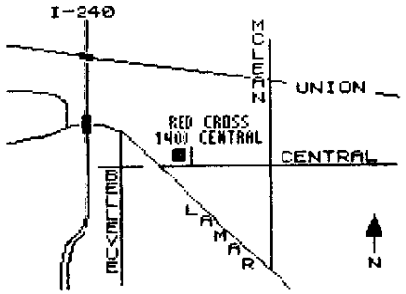
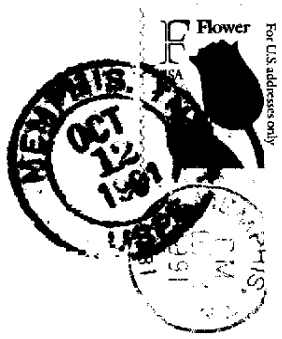
NOTICES

MEETING
7:00 P.M.
Thursday, OCT 17 th
Red Cross Building
1400 Central Ave.

WORKSHOP
To Be Annoinced



Mid-South 99 Users Group
P. O. Box 38522
Germantown, TN 38183-0522



UG 2/86
DALLAS TI USER GROUP
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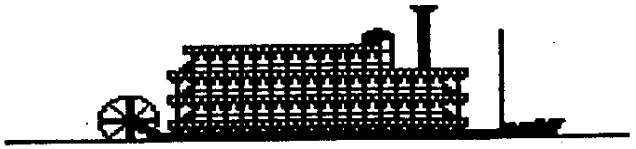
MID SOUTH 99 USERS GROUP



MEMPHIS TENNESSEE

1991

OCTOBER

Newsletter of the MID-SOUTH 99 USERS GROUP-Vol 9,#10-OCT 1991

TIDBITS

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Marshal Ellis	Editor - TIDBITS Newsletter	901-327-2506
Marshal Ellis	Editor-Technical Interface	901-327-2506
Beery Miller	9640 NEWS BBS Sysop	901-368-0112

OCT. 1991 INDEX

PRESIDENT'S BIT

By Gary W. Cox

The Memphis Computer Fair went very well with over 1000 people attending! Exhibits included some very elaborate equipment! Thanks to all who attended!

I would also like to thank TM Direct Marketing (1-800-336-9966) for donating several TI related prizes! A drawing for those prizes will be taken from all those who signed in at the TI user group area and who are also present at this months meeting! I would also like to thank Beery Miller (9640 News) for setting up at the fair and showing off his products as well as the new RAVE PEB. Also thanks to Mac Swope for his MIDI interface setup and thanks to those who brought equipment such as Lynn Crow and Pierre Lamontagne.

Plans are currently for Beery Miller (9640 News), Mac Swope, James Bennington, Jim Saemenes and myself to attend the November Chicago TI Faire. Anyone else interested in attending and riding with me please contact me at this months meeting.

C ya at the months meeting...

IN THE NEWS

By Gary W. Cox

The Chicago TI Faire is now at hand! It is scheduled for November 1st and 2nd in Elke Grove Village, Illinois (Chicago). Friday night November 1st will be a social mixer from 8pm until midnight with the fair being Saturday November 2nd. For more information call (708) 869- 4304. Following the Chicago TI Faire will be the Milwaukee TI Faire held Sunday November 3rd in Milwaukee.

The following from the September 1991 Micropendium

Jerry Coffey has announced on several online information services that he will distribute JP Software titles under an agreement reached August 15th with J. Peter Hoddie of JP Software. According to Coffey, the agreement "owes a great deal to the good offices of Wayne Stith, author of GEN-TRI." Coffey was planning to ship GEN-TRI by mid-September and says that he will announce availability of other titles later. Coffey says that he will work with buyers who have unfulfilled orders. "If you have evidence of actual payment, e.g. cancelled check, send me Xerox copies of checks, statements (whatever) and full details so that I can ship the software as soon as the masters reach me." "If your check was never deposited then please send a new order and I will arrange with Peter to void any previous checks that may turn up." Coffey asks that all correspondence be as complete as possible. Write him at 9119 Tetterton Ave.,

Vienna, VA 22182.

Richard Lynn Gilbertson, author of the RICH GKXB, says that the Extended BASIC disk has gone into versions 2.37 and 2.54. He says that Gary Bowser of Oasis Pensive Abacutors has sent him specifications for manufacture of the program as a cartridge. Gilbertson says that he is working on a Disk Manager to be installed on the module. He says that on problems have been found with the accelerator and it will work on the TIM card. Disk of RICH GKXB are available for $24.95 plus $2 shipping and handling from CaDD Electronics, 81 Prescott Rd., Raymond, NH 03077. Phone number is (603) 895-0119.

The Miami Users Group BBS is operating at (305) 625-8520. According to Mr. Mosher, sysop, the board is running at 300,1200,2400 baud off a basic TI with a 40 megabyte hard drive.

Asgard Software has released its first Geneve only program, Thumbnails, by Francisco Garcia. The company has also released a game for the TI99/4a, Starbase Raiders, and a utility for Page Pro 99 users, Gofer. Thumbnails will organize, catalog and convert MAcPaint pictures, according to the manufacturer, and is describes as of special interest to users of Page Pro 99, Y.A.P.P. and the Printer's Apprentice for providing access to the MAcPaint pictures available on BBSes and networks and in user group libraries. The manufacturer says Thumbnails catalogs disks and finds all the MacPaint pictures on them, then allows the users to view and print them, singly or in batch, either at full size or in "thumbnail" format. Thumbnails is said to be compatible with M-DOS 1.14 and 0.97H and with the Myarc HFDC and RAMdisks. Printing requires an Epson or compatible printer, though the manufacturer says the printer can be fully customized otherwise. Suggested retail is $12.95 plus $3 shipping and handling.

Starbase Raiders is an arcade style game based on a game popular on the Atari 2600. It was written by Joe Delekto, and requires 32k, Extended BASIC or Editor/Assembler and a disk system. Suggested retail price is $12.95 plus $3 shipping and handling.

Gofer is a utility described as being for the "power user" who uses Page Pro 99 frequently, written by Dan Eicher. The package is said to feature complete rewrites of almost all utilities included with Page Pro 99. It includes a columnizer 50 times faster than the Page Pro Columnizer, a program for converting art, a program for modifying page files and a PCI picture converter that will convert pictures created on a PC directly into Page Pro 99 format. Gofer requires Page Pro 99 and is compatible with hard disks and RAMdisks. Suggested retail price is $12.95 plus $3 shipping.

To order, send a check or money order to Asgard Software, P.O. Box 10306, Rockville, MD 20849.

Harrison Software has released Smart Connect, a program with which TI owners can transfer text files to and from PC compatibles. According to Bruce Harrison of Harrison Software,

the package can take large files from the PC and automatically split them into files small enough to be used with TI-Writer or Editor/Assembler editors on the TI side. The program will automatically increment the names of these split files, so that if the first one is TEXT1, the file will be split into TEXT1, TEXT2, etc...

The package is designed so that, once the program is at the PC end, all actions are controlled from the TI keyboard and the PC therefore can be unattended while transfers are being done, Harrison says. Two GW-BASIC programs for the PC are supplied. At the end of the session, the TI program will cause the PC program to end before ending itself.

The package, which sells for $10 including shipping and handling, requires 32k, at least one SS/SD drive, RS323 and a PC with GW-BASIC. The package can run from Extended BASIC, E/A or TI Writer modules. Instructions and an XB program to print them are included on the disk. Numerous "error traps" are included, Harrison says, so that even errors on the PC program will be reported on the TI screen and can be recovered from it without any action as the PC itself.

Harrison notes that Harrison Software's Word Processor has been reduced in price from $20 to $14, including shipping and handling.

For information or to order, write Harrison Software, 5705 40th Place, Hyattsville, MD 20781.

GOVERNMENT INFO

from the pages of: Great Lakes Computer Group, Sept, 1990

NATIONAL RESEARCH INSTITUTE

Need fast access to government information? It's just a fingertip away if you use a personal computer and modem to call up electronic "bulliten boards" at federal agencies. They'll provide "menus" on options that are avalable. Whether the latest economic data, legislative results, or current space events.

By call Commerce, Labor, NASA or other agencies, you choose the subject you're interested in and it can be "downloaded' into your computer. No waiting for the mails, or for the information to show up somewhere else at a later date. "Board" number at Census is (301) 763-4576; at Labor it's (202) 523-4784, for Commerce economic news, (202) 377-3870. Some charge nominal access fees. By tapping into just one bulliten board, you can get a list of all government boards.

TELECOMMUNICATIONS

----------by Richard Lumpkin

Houston User Group August, 199Ø

The following article is compiled from several sources:
4. Jon Hodges, Dallas 99er Interface, On RS232.
Note: Editors comments/additions/changes are in [....]

RS-232 Connections for Modems

The 4A PEB RS-232 Card has three ports, on two plugs. One plug is the 16-pin "PIO" port for parallel output, TTL 5 volt logic signals, primarily to a printer. The other two ports are the SERIAL ports addressd as "RS232/1" and "RS232/2", with RS232 type +/- 12 volt signals for both outp[ut and input, and are pin-accessible on the DB-25 female plug at the rear of the card.

as a "Data Terminal Equipment device" (DTE), and will hock up to a modem "Data Communications Equip." (DCE), on a straight-across basis" Pin 1 to Pin 1, Pin 2 to Pin 2, etc. HOWEVER, Tx. Instr. decided top set up THEIR ports as DCE devices, to make it "easier:" to hook up to a serial Printer such as the MX-8Ø, which is configured as a DTE, using a "one-to -one" 25-pin cable. which is why the "Impact Printer" will work with the TI and some computers using that cable it came with, and not with others (Since MOST companies like Tandy (tm) set their ports as DTE and their printers as DCE, or played cabling games with the whole thing to try to convince you not to stray from their brand. "See, if you just bought OUR printer and OUT cable to go with OUR comp[uter ...." SO we have an immense problem as regards hooking up to the so-called "standard" RS-232 , of which there are at least 1ØØ variations.

Luckily, around 1978 a guy named Dennis Hayes cornered the market on direct-connect modems, and the system he was using has become the default standard for almost all modems, since "Hayes compatible" neand PLUG compatibility also.

********** PRINTER CONNECTIONS:

Overleaf is the plug Pin-outs for hooking up some of the RS232 devices, such as modems. For a "universal" cable for most any RS232 printer, you should only need a cable as follows:

Printer: Pin 1 -- -- Pin 1 Pin 2Ø -- -- Pin 6
Pin 7 -- -- Pin 7

PLUS EITHER:

FOR	PIn 2 + 3	- to -	Port 1	Pin 3
RS232/1	Pin 5 or 6	- to -		Pin 2Ø

___ OR:

FOR	Pin 2 + 3	- to -	Port 2	Pin 16
RS232/2	Pin 5 or 6	- to -		Pin 19

**********MODEM CONNECTIONS

The "standard" 12ØØ BPS TI RS-232 pins:
"Hayes" modem pins::

MODEM	SIGNAL	DIRECTION	TI CARD

Pin 1	-- Frame Ground	--------	Pin 1 -- Ground
Pin 2	-- Transmit Data	<<<<<<<<	Pin 3 -- RS232/1 Data Out
Pin 3	-- Recieved Data	>>>>>>>>	Pin 2 -- RS232/1 Data In
Pin 4	-- N/C		Pin 4 -- N/C
Pin 5	-- Clear to send	>>>>|<<<	Pin 5 -- CTS,(CRU bit out)
Pin2Ø	-- Data Term Rdy	<<<<<<<<	Pin 6 -- Data Set Rdy 1/2
Pin 7	-- Signal Ground	--------	Pin 7 -- Ground
Pin 8	-- norm.not used	<<	Pin 8 -- Carrier Detect #1
Pin9-11	- N/C		Pin9-11- N/C
Pin12	-- High Speed Ind.>> (+12v on 12ØØ BPS)		Pin / -- Used by BBS only on TI systems.
Pin /	-- N/C [used by]	<	Pin12 -- Carrier Detect #2
Pin13	-- N/C [RS232/2]	<<	Pin13 -- CTS #2,CRU bit #2
Pin14	-- N/C [port =>]	>>	Pin14 -- RS232/2 Data In
Pin15	-- Trnasmit Clock>>		Pin15 -- N/C
Pin16	-- N/C	<<	Pin16 -- RS232/2 Data Out
Pin17	-- Recieve Clock >>		Pin17 -- N/C
Pin18	-- N/C		Pin18 -- N/C
Pin19	-- N/C	>>	Pin19 -- Data Term Rdy #2
Pin 8	-- Carrier Detect+12v	>>	Pin19)-- Used by BBS only
Pin 6	-- Data Set Ready>>>>>>>>		Pin2Ø -- Date TRerm Rdy #1
Pin21	-- N/C		Pin21-25 N/C
Pin22	-- Ring Indicator>> (+12 v on rings)		Pin / -- Used by BBS only
Pin24	-- Transmit Clock <<		Pin / -- From synchroous terminal only

********** Actually, to make a working MODEM CABLE, only 6 wires need to be hooked up, for RS232/1 Port:

MODEM RS232 CARD			MODEM		RS232 CARD
Pin 1	--	Pin 1	Pin 6	--	Pin 2Ø
Pin 2	--	Pin 3	Pin 7	--	Pin 7
Pin 3	--	Pin 2	Pin 2Ø	--	Pin 6

and for the Port RS232/2:

MODEM		RS232 CARD	MODEM		RS232 CARD
Pin 1	--	Pin 1	Pin 6	--	Pin 19
Pin 2	--	Pin 16	Pin 7	--	Pin 7
Pin 3	--	Pin 14	Pin 2Ø	--	Pin 12(or 6)

********** Note that you CANNOT make a single cable to hook up both Port 1 and Port 2 to s asingle modem, but you can make a double cable which will hook both ports, through a single plug ar the card to two seperate devices, such as a printer and a modem, sharing ground pins 1 and 7 at he Card-end plug.

This wiring hookup shown for a mod3em wioll evade many of the problems people have encountered with the "seitch settings" for htese modems, which have often been "fudged" to correct for improper cabling, thus leaving hte modem partly "out o fcontrol" by the card. On the other hand, it is possible to set the switches to "lock on" the Carrier Detect and DTR signals on the modem, and loop Pin 6 back to Pin 2Ø at he RS-232 card, and ONLY hook up: Pin 1 to Pin 1; Pin 2 to Pin 3; and Pin 3 to Pin 2; on a THREE WIRE cable, and have the modem work, though without proper status display, etc., Whatever "turns you on."

SWITCH SETTINGS: Another area of confusion. READ the manual with your modem. With a proper cable you want the DTR and the Carrier Detect and the CTS signals from the LINE, not locked on. You want Commands Recognized, Active; Verbal Display

of Status Signals, Active; and Display Commands Active. You probably want Auto Answer Defeated and Single Line selected. You want the Bell (not CCITT) system; you may or may not want or be able to pre-select the speed default. WITH AN IMPROPER CABLE, you will have to LOCK ON the DTR, CD, and CTS signals, probably. If your modem DOES NOT WORK like your friends, using his cable, it does not mean your modem is bad. Your switched probably DO NOT MATCH his settings in function. PLEASE NOTE THAT FUNCTUI)ON IS "ON". SOME "ON" positions activate a "DEFEAT" of that function, therefore, "OFF" is sometimes "on" on modem functions!!!! ENUF? Clear as mud, huh? GET HELP from someone who can intrepret the manual if you can, or your U/G sysop maybe.

Please note that TI's pins #5 and #13 (CRU extra bits) would have been been available as "input bits", for sensing such things as the "Ring", "High speed", "Carrier detect" signals, which NOW hvave to be read by such places as the CASSETTE port!

It actually does NO GOOD to hook up things such as pin 12 to pin 12, since the TI card cannot READ at pin 12, but is actually simulating an output AS IF IT WAS A COMMUNICATION DEVICE. Pin #19 CAN be read and is sometimes used with a BBS systems to read for Carrier or for Ring or High Speed. With proper utilization and switching, only the Carrier Detect needs to be monitored electrically, anyway. END

STILL IN USE

---------- by Andy Dungeon

from the Kentuckian, April - May, 1991

I have owned my TI-99/4A for nine years now and I use it as much or more now than ever. Part of my job includes running monthly movement reports on a mainframe (TI incidentally), taking that data and putting it in to a more readable report. The first month, I used the existing method which uses a PC with LOTUS 1-2-3. I had very little experience with this spreadsheet and no time to learn it. So I spent hours doing the math calculations manually and trying to print it in an attractive format. After finally completing that first report, I decided that I had an easier way! I took all the data and entered it into a TI-Writer file, wrote an Extended Basic program that now automatically performs all mathamatical functions and prints the data in just about any order needed, and in the print style that I prefer. It also includes printer codes to underline and double strike chosen segments of data. Also, it will sort data by rank. This program makes extensive use of SEG$ and VAL statements and took all of one evening to write.

My co-workers and boss were skeptical of using the TI for this but after I turned in the first report produced entirely on the TI, their skeptisism faded to interest in our little orphan. I continue to modify and improve the program and may be able to do more reports using basically the same program.

For one reason or another, the TI boom seems to have missed NE Tennessee. There are no longer user groups even close to this area and I have yet to find even one owner of a TI. Despite these sad facts, I will continue to use the TI for as much as I can.

FROM THE TEACHER'S DESK

---------- by Dave Howell

Erie 99er User Group , Erie, Pa. , JUNE 1991

WHAT'S AROUND THE CORNER IN OUR SCHOOLS?

Technology, that's what! Videodisks are beginning to replace books in at least one state. The Texas State textbook adoption system recently approved a science curriculum on videodisk. This decision means that each school district in Texas can choose to spend state funds on science textbooks or this science videodisk program. This event is the first of its kind in this country.

Turning to cable, telephone and satellite communications, educators are waiting to see how the FCC, Congress and the courts reshape the regulations. These changes, if drastic, could affect distance learning and data transmission especially if telephone companies are given incentives to wire the country with fiber-optic systems.

If the cable industry wins out over the phone industry, there may be considerably different outcomes in terms of who has the right to do what with information, in education and other fields, and at what cost.

DISTANCE LEARNING - WHAT IS IT?

What happens when two isolated communities - one in Wyoming and the other in Minnesota - need to bring students at local schools into closer contact with the cultural diversity of the rest of America? Plans call for distance-learning technology to help students at Cornelia Elementary School in Edina, Minnesota, get acquainted with students in an Arapaho school in Wyoming. Students on an Arapaho reservation had no contact with any one but other Native Americans. They needed to cope with the diversity of American culture as a whole. Travel by bus was expensive and inconvenient, so communications technology seems to be the school's best bet.

While the technology to link these schools is in place, the biggest chore these educators face is learning how to interact through computers and related distance-learning mechanisms. Actually, these activities will not focus on the technology itself, but on how educators can use the technology to better prepare today's youth for life in the 21st century.

SIMULATIONS FOR DECISION MAKING SKILLS

Computers are good at analyzing situations where complete information is available and only one correct answer is possible. But situations like that seldom exist in real life. Computer simulations are being used in political process works, through games that appeal to students' competitive nature and their desire to beat the systen. Students get a feel for decision- making in a limited-information environment where answers are not always easy to reach, and information can be less than complete.

In criminal-justice simulations, each player is assigned, at random, a status in life - perhaps wealthy and well-connected, or perhaps low- income and unable to afford bail or a good awyer. The game illustrates the different outcomes possible to various players depending on the situations assigned at random to them.

VIDEO TAPES OF THE 1991 LIMA MUG CONFERENCE ARE AVAILABLE TO THE TI COMMUNITY

At the May 18, 1991 Lima Multi User Group Conference a very complete video record was made of all formal presentations as well as most of the display and sales tables in the exhibit area. The entire record is on 3 VHS tapes and includes more than 16 hours of viewing. We are pleased to make these video tapes available to the TI community at a nominal cost.

ANY USER GROUP (including those not attending the conference), or any paid MEMBER of the Lima Ohio User Group, or any EXHIBITOR at the MUG Conference can order these videos from us at P.O. Box 647, Venedocia OH 45894. Send either three blank VHS videos and a check for $3.75 (for return postage and wear and tear on the machines we use to make the copies), OR a check for $15 ($18US if the destination is Canada). For those sending money only we purchase the blank tapes for you. This offer is not made to individuals. However, we do invite individuals interested in obtaining these videos to write inquiring about out of area membership in the Lima Ohio User Group.

LIMA TI MULTI USER GROUP CONFERENCE
May 18- 1991 Lima Ohio

----------VIDEO TAPE #1----------

Tape Counter	SPEAKER	TOPIC
75	MIKE SEALY, MICKEY SCHMITT, NORM ROAKKE	Software from MS EXPRESS.
1025	EUNICE SPOONER & CHRIS BEDARD	The OAKLAND COMPUTER CLUB, an elementaryol user group.
2110	IRWIN HOTT	Current status of the newsletter article clearing house BBS.
2770		The "MUG CONFERENCE", a meeting of user group officers.
3685	MIKE WRIGHT	Bits and pieces of TI history including a demo of the 99/2 computer.
4235	GARY BOWSER	Hardware products of O.P.A.
5070	BEERY MILLER	Software from 9640 News.

LIMA TI MULTI USER GROUP CONFERENCE
May 18- 1991 Lima Ohio

----------VIDEO TAPE #2----------

Tape Counter	SPEAKER	TOPIC
100	CHARLES GOOD	Preview of FUNNELWEB with support for DSKU file comments.
1175	BRUCE HARRISON	Demo of "GOLF SCORE ANALYZER", "HARRISON WORD PROCESSOR", and classical music disks.
2165	BARRY TRAVER	XB programs that write assembly programs and other XB programs.
3090	CHRIS BOBBITT	Demo of "SCREEN PREVIEW", "LINK", "CLASSIC CHECKERS", "VIDEO TRACKER", "LINE EDITOR", and "SWG CHAR SET EDITOR" from ASGARD.
3900	DON O'NEIL	An accelerator mod for the 99/4A based on the 99105 CPU chip.
4200	BUD MILLS	On screen demos of MEMEX MEMORY EXPANSION, P-GRAM, and the HORIZON RAMDISK.
4900	BARRY TRAVER	GEnie and GENIAL

LIMA TI MULTI USER GROUP CONFERENCE
May 18- 1991 Lima Ohio

----------VIDEO TAPE #3----------

Tape Counter	SPEAKER	TOPIC
100	JOE ROSS	Demo of C-SHELL 99
2010	CHRIS BOBBITT	ASGARD software support for PAGE PRO 99
2730	E.M. SMITH	Demo of "NEWSLETTER PRINTER" software by Art Gibson for formatting and printing newsletters.
3765	MIKE MAKSIMIK	Interview with MIKE MAKSIMIK about his MIDI INTERFACE for the 99/4A and Geneve.
3925		Video of displays and interviews with people in the exhibit area.

(This article/item comes from the June 1991 issue of BITS, BYTES & PIXELS (Charles Good, editor), the newsletter of the Lima OH 99/4A User Group, P.O. Box 647, Venedocia, OH 45894. It may be used by other user groups as long as proper credit is given. It was reformatted for 80 columns by Barry Traver.)

THE CASE FOR EXTENDED BASIC

PART 3 -

from Central Winchester User Group, Oct.'88, by Art Byers

Speed of execution, the weak link?

While we could compare Basic to 'c' or FORTRAN, because this chapter is about speed, let's stay pretty much with the acknowledged racing champ, Assembly, for comparison.

To begin, let's admit straight out that where TI Extended Basic fails is in speed of execution. When Monty Schmidt wrote his well known and popular TECHIE BBS program (in Extended Basic), he had to CALL LINK to assembly routines to do such things as reading the pin input/output of the RS232 to send and receive data via a modem. TI's double interpreted Basic simply could not hack it there!! But note, Monty was able to write most of the BBS program in XB.

Let's go back to some fundementals. As in any computer, all languages eventually end up being put into machine language in order to be run. For the 9900, the fastest language and one that can do anything and everything that is possible with the computer is, naturally, Assembly - the instruction set of the chip itself. The compiled languages, 'c' and FORTRAN, (as well as FORTH) allow the use, where the programmer desires, of Assembly language routines. The reason these Assy routines are used is that the compilers do not allow full access to the instruction set, but only use a limited part. This restricts them from equaling true assembly speed, nor is the compiled code written in such a way as to be congruent with the most efficient way of writing Assembly. Where maximum speed is needed, XBasic can also use Assembly routines as shown by the above example. In this respect it is the equal of the compiled languages.

The areas where speed is vital, such as lengthy math calculations, sorting a large data bases, big recursive loops, global searching, etc. are the areas where ALL the languages of the 99/4A most often tie in to Assembly routines.

Where blinding lightning speed is required, Assembly programers will write their own Device Service Routines, often accessing several chips, such as the 9918 (Video display) or the chips in the RS232 card, directly and bypassing the ROM/GROM routines many of which are written in GPL. More often, however, most programmers prefer to access the same ROM/GROM routines to save writing code because they don't require the extra speed.

You may now point out, and with justification, that if I stress the ease of understanding and simplicity of XB, I am ignoring the difficulty of writing Assy routines. Have I just shot my own arguments full of holes?? How can the average XB programmers (as apposed to advanced programmers in general) be expected to write Assembly code.

The answer is that they are not expected to write it, no more than they were expected to write the code in the XB module

itself. Today, there are many sources of routines that can be loaded into memory and accessed via "CALL LINK". The programing group led by Barry Traver of Philadelphia has not only put together these routines under the catch name of XXB,(Extended, Extended Basic) but they have devised a way of putting them into memory image (program) form to be loaded simultaneously into memory along with any XB program you have written. Several other Commercial and Fairware authors offer similar material. In the critical areas, XB can use assembly routines to bring its speed to completely acceptable levels.

This business of speed, in general, I consider to be highly over rated. For most purposes Extended basic is more than fast enough. Fortran, c, or Assembly may pop a full screen of text into view in less than half a second - but what matter if it takes a few minutes for the user to read the text. XB can fill a screen with text in less than one and a half seconds. Surely that is fast enough.

When you realize that most programs, no matter what the source language, spend much time WAITING for things to happen - ie: a user to make an entry, a disk to be searched, or a printer to finish printing, you must then consider that more often than not, XB is easily fast enough to accomplish its purposes. In most cases, what you are really talking about is APPARENT speed. Anyone who has searched a commercial data base at $1.00 per minute, using an all machine language terminal program, will tell you that the 30 seconds it takes to dump the text buffer to floppy disk can seem like half an hour, while imagining money pouring out of their pockets into the service's coffers!!

Care ful planning and proper XB programming can help to minimize the "waits" in an Extended Basic program, or any other language programming for that matter. However, often these delays are out of control of the program. A printer buffer, a RAM disk or hard disk will materially speed up any language on any computer.

----- * ----- * ----- * ----- * ----- * ----- * -----

To sum up, I sincerely believe XB, even TI BASIC, is more than adequately fast for practically all the programs the average user will write for a home computer, which is what the 99/4A was meant to be. Where it can't fill the required bill of speed, a link to a faster language is certainly allowable and available.

Part 4 will discuss accessing the support built into the XB module that are often more difficult to duplicate in other languages.

**********EoF**********

COMPUTERS - NEW TODAY,

by Frank DeCandia
Front Range 99ers

May 1990

VINTAGE MACHINES TOMORROW

WOW! Technology has changed so much since the introduction of the T.I more than ten years ago! Texas Insrtruments had a winner back then and could have another winner if tey decide to manufacture another computer that competes with Amiga and the Atari ST. This article doesn't really speak on the T.I computer. This is meant to enlighten you "T.I. only" people of what is out there.

What is out there? Power, power, and still more power. Let's make a comparison. How long does the following Basic code take to run in T.I. Basic?

```
100 FOR D=1 TO 1000 110 NEXT D
```

If my timing is correct, it takes exactly 3 seconds. Not bad for a 10 year old computer! The first I.B.M. and Apple computers ran at 4.77 mhx (megahertz) CPU speed. The above example is zapped through in only 1 second. How could todays supercharged XT's and AT's fare in such a test? I don't know, I didn't have an opportunity to test them, but the speeds are phenominal.

Let me tell you about the computers and the network we use at my job. What's my occupatin, you ask? I am the Program administrator and data entry person for a mid-sized law firm.

A network involves the connection of PC's to the main computer (called a file server) which contains a hard disk. This serves as main storage for everyone's work. The network at my job was installed about 1986. A "state of the art" AT file server was installed running at 8 mhz and has a hard disk capacity of 70 megabytes (70 million characters of storage!). T.I. owners can get 60 megabytes of hard disk storage. Not bad for a "home computer".

The CPU on that computer is only 8 bit (1 character processor). But, it has 0 wait states (no processor time is wated). (T.I. is a 16 bit .) We have 13 work station PC's (a work station PC is where you do your work) running ar 8 mhz or slower connected to the file server. There is one 16 bit, 12mhz 286 AT computer connected as a workstation with a tape back-up unit capable of storing 300 megabytes (yes, 300). If we daisy chain another tape unit we can get 500 megabytes of storage on only 4 tapes. That"s MY computer (I don't own it, I use it.)

Although I am running 3 times faster than our file server (or anybody else for that matter) I am slowed down by it. My processir is only 4 mhz fater, but it handles 16 bits (2 characters) of informatin compared to 8 bit (1 character) of the file server. The file server doesn't only take care of me. At any given time it will be serving 4 to 13 others computers. This creates a bottle neck when many people are reading or writing from the disk.

This system was originally meant for word processing and some spreasheet applications. It wasn't meant to handle the disk intensive software we have now with any ease. Needless to

say, if someone is preparing a report, or writing a check through Foxbase (a dBase clone which compiles its programs for faster execution) I notice a system lag. The system really gets bogged down when 2 or more people are generating reports. Sometimes I have to remove old case numbers from the check program. Although this is done automatically by the program, it takes over 7 minutes to complete. That's 35 minutes os wasted time if I remove only 5 cases. Mean while, no one can write a check when this is being done and my productivity dies because I am forced to sit and wait. I've been known to sleep at my desk.

How do we solve this problem? Easy, with the technology of today. We have on order a 32 bit 25 mhz 386 file server with a 300 megabyte hard disk. Do we really need that much storage? You bet we do! We are down to our last 4 megabytes or so. There are some files that must simply grow. Other files like word processing files can be deleted or archived on disk. Archiving involves the compressing of a file with a special program that will shrink it down to as little as half the storage space. The only drawback is you have to un-archive to use that file or program. (There is a program like this for the T.I.!) We knew sooner or later we were going to get this system, that is why we bought a tape back-up system with a huge capacity last year.

You may ask, "What's the difference between a PC, XT, 286 AT, and a 386 AT? Won't any computer let me do my work efficiently?" Well, yes and no. It all depends on your application and/or needs. Not all programs will work in all computers. Some do run on most computers but will run more slowly. A PC is the first personal computer to come out. Before that it was just large business/government computers or slall home computers.

Here is a general break down of the different computers and power. It is only to the best of my knowledge, but it"s pretty accurate.

PC - 8 bit CPU; 4.77 or 6 mhz; 640 k maximum RAM. 84 key keyboard with 10 function keys. Decent system. You can't buy these anymore.

XT - 8 bit CPU; 8 or 10 mhz; 640 maximum RAM. 84 key keyboard with 10 function keys. More flexible system.

286 AT - 16 bit CPU; 12 or 16 mhz; 640 k or 1 megabyte RAM. Expandable to about 4 megabyte RAM. 101 key keyboard with 12 function keys. These computers are commonly known as "brain dead".

386 AT - 32 bit CPU; 20, 25 or 33 mhz; 1 megabyte RAM, expandable to 16 or more megabytes. 101 key keyboard with 12 function keys. The top of the line 386 is only the second most powerful desktop computer around!

486 AT - 32 bit CPU; 25 mhz; Due to better design, a 25 mhz 486 is slightly faster than a 33 mhz 386. Not enough to justify the cost difference. 1 to 4 megabytes RAM, expandable to ... ? 101 key keyboard with 12 function keys.

XT's and AT's use 5-1/4" disks with 360K and 720K capacity respectively. 286 AT's use 5-1/4" disks with 720K or 1.2M capacity. Some have 3-1/2" disks with 720K or 2.44 M capacity. Some systems have one of each. 386 AT's have 5-1/4" and 3-1/2" disks with 1.2 and 1.44M capacity respectively. Ditto for 486's.

All the mentioned systems can use or come with hard disks. They vary too much for me to cover. I've seen disk with storage

ranging from 5 megabytes when they first became available for personal us to 66Ø megabytes. Not all hard disks will work in all computers.

There are also 386 SX computers! (This is making me sick.) They are a cross between a "brain dead" 286 and a 386. They are 32 bit machines that commonly run at 16 mhz. For a little more money than a fast 286, you can buy a stripped down version of a 386. (Anyone for a game of Russian Roulette? If not, I'llsettle for Tetris.) Where will it all end?

Portable computers also have come a long since the 1 line LCD displays of yesteryear. Several months ago I saw that color protables are comong to market! There were prototypes that were being reviewed in PC Nagazine. (If you wnat a great magazine on PC's, this is it)

Why can't the computer industry have just one new standard at a tiame? I don't know. Why does the Lone Ranger wear a mask if he's a good guy? Why not use gold bullets instead of silver? Why is his horse named Silver? Why did T. I. stop making silver 99/4A's?

It's no wonder I stayed with T.I. all these years. I know a program will ALWAYS work on my computer as long as I have the right hardware. The T.I. IS a state of the art computer. Not because of conputing power, but because of it's longevity. The others should be so lucky.

THE NEXT GENERATION

---------- by Wm.Carey College
Datamation August, 1, 1987

The rapid -fire change of the field that I'm in,
While welcome, still sometimes confuses.
Big Blue changes the words that it uses.
These wonderous machines that we use every day
I call personal COMPUTERS. Do you?
That word's had its day. It's clearly passe.
Now ther're personal SYSTEMS (slash two).
We've hoarded our data (much money we've spent)
Since Hollerith's days of the card file.
To tape it went, on to flopies was sent,
Then to Winchester disk, now called HARD FILE.
A new way of moving the cursor came through.
"A mouse!" we exclaimed. "Oh how nice!"
"But wait," said Big Blue. "A rodent won't do.
From now on, it's POINTING DEVICE."
Think of the many fine dots on a screen.
They're pixels, we all know quite well.
Not so! Whether green, blue, or somewhere between,
From now on each one is a PEL.
Oh TV celebs, since Korea unseen,
The whole truth tell, in plain English please:
That new on the scene is not merely machine
But the next generation in computerese!

REM's

---------- by K.Johnson
S F G 99ers

on REM's

from: Queensborough Monitor,Feb.,90

Consider the lowly REMark statement, much maligned in word and cartoon as a time and memory waster. Time waster it is not, taking only millionths of a second to pass thru in a program. A full memory (16k) of REM statements takes less than a tenth of a second to RUN thru. They do use memory, but used in short statements, their worth outweighs the few hundred bytes of memory they may occupy.

Their baic usefulness is to identify subroutines and other parts of a program. This is very helpful when debugging or changing a program. REM's can be used in other ways, such as for a simple filing system using statements numbers for numerical classification. An example of a membership list entry would be:

```
1Ø156 REM JOHNSON, KEN
            23424 HAPPY VALLEY DR.
            NEWAHLL, CA. 91321
            PHONE NUMBER, ETC.
```

The first two statement number digits stand for the first letter of the last name (J is the 1Øth letter of the alphabet). The next two digits are the second letter of the last name and the last digit of the statement number (6) in this example would mean the 6th entry with the last name first letters JO. Reading this kind of file is not done by a RUN but by a LIST ##### - ##### or EDIT ##### followed by v or .

There are a couple of interesting things about REM's (in TI BASIC only). The first is: when ENTERing a REM for the first time or if a REM statement is changed in EDIT mode and re-entered (by ENTER, , or v), one extra space is always inserted (by the computer compiler) between "REM" and the text of the REM statement. This extra space does not occur immediately in the REM statement, but will be present when LISTed or recalled in EDIT. Understand that the space is only added in the first entry of the REM or each time it is changed in EDIT and re-entered. Just looking at it in EDIT and re-entering with no changes does not require re-compiling and so no extra space is added. This extgra spaCE CAN BE FRUSTRATING IF YOU ARE TRYING TO ACHIEVE A SPECIFIC TITLE, INSTRUCTION OR FILE FORMAT WITH ren'S SO PLAN AHEAD!

The second is: you are not limited to the normally expected 4 lines of entry (about 1ØØ spaces of text) per REM statement. Instead, you can get over 5-1/2 lines (156 text spaces) per REM! The way to obtain the extra spaces is to first completely fill all 4 lines available (blank spaces may be used) untill the cursor stops. Then ENTER the REM. Next recall the REM by EDIT. The 5th line is now available for text entry (remember that an extra space will be inserted after "REM" when the changed REM is re-entered). The remainder of the 156 spaces is available on the 6th line by repeating the previous procedure, ie. completely fill the 5th line untill the cursor stops and ENTER. Recall the REM by EDIT and about 3/4 of the 6th line line may be used before a "LINE TOO LONG" comment appears when you enter. Incidantly, this same procedure will also goive 156 characters in PRINT, INPUT, DATA, and READ statements. +3Ø/Ø1+

Editor's Bit

---------- by Marshal Ellis
Mid-South 99er User Group, October, 1991

* "A Brief History of the World: Certifiably Genuine Student Bloopers" written on essay questions and collected by teachers throughout the United States, from eighth grade through college level, 1987. Compiled by Richard Lederer.

==========

"The nineteenth century was a time of many great inventions and thought. The invention of the steamboat caused a network of rivers to spring up. Cyrus McCormick invented the McCormick raper, which did the work of a hundred men. Samual Morse invented the code of telepathy. Louis Pasteur discovered a cure for rabbis. Charles Darwin was a naturalist who wrote the *Organ of the Species.* Madman Curie discovered radium. And Karl Marx became one of the Harx brothers.

The First World War, caused by the Assignation of the Arch-Duck by a surf, ushered in a new error in the anals of human history."

----- * ----- * ----- * ----- * ----- * ----- * -----

The student's creative view of history has now come to its conclusion. This did turn out to be a long article to put on this last page. Now, I get to figure out what can take its place each month.

Along the same line, I am putting a lot of effort into the newsletter cover art. Does anyone have some cover material they would like to submit? This is just seasonal artwork done in TI Artist picture file. MHE

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PROGRAM BIT

OCT 1991

6:30pm - Assembly Language programing class
in Cafeteria

7:00pm - Main meeting begins, general discussion.

7:15pm - Surprize demonstration by Beery Miller
of 9640 News.

9:00pm - Meeting ends, late dinner at location
to be announced.

NOTICE

Information contained in TIdbits is accurate and true to the best of our knowledge. Viewpoints and opinions expressed in TIdbits are not necessarily that of the Mid-South 99'ers. We welcome any opinions/corrections from our readers. Articles may be reprinted elsewhere as long as credit is given to the author and newsletter.

GROUP INFO

Visitors and potential members may receive 3 free issues of TIdbits while they decide if they wish to join (no obligation) On the top of your label is a code. A Y means you are a member, N means 3 free list, UG means user group and S means a business. Beside the Y is a date, one year from that date your dues are due. A dollar sign ($) on the label will indicate that your dues are due. The library is open only to members. Library list is $1. Mail order disk library access is $2 for the first disk and $1 for each additional disk - max of 5 disks per month. Order by disk number only. At meetings, library access is FREE if you exchange your disk for ours or $1 per disk for our disks. Send all mail order library requests to librarian's address! Send dues and correspondence to group address.

CALENDAR

MEETINGS: OCT. 17, NOV. 21, (3rd Thursday!)
WORKSHOPS: TO BE ANNOUNCED

24HR TI BULLETIN BOARD

The 9640 NEWS BBS 300/1200/2400 Hayes. 901-368-0112

The Full Moon BBS 300/1200/2400/9600/14400 HST 901-386-1760

GROUP MAILING ADDRESS

Mid-South 99 Users Group
P.O. Box 38522
Germantown, Tn. 38183-0522

LIBRARY ADDRESS

Jim Saemanes
46 Higgins Road
Brighton, Tn., 38011

MEMBERSHIP APPLICATION

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CITY _____ ST ____ ZIP _____
PHONE(____)____-_____:INTERESTS _____
_____
EQUIPMENT,ETC._____
_____

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