentive and patience to keep up with the periodic detailed entries required. After that it's obviously a highly personal choice based more, I suspect, on simply enjoying being able to access all the available features with a personal computer rather than a real practical need. Being able to pay bills with business like printed checks or view budget compliance graphically are clearly a matter of esthetic preference or simply to enjoy. I happen to feel the same way about Income and Expense statements, Balance sheets and detailed budget tracking. How often are they really needed by the average family? But that's my personal choice; yours may be very different. If it is different, you may want to look at

this program more carefully. But, assuming it's legal to do so, contact our Disk librarian and borrow it first. If it's mainly Financial Planning you're interested in, the so called Financial Planning report prepared by the program will provide the kind of financial information summaries that can serve as a first step. The program does nothing to take you past this first step. I'd suggest use of a spreadsheet program like the one in Appleworks to do your own projections. If you feel a little uncertain as to how to set up and do the necessary projections (use of compound interest and ordinary annuity calculations, for example) there are DAUS members who would be willing to help. That's what a Users Group is for.

--- Ralph P. Stein (6/15/86) ---

Vendor Support

Below are listed the phone numbers of some of the major software vendors. This section will be updated as new software becomes available or goes defunct. If there ate other vendor's which are not on this list, please bring them to my attention.

Vendor	Software	area	Phone #
Apple Computer	Various	408	996-1010
ARTSCI	Magic Series	213	760-4577
Microsoft	Various	800	426-2940
Perfect Software	Perfect Series	800	332 -8 327
Software Publishing	PFS:Series	800	232-2897
NicroPro	Star Series	800	443-0100
Broderbund	Various	415	479-1170
LJK Enterprises	Perfect Series	314	962-1855
Megahus	Mega Series	800	35 8-88 83
Nuse Software	Supertext	301	659-7212
Quark	Word Juggler	800	543-7711
Stoneware	DB Master	415	454-6500
Visicorp	Visi Series	800	583-7762
Ashton Tate	DBASE II	213	204-5570
Peachtree Software	Various	800	554-8900
BPI Systems	Accounting	512	454-2801

Want a Free Disk of the Month?

The way to get your free disk is very simple in DAUG. All you have to do is submit an article for the newsletter.We are always looking for more material or recommend a friend for membership to the membership chairman Jim Cormack .

DAUG Disk of the Month # 60 - July 1986

The DoM for July contains a potpourri of interesting, instructive, and helpful programs. There are programs that will demonstrate arrays and sorting routines; programs that are designed to help the teacher; programs to test and to enhance your memory, your reading skills, or your typing speed; and even a program that turns your Apple into a digital clock with a built-in alarm.

ARRAYS: Arrays are sometimes difficult to visualize. This program will give you practice on a three dimensional array. After all, the best way to learn is by doing.

ASTRO CONVERSION: This program will convert astronomical coordinates from right ascension and declination to altitude and azimuth or vice versa. This is particularly useful for the backyard astronomer who does not have the equipment to measure equatorial coordinates when seeking a celestial object.

BLIND SPEED: Here's a way to check if your touch-typing skills are really as good as you think.

BRAKING DISTANCE: This is a car stopping simulation. The program will show your reactions and the importance of the speed of your car, your reaction time, and the condition of your brakes.

BUBBLE.SORT: A great program for understanding the bubble sort, its advantages, and its limitations. This demonstration of the bubble sort process will either sort numbers or arrange colors on the lo-res screen vertically, horizontally, or inboth directions.

BUBBLE.SORT.ROUTINE: This is the routine demonstrated by the previous program. You can use it directly as a subroutine in your own programs.

DIGICLOCK: This program lets you set the current date and time, as well as a time for an alarm to sound. You then have a digital clock which advances in 1 second intervals displayed on your screen.

ESTIMATION: This program tests your ability to estimate the results of multiplying large numbers. How well can YOU guess? Try this program! It may seem boring, but you will probably be surprised by the interesting conclusions drawn at the end!

EXAM AVERAGE LETTER GRADE: This program elicits the number of students who have received each letter grade from A+ to F and calculates the mean grade on both a 12-point scale and on UCSD's 4-point scale

EXAM CURVE: The second program in this group accepts scores from any number of exams, converts them to percentages and prints a distribution to the screen or printer. It calculates the mean and standard deviation of the distribution. You may enter scores manually or read them from a text file. EXAN SCORES: The final program of the group accepts grader's scores of up to 13 individual sections of an exam and calculates the total exam score and percent score. When you exit, you have the option of building a text file of percent scores to be used by the above program.

FAST.FORWARD.MUSIC: This program is a color/sound quiz on simple musical notation, and on the identification of motes in the bass and treble clef. Lo-res leger lines and a variable time limit are used. You will need a joystick.

LEARNIT: This program will help you memorize a poem, speech or other passage. The text is displayed on the screen repeatedly, and letters are removed at random on each pass.

NETRIC CONVERSION PROGRAM: The program does what its name implies. You can go from anglo to metric, metric to anglo, or make conversions within each system. Lengths, areas, weights, volumes, speeds, and temperatures can be converted.

REMEMBER.LETTERS: This program tests your ability to remember a sequence of letters flashed on the screen. The sequence gets longer and longer as you progress.

SINEWAVE DEMO: This is a demonstration of how circular motion is transformed into a sine wave.

SPEED.READING: This program is designed to improve your reading habits as well as your reading speed. A phrase to be read is displayed on the screen. The phrase length and display time is set by you at the beginning. From then on the display time will decrease or lengthen depending on your ability to read each phrase.

TYPING: This program checks your typing accuracy by displaying groups of selected letters for you to type.

=== DAU6 Special *** 19** ===

We have another Special Disk for you! In keeping with this meeting's theme of Game Night, DAUG brings you a fun way to while away the lazy, hazy days of summer.

If you enjoy outwitting the guards of the Bungeling Empire, if you thrill to the joy of returning Mankind's stolen treasures, if you get excited by the prospect of finding your way to the next blue treasure room, then prepare yourself for the pleasure of the Loderunner Special!

On this disk you will find 150 (yes, that's right) NEW and exciting levels of play for Loderunner! Enjoy - enjoy - enjoy.

VISIT OUR FRIENDS!

A number of local computer stores support our activity by offering the discounts listed below to those who show their membership cards. Stores that sell merchandise to everybody at a discount are not included.

5 8 2 at 1

C B M Computer ,St.CharlesRdandRoute83,Elmhurst(530-1125)-15% C B M Computer , 7 S LaGrange Rd, LaGrange (352-4700) -- 15% Computer Workshop, 1626 W Ogden Av, Downers Grove (971-0004) -- 10% on training and rentals; none on consulting or programming Farnsworth Computer Center, 1891 N Farnsworth Av, Aurora (851-3888)--15% Farnsworth Computer Center, 383 E North Av, Villa Park (833-7100) 15% Primetime Computer Services, 9906 Wood Lane, Palos Hills, Ill (598-5200)-10% Save On Software, 111 E Roosevelt Rd., Lombard, Ill 60148 (932-9144) -27% on software & supplies, hardware -good prices Softwaire Center, 1163 Ogden Av, Naperville (355-7515) -- 15% Frequently a smaller discount is offered if a credit card is used. Ίf a store would like to be included in this listing, please write the editor and give us your discount schedule for Apple-User Group members. #****