# CLEVELAND AREA 99-4A USERS GROUPS NEWSLETTER

1987 APRIL,

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#### NORTHCOAST

#### TI-CHIPS

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It's frightening to look at our masthead today and mailing, but will list my address as the return address and realize we have been cut in half since the first of the year - at least as to having a choice as to where to attend a meeting, if not in actual numbers. We have heard both that Golden Crescent has disbanded and/or it has not disbanded but has chosen to disassociate with the rest of the groups for ecompaic reasons. We are sending this issue to Crescent members in order to give them a choice with regard to the newsletter if they so wish. These costs are determined and shared on a monthly basis. If your subscription is paid up at Crescent, it doesn't mean your newsletter is paid. Unless we hear from each of you individually - or from your treasurer as a group, this is the last newsletter you will receive.

If this is a downer, the rest of the news is definitely on the upside. With regard to the labels received from TI, Marty Smoley sent out a "test" mailing to his area (Mentor) about a week before the Northcoast meeting. For whatever reason, we had 13 visitors and 5 new members. Meedless to Say, that is not a normal month. He are much encouraged that what I said last month about doubling our memberships is well within our reach.

In discussions with several people, a proposal has come about to help get the word out without the cost of the mailings being a burden on the clubs. Since the mailing labels came grouped by zip codes, and that is how bulk mailing are handled, we are asking you to "Adopt" a zipcode, preferably the one in which you live. If only one person volunteered for a particular zip, the cost of one 200-piece (minimum) mailing would be about \$25. If two people in the same zip volunteer, it would be cut in half and on down the line. I talked with John Parken of Chips on the phone before the newsletter seeting, and he said "count me in". When it was proposed at the newsletter meeting, everyone volunteered and wanted to be first in line. The logistics are a little rough at the moment, but for areas which would OMLY involve Morthcoast, you would not have to do the actual mailing yourself. You would be requested to pledge whatever you want in \$\$\$ and be a "contact" person, so that the people receiving the notice would have someone local to call for additional inforation. Thus, I have volunteered to sponsor at least one 200 mailing for 44116. Marty is geared up to produce the /.

I will be noted on the inside as someone to contact.

On the west side, especially, we are going to find there are areas where we have BOTH Northcoast and Chips meabers wanting to sponsor the same zip code. Some logistics Will have to be worked out with a special letter that tells about both clubs, etc. For areas that would be considered exclusively Chips because of demographics they will have to decide how they want to prepare and do each mailing. We are excited about what CAN happen because of what DID happen last month at NorthCoast.

I am instituting something which I hope will be successful and copied. Not everyone can always make regular monthly meetings because of work schedules, family funcions, etc. Also, sometimes if you have a problem, or question, you are intimidated by a large group and are hesitant to speak up. Thus, I starting a "Fireside" group and hope that others will do the same. My home will be open to anyone who would like to drop by on Monday evening, April 20 from about 7p.m. to whenever. I would assume the people who might want to come would be mostly west siders, and I don't care if your home group is Northcoast, Chips, or Crescent. There will be no set agenda. We will just share information and hopefully learn something. I have two projects I would like help with, translating a Commodore 64 basic program and a TRS 80 program to TI format. I have a good start on both and it is a very good learning process. I am fairly knowledgeable in TI-Writer so could help someone out who wanted some tips there. I can get in and out of Forth, have even typed in a few programs and gotten them to run, so could help out a little there. You will be amazed the "little" tricks you can pick up in a small group. If you think you would like to do the same in your home for people in your area, announce a time and date at your next regular meeting, and we are on a roll. My only request is that you give se a call at 333-3986 if you plan to come so if I get a big crowd, I can make room, and if no one is coming, I won't sit and wonder where everyone is all evening. I don't care if only 2 people show up, it will be a start and we will learn something together. A lot of computer stuff can be intimidating and it need not be with a little help.

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#### EXECUTIVE NOTES - TI CHIPS

The March meeting was held in the meeting room of the North Royalton library. We welcomed some new members and visitors, as well as many current members. Any TI user in the area is always welcome to attend on the third Saturday of each month.

The seeting began with some good news and some bad news. The good news is that a total of \$14 was collected from TI-Chips members to contribute to the check to be sent to Australia for the authors of FUNLWRITER. Also, the current funds in the treasury are sufficient to support the purchase of a computer system for group use. Terry Vacha will be making this purchase soon.

The bad news came for the friends and acquaintances of forser TI-Chips president Bernie Gallagher. Bernie suffered from cancer and passed away on March 1. He was president from April, 1984 to December, 1985. He will be missed.

Mark McCauley distributed copies of an update of the disk library. The library continues to grow. The fifteen dollars club dues each year makes this library available to any member. It is a valuable resource for any TI user. John Parken has many cassettes available for those who do not have a disk system. He announced he has a cassette program that will load a disk-type program, one that has files to be read from the cassette.

Mark demonstrated two new programs in the library. The first, titled Rapid Scroll (Disk 001), is an assembly program that reads DV/80 files and rapidly windows left or right. If allows you to rapidly proofread your TI-Writer or Editor-Assembler texts before printing.

The second program, Trivia 99er (Disk JJ1), is a framewore version of the famous game. As a group, TI-Chips is a minner on trivia questions! The questions were challenging, but there is an option to add or change the questions asked.

Les Kee showed a program he had tried, with the adaptations he had added to make it more easily understood. The listing, originally from MICROpendium, is a graphics program which redefines ASCII characters to draw dots for a picture. The size and scale can be changed as desired.

Terry Vacha previewed a fascinating disk called Printer's Apprentice. It combines text and graphics on a page with satisfying and professional-looking results. The printout of his presentation has been submitted for inclusion in this newsletter.

John Parken demonstrated an inexpensive printer interface which he had developed for home use. He distributed copies of a program he wrote which generates a form requirement for compon and refund offers.

Another disk program was offered as the prize for the monthly raffle. The lucky winner was Matt Andel.!

See everyone again at the library on Saturday, April , 18.

#### MARY PHILLIPS

#### HOME CONTROL 99: REVIEW BY KEN GLABYSZEWSKI - NORTHCOAST 99ERS

Home Control 99 by Eagle Software is a disk-based 20K program with some assembly language routines (under development for the past four months) used to interface the TI with the X-10 POMERHOUSE.

The X-10 POWERHOUSE is an energy management system that allows one to control anything in the house which runs on electricity. It does this by sending signals over normal existing house wiring to remote modules into which lamps, etc. are plugged.

the X-10 POMERHOUSE system and Corcomp's Home Sentry Interface Cartridge were reviewed in MICROpendium (Dec.86) and by OM-MI-TI (Jan.87). The latter was reprinted in this newsletter (Feb.87). Please see these articles for a sore thorough explanation of the X-10 POMERHOUSE system. The cartridge software as described in these articles requires only the TI console, TV and special cable, but does not provide any additional features (files) when used with an expanded system (Disk, XBasic, Expanded memory & RS232).

Hose Control 99 uses text exclusively to an advantage, equiating the capability of X-10's software for the IBM. The user types any amount of locations and device descriptions up to the controller limitation of 256 devices. In comparison, the cartridge allows only 14 choices of locations and 9 choices of device types for a total of 126.

up to 128 timer events. Each timer event consists of an on, off or dia command for up to 16 devices within a single housecode (while the module allows for only one device per timer event).

The best feature of this program is the ability to save collections of timer events to disk as a file. This allows one to have a file for vacation, summer, winter, etc. These files can be edited, printed and downloaded to the controller.

The X-10 POWERHOUSE controller, including required IBM RS-232 cable can be purchased for \$19.90 + S&H from

DAK INDUSTRIES, INC. (Cat. No. 4410) 8200 Remmet Avenue, Canoga, Park, CA 91304 1-800-DAK-0800

Home Control 99 is provided on a SSSD disk with documentation on hardcopy, including instructions on how to reconnect 2 wires in the IBM RS-232 cable. The program sells for \$10.00 and is available from:

(IN Ohio) EDU-COMP 6516 O'Henry Circle North Ridgeville, OH 44039 216-327-6579 (OUTSIDE OHIO)
EAGLE SOFTWARE
1269 E. 348th St.
Eastlake, OH 44094

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#### XECUTIVE NOTES - NORTHCOAST

y folks, we are on a roll. I will adoit that the demoion was a little long, but the information was very deresting and the audience was great.

Paul Wheeler's portion on TI-WRITER was in-depth and contained a vast amount of knowledge about how to set up a blank screen, and then use that as an aid in writing a letter. I learned several new tricks from this demo.

Too Wellis showed off many of the new capabilities of Funnelweb Ver. 3.4, which now has a new improved load program that is easier to work with than 3.3, and a disk catalog program that does much more than the "SD" function of TI-WRITER. Tom has been our point man in regards to the acquisition of the latest FunnelWeb programs and how they function, (and he's doing a great job).

As for the meeting itself, we had a great turnout even though the weather was terrific and people could have been doing a thousand other things. We had 13 guests and 5 new members joined. The people who attended this meeting were very enthusiastic, and demonstrated an increased willingness to participate. How you might ask? Well I'm going to tell The activity at all of our tables around the room has you! increased considerably. People are looking at the book library, swapping ideas and hardware amongst themselves, and they really showed participation in the All New Raffle. We showed a considerable increase in income from both the raffle and the disk library. Also, after the deep we had several people volunteer to do demos on specialized items in the ture. This is the kind of participation that will make our .ub one of the best in the country. If you haven't been attending the sectings lately, you should start soon, or you will miss a revitalization that I hope will be spectacular.

This is the lineup for the all new spring season at NorthCoast.

Disk Library: Ernie and Don Nitschke are making more headway with organizing the mass of material they have on hand. Ernie conveyd to me previously that members are taking an interest in the cataloging project, and that we are also getting considerable help from the II-Chips group.

Book Library: Dick Alden had a lot of activity around his table at this meeting. He pointed out an article to me during the meeting on a specialized form of transliterates which are used with the Interactive Forms Benerator in The Best of 99'er Book. This demonstrated to me that we not only have a good deal of information on hand, but also that Dick is becoming quite knowledgable on the library's content.

Cassette Library: Tom Nellis is heading up a remewed effort into the cassette area. This is being done to aid any new or old member who still use tapes with their computers. He has already pointed out that there are many new and up-to-date programs out for cassette users. He has made contact with Ed Luptak and Herb Sloss (I think I misspelled "Sloss") from Youngstown to gather more information and programs that directly relate to our tape users. The ungstown group has always helped us in the past and Ed and werb (who were visitors at this meeting) said that they would continue to work with us in the future on the cassette library and many other projects.

Mewsletter: Deanna Sheridan is still carrying most of the workload for this section. I think everyone should know that we probably would not have a newsletter without Deanna. We do have several people in this section who should not be discounted. Ken Gladysewski, Tom Hellis, and I got a tenative agreement to help out from a familiar name Steve Weinkamer. We also have Mary Phillips, Terry Vacha, and Mark McCauley from TI-Chips; AMD, in the background we have Frank Jenkins, Bruce Young, Tom Hellis (again), Elmo Iacobucci and even Deanna's husband.

NOTE: Our Newsletter is one of the best, but it takes a lot of work by these people and others to get it out each month. We will be looking for articles and items from a cross section of the membership in the future.

Financial: Jim Mekeel passed around a brief financial sheet which showed an income of approximately \$340, expenses of \$200, and a balance of around \$500. This is no great improvement, but we are holding are own, and things are getting better each month.

Membership: Elmo lacobucci had a lot of activity around his table this month. He was the first to report the good news of 13 visitors and 5 joiners. I loved hearing that. I think that puts our membership at around 80.

Bulletin Board System: Elmo is also our BB Sysop, and will now receive help from Chuck Poulin and Ken Gladyszewski. If more manpower is needed, we have a volunteer from our VP, Rich Johnson, and his son to pitch in.

Publicity: Earl Blewitt is back in town from Florida, and will continue beating the bushes for those II owners who need to find their way out of the wilderness and into our ware and friendly campsite. Jim Nekeel who will no longer be as involved with cassettes, will do some market studies in an effort to help Earl select the best strategy.

Hardware: Howard Winkler is providing help to many of our members with all types of Consol, PE Box, Super Cart, and even Printer repairs and modifications. I don't want to overwork Howard, but if you have a problem you might give him a call.

#### Interesting Tidbits

Bi One of the guests at the mueting was our old Pres., Jim Cline. It was good to see him after all this time.

The Thalmers have all the info on the new MYARC 9640 and expect it to be available from them almost immediately. They passed out info at the meeting which was very interesting.

#### The Next NortCoast Meeting

This meeting will premiere a demonstration of Home Controle 79. Written and demoed by Paul Wheeler it works with the X10 control units and allows your TI to control lights, burglar alarm, thermostat, etc. We'll have lots of flash for the demo as usual, and there will only be one, so we will not miss the question and answer period this time. At the last meeting Oscar had a pressing question and I lost track of the time which left Oscar out in the cold (I'm sorry Oscar).

See You All At The Next Meeting \*\*\*\*\* Marty \*\*\*\*\*

"PRKLABELS"...A Quick and Easy Mailing Labels System Review by Steve Neinkamer, Norhtcoast User's Group

While spending several evenings trying to figure out how to print labels from PRBASE, and wading through some confusing documentation, I happened to remember a program that I had somewhere in the depths of my disk files, but never really looked at. Written in 1985, by Art Byers of the Westchester N.Y. user's group, the program is called PRKLABELS. It lets you use the Personal Record Keeping command module to set up a mailing list, and then use a basic program to print out the labels.

As you may or may not know, the basic built into the PRK module contains several commands that are not available in ordinary console basic. (You must insert the PRK module into the cartdridge port, and call up TI BASIC from the title screen to be able to access these special built in commands. My purpose here is not to go into any detail of "PRK BASIC", but if you wish to find out more about it, I suggest that you refer to the Best of 99'er for a short lesson.)

The procedure is really quite simple. To work properly, you first go to PRK and set up your data base file where items 1-7 must be string characters to work properly. For example:

#1 FNAME

#2 LNAME

#3 ADDRESS PART 1

#4 ADDRESS PART 2 #5 CITY

#6 STATE

#7 IIPCODE

This is a little bit different from the way that Art designed the fields in the original program, and I made a slight modification to fit my own uses.

After setting up the fields with PRK, and entering the approiate data, save in the usual manner. Then exit PRK and go to "PRK BASIC" as described above. In the immediate mode you must type: CALL P(10000). This allocates space in the VDP ram so the PRK subprograms can manipulate the data files. If a disk drive is attached, then CALL FILES(1); then NEW (for both CS1 or DSK). Then load the PRKLABELS program and run.

The program reads the files and outputs them to the printer. I found that you have space for approximatly 160 labels in the data base, depending on the size of each feild. Although some of PRK's functions are painfully slow as compared to PRBASE, anyone who needs a quick and dirty mailing list and has a functional knowledge of PRK, should have no trouble using the program.

With full credit to Art Byers for this nifty gen, here is the program, with my modifications as noted above. (Art Byers original is in the Cleveland library.)

110 REMIPRK-LABEL PRINTS 120 REM#VERSION 1 9/85# 130 REMIBy Arthur Byersi 140 REM\$ Shrub Dak, NY \$ 150 REM# 914-528-5402 # 160 REM388888888888888 170 REM# 180 REMIPRK module musti 190 REM# be installed # 200 REM# 220 REM STHIS PROGRAM IS TAI LORED EXACTLY TO A KEY FILE WHERE ITEMS 1-7 ARE STRING C HAR. 230 REM\$1=FNAME 2=LNAME 3=AD DRESS PART 1 4=ADDRESS PART 2 5=CITY 6=STATE 7=ZIPCODE 240 REMAThe key files are be st made out using the PRK mo dule. 250 REM: : : : : : : : : 260 REM#From the title scree n call up TI BASIC. then in the immediate mode type in: 270 REM#>CALL P(10000) 280 REMAIF DISK DRIVE ATTACH

ED THEN >CALL FILES(1) 290 REM #>NEW (for both CS1 and DSK) 300 REM &Then QLD this progr am and then >RUN 310 REM&BEGIN WITH MENU 320 CALL CLEAR 330 CALL D(8,12,4, "MENU",10, 1,22, "FCTN/5 = LOAD PRK FILE ",11,1,21,"FCTN/6 = PRINT LABELS") 340 CALL D(12,1,13,\*FCTN/7 \* EXIT, 23, 1, 13, "ENTER CHOICE 350 CALL A(23,14,1,V,W\$) 360 ON V 60TO 350,350,790,35 0,540,380,350 370 REM\$LOAD the file create d using PRK 380 CALL CLEAR 390 CALL D(6,1,28, "NAME OF F ILE TO LOAD?",8,1,9,"Example s: ",10,1,3,"CS1",11,1,14,"DS K1.FILENAME") 400 CALL A(14,1,14,V,FNS) 410 CALL L(FN\$, V1) 420 IF V1>0 THEN 470 430 CALL CLEAR

440 PRINT \*LOADING ERROR-RED 450 60SUB 860 460 GOTO 310 470 CALL CLEAR 480 REM\$Read the "HEADER" fo r number of pages in the fil e MP=number of pages 490 CALL H(1,6,X,NP) 500 CALL D(10,1,28, "LOADING COMPLETE\*) 510 60SUB 860 520 60TO 310 530 REM&PRINT LABELS 540 CALL CLEAR 550 CALL D(5,1,19, "ENTER PRI NTER NAME: ") 560 CALL A(12,1,28,V.PDV\*) 570 OPEN #2:PDV\$ 580 CALL CLEAR 590 CALL D(10,1,28, "ARE LABE LS PROPERLY ALISNED?",12,1,2 6, "<<pre>PRESS ENTER WHEN READY> 600 IMPUT ES 610 CALL CLEAR 620 FOR J=1 TO NP 630 FOR K=1 TO 7

640 REMareset value of V\$ to a null string 650 V\$=\*\* 660 CALL 6(1, J, K, X, V\$) 670 A\$(K)=V\$ 680 NEXT K 690 PRINT #2: A\$(1)&" "&A\$(2) 700 IF A\$(3)="" THEN 720 710 PRINT #2: A\$(3)&" "&A\$(4) 720 PRINT #2:A\$(5)&" "&A\$(6) 730 PRINT #2: A\$(7) 740 PRINT #2:" ":" " 750 NEXT J 760 CLOSE #2 770 60TO 310 780 REM\*EXIT 790 CALL CLEAR 800 REM#One last chance to c hange your mind 810 CALL D(10,1,19, "EXIT PRO GRAM? Y/N N°) 820 CALL A(10,19,1,V,YNS) 830 IF YNS="N" THEN 310 B40 END 850 REM&DELAY SUB 860 FOR DELAY=1 TO 700

870 NEXT DELAY

880 RETURN

#### MULTIPLAN MACHINATIONS BY BILL HARMS - ROM - AUS 86

In this article I will introduce you to a method to transfer data from a basic program to Multiplan. I use Multiplan to keep my budget and to estimated income taxes. I have a spreadsheet with 18 columns: 12 months, Yearly Total, Year-To-Date, Neekly Average, Monthly Average and two for Taxes. Those last two have formulas to get various numbers from the spreadsheet. The rows include: Pay, Interest, Expenses, Loans and Other. You can really do "what If'ing" and "why Not'ing" with Multiplan.

I use a nice fast (I mean fast) XB program I wrote to add all my transactions by category. Then I can use a SYLK creator to quickly and correctly prepare them for loading into my Multiplan spreadsheet. SYLK (or Symbolic Link) files are a little known feature of Multiplan. They can be written to disk by a basic program and read by Multiplan.

This material is based on a program I got from TI, a series of articles in the May (and later) 1985 SUPER 99 MONTHLY (now called THE SMART PROGRAMMER) and the Multiplan manual.

This bare bonus program is based on the one I received from TI in 1984. The disclaimer was bigger than the program! It writes a disk file with one a one cell spreadsheet that can be read by Multiplan.

100 OPEN #1: "DSK1.SYLKF", DISPLAY, OUTPUT, FIXED 128

110 CALL CLEAR

120 INPUT "ROW NUMBER: ";R\$

130 INPUT "COLUMN NUMBER: "; C\$

140 IMPUT "CELL CONTENT: ";A\$

150 FOR Q=1 TO 27-LEN(A\$)

160 WS=WS&CHR\$ (0)

170 NEXT 9

180 Xs=CHR\$(34)&A\$&CHR\$(34) !Surrounds contents with quotes)

190 Zs=CHR\$(13)&CHR\$(10) !Carriage Return and Line Feed

200 Ys="D;PMP-&Z\$&"F;D606B"&Z\$&"B;Y"&R\$&";X"&C\$&Z\$&
"C;K"&X\$&Z\$&"W;N1;A1 1"&Z\$&"D"&Z\$&W\$

(This monster of a line has the symbolics needed for Multiplan to read the file. See page 205 of the Multiplan manual for explanations).

210 PRINT #1:Y\$

220 CLOSE #1

230 END

If you enter and run this program, you will find a file on your disk called "SYLKF". Before you can load this

file, you must change it. It may seem a bit odd, but the file must be written as DISPLAY, FIXED 128 and then changed to INTERNAL, FIXED 128 in the file header. In other words, the file must use DISPLAY notation but must look like an INTERNAL film! There are two ways to do this. You will find an application of Barry Traver's RAW (Read And Write) in SUPER 99 MONTHLY. Or you can use ADVANCED DIAGNOSTICS to change the law four hex characters of the first line of the file header to <0202>.

Once you have done this you can load your file. First, boot Multiplan. Press (T)ransfer and then (O)ptions. Next press (S)ymbolic and then (ENTER). Now press (T)ransfer again and this time (L)oad your file.

Here is the Multiplan spreadsheet:



This is what the data looks like on disk using Millers Graphics great ADVANCED DIAGNOSTICS:

Drive: 2 Track: 3 Side: 1 Sector: 34 Byte: 0 Display: Ascii

Most of the \$5's stand for CR/LF (Is in line 190).

There are many ways you could input data besides the simple INPUT in line 140. You could read data in from DATA statements or from a disk file. That disk file rould be created by most anything: TI-Writer, RS232, another module or a Multiplan Print File.

You can create data in Basic and then "dump" it into a spreadsheet en masse' instead of just keyboarding it. You could transmit the outputted SYLK file of your Multiplan spreadsheet to others via RS232. The DIF (Data interchange Format) used by Lotus 1-2-3 and Visicalc only accommodates the cell content, not the sheet parameters.

This is only a taste (BAD?) of what you can create to load data into Multiplan. It really opens Multiplan up to other software.

### \*\* RENSLETTER SUBSCRIPTION ONLY \*\*

#### UTILIZING THE MERGE FORMAT BY R. PETROCOME - VIA THE SOURCE VIA THE K-TOWN 99ERS FEB B7

The merge option of XBasic opens up the possibility of doing many things far from its original purpose. Using the merge format to send programs via modem was, until recently, the only way a remote computer could send a program on its own. We have seen it used to convert text files to program allowing users to write programs on word processors and later convert them. It can also be used to enable one program to, in effect, write another program.

This can be useful, especially when you have to type the same command many times with different variables such as CALL SOUND, DATA, CALL CHAR, etc. By utilizing this format, a person would have to type in only the variables and the computer would write the line numbers and the command by itself.

#### FILE STRUCTURE

The first step in creating a merge format file is the OPEN statement. Merge files must be DIS/VAR 163 files. An example open statement is:

OPEN #1: "DSK1.FILENAME", VARIABLE 163

#### CONDENSED CODING

In the merge format, most Extended Basic commands are represented by one ASCII character between 129 and 254. In order to write files in the merge format, it is necessary to know these codes. You can generate a list of the merge format codes by typing in the following program:

100 OPEN #1: "DSK1.CODE", VARIABLE 163

110 LINE=128

120 FOR I=129 TO 254

130 LINE=LINE+1

140 PRINT \$1:CHR\$(0)&CHR\$(LINE)&CHR\$(T)&CHR\$(0)

150 NEXT T

160 PRINT #1:CHR\$(255)&CHR\$(255)

170 CLOSE #1 :: END

When you run this, it will create a merge format file containing all the condensed format codes. After running it, type NEW and then MERGE DSK1.CODE. When the drive stops, and you list the program, you will notice that there will be one command or character per line, the line number will be the ASCII code of that command or character. Please note that the following lines will not be used and should be deleted.

#### WRITING A LINE OF CODE

The first part of a line of code is logically the line number. The line number is given by two CHRs statements, the first one gives the number of 256's in the line number and the second gives the number of ones.

EXAMPLES: CHR\$(0)&CHR\$(100) LINE 100 CHR\$(1)&CHR\$(24) LINE 280 CHR\$(2)&CHR\$(2) LINE 770

Mext, you must write the command you wish to use by using the CHR\$ of the ASCII value as generated by the program given earlier.

If the line you are coding requires that you use variable names then they must be enclosed in quotes. Suppose you wanted to enter the following line:

VARIABLE

This brings up another factor, you will notice that there is a CHR\$(0) at the end of the line, this is an indicator which tells the computer that it is the end of the line and should be at the end of all lines of code.

Strings which would normally be quoted in Extended BASIC are also handled specially. Before the string to be printed, you must enter two CHR\$'s, the first being CHR\$(199) and the second being the length of the string that follows. The same also applies to all numeric constants with the exception that the first CHR\$ should be CHR\$(200) and not CHR\$(199). Note that both constant and string are placed in quotes.

CHR\$(3)&"YES"&CHR\$(179)&CHR\$(200)&

; ; ; ;

; YES ASCII UNQUOTED STRING

LENGTH CODE OR

1S 3 FOR COMMA NUMERIC CONSTANT

The final exception is when you have line numbers within a line, for example in 60TO's, 60SUB's, Etc. To include a line number like this you must first identify the coming line by typing in CHR\$(201) and then you enter the line as you do a regular line number.

EXAMPLE: 7 60TO 1 Written like this:

CALLS

When you go through your list of condensed codes, you will notice that there are no values for the CALL's, CALL CLEAR, CALL COLOR, CALL CHAR, etc. There is however, just a value for "CALL". In order to write a CALL statement you out treat the word after the CALL as a quoted string.

EXAMPLE:
1 CALL CLEAR
You would enter:

CHR\$(0)&CHR\$(1)&CHR\$(157)&CHR\$(200)&

----- ASCII UNQUOTED

1 CODE FOR STRING
CALL NEXT

CHR\$(5)&"CLEAR"&CHR\$(0)
: : : !
LENGTH CLEAR END
IS 5 OF LINE

CLOSING THE FILE:

When you are finished printing to your file, you should end it properly. Do this by printing CHR\$(255)&CHR\$(255) to the very end of the file, the CLOSE it. If you omit this, it will cause an error message when you merge the file, but it will still work.

#### **EXAMPLE PROGRAM**

The following is a short example program giving a practical usage. It allows you to write DATA statements having only to type the DATA.

100 ON WARNING NEXT

110 DISPLAY AT(10,1) ERASE ALL: "ENTER FIRST LINE NUMBER: ":: ACCEPT AT (10,25) BEEP VALIDATE (DIGIT) SIZE (4): LN

120 DISPLAY AT(12,1): "ENTER INCREMENT:" :: ACCEPT AT(12,17)
BEEP SIZE(3) VALIDATE(DIGIT): I

130 DISPLAY AT(14,1): "ENTER FILENAME: ": ACCEPT AT(14,16)
BEEP VALIDATE (UALPHA, DIGIT) SIZE (10): FN\$

140 OPEN #1: "DSK1.1FN\$, VARIABLE 163)

150 DISPLAY AT(2,6) ERASE ALL: "PRESS ENTER TO END" ::
DISPLAY AT(22,1): "ENTER A LINE OF DATA" :: LINPUT "":D\$

160 IF D\$="" THEN 190

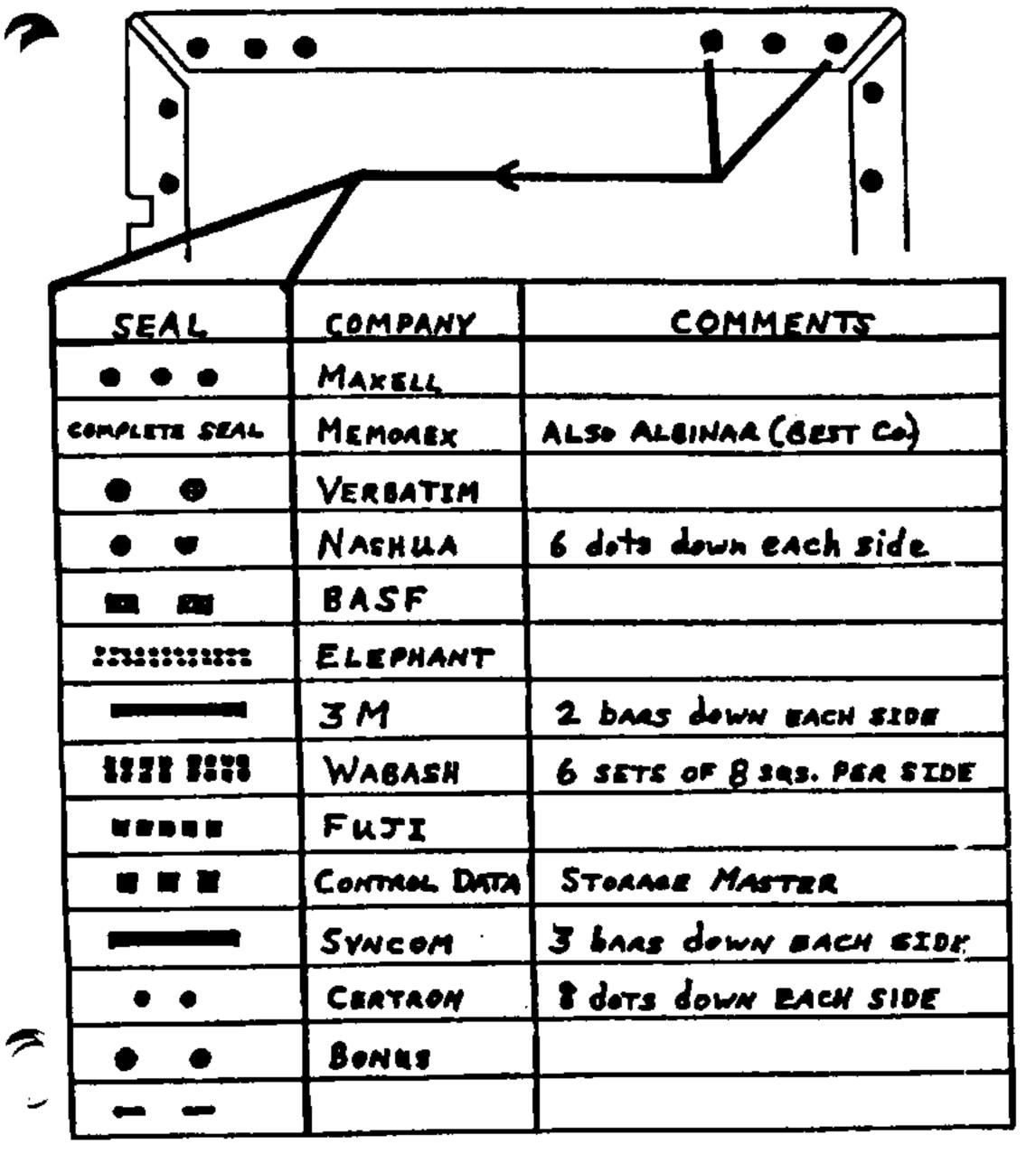
170 PRINT #1:CHR\$(INT(LN/256))&CHR\$(LN-256\*\*INT(LN/256))&CHR\$(147)&D\$&CHR\$(0)

180 LN=LN+I :: GDTD 150

190 PRINT #1:CHR\$ (255) &CHR\$ (255)

200 CLOSE #1 :: END

### IDENTIFICATION OF 54" DISKS



THIS CHART SHOWS THE NAME OF THE MANUFACTURER WHO MAY HAVE PRODUCED THAT DISKETTE YOU NOW HAVE IN YOUR DISKETTE DRIVE. I WOULD LIKE TO THANK THE N.O.V.A. USERS GROUP OF VANCOUVER, WA. FOR THIS CHART PRINTED IN THEIR NOV. ISSUE.

#### 100 REM \*\*A GLIMPSE OF REALITY FOR COMPUTER ADDICTS\*\*

```
120 CALL CLEAR
130 CALL CHAR (96, "1018183C3C7E3C18")
            CHAR (112, "FFFFFFFFFFFFFF")
140 CALL
190 H=22
 200 CALL COLOR (9, 16, 1)
 210 CALL COLOR(11,2,2)
220 CALL COLOR(12,13,1)
230 CALL COLOR(13,14,1)
240 CALL VCHAR(4,16,112,3)
250 CALL HCHAR (4, 17, 112, 3)
260 CALL VCHAR (4, 20, 112, 18)
270 CALL HCHAR (22, 1, 120, 96)
280 CALL HCHAR (3, 18, 112)
 290 CALL HCHAR (2, 17, 112, 3)
 300 G=0
 310 H=H-1
 320 FOR Z=7 TO H-1
 330 CALL VCHAR(Z,16,96)
340 CALL VCHAR(Z,16,32)
 350 NEXT Z
 360 G=G+1
 370 CALL SOUND (15, (H$150), 2)
 380 CALL HCHAR (H, G, 121)
 390 IF G=32 THEN 300
 400 IF H=7 THEN 410 ELSE 320
 410 FOR F=3 TO 30 STEP 3
 420 CALL HCHAR (7, F, 128)
430 CALL VCHAR (8, F, 122, 14)
440 CALL SOUND (30, (F*200), 2)
 450 NEXT F
 460 PRINT "NOW DO SOMETHING ABOUT IT!!"
 470 GOTO 470
```

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256K - COLOR BRAPHICS CARD

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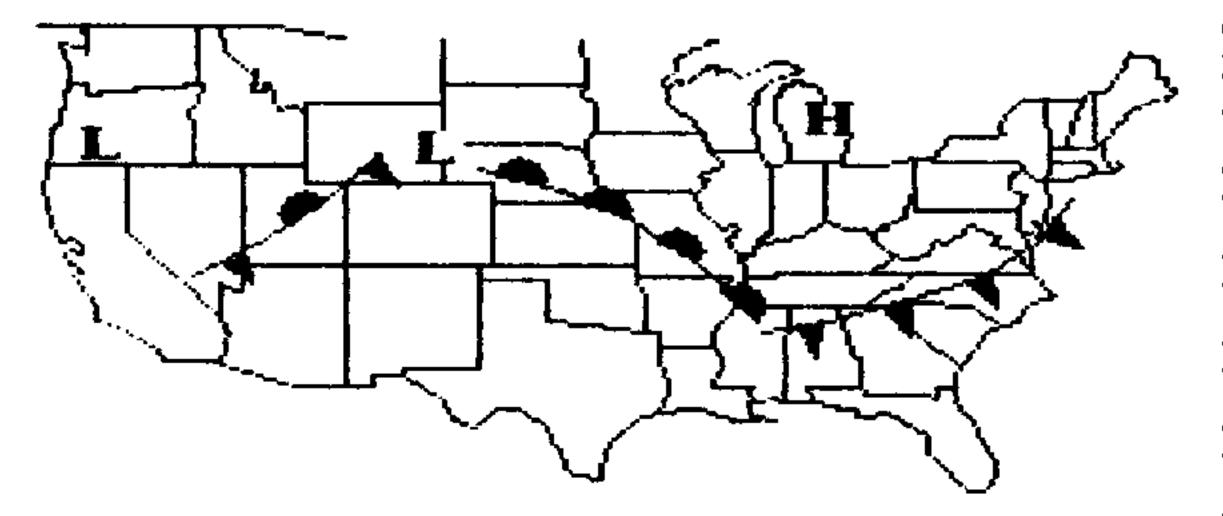
# THE PRINTER'S APPRENTICE (TPA) review by terry aa 259

TPA is a fine program of the quality and price range as TI-Artist Printer's Apprentice is a desktop publishing program designed by Mike McCann to combine graphics and text with a single pass of the paper through your printer.

You can make the text any shape on your page and use a variety of fonts. Each font can be printed in 3 sizes. The graphics can be clipped to use any portion of your picture and those pieces can be doubled in size if needed. Your text can come from a Ti-Writer file, or you can use the TPA word processor. Your pictures can come from Ti-Artist, Maxrle, or you can make them with the artist portion of TPA. You can use the fonts which come with TPA or use TPA to make your own fonts. This is an easy to use, versatile, versatile, program. That was a quick summary, now let's look at each part more carefully.



# The main menu of Printer's Apprenticularies looks like this:



- 1. Character Editor
- 2. Picture Editor
- 3. Formatter
- 4. Scheduler
- 5. Exit to Monitor
  - 6. Exit to TI-Forth

#### \*\*SCHEDULER\*\*

The Scheduler is the most exciting part of TPA, so that's where I'll start.

The scheduler is where each picture and graphic is combined to make one page. You maintain maximum flexibility by keeping your pictures and text in many files rather than a few files. The scheduler will tell you how many pixel rows and pixel columns each graphic or text takes up on a printed page. You begin "scheduling" by telling TPA what files and in what order you want them considered. Next you give the upper left corner row and column number for each file. When you've done that, the scheduler can print you a nice table listing what rows and columns each graphic and text will take up on your printed page. If you notice a "gap" or "overlap" you can easily correct your "schedule". Of course, printing a draft is always the best way to tell how things are going. When you are finally ready to run, just type "G" for "GO" and pictures and text appear right before your eyes.

## FONT WRITER - REVIEW BY STEVE LANGEUTH - OZARK 99ERS VIA JACKSON COUNTY 99ERS - MARCH B7

(The following is excerpted from Steve's report) I wanted to like Font Writer, I REALLY did. The ad implied it was comparable to Printshop and Newsroom. Apparently the person who wrote the copy for the ads doesn't expect much creativity from 99/4A users because Font Writer provides only a limited ability to combine the various graphic files and text on the same page. I have seen pages created with the Newsroom program, and after working with Font Writer for several weeks, I was not able to produce anything close to their quality.

The program is written in Extended Basic with Assembly Language subroutines, which probably explains why it seems to run fairly slow at times. The Font Manager allows the user to convert CSGD fonts to the TI Artist Format. It also allows conversion from TI Artist to that used by CSGD. (In other words if you have a version of a font that works with one of these programs, you can now manipulate that font so that it will work with all three programs). The Font Manager will allow two different font files to be merged and saved as a single file (for example, putting the numbers from one font together with the letters from another).

The Formatter allows the user to combine text with the various graphics. A file can only use one font. If you want a headline in one font and the body of the text in another, the only way is to use one of the type styles built into the printer for either the headline or the text. Text and graphics can be printed on the same line only if the text is printed with a font file. There is no way I could find to print two different graphics on the same line. Printer-resident type styles cannot be used on the same line as graphics. There is no built-in way to get text printed out in multiple columns.

In general Font Writer is very easy to use. The Font Editor has "drop down" menus and the choices in both the font Editor and Font Manager are very straight-forward. The Formatter is almost "second nature" to anyone who is familiar with the TI Writer formatter.

If it did everything the advertising implied, the price of \$24.95 for Font Writer might be appropriate. But there are programs available that do a better job of mixing text with graphics that cost less, and to use Font Writer most effectively you will have to either already own or purchase TI Artist, and/or CS6D, and/or one of the various companion disk sets with ready-to-use fonts and graphics.

If you are looking for a "page layout" type of program that gives you a lot of control over the placement of text and graphics using multiple fonts on the same page, this program will disappoint you. But, if you already own TI Artist, or CS6D, and you are looking for an easy-to-use program to occasionally add a small amount of graphics to your text files, you will probably be well satisfied with Font Writer.

## ANOTHER VIEW FROM BONNIE L. SNYDER - FRONT RANGER - MARCH 87

(Excerpted also) Font Writer turned out to be all that I wanted and more! It is a very user-friendly program package, and it includes some very well written, well thoughtout documentation. My review will come in two installments. This portion will cover the basic layout of the program package. Next month I will give you a description of the powerful Macro feature and the Sprite Editor.

Although Font Writer is in Extended Basic, it runs surprisingly quickly. The speed can be attributed to its many assembly language CALLS. Each section of the package has its own menu, many appear like the pull-down menus you see in other computers.

Within the Editor, you can choose to open and/or close input or output files when working with fonts. For instance, you say wish to take an existing font and add to or sodify it. All you do is open it, scan through it, load whatever letter you wish and work on it on the editing grid. When you have what you want, you can save it into the output file. For example, many of the TI-Artist font files do not have lower case letters. By looking at the upper case letters, it is fairly easy to create lower case letters which match. I have discovered that if I decide to change an existing letter in the file, the new letter will be appended, and the old letter remains also. Working on the editing grid of Font Writer is a Joy!

Using the Formatter is extremely simple. You can choose to print text prewritten in the TI-Writer Editor and variants, or in the Editor of E/A. You can use the CTRL U codes, or the "dot" formatting commands, or you can type directly from the Formatter and use any of the formatting commands while doing so. You can use any of the TI-Artist or CSSD fonts in the Formatter and the text will be printed out in that font. You can also mix graphics and text!

I am thoroughly enjoying this program and am learning more about it every time I use it. Next month I will continue with my review and go into the remaining features.

## FORTH UTILITIES By Paul Newmeyer (Northcoast 99ers)

Have you perused the NorthCoast library's set of 10 Forth disks and ferreted out its practical utilities? If reluctance has held you back, now's the time to throw that to the winds and dig in. The set contains many utilities, some useful and some no more useful than a milking stool under a mouse. Let's tunnel into some of them, and hopefully, you'll experience excitement about using them and desire to find other utilities we haven't had space to investigate.

As we burrow along, mole fashion, keep in mind that we will use the TI Forth System disk and assume a COLD start for each program we look at. However, for -PRINT options if you use PIO, I suggest changing screens 72 and 73, and on the System Disk, to the following (or using screens 28 and 29 on Disk #9)

```
SCR $72
  @ ( ALTERNATE I/O SUPPORT FOR PIG PATR 12JULO2 LCT )
  1 0 CLEAD INDEI
                     BASE-YR DECIMAL 68 R-YBASE CLOAD STAT
  2 0 0 FILE MS232 0 0 0 FILE MS232/2 BASE-WEI
  3 : SETP PARS & 10 + BUP PAR-ABOR ! 1- PAR-VOUF ! SET-PAR
  4 SONTL 1 REC-LEN : : ATTACH DPN 3 PAB-ADDR & VSBY
  S 1 PAS-ADDR @ 5 + VSSV PAS-ADDR @ ALTOUT ! ;
  6 : SUCH >RS232/2 SETP F-B" PIB.LF" ATTACH :
 7 : SWCI >RS232 SETP F-B" RS232.BA=300" ATTACH ;
 8 : UNSVCH & ALTOUT ! CLSE ;
  9 : PASCII ( BLOCKS --- FLAG ) BLOCK O SWAP BUP 400 + SWAP
 10 00 I C0 20 > + I C0 DVP 20 < SYAP 7F > 9R
       IF SHOP & LEAVE ENDIF LOOP :
 12 : TRIMS 0 SWAP SUCH 3 / 3 * BWP 3 + SWAP
 13 90 1 PASCII IF 1+ I LIST CR ENDIF LOOP
 14 -9UP IF 3 SWAP - 14 * 0 00 CR LOOP
 15 OF MESSAGE OF ENIT ENDIF UNSVCH ; R->BASE -->
SCR 873
 # ( SIGRT TRIMS NO TIME! 15REPOR LAS ) BASE-X DECIMAL
 1 : TRIADS ( FROM TO --- )
 2 3/3+1+SWAP 3/3+00 1 TRIMA 3+LOOP :
 3 : INDEX ( FROM TO --- ) 1+ SWAP
     DO 1 BUP PASCII IF OR 4 .R 2 SPACES I BLBCK 64 TYPE ELSE DROP
        END IF PAUSE IF LEAVE END IF LOOP | WE'L
     O O O FILE WISH
 7 : SUCE DESIR PARS @ 30 + BUP PAR-ADDR ! 1- PAR-VBUF !
     SET-PAR UPST SQUITL FEB 1 REC-LEN F-9" RS232.8A=300.EC"
     GPM 2 PAG-AGOR @ VSBV 1 PAG-AGOR @ 5 + VSBR PAG-AGOR @
10 MITH! HET
11 : UNSYCE O ALTIN ! CLSE ;
12 : TERMINAL SUCI SUCG 34 0 837C C! OA SYSTEM . READY " ]
13 : OFF WESVCH UNSVC4 ;
14 R-XBASE
15
```

Having made these changes, let's poke into Disk #1. Here we uncover a program called Mini Forthwriter. You can use it to turn your computer into something like a type-writer. Load the -PRINT option and enter 12 LOAD. Enter RUN to start and fct. 4 to quit. Also, make sure the printer is on. Using programs designed for a printer while the printer is off appears as sensible as sitting in a saddle on a stump. Type whatever you wish on the screen. After two lines or after a carriage return the screen will print. TOP clears the screen and locates the cursor in home position.

How about a Forth disk copying program? Enter 1 LOAD, then enter COPY1. Next put in the System disk and follow screen instructions. The options will automatically load. This copier will copy 5 screens at a time and works with a single disk drive. If that's all the screens you wish to copy, this is your utility. But if you want to copy an entire disk, you'll make more trips to the disk door than Hontezuma in his revenge. This utility also grants the option of initializing a Forth disk. You can load this disk by another method if you wish: load -COPY - SYNONYMS, next 13 LOAD, 14 LOAD, and finally follow instructions.

Let's transfer to Disk #2. Here we find more disk copiers. Load -SYNONYMS -COPY options, them enter 9 LOAD for

a program called Clone 2/3 Drive. Type CLONE and follow screen instructions. This utility will copy to an unitialized disk, but requires 2 drives.

For a 3-Pass Copier enter 34 LOAD. This utilities requires no options. Simply follow the screen instructions.

If you wish to initialize a disk for use in Forth, load the -SYNONYMS -COPY options and enter & LOAD. Type INIT for instructions.

In digging around in the disks, we'll eventually need a catalog, and we find it in Disk List/Cat. Enter 71 LOAD and RUN. Fct. 4 will stop the listing.

After spending a lot of time copying disks, you might want to check the time. So load -SYNDNYMS option and enter 30 LOAD, for an ISR Clock [that's "ISR" (interrupt service routine), not "IRS" (Internal Revenue Service)]. To start this clock, enter the hour (1-24), then enter the minutes, and finally the TIME. A clock will appear in the screen's upper right corner.

Now, for some utility excitement, let's dig into the Multi-Designer program. Load -GRAPH -VDPMODES options, then enter 44 LDAD. Two dots appear on the screen. You manipulate these dots by using either joysticks or keys. One joystick draws a white line; upon pressing the firebutton, the other places a white square (keep Alpha lock up). The following are some key moves:

Penetrate into a Sprite designer utility by loading -6RAPH -VDPMODES and entering 45 LOAD. A box with 4 sides labeled in Hex hits the screen, accompanied by a plus sign cursor. Move cursor with joysticks. Firebutton places a square. Proceed to design a sprite. CTRL B escapes the program. To erase a square, place cursor over it and hit firebutton. When finished, press space bar and sprite code will print and the created sprite will draw on the monitor. Color options then flash on screen. You can also draw from the keyboard.

Change page by entering 49 LOAD (no options required) for a Prime Number utility. Enter a number and PRIMES. The number of prime numbers in your entered number will poponto the screen.

To uncover a Screen Dump load -PRINT -GRAPH, and enter 69 LOAD. SCREEN-DUMP prints the on-screen material to printer. Fct.4 will escape command.

Let's move on to Disk #3. Here we bring to light several more Forth disk copiers. Load -SYNONYMS followed by EMPTY-BUFFERS. Enter 21 LOAD and, eureka, as quickly as sparks spring upward, you have a 3-Pass fast Copier, for 2 drives. This copier reads 30 screens at a time.

For a 1 or 2 drive copier load -SYNONYMS and 25 LDAD. Enter TRANSFER to start, and follow screen instructions.

At some point you'll need a Disk Fixer, and you have it. Load -DUMP - TEXT -GRAPH options, then 28 LOAD. This is a very useful, versatile utility. Code words accomplish various functions. For example, HELP-instructions;





#### . Utilities Continued

/IND=finds desired sector (# FIND) in hex; NEW=empties uffers; ALT=allows sector to be altered (addr. wordcount .ALT); N=writes current sector, 4 sectors to disk. FIND aust precede W; PAGE=clears screen and homes cursor; BM=bit map sector, preceded by 0 FIND. 1-used sectors, 2-available sectors: FREAD=use in dictionary sector to show the disk sector files occupies (<# of sector> (cnt of sector>); SCAN=scan sectors of file using info from FREAD (# cnt SCAN); DR1=searches drive 2; variations (<beg sector \$> <end sector #> THRU), (<beg sector #> <end sector #> LOOK) scans large portion by screen instead of sector). Fct. 4 aborts command.

60 to Disk #5 and hunt for a nice word processing utility called Forth Riter. Load -64SUPPORT -PRINT -TEXT -6RAPH, then hit 63 LOAD. This utility sets the printer to various modes and enables the printing of any number of FORTH screens. Enter the number of screens you desire to print, then the starting screen followed by 60 (x y 60). Make sure you turned the printer on.

The following are some utilities on disk 9. Other disks have more utilities. This terse survey hasn't come close to exhausting the resources of our Forth wonders.

that DSK1.LOAD isn't pushed in over what we will put into

VDP. Go to your GK memory editor and press FCTN 1 to get to

6RAM, then type in 63DO for the memory address. Now FCTN 9

to get to memory window. You should see 06 64 8E. Disable

the W/P switch and type in 95 over the 8E. This bypasses

the move of DSK1.LOAD to VDP. [NOTE: I am using V.110; I

hope the addresses are the same for you! ]. Next examine

location 6006-6007. This should contain 633B which is a

pointer to the first application profess (and last in the

case of the pure XB module). Now move to 6338, or whatever

you found and look at the first 5 bytes. They will conform

to TI's standard for application programs. The first two

| Dish #9t                 |                            |                  |  |
|--------------------------|----------------------------|------------------|--|
| Program                  | Oct i on s                 | Loading          | Comments   |
| XE to Forth              | :-TEXT -GRAPH              | 6 LOAD, 7 LOAD   | : RUN to start.  |
| Forth to D/V80           | :-V(:FMODES<br>:-FILE<br>: | 10 LOAD          | Instructions screen 9. Enter F-D"Dski.Filename". type screen# to screen# (exp. 100 113 PUTFILE). PUTFILE starts process.   |
| 3 Pass Disk<br>Copier    | No options                 | 23 LOAD          | Enter 4th System, enter<br>COLD, enter W to copy.  |
| ^Clock                   | : No options               | 35 LOAD          | Enter hour, minutes TIME.  |
| Printer Command          | t                          | 48 LOAD, 50 LOAD | Makes calendar(1582-4902) Screen 49 for info. Dn #54 put parenthesis on Loop. Enter x year.  |
| Dump Routines            | I-SCREEN -DUMP             | 26 LOAD          | Dump to screen.  |
| Peripheral DSR<br>Peeker | -DUMP -CRU<br>-SYNONYMS    | 37 LOAD          | OFF=turn off selected DSF<br>ROM. ALLOFF=turn off all<br>DSRs. ON=turn on selected<br>DSRs. DISKON=disk control<br>card. PIOON=intrfce card.<br>TPON=thermal printer.<br>PCODEON=pcode card. PAGE.<br>DUMPDSR=dump DSR RAM to<br>screen. SEARCH. |

#### 6RAM PACKER - PART III FROM LA 99ERS - 1986 BY TOM FREEMAN

#### 3. XBASIC PROGRAMS DIRECT FROM THE MENU

I once asked Craig whether it was possible to run XBasic programs directly off the menu, as MSAVE does with Basic programs. The answer was no, and essentially that is true, at least as far as having them run directly from GRAM is concerned, since the XML instruction needed exists only in Basic. But I kept on thinking that if XBasic can load a program called LOAD automatically from Drive #1, why can't it do others as well! What follows is my method for doing this - it is rather cumbersome since it involves typing code directly into GRAM, no program like GRAM PACKER can do it for you. At least it is rather short! The method involves the following concept: when XBasic starts up, it does a certain amount of housekeeping, and then inserts the string DSK1.LOAD into the crunch buffer in VDP ram, preceded by the length byte >OB and followed by byte >OO, and then "pretends" that you typed it in with RUN and runs it. It turns out that this area is never touched by the housekeeping chores, and hence can be done right at the start. Thus my method involves inserting the program name of your choice there instead, and setting up proper code to make an additional item on the menu. If the program isn't there, you get the same result as XBasic if LOAD isn't in drive 1 just the "ready" prompt.

First, we need to do a little patching of XBasic so

will point to the next application program (in this case 00 00 because there aren't any, but you will eventually replace them because you are creating one). The next two refer to the start address for this program, and should be 6372 in this case. You will be changing this. The fifth is the length byte for the following text, and the text is what will go on the main menu screen. We will use the same set-up for our own application program. You will now have to decide WHERE you are going to place the code to be described below. If you are using a pure XB module, you can use 7800 since 7800-7FFF is free. I am using Danny Michael's combination XB/EA and so this space is used. There is free space in GRAM 7, starting at FSCE, however. Replace the 6372 with the start address you are using. Now go to the address you have selected and type in the following: 31 00 0B A8 20 63 51 05 63 72

(cont back Page)

Fram Packer - Cont

If you did nothing more you would still have the same functioning XD module, because the code you just typed in performs the move of the text DSK1.LDAD and then branches back to where IB normally starts. Now the fun begins. The next address, which if F508 will be the location of the next: application program, so go back and type it in over the 00 00 at 6338, indicating that there WILL be sore. Now decide on the menu name for your program and determine the length of the same (in hex, of course). I believe the maxi-mum allowed for the actual name is 18 ()12). Now go back to F5D8 and type 00 00 00 00 xx "text" where xx is the length byte you just determined, and "text" is the actual text for the menu. Next determine the length of the devicename.file-name you wish to have loaded, e.g. DSK4..MEMULDAD has a length of >0. Directly after the text for the menu you have just typed in, type this new length byte, then the devicename.filename. YOU MUST FOLLOW THE DEVICENAME WITH A 00!!! Note down the address where the length byte of the filename is located AND the address just following the OO (I will call these ADDI and ADD2). Now type in the follow-ing code:

31 00 yy A8 20 ADD1 05 63 72

where ADD1 is the TWG bytes address just determined, and yy is the length of the filename PLUS TWO. Finally, go back to the application program header and type in the two bytes of ADD2 over the 3rd and 4th 00's.

As an example, if the program to be loaded was named MEMULUADER and was on DSK4 and your title for the menu was MISC. PROGRAMS, then the code beginning at FSCE should look like this:

>F5C3 31 00 08 A8 20 63 51 05 63 72 00 00

CLEVELAND AREA 99/4A USERS GROUPS C/O DEANNA SHERIDAN 20311 LAKE ROAD ROCKY RIVER, OH 44116

PLEASE NOTE - NEW ADDRESS

CHECK YOUR EXPIRATION DATE. THIS MAY BE YOUR LAST ISSUE! >F5DA F5 FC OE 4D 49 53 43 2E 20 50 52 4F >F5E6 47 52 41 48 53 0F 44 53 48 34 2E 4D >F5F2 45 4E 55 4C 4F 41 44 45 52 00 31 00 >F3FE 11 A8 20 F5 EB 05 63 72

You would then follow the same general rules if you wanted to add more programs to your menu. Now at one key press the program DSK4.MEMULDADER would load and run.

By, the way, here is a short program allowing you to set up all your favorite programs to run without typing in the names: you merely insert them in the DATA statement, and follow the last with a \*\*. If you save this program on your utility disk under the name you used in the above autoload then you will quickly get a menu of these programs when you press the "NISC. PROGRAMS" key and be able to pick your program with one more key press. This way you can still have the auto load of DSK1.LOAD for use with programs that need For this program to run properly you MUST type in line 170 first, exactly as written!

100 DATA RD. PRD1, RD. PRO2, ""! ADD MORE IF YOU WISH 110 CALL CLEAR

> 120 X=X+1 :: READ AS(X):: IF AS(X)()"" THEN 120 C130 DISPLAY AT(1,1) BEEP: "PRESS FOR" :: FOR Y=1 TO X-1 :: DISPLAY AT(2\*Y+1,2):Y; "; A\*(Y):: WEXT Y

140 CALL KEY(0,K,S):: IF S=0 THEN 140 ELSE K=K-48

150 CALL INIT :: B\$=A\$(I):: L=LEN(B\$):: CALL LOAD(-45. L+4):: CALL LOAD(-42,L)

160 FOR X=1 TO L :: CALL LOAD(X-42, ASC(SEG\$(B\$, X. 1))):: NEXT X :: CALL LUAD(X-42,0)

170 RUN "0123456789ABCDEF"

Pushcart 1880s

!! TIME DATEL MATERIAL !!

4 H ( ) 4 H (