net99er news

Newsletter of the North East Tarrant County TI 99/4A Users Group

Vol. 7 No. 5   May 1989

NEXT MEETING:
SATURDAY
JUNE 3rd

at 9:30am   in the NRH Community Center

— * CLUB OFFICERS * —

President	James Crosson
Vice President	Charlie Bathman
Treasurer	Lee Deforest
Secretary	David Shivers
Membership Chairman	Bill Duncan
Librarian	Joe Torres
Newsletter Editor	Tom Collins
TI-NET BBS SysOp	Phil Chappell

TI-NET   581-1421   300/1200—7E1— 24 hours

For those of you still waiting for the May newsletter, well you might just get it with the June issue, due to RED TAPE from the government. Hopefully this week we will get the newsletter out and everybody will have an sufficient notice to attend the meeting.

I just learned this evening that a member of ours and the Dallas group has been injured in a car wreck, his name is well known to many of the group for a long time and he has put many hours in both our group and the Dallas group, his name is Tom Hall. I understand that he is hospitalized in the Arlington Community Hospital, but I don't know any of the particulars.

As promised recently, we received the new grom ports in from TI and we will have them at the meeting for those that need them.

This month I will attempt a demo on disk managers, especially DM1000. It seems that every year we have to give this information to the people of the club, however I believe that it is because that we have so many new people that join each year that they are unaware of the type of disk managers available and how to use them. Maybe we will catch the interest of a few.

Hopefully, some of the people that said they would check to see where we could hold our first ever cook-out have been checking for us and come up with some good ideas and possible places to have this event. Please let us know at the meeting.

Also this month, I hope that Ron Miller has been studying his Telsup package and can shed some light for those of us that cannot seem to find daylight by ourselves. Perhaps if we offered riches and fame we could lure him to our midst in order to render us help, but maybe saying 'please' might work, let's give it a try. As everybody should know by now the meeting is this Saturday the 9th of June, at the North Richland Hills Library and Community Center at 9:30 a.m. If you can make it, please do. We will be glad to see you and hopefully you will be glad you made it too. As always, see ya at the meeting. ‡ James ‡

----- MEMBERSHIP UPDATE -----

Our Membership Chairman reports that as soon as he figures out how to print his member file from TI-Base, he will get the updated list out to me so your mailing label will reflect your expiration date like it should. One charge to the label is that it will say 'exp 12/89' instead of M12/89 like in the past. Also if I can keep up with the system, I will stamp labels with a RED stamp that says RENEW NOW! if they are one month from being due. Remember, renew your membership when it comes due and help the club stay solvent. We will have to cease sending newsletters to former members who have not shown an interest in renewing their membership. Please renew and continue support for the group. Thanks - Tom Collins

An explanation is in order for the lack of a newsletter for April. I had an unfortunate problem regarding crossed Social Security numbers and it took several weeks to straighten out. Things are back on track now. I would like to thank all the people who have made my job as newsletter editor easier. It has been an experience that I will remember. It has had some bad times, mainly when we lost our publisher but on the whole we have had lots of good luck since then. We are currently looking for a new editor for the newsletter. I will personally train anyone who wishes to take this job. The newsletter is considered the lifeblood of user groups because there are so many people who are unable to attend every meeting. This is how they keep in touch with the rest of us. And the NL is the club's link to other clubs throughout the world. Our newsletter reaches Australia, Canada, and many clubs in the States. My dilemma is this - I will not be able to do the newsletter after this summer. At the beginning of the new school year, someone must take over and produce it for the club. Take the time to mull this over and please do something for the club that has done so much for you. Thanks, Tom Collins - Newsletter Editor.

SOME COMMENTS ABOUT DISK PROTECTION:
HOW TO PROTECT THE RIGHTS OF
BOTH SOFTWARE AUTHORS AND USERS
opinions of Charles Good -Lima 99 UG

After I laid out over $40 to purchase WRITEREASE, I discovered that this disk software is heavily protected and not copyable using any of the commonly available track copiers. I am thus unable to make any backup copies of WRITEREASE, even though the law allows me to do so. I am now stuck with my one and only program disk which is only guaranteed for 120 days. I have to hope that my kids don't get hold of the disk and finger it. I am reminded of the cartoon in which the child has a computer disk in one hand and a magnet in the other. The kid says to his father, "I thought you said this was magnetic media." I have to hope that I don't turn off the power to my external drive with the disk still in the drive, as this sometimes messes up the disk.

Much of the software I buy I expect to use on a regular basis, and as such I like to put on my ramdisks. In particular, one would think that a word processor would get regular use. WRITEREASE is advertised (TexComp 1988 other. The kid says to his father, "I thought you said this was magnetic media." I have to hope that I don't turn off the power to my external drive with the disk still in the drive, as this sometimes messes up the disk.

Much of the software I buy I expect to use on a regular basis, and as such I like to put on my ramdisks. In particular, one would think that a word processor would get regular use. WRITEREASE is advertised (TexComp 1988 catalog p. 28) as "designed especially with owners of the CorComp MEMORY PLUS products in mind. With the MEMORY PLUS RAMDISK capability the complete WRITEREASE and and its SPELL CHECKER can be loaded into the ramdisk for lightening speed access!" This is NOT TRUE! Only the spell checking dictionary can be put on a ramdisk. Because WRITEREASE is protected, the program itself can only be loaded from floppy in drive one. (cont. next page)

Because of these reasons, I hate disk protection. Unlike modules, disks are fragile and can be destroyed. If I had known that WRITEREASE was uncopyable and (contrary to advertising) could not be completely booted from ramdisk I would not have purchased the product. If I can avoid it, I will not again purchase protected disk software. I understand and respect the problems authors of copyrighted software have with piracy, and I understand the reasons why such authors want to try and limit copying of their product. I am not a pirate. I don't hand out copies of my commerical software to all my TI friends and I don't put copies of commercial software I purchase in my user group's library. I do feel, however, that there are good reasons to use my legal right to backup my disk software. Ultra protection, such as used with WRITEREASE may actually discourage people from purchasing the software, resulting in decreased rather than increased income to the software copyright holder.

Here is my suggestion to commercial software authors who wish to prevent unauthorized distribution of their product. This suggestion will allow legitimate owners of to freely backup their software and to install this software on ramdisks or hard disks. Sell the software on completely unprotected disks. Hide a secret serial number somewhere on the disk buried within the code of the software in a location known only to the software author (eg. 5th byte of 3rd sector of LOAD program). Each serial number can be referenced in a master list to the original purchaser. Every time the disk is copied, the secret serial number goes with the copy. If copies are passed around, eventually through the grape vine a copy will get back to the software author. Software authors should make the existence of this secret number known to all purchasers, and perhaps offer a reward to anyone who provides the software author with an unauthorized copy. Such a secret number would be very difficult to locate. You couldn't find it by just looking around with a sector editor. It would look like part of the program code. It would take a very smart disassembler to separate the serial number out from the rest of the program code. The threat of such a secret number would, I think, discourage legitimate purchasers from giving away copies of their software. Great Lakes Software already uses this system. When you purchase disk software from them at a computer show you can actually see this protection system being installed. They don't just hand you a disk. They first ask your name and address and than take the disk, put it into a drive, and do something on a keyboard before handing you your disk. Presumably they are adding the identifying code number that their literature states is on each original disk.

Both software owners, and software authors have legitimate rights to protect their investments. I believe that my suggestion would protect the rights of both sides while at the same time making the software easier to use and thus more likely to be purchased.

HORIZON RAMDISK USERS!

Place this Program on your MENU and go to Extasic FAST!
100 CALL INIT
110 CALL LOAD(-31952,255,255,0)

----- TECH TALK by Mike Maksimik
from the Chicago TImes
(continued from last issue)

I mentioned the TMS9995 earlier. Just what exactly is a pipeline microprocessor? Well, the 9995 is not only fast, but it has a distinct controller ROM, the RS232 interrupt routine--all of these put together with the right glue can make a great DOS, and all I did was to provide the necessary glue for the parts, and it works! It has a batch file load and execute, D/F 80 loader (compressed/uncompressed), program file loader, cos utilities (FORMAT, COPY, RENAME, DELETE, ASSIGN) and screen control commands (WAIT, BEEP, CLS, GOTOXY, PRINT, ECHO ON/OFF) and "smart" control keys, as well as a 255 E/A supercart, and the utilities that it needs are extracted from the E/A GROM--that way, I can restore the lower memory expansion to a defined state very quickly without reading from a disk drive. The DOS is completely self contained, and will provide a choice for you on the master title screen. I am a college student, doing projects to complete my final years of undergraduate study in computer science. This project was inspired by a need for a better operating environment for the TI as well as a need for me to see if it could be done. Well, I have succeeded! The DOS uses the DSRLNK utility to attach to the low level device drivers. It gives you the familiar A> DOS prompt, and will controller ROM, the RS232 interrupt routine--all of these put together with the right glue can make a great DOS, and all I did was to provide the necessary glue for the parts, and it works! It has a batch file load and execute, D/F 80 loader (compressed/uncompressed), program file loader, dos utilities (FORMAT, COPY, RENAME, DELETE, ASSIGN) and screen control commands (WAIT, BEEP, CLS, GOTOXY, PRINT, ECHO ON/OFF) and "smart" control keys, as well as a 255 E/A supercart, and the utilities that it needs are extracted from the E/A GROM--that way, I can restore the lower memory expansion to a defined state very quickly without reading from a disk drive. The DOS is completely self contained, and will provide a choice for you on the master title screen. I am a college student, doing projects to complete my final years of undergraduate study in computer science. This project was inspired by a need for a better operating environment for the TI as well as a need for me to see if it could be done. Well, I have succeeded! The DOS uses the DSRLNK utility to attach to the low level device drivers. It gives you the familiar A> DOS prompt, and will mimic DOS to a degree, but with one delightful exception--the DOS is being written by me, and I can have it do whatever I want it to! I will no longer be a slave to incomplete DOS commands or ambiguous and useless syntax, often the product of overpaid software developers. The commands are clear and precise, and the DOS is very short, only about 5k at this writing. Since most of the DOS is already present in our machines, in places like the E/A GROM, the disk controller ROM, the RS232 interrupt routine--all of these put together with the right glue can make a great DOS, and all I did was to provide the necessary glue for the parts, and it works! It has a batch file load and execute, D/F 80 loader (compressed/uncompressed), program file loader, dos utilities (FORMAT, COPY, RENAME, DELETE, ASSIGN) and screen control commands (WAIT, BEEP, CLS, GOTOXY, PRINT, ECHO ON/OFF) and "smart" control keys, as well as a 255 character input

queue for type-ahead. Many of the commands are internal, and they reside only in the supercart. Other commands can be created from object code, which you can create from any one of the compiling languages, or the assembler (i prefer the assembler) and by simply typing the name of the file at the command prompt, the file will be loaded and executed.

I hope to have some sort of language compiler for DOS, such as a basic/pascal compiler, to facilitate creation of programs and utilities. My plans include a file transfer utility (terminal emulator), windowing, an 80-column editor, and multiprogramming. If for no other reason, then to gain experience and to enjoy doing it on my $49.99 TI99/4A. Of course, I wouldn't dream of charging anyone for this DOS, and I've had some interesting suggestions for names. "F-DOS" by our own editor, BOB DEMETER, for FROGMAN-DOS, since my "other" hobby is SCUBA DIVING, "XIOS" for eXtended Input Output System, and whatever...I am using version 1.24, which is relatively complete. I would just like to add the bells and whistles, plus write a manual on it's use.

Now for some more TechTalk. If you are confused as to why computers like the c-64 and the apple all have DOS commands built in...well, the designers of those computers anticipated a disk system, and available to most users, so the operating system and BASIC language all had the DOS commands either in the disk unit itself, or in a disk BASIC which loaded in on powerup. Since TI did things a little differently, they preferred to make DOS a separate thing, with a disk manager module to handle disk tests and formatting. It seemed a little annoying that in order to rename a file from BASIC, you had to either load the program and save it under another name, or if it was a DATA file, you had to OPEN it and read all of the data, then re-save the data to disk under another OPENed file name. This could be terribly inconvenient to users, but consider what the others have...the c-64 must send all of it's DOS commands through a command channel, and the disk drive will run itself. It essentially is another computer, a 6502 based one, to be exact, that only accepts commands from a serial line and performs all of the disk commands. Imagine.. a computer so STUPID that you need TWO computers to run any disk software...and you would be paying for TWO computers also. Commodore doesn't tell the average users that they are essentially using TWO computers instead of one. Apple computers are also based on the 6502 series of microprocessors. Apple used an old method of running it's computers...just write a DOS and put it on disk, and when the computer is powered up, the DOS is loaded. Funny thing, though. Although Apple boasts of 64k of RAM, much of that is used to hold the resident DOS, and BASIC. If you want to load a program which needs the space allocated by DOS, you are out of luck, since your program might make DOS calls to perform disk functions. And if DOS were overwritten, then when your program is finished, it must go back and load it all over again. And 6502 is not exactly the processor I would waste terribly expensive memory on, since it has a very limited instruction set, and things I take for granted now, like memory-to-memory word moves, multiplication, division, and subroutine branching would be terrible to implement on an apple of commodore 64. I just don't know how they have survived this long...

Our little TI, on the other hand, has a wonderful method for handling new devices. The GROM header, present on all ROM in the expansion box, and all command modules, is the link between the unknown and the known. It allows us to plug in new devices at any time in the future, and the operating system will immediately recognize the device, as if it were there from the beginning. This is what will keep our TI computers alive. The method of access is very similar to the IBM pc method. Each peripheral card has a certain address in the serial addressing fields. The operating system can turn on a card singly, look at what occupies a pre-defined memory area (>4000 to >5FFF for us) and can determine if the device exists. With the IBM, certain logical names are assigned to a physical device address, such as COM1:, TTY:, A:, LPT1:, and so on, and can be changed according to the user's wishes. This requires a small modification to DOS to accommodate the new device, and from then on, a new sub-version to dos is created. If the device is removed, an error will be issued since DOS can no longer locate the installed device. The GROM header in the TI provides a standard table for finding a device quickly and efficiently. All of the devices use a pre-decoded 8k block of memory, and 8k is plenty for most devices. Since we are not limited to 64k of total address space (via memory paging in the MYARC or HORIZON ram cards), larger programs may occupy that memory and give our TI's a greater running capability. The IBM uses a segment register that is pre-decoded to page in banks of memory, which is essentially the same way the HRD or MYARC does it, so memory expansion is no problem. The safe area in the TI is the first ROM bank, which is the invaluable interrupt routine and powerup routines. the SUPERCART is the only save RAM alternative for a kernel or DOS, since it is battery backed and it remembers all the changes you have made to DOS. In the CRU, the only area you could use for your own bit-twiddling is the >400 to >1000 area, which is not decoded presently and could be wired to something (I will let you imagine that). It would not be a difficult task to interface an IBM card to the TI, provided you had the correct cross-wiring, and a ROM to control the new device. A few of us in the chicago users group will attempt this. The price of IBM cards is falling like a rock, and I don't see any interfacing pitfalls.

NOT drawn with a TI 99/4a!

Does anyone know of a TI program that will interface with a plotter to draw pictures such as these? CONTACT TOM COLLINS!!!!

F18 HORNET
DRAWN USING DESIGNCAD