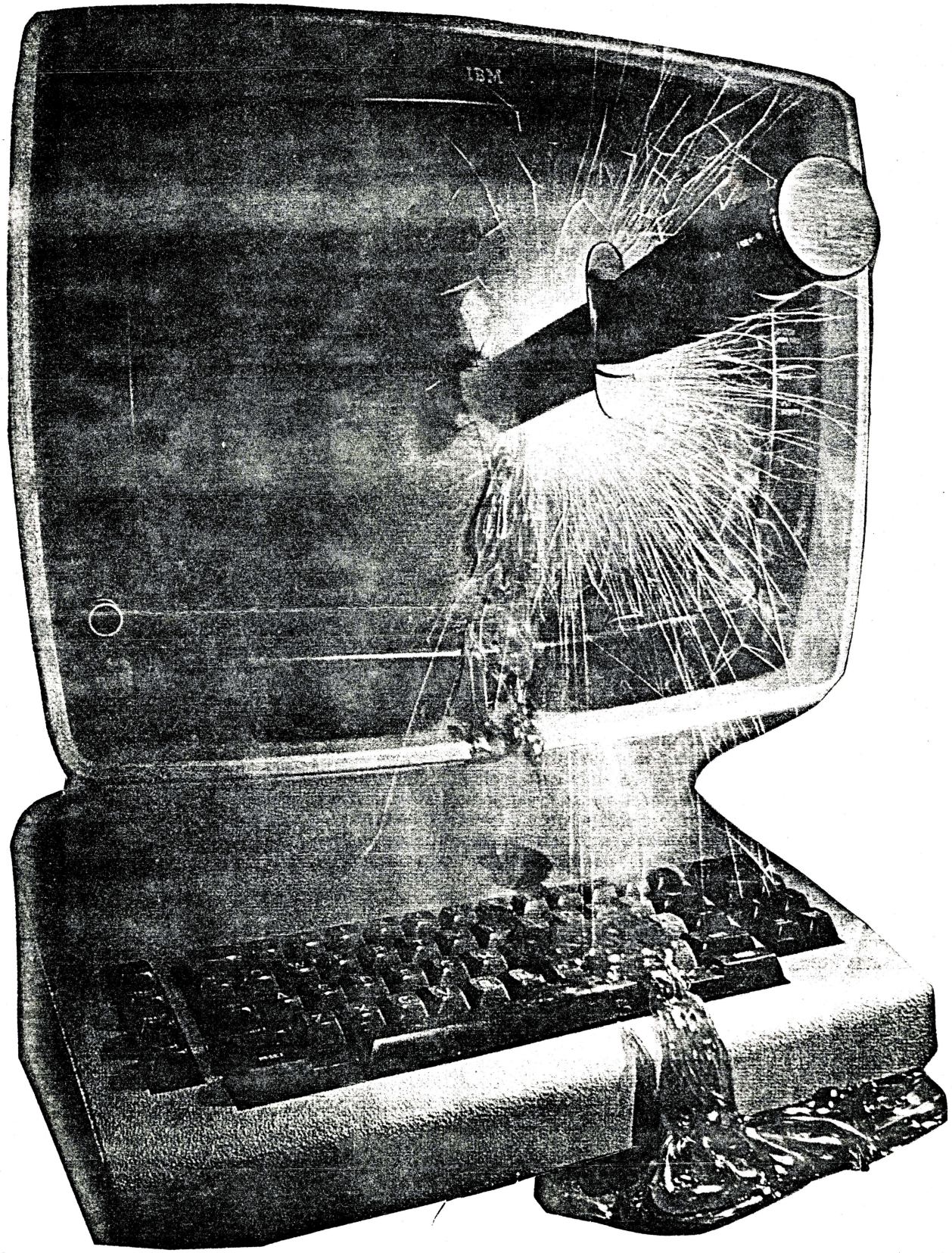
IBM

JULY MINUTES
by
JOHN WEBB

A little missed communciation on the deadline Al works with in getting the VOICE ready meant that we are behind on the minutes again. We'll do better in the future.

President Gross called the meeting to order and began with our usual question and answer session. A brief discussion of the MICRO COMPUTER FAIR followed. The fair is scheduled for the end of September and volunteers are needed for virtually all jobs: publicity, ticket sales, set-up, accounting, security, booths, etc. The fair is jointly sponsored by Appleshare and FCUG and we all want it to be a big success. If you can help in any way, please contact Ira Friedman, Fair Chairman for FCUG.

Our first presentation was given by Hubert Howe, Editor-in-Chief of Computronics Magazine and author of the book "TRS-80 Assembly Language". He has finished a new book on the Mod III which is just going to press. Aside from making us feel envious of his knowledge, Hubert presented a very informative discussion of how disc works, the differences between Mod I and Mod III, and the organizational differences between certain operating systems. Hubert's presentation was followed by a long session of questions and answers that demonstrated that everyone had gotten a great deal out of it.

Following our coffee break, Roger Giler returned to offer a session on the "INSTR" function, which outlined its usefullness in searching a string for a particular variable. The Chief Wizard made it all very understandable for us

The meeting was adjourned at about 10:00 p.m. See you at the August meeting.

VIDEOTEX ..... by Eric R. Giler

As I originally proposed, my idea was to look at the issues surrounding the standardization in international videotex. It seemed that there were three basic standardization alternatives with corresponding pressures coming from various players with different stakes. Basically, I thought it would be a typical "business policy" type analysis.

If the industry had a lot of definition, it would probably work out that way. Unfortunately, there is such a lack of definition that it becomes difficult to perform a conventional analysis.

The first problem is that there is not a fixed definition of videotex. The second is that the players are as diverse as AT&T, Radio Shack, and the British Post Office who is trying to become a player in the United States videotex market, as well as several Japanese companies that don't appear to know how they intend to participate in international markets for this technology. Trying to tell a story about standardization in an undefined marketplace can quickly drive you crazy.

The way I propose to tell the story is first to establish some definition and from there to look at the major standardization issues, the various proposals in the industry and finally look at what is emerging as a standard(s).

DEFINITION

What is videotex or videotext?. Radio Electronics Magazine says it is a system that uses the vertical blanking interval (the dark band that appears between pictures when the vertical hold control of your television is not set properly). Efrem Siegel in his videotex book calls it "tv-transmitted information". 80 Microcomputing Magazine is a little less specific when it says "videotext is the interactive transmission of words or graphics by phone lines, cable, satellite or broadcast tv." Business Week called videotex, "the generic label applied to home information retrieval systems..."

I don't intend to muddy the water further by proposing my own definition except to agree that it is a generic label, but it includes more than just the "home market". According to Steven Jobs of Apple Computer in his recent visit to HBS, there isn't a real "home market" yet. It is an office/business market that is being used for commercial purposes in the home as opposed to a specific "home" use. He was referring to videotex as well as the personal computer. The distinction becomes blurred as the Apple computer is currently used as a videotex terminal with Dow Jones, Compuserve, The Source, etc.

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The positive attributes of this system lie predominantly in its low implementation costs. Existing broadcast channels are used. There is a large installed base of televisions in Europe and North America. The cost of a decoder is a few dollars per unit when manufactured in quantity. The decoder is used to select the portion of the videotext transmission that you wish to view. The disadvantages of this type of service are that it is not interactive so the user must wait as the information cycles across his screen. This tends to enforce a schedule upon the user much the same as any television program. In an environment where the broadcast channels are government operated, standardization exists by mandate. If enough of an installed base is foreseen with relative certainty, then perhaps the television manufacturers may see advantages in incorporating the decoders into their sets. Pioneer in Japan has been developing such models. The interesting thing to note is that there is no international impetus towards standardization of one-way broadcast teletext, whereas when it deals with interactive services standardization seems to become an issue. Some of this has to do with many countries having separate broadcast standards (SECAM, PAL, NTSC, etc.). Some of this I believe is also cost driven. In order to introduce interactive capability, national telephone infrastructure becomes the cheapest transmission medium to send information from user to the videotex source. A database must be maintained. The equipment required becomes significantly more expensive and complex. The question now becomes, who pays? - government,consumers or broadcasters? In the case of Prestel in Great Britain, the Post Office has footed the bill, the consumer appears unwilling to pay for it, so in order to help recover their investment and perhaps make a profit, Prestel suppliers and the British Post Office are actively involved in foreign markets. This is particularly noticeable in the U.S. where they are lobbying to have a Prestel standard adopted by the FCC.

One wonders why, if your system is going to utilize the telephone infrastructure for sending information from user to source, why not eliminate the broadcast portion and use the telephone system for two-way data communication. In fact, the videotext industry in the U.S. is composed predominantly of this type of service. This is considered viewdata and many of the time-shared computer services fit into this category. CompuServe, The Source and Dow Jones are examples.

An advantage of this subset of the technology is that there is already a large established base of computer terminals and modems in the business computer sector. Many personal computers have built-in videotex capability. Complete viewdata terminals are currently on the market which require simple connection to the phone lines and television set for under $300. These terminals can be kept at a relatively low cost because only one transmission medium is used (the telephone lines) which keeps it less complex. Another advantage is that it is easy to identify and charge those who use this service as they can be billed on a time usage basis. There are significant start-up and maintenance costs associated with

running a large computer database, but as mass storage costs continue to drop and the sophistication of the data base software continues to increase, viewdata becomes more attractive. As for the cost of a long distance telephone call to access a viewdata data base, networks such as Tymnet and Telenet are increasing in use where several viewdata companies have banded together and now it is only necessary to make one local phone call to access many national services. Radio Shack offers their Videotex Network System which is a complete viewdata source system which can handle up to 16 simultaneous users at a cost of $20,000.

The standardization issues in the U.S. for viewdata are predominantly one of communications protocol. Electronic Industries Association standard (EIA) RS232 is one of the main viewdata standards, as well as Bell 103 and 212A standards which regulate the speed of the communications. Many of the services now in use such as On-LIne Systems of Pittsburgh, have the ability to sense automatically what type of terminal you are using. A push for standardization is not as evident in these business use areas as it is in the future "home market". Rather than the government mandated standards appearing first as they do in Europe, the standards are proposed in the U.S. by industry groups such as IEEE and EIA usually after there is a significant installed base. The standards tend to be defacto. Similarly, AT&T has wielded a big club in data communications protocol by controlling the telephone infrastructure, although many non-Bell standards have also developed in parallel. Interestingly enough these non-standard systems have been cost justified by the business needs they are addressing. Therefore standardization in videotex is not the "do-or-die" situation as it might appear to be in a more controlled communications environment such as Great Britain or France. The major drawback to a telephone based videotex network is one of bandwidth. In order to send digitized pictures, a sophisticated level of graphics capability is necessary. Higher speeds are required to send this level of complexity that is not easily accomplished over twisted pair telephone wires.

Another alternative for standardization in the transmission medium is cable TV. The costs again appear to drive the standardization possibilities. Many cable companies have conducted experiments, the most well-known being Warner's CUBE in Columbus, Ohio. At the present time, converting from a one-way system to an interactive one involves significant investment. The question is again one of "who pays"? The services currently being offered with cable systems seem to be using its interactive abilities to provide market research feedback to the videotex source as opposed to providing information to the user. The advantage to cable videotex is that there are 20+ million homes already equipped for cable TV in the U.S. which can readily incorporate one-way videotex technology. However, any sophisticated two-way interactive system seems to have a cost barrier in place. The band width of cable systems (whether broadband or baseband) is higher than can be achieved with twisted pair wires. When trying to predict how the standards question will ultimately be resolved

in this area, one can not ignore the impact of the current battle going on in the office automation market. Local area networks vs. centralized processing, baseband vs. broadband, Wangnet vs. Ethernet are all forces that will eventually impact the "home market" as it develops.

Direct broadcast satellite seems to offer the ultimate in user convenience and sophistication of information that can be transmitted, although two-way satellite communication from the home appears to be a few years off. Once again, the business uses of satellites appear to be the battleground for what "home" systems will ultimately look like.

The issue of standardization is said to be influenced by a Catch-22 in the industry. Companies don't want to take a large capital risk until there is a home market, and a home market won't develop until someone takes that risk. Therefore, there is pressure in an international context to spread the risk by establishing a standard that would be acceptable in some sense "internationally".

THE INDUSTRY PROPOSALS

The U.S. appears to be the battleground for three different competing international standards:

Prestel - Great Britain
Antiope - France
Telidon - Canada

The differences between the standards are predominantly in two areas. First, the type of alphanumeric/graphics and second, the method of transmitting the alphanumeric/graphic information.

The simplest graphics are known as alpha-mosaic in which graphic elements consist of small blocks. Prestel and Antiope use this type of graphics. The next step up is alpha-geometric in which graphic elements consist of dots which allow higher resolution. This type of graphics is used in the Telidon system. The highest level graphics are known as alpha-photographic which are basically bit-plane memory consisting of several layers of overlaid RAM. This allows different levels of brightness which is essential to give the resolution necessary to transmit photographs and pictures. This is ultimately where the technology will move as videotex "shopping at home" and teleconferencing becomes more developed. The Telidon system also supports alpha-photographic graphics.

There are basically two methods of transmitting the data. Prestel uses serial attribute transmission while Antiope and Telidon use parallel attribute transmission. The difference lies in the fact that with serial attribute transmission color change descriptions cause blank spaces to occur in the picture as they are transmitted causing less desirable graphics. With parallel attribute transmission, each graphic element carries its color information in the description of the element.

Two other areas that affect the graphics issue are DRCS (Dynamically Redefinable Character Sets) and PDI (Picture Description Instructions). DRCS is used to be able to construct any shape that the user desires up to the resolution of dot elements in an alpha-geometric system. The PDI allows this type of information to be stored in the decoder at the videotex terminal and not transmitted every time they are used.

Each of these countries proposes that their standard be adopted in the U.S. Prestel claims its simplicity is an advantage because of its lower implementation cost. Its proponents claim that the cost of Telidon is too high to attract enough of an installed base. Telidon proponents claim that the features of Prestel are not sophisticated enough to appeal to a broad enough segment of the market.

Over the last few months, a specific proposal for standardization in the U.S. has gained considerable momentum and been endorsed by many of the players in this business. It is called the North American Broadcast Teletext Specification (NABTS) and has been proposed by the EIA to the FCC. At last count it was supported by AT&T, CBS, NBC, Knight Ridder and Time, Inc. The consensus among the trade publications is that this standard will be the predominant one in the U.S. market and will set the stage for wide scale acceptance of videotex technology internationally. NABTS is Antiope/Telidon compatible because of parallel attribute transmission while Prestel is not. The stakes for Prestel are high. It has the highest installed base in the world, yet if they are cut out of large international markets, it is doubtful that it will prove a commercial success. Microcomputer manufacturers such as Apple support NABTS, and Norpak (Telidon equipment supplier) in Canada is currently marketing an Apple/Telidon board at low cost. So, it may be possible to leverage the installed base of Apples in the U. S. to help lower the costs of introduction. In terms of support to this standard, AT&T has probably had the biggest effect on the standard, especially in light of their recent antitrust settlement which will allow them to participate actively in the videotex market. It may even become one of their battlegrounds with IBM.

Most of this thinking supposes that eventually there will be considerable market demand for videotex services and whether that demand will appear over the pate actively in the videotex market. . The development of videotex is incremental in nature and whether these incremental steps are in the direction of the marketplace needs may ultimately determine whether the technology is accepted in the home.

****
* PROGMENU/BAS *
* Dave McGlumphy *
* 4429 Paula Ln *
* Red Bank TN 37415 *
****

This is a description of PROGMENU, a program I wrote to let my three year old son use the computer easier. It works with NEWDOS and NEWDOS80, versions 1 and 2, but it won't work with model 1 TRSDOS since it uses the command CMD"DIR:n". I use the AUTO BASIC RUN"PROGMENU" on his diskette to initiate this program. It prints a directory on the screen and allows him to move an arrow which acts as a cursor to the program that he wants so that when he presses ENTER, the program will execute whether it's a BASIC program or a /CMD file. It amazes me how quickly Jonathan learned to read the program names from the screen in order to be able to run what he wants.

I use lines 50-70 to extract program names from lines on the screen quickly. The FIELD statements don't reference any disk file. The subroutine at 260 puts one line from the screen into A$, line 370 puts A$ into the FIELDed buffer, and the subroutines at 400 and 440 read the program names from the buffer. NEWDOS80/V1 uses only three entries per screen line while NEWDOS80/V2 uses four. Line 180 looks at a certain screen position to see if there is a blank. If there is, then I assume this screen has only three entries per line.

Line 490 checks the program name in the FIELDed buffer. If the name begins with a space, I assume that there are no more program names to find. Otherwise, I put the program name in the array, PN$. After I've found all the program names, I print the directory again in my own format so that I know for sure where things are located on the screen. Then I can use the subroutine at line 510 to move the cursor around until the user presses the ENTER key.

When the user presses ENTER, the subroutine at 860 checks to reject files that end with /DAT. Anything that doesn't end with /CMD is assumed to be in BASIC. Enjoy.

```
10 'PROGMENU: DAVE MCGLUMPHY, 4429 PAULA LN, RED BANK, TN 37415
20 '08/08/82. THIS PROGRAM DISPLAYS ALL NEWDOS DIRECTORIES
ON  THE  SCREEN AND  ALLOWS YOU TO SELECT WHICH PROGRAM YOU WANT
TO EXECUTE BY MOVING THE ARROW ON THE SCREEN USING THE ARROWS
30 'ON THE KEYBOARD AND THEN PRESSING ENTER.  IT WILL TRY
TO EXECUTE ANY PROGRAM POINTED TO, BE IT BASIC OR /CMD FILES.
40 CLS : CLEAR 3000 : DIM PN$(56) 'PROGRAM NAME ARRAY
50 FIELD 1, 64 AS D$
60 FIELD 1, 20 AS N1$, 20 AS N2$, 20 AS N3$
70 FIELD 1, 15 AS P1$, 15 AS P2$, 15 AS P3$, 15 AS P4$
80 A$=""          '64 BYTE STRING TO HOLD A SCREEN LINE
90 AI=0           'ASCII VALUE OF KEYED INPUT
100 AR$=CHR$(94) 'ARROW
```

```
110 CP=0          'CURSOR POSITION
120 J=0           'FOR/NEXT LOOP INDEX
130 NE=0          'NUMBER ENTRIES/LINE IN DIRECTORY
140 NM=0          '=1 IF NO MORE PROGRAM NAMES ON LINE
150 PC=0          'PROGRAM NAME ARRAY COUNTER
160 SP=0          'SCREEN POSITION (AS IN PRINT@)
170 GOSUB 700 'ASK FOR DRIVE$ & DO DIR COMMAND.
180 IF PEEK(15503)=32 OR PEEK(15504)=61 THEN NE=3 ELSE NE=4
190 GOSUB 260 'TO READ SCREEN LINES & BUILD PGM NAME ARRAY
200 CLS : PRINT"MOVE THE ARROW TO THE PROGRAM YOU WANT AND
PRESS ENTER." : PRINT
210 FOR J=1 TO PC : PRINT"  ";PN$(J), : NEXT J
220 GOSUB 510 'CURSOR MOVE ROUTINE RETURNS AFTER <E>NTER
230 GOSUB 860 'TRY TO EXECUTE PROGNAME.
240 GOTO 200
250 '---------------   SUBROUTINES -----------
260 FOR J=0 TO 13 '------- READ SCREEN LINES & PUT INTO A$ ----
270     P0=(J*64+15488) / 256
280     P1=INT(P0)
290     P2=(J*64+15488) - 256* INT(P0)
300     K=VARPTR(A$)
310     POKE K,64 : POKE K+1,P2 : POKE K+2,P1
320     PRINT@64+J*64,CHR$(30);
330     GOSUB 370 'TO CREATE ARRAY OF PROGRAM NAMES
340     IF NM=1 THEN J=13 'BECAUSE NO MORE PROGRAMS
350 NEXT
360 RETURN
370 LSET D$=A$ 'CREATE ARRAY OF PROGRAM NAMES FROM SCREEN LINE
380 IF NE=3 GOSUB 400 ELSE GOSUB 440
390 RETURN
400 N$=N1$ : GOSUB 490 '--- 3 PROGS/LINE ---
410 N$=N2$ : GOSUB 490
420 N$=N3$ : GOSUB 490
430 RETURN
440 N$=P1$ : GOSUB 490 '--- 4 PROGS/LINE ---
450 N$=P2$ : GOSUB 490
460 N$=P3$ : GOSUB 490
470 N$=P4$ : GOSUB 490
480 RETURN
490 IF LEFT$(N$,1)<>" " THEN PC=PC+1 : PN$(PC)=LEFT$(N$,12)
 ELSE NM=1
500 RETURN
510 AR$=CHR$(94) '-------- CURSOR MOVE ROUTINE -------
520 SP=64 : CP=1 : GOSUB 680 'PRINT ARROW
530 I$=INKEY$ : I$=""
540 I$=INKEY$ : IF I$="" THEN 540 ELSE AI=ASC(I$)
550 IF AI=13 THEN PN$=PN$(CP) : RETURN '----------EXIT.
560 IF AI=91 THEN AI=7
570 IF AI<7 THEN 540
580 ON AI-6 GOSUB 600,620,640,660
590 GOTO 540
600 IF CP>4 THEN CP=CP-4 'MOVE CURSOR UP
610 GOTO 680
620 IF CP>1 THEN CP=CP-1 'MOVE CURSOR LEFT
630 GOTO 680
640 IF CP < PC THEN CP=CP+1 'MOVE CURSOR RIGHT
650 GOTO 680
```

```
660 IF CP < PC-3 THEN CP=CP+4 'MOVE CURSOR DOWN
670 GOTO 680
680 PRINT@SP," "; : SP=(CP-1)*16 + 128 : PRINT@SP,AR$;
690 RETURN
700 I$=INKEY$ : I$="" '---- GET DRIVE # & DO DIR COMMAND -----
710 PRINT"FOR WHICH DISK DRIVE DO YOU WANT THE MENU (0-3)? ";
720 I$=INKEY$
730 IF I$=CHR$(13) THEN I$="0" ' ENTER DEFAULTS TO 0
740 IF I$<"0" THEN 720
750 IF I$>"3" THEN 720
760 PRINT I$
770 DR$="DIR :" +I$
780 ON ERROR GOTO 800
790 GOTO 840
800 PRINT"ERROR" ERR/2+1 : RESUME 810
810 PRINT"SORRY, BUT I CAN'T DO THAT.  TRY AGAIN."
820 GOSUB 970 : REM PAUSE
830 GOTO 700 : REM TO REQUEST ANOTHER DRIVE'S DIRECTORY.
840 CMD DR$ : REM GET THE DIRECTORY & DISPLAY IT ON THE SCREEN
850 RETURN
860 '---------  RUN THE REQUESTED PROGRAM -------
870 PRINT@ 520,"LET ME GO GET " PN$". . ."
880 ON ERROR GOTO 920
890 IF INSTR(PN$,"/CMD") THEN PN$="S="+PN$ : CMD PN$
900 IF INSTR(PN$,"/DAT") THEN 940
910 RUN PN$
920 RESUME 930
930 CLS
940 PRINT"I CAN'T RUN THAT ONE.  TRY ANOTHER."
950 GOSUB 970 ' PAUSE
960 RETURN
970 '-------- PAUSE ------
980 PRINT@ 975,"PRESS ANY KEY TO CONTINUE.";
990 I$=INKEY$
1000 IF INKEY$ ="" THEN 1000
1010 CLS
1020 RETURN
```

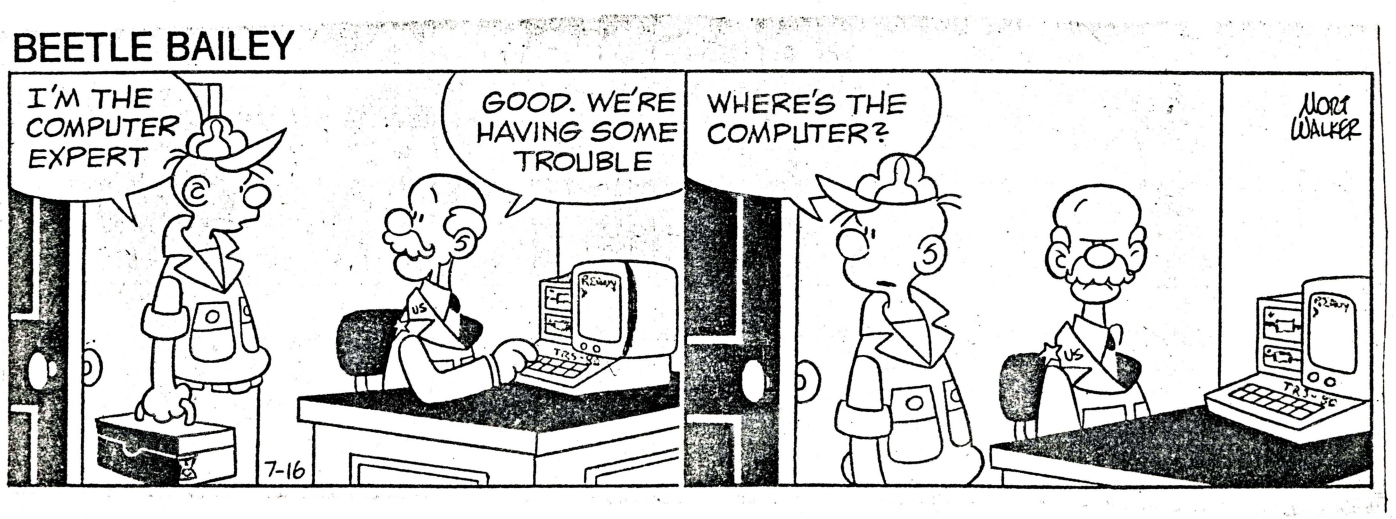
```
*******************
*     PTR/CMD     *
*       by        *
*  Dave McGlumphy *
*******************
```

Here is one for you EPSON fans from Dave in Red Bank,Tenn. This machine language code will allow you to set up your EPSON MX-80 for the font style you desire. Just assemble the source code and follow the menu prompts. You can exit from the program to either BASIC or DOS.

```
;        "PTR/CMD" CONTROLS EPSON MX80 FONTS
;DAVE MCGLUMPHY, 4429 PAULA LN., RED BANK  TN  37415
;08/05/82
        ORG     6000H
BEGIN   EQU     $
```

```
DOSXIT  EQU     4405H   ;NEWDOS80/V1 & V2
PRINT   EQU     4467H   ;NEWDOS80/V1 & V2
        CALL    01C9H   ;CLS
        LD      HL,MSG1
        CALL    PRINT
        LD      HL,MSG2
        CALL    PRINT
        LD      HL,MSG3
        CALL    PRINT
BASIC   DEFM    'BASIC NEW'
        DEFB    0DH
MSG1    DEFW    0D3FH
MSG2    DEFM    'B=BASIC   C=COMPRESSED   D=DBLWD'
        DEFM    '   E=EMPHASIZED   R=RESET ALL'
        DEFB    0DH
MSG3    DEFM    'V=VERTICAL EMPHASIS   '
        DEFM    'X OR <BREAK>=EXIT   '
        DEFM    '6=6 LPI   8=8 LPI'
        DEFB    0DH
INPUT   CALL    049H    ;GET KEY
        LD      HL,3C01H ;2ND BYTE OF SCREEN
        LD      (HL),A  ;PRINT INPUT
        LD      HL,14312 ;PRINTER ADDRESS
        CP      45H     ;<E>MPHASIZED (HORIZONTALLY)
        JR      Z,EMPH  ;YES
        CP      44H     ;<D>OUBLEWIDE?
        JR      Z,DBLWD ;YES.
        CP      43H     ;<C>ONDENSED?
        JR      Z,CONDNS ;YES
        CP      'B'     ;<B>ASIC?
        JR      Z,BAS   ;YES
        CP      52H     ;<R>ESET ALL?
        JR      Z,RESET ;YES
        CP      'V'     ;VERTICAL EMPHASIS?
        JR      Z,VERT
        CP      36H     ;6 LPI?
        JR      Z,LPI6
        CP      38H     ;8 LPI?
        JR      Z,LPI8
        CP      58H     ;X?
        JR      Z,XIT
        CP      1       ;BREAK?
        JR      Z,XIT
        JR      INPUT   ;GET SOMETHING VALID
BAS     CALL    01C9H   ;CLS
        LD      HL,BASIC
        CALL    DOSXIT  ;GO TO BASIC
EMPH    LD      A,27    ;TURN
        LD      (HL),A  ; ON
        CALL    WTPTR   ;  HORIZONTAL
        LD      A,69    ;   EMPHASIS
        LD      (HL),A
        JR      INPUT SOMETHING VALID
        CALL    01C9H   ;CLS
        LD      HL,BASIC
        CALL    DOSXIT  ;GO TO BASIC
        LD      A,27    ;TURN
```

```
        LD      (HL),A  ; ON
        CALL    WTPTR   ;  HORIZONTAL
        LD      A,69    ;   EMPHASIS
        LD      (HL),A
        CALL    WTPTR   ;  VERTICAL
        LD      A,71    ;   EMPHASIS
        LD      (HL),A
        JR      INPUT
RESET   LD      A,18    ;TURN
        LD      (HL),A  ; OFF
        CALL    WTPTR   ;   COMPRESSED
        LD      A,27    ;TURN
        LD      (HL),A  ; OFF
        CALL    WTPTR   ;  VERTICAL
        LD      WTPTR   ;  VERTICAL
        LD      A,71    ;   EMPHASIS
        LD      (HL),A
        JR      INPUT
        LD      A,18    ;TURN
        LD      (HL),A  ; OFF
        CALL    WTPTR   ;   COMPRESSED
        LD      A,27    ;TURN
        LD      (HL),AR         ;  6 LPI
        LD      A,50
        LD      (HL),A
        JR      JRINPT
LPI8    LD      A,27    ;TURN
        LD      (HL),A  ; ON
        CALL    WTPTR   ;  8 LPI
        LD      A,48
        LD      (HL),A
        JR      JRINPT
XIT     JP      402DH   ;DOS
        END     BEGIN
```



PRT/CMD Revisited

by: Alan Abrahamson

Last month we published a fine program that came to us from **KINGSBYTE**, written by **Louis Shapiro.** In it he has developed a fine printer driver routine for the **MX-80** series of printers. The real beauty of the program lies in it's simplicity of structure. For example: If I wish to start printing in ITALICS mode all I have to do is type #I *and as you see we are now in ITALICS mode. If I want to Double strike in this mode I just type #S and you now have double strike ITALICS. We can even emphasize this mode as well by typing #E* ***and now we are in the WALLBANGER ITALICS mode. To turn off the ITALICS is just as easy with #i*** **but as you can see we still have double strike and emphasized on. To turn off the double strike just type #s** and there we are but emphasized still is **here.** So type **#e** and we are now back to normal mode like we started in.

Sometimes we all look at programs that are published and with a very blase attitude, fail to appreciate something as good as this, for **FREE** yet. (Did you like that move ?) You will have to figure that out for yourself. The Heading was of course done by using #W for **WIDE** characters which turn themselves off at the end of every line or with the command #w like the one I put in after the word **WIDE** 2 lines up. The versatility of this driver is terrific and I intend to use it often. Thanks very much Lou, for a dynamite piece of code.

In case you think that some commands were left out, well I don't. Lou even lets us go into the compressed mode with a #C which of course is now much smaller than before but we can switch it off just as fast with #c and continue on our merry way. There are also commands to ring your chimes (#B), reset the whole system (#Ø) or do a form feed with (#F). If your DOS does not print graphics to the EPSON correctly from BASIC then you can use #G to offset graphics characters by the 32 required or #g to turn the offset off.

By the way all this works from BASIC using the same commands as well as SCRIPSIT. How about a WALLBANGER mode listing for your archives. Just enter #E#S in a REM line and your program will list that way. Line Ø of course!

It's great to have an EPSON MX-80 to use with this great driver program

```
* * * * * * * * * * * *
*                     *
*     A s k   A l a n *
*                     *
* * * * * * * * * * * *
```

A new column has come to mind and I hope that it will be meaningful as well as informative to you. Many of us forget the time that we first got our computers or first got a new piece of equipment or software. I remember the day I got my first disk drive and looked at my first DOS. Was I snowed! Well I hope that this column as well as ones in the future will help solve these types of problems. The format will be in Q & A form with all names witheld to protect the innocent. Don't be bashful just **Ask Alan.**

Q: If I want to FIELD a file and all my FIELD statements do not fit on one line in BASIC, do I have to use a DUMMY argument on the continuation line to get the buffer set right?

A: *Yes you do and it would look something like this:*

```
1000 FIELD #1, 20 AS A$, 30 AS S$, 40 AS K$, 5 AS M$,
                 2 AS E$ .... etc. to end of character space
1010 FIELD #1, xx AS DUMMY$, 2 AS AA$, 2 AS SS$, 2 AS KK$ etc.
```

The xx is of course the number of bytes used in line 1000 which must be skipped over in the buffer in order to locate AA$ in the proper buffer position.

Q: I just got Newdos80 Version 2 and when I try to backup my system disk from drive 0 to drive 1, I get only 35 tracks on the diskette in drive 1? How do I do this?

A: *You must indicate to the system that you want a different track count (TC=xx) in your PDRIVE specification or you can indicate the altered number of tracks in the COPY command itself or you can refer to another PDRIVE specification other than the one set for drive 1 on the SYSTEM disk (Drive 0). Examples of the above to follow:*

Assuming a NEW unaltered system as it comes from the company:

COPY 0 1=40 would copy the 35 track master disk to a 40 track system disk on drive 1.

PDRIVE 0 1 TC=40,A would change your PDRIVE specification for drive 1 so that the standard backup form of COPY would make a 40 tracker out of the 35 track master disk. (COPY 0 1 <ENTER>)

COPY 0 1,date,CBF,FMT,DPDN=x will backup your system disk to drive 1 using the PDRIVE specification shown in PDRIVE format "x".

So until next month, remember if you have a problem or need an answer, I will try to find it out for you. See you next month in "The Voice" and please **Ask Alan.**

GEAP

REVIEW

BY: ALAN ABRAHAMSON

GEAP is a very powerful Graphics Editor And Programmer as its name implies. It can be used to create graphics on screen as well as in text. The graphic can be saved to disK as a core file or be used in a basic program.

GEAP comes with 9 character fonts if you have purchased it with the Dot Writer modulle. These fonts can be intermixed and used from within a word processor like Scripsit, as I am using here, or especially from within Newscript for which it is configured.

GEAP HAS TO BE THE MOST FUN GRAPHICS PACKAGE THAT I HAVE COME ACROSS IN QUITE SOME TIME. NOT ONLY CAN YOU USE THE FONTS AS PREPARED FOR YOU BUT YOU CAN EITHER CREATE OR MODIFY THE FONTS SUPPLIED.

THE BEST PART OF IT MAY BE THE EASE IN WHICH YOU CAN CREATE DRAMATIC EFFECTS USING THE BIT GRAPHICS OF THE MX-80 PRINTER AND GRAPHTRAX-80 OR GRAPHTRAX-PLUS.

THE DOT PRINT MODULE ALLOWS YOU TO WORK WITH A WORD PROCESSOR PROGRAM AND CREATE CREATIVE TEXT AT WILL. SIGNALS ARE GIVEN IN THE ASCII FILE THAT ARE INTERPRETED BY GEAP AND PRINTED ACCORDINGLY.

THE SIZE AND SHAPE OF LETTERS CAN BE ALMOST ANYTHING THAT YOU DESIRE.

Hats off to William Mason and JF Consulting for this fine graphic pacKage.

FLIPPYS

By

John Krause Jr.

Are you doing the 'Floppy Shuffle'? You know the dance. You just finished writing your next piece for the Voice of the 8Ø, and decide it's time to get to work on that term paper you promised to print-up for your son. Now, what the heck disc is that rough draft on? It was here a minute ago. You just used it to save your nasty letter to the IRS.

Why can't you pack more stuff onto those diskettes? You spent a couple of hundred dollars on those disk drives to give you the speed and storage capacity you so desired. But soon the ol' disc space got used up, so you braved the wrath of your spouse yet again and sprung the extra hundred and fifty for double density. But you still have to dig through piles of discs to find the right one. What's next? Quadruple density? Well, not quite, but almost.

What we are going to discuss here is Flippies. What's a flippy? you ask. Why, it's simply a diskette that you can use both sides of. Again you cry out 'I can buy them anywhere, but they cost twice as much!'. Nay, I say unto thee. We don't need to pay those exorbitant fees for their flippies, we can make our own using those full-up single sided babies we already have. No, wait, don't leave. It's not as bad as all that.

But first you will need a template to follow. There are a few ways to make a template. The best way is to find a scrunched up disc that is no longer useable. Cut the jacket off using a single edge razor or a pair of scissors. You will only need one side of the jacket, so you can toss-out the remaining fragments. A slightly more difficult method of obtaining a template is to trace a diskette onto a piece of shirt cardboard or paper. Then cut out the center hole and punch the sector hole with your paper punch. The holes should be as close to exact as you can make them.

Now that you have a template, the rest is easy. First, place the template over the disc so that all the holes and slots line up. Now, turn the whole affair so that the long oval slot is facing away from you. Now flip the template over from left to right. The template will now be aligned to punch the holes. The first hole to punch should be the Write Allow slot. This is the easiest one, and also makes it easier to line up the template to punch the other holes. Go ahead and punch that one. The original one is a long square slot, your new one will be a rounded hole. That's o.k., it will make it easier to identify which side is which in a hurry.

Now, with the template held firmly in place, slide a piece of paper or something between the jacket and the diskette to protect it from scratches. About an inch wide and two inches long should be adequate. Next, slip your punch inside the jacket and line it up with the hole in your template. When your satisfied with the line-up, go ahead and punch it. If your hole puncher does not have a catcher on it to trap the punch-out, either watch closely to be sure it doesn't end up inside the jacket or place a small piece of scotch tape on the punch to catch the punch-out. Now turn over the disc and repeat the process on the other side. NOTE: Sometimes the cloth lining doesn't come cleanly off. It this happens, before removing your paper disc protector, pull out the piece of lining with a pair of tweezers.

Now, all that's left is to test it out. Place your new flippy in your disc drive and format the original side. This is to be sure you didn't harm side one. If all goes well, flip the disc over and format the back side. It should work as good as the first side. If it does, viola, you have made your first flippy.

Naturally, if you have a Flippy disc drive, you already use both sides, so you don't need this procedure. If you just have the standard single sided drives like most of us, you can easily double your disc capacity this way. I know that the manufacturer didn't certify both sides, but they both work, so why not use them? And this way, you don't have to pay those higher prices for ready made flippies. You can also cut down on your diskette bills, and save that money for better things. Like that next disc drive, or that new game program, or that...hey...honey...stop...I'll turn it off in a min.....

$$$

IN MEMORIAL

This fine looking page could have been left blank for you to stare at, but in the interest of beautification you will be treated to some enlarged GEAP Old English font script for your edification and enjoyment.

What really belongs on this page is your article for Voice of the '80. Since we have not received your article we were unable to publish it at this time. This otherwise blank page is a memorial to the article that you did not send in. Remember, if you like this page or others like it you can have it on a regular basis in the Voice of the '80. In case you would like some more useful information regarding computers, then please send in that article that you have been working on. All of us will benefit greatly from your efforts.

Your Editor.

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1st CLASS MAIL

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