NET99ER HCUG
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NEWSNET99ER

Newsletter of the NET99ER TI 99/4a
& Geneve 9640 Computer Users Group

VOL 9 NUM 2 February 1991

Next Meeting: Saturday March 2nd

9:30 AM at the
NRH Community Center
Loop 820 at Rufe Snow Dr.

Club Officers

Barbara Massey	President
James Crosson	Vice Pres
Lee DeForest	Treasurer
Tom Collins	Secretary
Barbara Massey	NL Editor
Tom Collins	BBS SysOp
Gary Owens	BBS SysOp
Jeff Drinan	Librarian
Bill Duncan	M/S Chrmn

Call the **SUPERNET BBS**
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7E1 - 24 hours
457-7043

-----BAM's BABBLES-----

As promised, the DOM for this month is for FAMILY ACCOUNTING. In fact, that is the name of the disk. The four programs are very simple to use, just follow the prmts. First there is a Check Book manager that lists your checks in the accounts you set up. This program will list the checks by checks, or by accounts, showing the ending balance. At the end of the month, you move the months records over into the year to date column. The second program is a Budget Analysis. This takes your check figures from the Check Book program and as the name suggests, gives you an analysis. The third program is a Mail List program. Very simple. What you type in is what you get. This program has no sort or label capability - yet, but that is not to say you could not add one. The final program is a very simple Inventory program. You enter the item name, quanity, price, and a short description. All these programs will print to the screen or to the printer. You have the prompt to enter either PIO or RS 232 so there is not need to modify the programs. There is no documentation on the disk, but they are very simple programs, and I will try (hardware permitting) to give an indepth demonstration of all programs.

The new 1.7 version of TIPS is out. Yet a faster version. For those of you who have perchased any TIPS Master disk, bring the disk with you, and we will copy the new 1.7 version for you at no charge. There are a number of new images to choose from. I'll bring my image catalog for you to look at. Remember to bring your original TIPS disk tho!

There are still a number of members who are having problems with Achiver. This meeting is a kind of "Back to Basic" meeting. We will go through the Archiver program showing how to Archive files and how to Extract files that have been Archived. There have been some mumbles about not being alle to use some of the DOM's that have been Archived by those who have yet to master this program. It is a very easy program, and this is what we will start with.

We are also going to start with the very first step of Multiplan. There are many member who have this program, and have yet to use it. The manual that came with the program has scared some by it's huge size. This meeting we will discuss just what Multiplan is, and some of the ways it can be used. This will be an ongoing demo. I hope to give just enough food for thought per meeting so that no one is left behind. How do you think you could use Multiplan? How would you like to? I am not an expert by any means. I use the program regularly, and with the other members who also use the program, I'm sure that we together will be able to answer your questions.

This month will be an hour longer. After the break we will divide into several SIGS. There will be a TI Writer SIG, we will try to answer any questions you have. I want to start at the beginning, loading, editing, saving, moving lines, copying lines, merging files. Write your questions down (don't make them too hard!) and we'll help you all we can. James will be showing the magic of the GENEVE, and this will also be the time to copy any disks you might want.

Jeff Drinan has given us some bad news. Seems the Library is is worse shape than we thought. I know that many of the disks I have copied I have yet to get to work properly, and have given up on most of them. Hopefully, Jeff will be able to take it a

little at a time, correcting the disks as they need to be. We might have to get a few more volunteers to help Jeff out. Anyone interested? Contact Jeff, or any officer.

Once again Jim Lesher has come to the Club's rescue. This time his lifesaver was in the form of an RS232 card and a video cable. Many, many thanks to Jim Lesher. Don't forget to browse thru Jim's extensive software during the break. Jim has rendered support to the club so many times, it's about time we give Jim our support. Remember, Jim is our own local vendor - satisfaction guaranteed.

Our next meeting is Saturday, February 2nd, at the North Richland Hills Community Center, Rufe Snow Road and 820. We start at 9:30 am - hope to see you there!***BAM***

----- VP REVIEW----

What's all this talk about windows? I have seen the version that Beery Miller sent out to his customers 9640 News, and to be honest, I was not impressed, in fact the way he made the windows work will not work well from current menu programs. That is if you would like to have one program finish and return back to the menu. I hope that this will not set a standard.

Oh well, on to bigger and better things. For one thing I would like to say that Barbara Massey, president of the MET99ers, did a good job on her first meeting and she had some good ideas and a lot of spunk. She deserves a hand for taking on a job that scares most people to death, for what she lacks in knowledge she more than makes up in enthusiasm and perseverance. What this boils down to, is if she gets the kind of support from the group and the 4A community she deserves, this could be the best year that the MET99ers have ever had.

I recently recieved a copy of version 97k for my 9640 and to my surprise nearly everthing works now including Tips. Hopefully in the near future we should have the final version from Myarc on the floopy version DOS and hard-drive version.

While playing around the other day with my new MDOS 97k I happened to stumble on some carts that I had dumped a long time ago for use on my Geneve, and to my surprise most of them now work and I understand that even more could work with a minor modification in the programs. As I get these things fixed I will upload these to BBS for other 9640 users to take advantage of.

I guess that about takes care of this month's review of what's changeing in our machines, so I will see you at the next meeting of the MET99ers.***James***

-----SysOp's RAMblings-----

Our BBS is siffering from an ailment we can all alleviate. Things are rather slow there. I don't really have much to do, since the software does it's own maintenance. So, it suffers from non-use. Lets all see what we can do to make it better.

Speaking of making it better, the console swapout seems to have taken care of the hardware woes. For months it crashed regularly, being a real pain. It now purrs along with little or no trouble. I have recieved the REBOOT circuit diagrams from Wolfgang, and for now, until it begins to give problems, that will be shelved. Also on the shelf is the clock card. Again, since it ain't broke we ain't gonna fix it - hardware wise.

Another note, the original BBS - COLOSSUS I, the MUG BBS, has shut down, and the

reins for the MUG BBS has been taken over by Carl Nosher, of the same group. His board is designated COLOSSUS II. The number is - 305-625-8520, 3/12/24 - 7E1 - 24 hours. So as far as I know, these two boards, ours and the MUGs, are the only clubs in the country running this software. Although there have been patches to other BBS programs to allow the use of the HD for UL/DLing, this software was the FIRST to make that claim.

We have come closer than ever before in using the GAMEROOM since we have begun using COLOSSUS. I have finally gotten the complete GAMEROOM to run as a standd alone program on my Geneve 9640 in TI Extended Basic. I have tried before but had very little success, especially with the COLOSSUS program in memory. Wolfgang Reisterer has volunteered to help in the development of the combining of these two programs. I have spent many hours working on the Extended Basic part of it. It requires (as far as I can tell) the complete dumping of all code residing in the 32K area of memory, while a program is running, and then it should begin booting the GAMEROOM (with requires it's own set of assembly routines to run). It is these routines that conflict since some stay in memory when an Extended Basic program is loaded. The GAMEROOM was a big draw for the BBS, and we hope to get the call ratio back up with this addition. If we get the two programs working correctly. I have another idea in mind, too. I would like to have a TRIVIA program as an option too. Perhaps the trivia database from our library could be used for a start. Are there any volunteers out there to help? I frequent several BBS's that have GAMES, TRIVIA, and other additional interactive activities for users. These are things that really get people to call, not just TI users but other compiter users too.

The BBS is running along fine, having only one episode several days ago that required a restart. Don't know what happened, but it's back online. We have seen quite a lot of downloading lately, and we need some new uploads! If you have any PD, Freeware, Shareware, or Fairware, please give us a call and upload it.

News of late is that there are several programs that are going to become a real boon to the 9640 userbase. These programs reportedly can UNZIP, UNIMLODE, and also COMPILE IBM text files, and program files. The Compiler must run on a clone compiter and according to the info I have, it produces TI assembly code that can be ported over RS232 to a TI or Geneve. This will allow our system to run programs written in C for the clone world. This is one of many I have recently heard of, another being a program that will help in the development of a GUIE system for the Geneve. I am in the process of adding a clone to the desk. It will be a 286 AT-12 megahertz, for the speed. I will definitely be trying these new programs when my system is up and running. Time will tell....

Give the SUPERBBS a call!!! 817-447-7043 - 3/12/24 - 7E1 - 24hrs. Click!.....NO CARRIER.....Tom Collins

-----*MINUTES OF NET99er MEETING of February 2, 1991*-----

The meeting was called to order at 1:40 AM by our new president Barbara Massey. The previous minutes were read and accepted, as was the treasury report.

The option to extend next months meeting was mentioned and approved. Member Rosie

Steele has volunteered to do a demo of the BIZWARE software in the near future. Higher postage fees were discussed related to the newsletter mailings. A word of note - the BBS has a new way of handling the NL. It is now available as a menu option 'V'. This is preferable to ARCing the file and placing it in the Textfiles Section. Lee DeForest has volunteered to re-ink printer ribbons for a fee related to the width and length of the ribbon.

James Crosson stated that Al Beard, who owns AGNA, and wrote the 9640-99/4 Fortran Software package has developed a 'c' compiler that is touted as a way to convert IBM programs for use on the 99 and 9640. Former NET member, Gary Higgs, has been working with a program called DEZIP, working the same end, but with limited success. James mentioned that DI v1.3, by Clint Pulley, a program for the 9640 was actually a ported over translation of XTREE, a clone disk manager program. It is said that his program actually can repair errors made by MDM5. A new IFDC card is available for the 99 and 9640 use, projected price is $225, but hasn't been released as yet. James noted that while we have seen some companys supporting the TI community folding, there are more taking their place and we hope to see more support in the future. He reports that Mechatronics may even be considering building a 99/4.

Barbara did a demo of a fine program, Calendar Maker, by Chris Bobbitt and Ed Johnson. This program does a fantastic calendar with graphics and text, as well as a picture for the top of the calendar (in Picasso format, though I suspect TIAP or PP99 pics will be a future option). Instances from TIAP, TIPS, and PP can be converted to the /GR format for use in Calendar Maker also. After several software/hardware glitches slowed progress, a narrative of the program ensued and copies of the finished product were passed around for all to see. We seem to be plagued with one hardware problem after another during meetings.

James then explained that the original DOM was not available and then presented one with programs provided by Ken Dominiec, a ember with contacts in the Chicago UG. He then demoed several of the programs.

A rather intensive BUY-SELL-SWAP session was held while James repaired several DOM disks before they were sold.

After the break Jim Lesher did a great demo of Jiffy Flyer, with hardware woes again slowing progress. This is a slick program, with an impressive way of handling the input onscreen. This program as well as Calendar Maker surpass the PD programs that 'try' to do the same thing. These two fine programs are available from Jim Lesher.

The meeting then adjourned at 12:30.** Submitted by Tom Collins - Secretary**

-----*TREASURY REPORT*-----

We started the month with $775.79, had an income of $168.80 with expenses of $151.08 leaving the club with a total of $792.51. ** Lee De Forest - Treasurer**

-----*RENEWALS DUE*-----

The only members who need to renew their membership in February is Al Smith. Please be sure to check your address label, if your membership expiration date is

incorrect please let me know.

I want to thank all of those who have renewed. However, recently we have had to drop quite a few members who were over three months past due. If you are unable to attend a meeting, you may send your $20.00 membership fee to MBT99er HCUG, c/o Bill Duncan, PO Box 514, Hurst, Texas 76053.

Also, be sure to check with Lee De Forest for your expiration date of your MICROpendium subscription.

-----FANS-----
-INSTALLATION-
by James Crosson

Fans Last month I wrote an article on fans, to summerize the details, I will try to quickly run through some of my objectives for you in case you missed or simply not paying attention. NOW LISTEN UP!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!

I have never liked the noisy egg beater that comes in the PE box and the wisper fan didn't provide a sufficient amount of air for heat displacement, so if all else fails what do you do, well I punt. No, actully I sought some professional advise and I came up with an answer that I could live with and satisfy my PE Box's needs.

The problem was to have a sufficient amount of air cooling all the parts and still maintain a low noise level. The solution was not a larger fan, but two fans, yes 2 fans. If you have replaced the eggbeater fan with a quite or wisper fan and you tend to use your system more than a couple of hours, I strongly suggest that you first monitor the heat coming from the Box and also from the individual cards. If you determine that the heat is excessive, it might be time to consider adding an additional fan to the PE Box.

The method that I chose was to measure the area that I needed to use for the fan and cut out a place behind the disk drives and added a fan plate at the region of half the disk drive space so that the other half was over the area of the card position and mounted the fan there so that it cooled the drives and the card area at the same time. Essentially what I have done here is simply add a fan housing to the back of the PE Box and then I take apart the PE Box to add the electrical connection next to the fuse connection or even easier run a wire down to the power strip so that when I turn on the system the fan automatically comes on upon power up.

Another method of installing the second fan is to measure the back of the PE Box, cut some boards about one half inch thick nailing them together adding foam insulation where necessary and cutting small holes near the top for the cables to exit for such things as hard-drives, modems, printers, video connectors and such. Then cut out the fan hole and attach the fan and follow the methods mentioned earlier for use of the electrical connection of your choice.

No big deal, really you can finish this project in a couple of hours and give yourself the satisfaction of knowing that you now have a cool running system that is quite and should last a good deal longer. I hope this satisfies most of the questions on how to install the second fan, but if you have more questions just let me know and I will try to get with you and see what we can do, keep on computing, and GOOD LUCK. **JAMES**

-------DON'T FORGET! THE DOM is FAIRLY ACCOUNTING!-------

-----TI-WRITER-----
by Stan Katzman
PART 5

There are several miscellaneous routines that we ought to discuss that are usefull (and important), so here goes.

The standard typing mode is called word-wrap. In this mode, when you come to the end of a line, that word is automatically put on the next line. This is the opposite of a typewriter where one has to return the carriage by hand. If you press the <ENTER> key, you start a new paragraph. If you want an empty line between paragraphs, just press the <ENTER> key again. If you remember an earlier article on how to edit, we use the reformat key (CTRL2). The reformat key only works within the paragraph one is working.

If we want to combine two adjacent paragraphs, all we have to do is remove the carriage return symbol (by pressing "Del Char', - FCTN1) and then the reformat will combine the two paragraphs.

By default, a page of material is 56 lines long. In order to make the document haven, say only 60 lines per page, just keep track of the line numbers at the left of the screen and put in a "New Page" symbol by pressing CTRL9, and when the document is printed, the new page symbol will cause the printer to start at the beginning of a new sheet. (The New Page symbol also works in the Formatting Mode.)

The other "method" of writing a document is in the "Fixed Mode". To get into the Fixed Mode, press CTRL0 (Zero), Word Wrap, and this puts you in Fixed Mode (the cursor will be a hollow rectangle). To get out of Fixed Mode, press CTRL0 (Zero) again (toggle) and you are back to Word Wrap. In Fixed Mode, you do not automatically go to the next line. In order to get to the next line you have to press <ENTER>. If you do not press <ENTER> at the end of the line, each character entered will replace the last entered character. The Fixed Mode is used to make tables of data.

Now something more about printing out a file. If you noticed in the past, in order to load and save part of a file, you had to know the start and finish line numbers. It makes it alot easier to load and save file parts if you have a printout of the line numbers. In order to have a printout with the line numbers, go to the Command Mode (FCTN9), enter P and then enter PF. At the statement "PRINT FILE, enter device name:", enter L, space and then PIO (for a parallel printer). EG "L PIO". There is one minor catch and that is it will not print anything in columns 75-80.

You can also print only part of a file. Get the PF mode and then type the starting line number, a space, ending line number, a space and then PIO. EG 23 48 PIO, and only lines 23 to 48 will be printed out.

One last function, Q (Quit) (quite appropriate). To Quit working go to the Command Mode and enter Q. There will be another menu which is obvious that you can easily follow.

More later. S.K.

-----NEW/AGE SPECIAL----

Jack Sughrue Box 459 East Douglas, MA 01516

GOOD, BETTER, BEST!

There is only one program in the TI disk community that is (as my 5th-grade pupils would say) "totally wicked awesome rad to a garly degree". I agree with the sentiment, if not the mode of expression.

Nothing else in our world computer community has equalled the impact of the FUNNELWEB environment created for us by Tony McGovern and his son, Will. These two Australian geniuses (and I do not use the word lightly) put together what all of us deemed impossible for the TI.

FUNNELWEB just grew and grew. The original American release was a TI WRITER and EDITOR ASSEMBLER combo, more or less (actually more). Next version a few months later contained a bit more with lots of enhancements of what went on before. TIW, for example, does not contain a ruler or address recall or macro-key CAPS or aC. Tony put all these things in fairly early versions, all of which we take for granted in our word processing activities. The environment always loaded by either E/A or XB, thus making it ideal for supercarts (again earlier versions) or RAMs or whatever device hardwarers could devise. Then things like Disk Manager 1000 and Diskpatch were added and modified/ As were loaders for c99, FORTH, etc. Each time Tony (primarily) would unravel the complexities caused by these needs and create new and better solutions than dreamed possible.

When he came up with the windowing effects for the CONFIG program, for example, which established a profound systems configuration (still able to be ported "en masse" to any newer version) I felt he had reached his peak. Boy, was I ever wrong.

FUNNELWEB is not a program. It is an environment which gives you, the user, some great computing tools in such a complete package that it becomes almost impossible to do without them after using them.

Probably 80% or more of normal (non-programmer) use of computers - especially the TI - is word processing. People need to communicate. FUNNELWEB turned TIW into a great word processor, adding so many features that should have been in the original cart/disk combo that when you become spoiled by TONY and take for granted what is surely a remarkable achievement.

Much as I ♥ my TI, I know that if FUNNELWEB did not exist I would no longer be TIing. I couldn't. FWB's a structure equal to the best that any home computer has to offer its users at any price.

Let's face it. It serves as a Master DOS. What does a Disk Operating System do? Well, it lets you load up other programs, primarily, or lets you handle some disk management tasks. FWB does all that as a sideline.

With the new 4.31 FUNNELWEB the console 99 disk user has just leaped quantumly into an exciting era. The 40-column (standard) TI computer fan now has available to him or her a package heretofore only available to non-standard 80-col upgraders.

Before I go on, I'd like to say: **STOP!**

The bad new is this: Will went over to the Amiga a long while ago, and his father will be following shortly. This will mean that the greatest simple piece of software for the TI will no longer grow; nor will we be seeing any other pieces come from Funnelweb Farm; nor will there be any more great tutorials (particularly thoses exploring XB). this is not only BAD news, it is HORRIBLE news. Not that I can blame Tony. Although close to 100% of all TI disk users use FWB and its upgrades, an extremely small number has ever paid the author a penny - and a tinier number, still, has ever given a second contribution (thought the original to present upgrade is similar to the difference between my salary and Donald Trump's). And a tinier number, still, have ever written to Tony to tell him how much they use and appreciate FUNNELWEB and all the other great things he has done for us.

Remember, this is not commercialware. Fairware authors need and deserve our support. Fairware authors of the stature of Tony McGovern have earned massive support financially and socially. They just don't get it.

I urge every user group to "charge" a minimum $10 copying fee to each member for this upgrade and send the entire collected sum to Tony. Send a group letter. Write him up in your newsletter. Let's let '91 be the Year of McGovern. Even more, I urge every single reader to sit down at your first opportunity and write (probably using FUNNELWEB) a supporting letter, enclosing the largest cash (certified check, international coupon, money order) contribution you can really afford. It'll still be cheaper than anything you'd have to pay for that would be in the same league as FUNNELWEB (if such a thing exists). People couldn't wait, for example to shell out $60 for PRESS (sight unseen) or $25 to $60 for data bases. Many Many of our game cartridges cost at least five times what some consider a "fair" price to pay for the finest piece of software ever for the TI.

How about this for a rule of thumb? Take the most expensive piece of software you have ever bought (and probably don't even use anymore) and double it? Send that as a donation. Remember what you paid in those pre-inflationary days for LOGO and MULTIPLAN and TI WRITER and DISK MANAGER II and E/A and whatever?

Well, the new FUNNELWEB has so many new features that most of those expensive cartridges and upgrade disks can be chucked in the basket.

What's your TI worth to you? What'll it be worth to you down the road with Tony McGovern gone? Decide soon about your commitment and make the investment today in your future.

So what are a few of these outstanding features? Well, for one, there is no more Disk Manager 1000 nor Disk Patch, because the new Disk Review performs all the functions of both (and then some) from within the FWB environment, including COPYING FILE BY FILE (to eliminate fractures) WHOLE DISKS TO MULTIPLE DRIVES! So stick a disk in Drive 1 and copy to Drives 2, 3, and 4, while you go comb your wallaby. Disks can be FORMATted to Quad density, if you have the right controller. Any program can be RUN right out of DR, including the huge IV254s. The Quick Directory now lets you mark a file from WITHIN the FORMATter or ASSEMBLER. And the disk editing functions are plentiful and profound.

The whole FUNNELWEB 4.31 environment is profound. You'll realize this immediately when you see BOTH central menus displayed on the screen simultaneously and you just have

to move the cursor around to either RUN the program or VIEW and/or PRINT the text file.

This is a must for everyone!

Get-it from your user group today, being aware that everything worthwhile in life costs.

----------DON'T FORGET the DOM is FAMILY ACCOUNTING!----------

-----*TAKING THE "BUZZ" OUT OF BUZZ WORDS*-----

by Alan D. Applegate

Note: The following three part series on modem fundamentals is reprinted with permission from the eSoft possibilities newsletter June, July, and August 1990 issues. Possibilities is a monthly customer support publication of:

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Part 3: Communitaction Terminology

Of Bits and Parity...

In parts 1 and 2, we took a closer look at the most common and often least understood terms and standards in the world of the modems we use. There are, however, several other telecommunications terms that can be confusing. Though they don't necessarily relate to modem-buying decisions specifically, understanding these terms can add important additional power to your communications dealings. They also will help you understand how to set up the terminal programs your users will have to configure to call your TBBS system. Among the most commonly faced (and least understood) are the concepts of Data Bits, Parity, and Stop Bits.

Data Bits

The American Standard Code for Information Interchange - ASCII - is a standard that defines 128 different characters that can be used for data transmission. These include control characters, letters of the alphabet (in both upper and lower case), numbers, and a full set of punctuation characters. Because there are only 128 ASCII characters, only 7 binary digits (bits) are required to form each of the 128 possibilities.

Many computer makers have extended the ASCII character set by adding 128 more characters. This was accomplished by simply adding one more binary digit, resulting in a total of 256 transmittable data characters. Each manufacturer, however, created their own set of 128 additional characters. All extended character sets are NOT the same.

In the case of the IBM PC and compatibles, the extended characters include international alphabet, graphics and mathematics characters. These are commonly known

- there can be "gaps," or spaces, between each character. The receiver knows when a character is sent by the framed nature of asynchronous transmission - the start and stop points can easily be determined.

Synchronous Communications

An alternate serial transmission method exists known as synchronous communications. It occurs when there are no start or stop bits, and is possible only if data characters flow constantly at a fixed bit rate with no interruptions. When there is no data to send, idle or padding characters are sent at the fixed rate (to keep data bits flowing constantly), but they are discarded by the receiver.

Because there are no start or stop bits, it is possible to remove 2 of every 10 bits used in Asynchronous communications. This results in a 20% faster data speed with the same serial bit rate. However, because of the requirement for constant data flow, Synchronous transmission requires additional protocol and is primarily used in mainframe computer or specialized applications.

The place it is used with TBBS is hidden inside of high speed modems. When these modems use MNP or V.42 protocols, they have the needed protocol to use synchronous communications between the modems themselves. However, you still use asynchronous communications between the computer and the modem so this instance of hidden synchronous communications is primarily of interest as trivia.

Duplex

"Duplex" is a term which refers to whether a data communications path is one- way or two-way. "Full duplex" means that data can flow in both directions at the same time. "Half duplex" means that data can flow in only one direction at one time. Most modems are full duplex, but communications software can most often still be set to take advantage of half duplex connections.

Some less expensive high speed (9600+ bps) modems are pseudo- full-duplex. This means they cannot transmit data at high speed in both directions at the same time because they are really operating in a fast turn-around half duplex mode internally.

Flow Control

The term "flow control" refers to a method of controlling the flow of transmitted data, so it doesn't "overrun" the data receiver's ability to receive the incoming signals. Flow control allows the receiver to signal the transmitter to pause, while recently received data is properly assimilated, then signal it to restart the data flow when it's ready to receive more.

There are generally two forms of flow control - software and hardware.

RTS/CTS

Hardware flow control is not always required. It is generally needed only with modems that are capable of "buffering" out-going data, or with high speed modems. Hardware flow control, called RTS/CTS flow control, uses two of the RS-232 (serial) pins to start and stop the data flow. Its advantage is that it is data independent and thus can be used for reliable flow control with any type of data stream.

X-ON/X-OFF

Software flow control, called XON/XOFF flow control, starts and stops the data flow based on the reception of certain control characters. Although this type of flow

as IBM Graphics characters.

In communications, common settings are either for 7-bit or 8-bit data. Generally, both ends of the connection must be set the same way. If one end is set to 7-bit data and the other end is set to 8-bit data, reliable communication cannot usually be established. This is because one end interprets the 8th data bit as a parity bit (explained in a moment), and the other end tries to interpret it as a part of the current character. On a connection like this, some characters will display properly, while others will appear as "garbage," depending on which direction the data is traveling.

If the communications link is set to transmit only 7-bit data, the sendable characters are limited to the 128 defined ASCII characters. The extended character set, such as the PC's single- and double-line boxes and foreign characters, CANNOT be sent unless the link is first set to allow the transmission of 8-bit data.

Some systems have even 5-bit and 6-bit data, and use character sets such as Baudot and Selectric, but these systems are uncommon today.

Parity Bit

When you establish communications with another computer, parity is set to 'even," "odd," "mark," 'space" or 'none." These are terms for the manner in which the parity bit is interpreted by the receiver.

Parity is a primitive form of error-checking. The state of the parity bit, when set to be even or odd, is based on a simple mathematical formula. Depending on the data bits, the parity bit will either be on or off. Normally, the limited error checking capabilities are not utilized. This explains why the setting of parity to "none" is so common in communications today. This allows the parity bit to be used as a normal data bit instead.

Start and Stop Bits

Start and stop bits allow each character sent to be set in a "frame." The beginning of the character, the first part sent, is the start bit, and the end of the character, the last part sent, is the stop bit. Each character sent is thus framed with a distinct beginning and ending bit and this allows the receiving system to know when each complete character has been sent.

There is always just one start bit. However, there may be one, one and a half or two stop bits.

Stop bit length used to be critical when serial communication was primarily handled with electromechanical equipment, such as an old-fashioned Teletype machine. The print head in this type of equipment took a fixed amount of time to return to its "home" position, and this was accomplished during the sending of the stop bits. A longer stop bit length gave the print head more time to return to its home position.

In modern all-electronic serial communication, the stop bit is still necessary, but only to mark the end of a character. A delay isn't necessary as there isn't usually anything mechanical involved.

Asynchronous Communications

Framing the character with start and stop bits forms the basis for "asynchronous" communications. In asynchronous transmission, characters do not have to flow constantly

control can be used by hardware devices, software flow control is usually used with TBBS, to allow the TBBS user to start and stop data transmission by using control keys. This allows the user to press Ctrl-S at any time to temporarily halt data flow, and then press Ctrl-Q at any time to restart data flow.

Even when hardware flow control is in use, TBBS will honor software flow control codes to start and stop the flow of text data displays.

What is ANSI?

"ANSI" is a common term in the bulletin board community today, but it's also a term that's usually misused.

ANSI stands for the American National Standards Institute, a standards development organization (sort of like the CCITT, which I discussed in my last column). ANSI develops and documents standards for thousands of different areas, from architectural specifications for the handicapped to computer programming languages.

Within the bulletin board community, the term "ANSI" generally refers to an ANSI standard called X3.64 as implemented by IBM in ANSI.SYS. The ANSI X3.64 standard specifies a series of codes that a host system can send to a remote data terminal to control color attributes, cursor positioning, inverse video and screen clearing on the terminal display.

"ANSI Graphics" is a term that is often used in the bulletin board community, but this actually refers to two separate elements. "ANSI" controls color and cursor positioning, while "Graphics" usually refers to characters in the IBM PC extended character set, such single- and double-line boxes, shading characters, and so on. "ANSI Graphics" is a common term, since normally only an IBM PC is capable of handling both ANSI and Graphics. In reality, many data terminals and software packages for various computers are capable of handling ANSI codes, although they may not always handle the IBM extended characters.

Actually, "ANSI Graphics" does NOT refer to a standard for displaying pictures or graphic images on the remote terminal.

The VT-100 terminal (a data terminal from Digital Electronics Corporation) and software that emulates a VT-100 terminal can also be used with ANSI escape codes, since the codes for both ANSI and VT-100 are very similar.

ANSI works by sending a series of characters to the remote terminal. The codes all begin with an escape character and a left bracket, and are followed by a variable quantity of numbers and letters. The terminal understands the meaning of these codes, and acts accordingly by setting screen colors or moving the cursor.

Graphics

Graphics, as I mentioned previously, are the characters in the IBM PC extended character set. They are characters beyond the original 127 possible ASCII characters as defined by IBM in all of their display adapters. These include single- and double-line boxes, shading characters, international characters and mathematical symbols.

IBM Graphics characters have become enough of a de-facto standard, that many other computers now emulate them. Many terminal programs on the Apple Macintosh computer will allow proper display of the IBM graphics character set, as will many of the true display terminals on the market today.

Summary

That pretty well covers most of the common modem and telecommunications program terms and standards in use today. I hope this series of articles has made you better able to understand the seemingly endless number of buzz words you find in microcomputer communications. You should now be able to understand better why terminal programs must be configured to operate correctly. You also should be able (with information from the first two parts of this series) to better choose the type of modem you need to meet your applications. I hope you'll let us know if you have any questions or need further help understanding anything that I've already discussed. It's been fun...

-----CEOTICS88D20-----

by Jim Lesher

D2088 BIOLOGICAL COMPUTING

The Cutting Edge Of Technology In Computer Science: It seems as though with man's highest advances in technology, he has only scratched surface of the technology of the designer of the universe. Take a very small ant, whose brain is smaller than the head of a pin. Yet he maneuvers about quite skillfully. He can see and coordinate his limbs with his sight. Has an entire nervous system, digestive system and a sensory system and more. Yet even with the Cray Super Computer and the latest technology in mechanics, this monstrous machine very slowly takes a step about every three seconds after analyzing all the information transmitted to the CPU thru the visual sensore.

So it is in this writers opinion that the ultimate computers will be biologic. With genegic engineering, gene splicing and recombinate DNA, it is not too difficult to imagine. Some people go so far as to say, a computer will some day handle every financial transaction in the world. At this very moment a world wide network of banks interconnected by computers and satelites is already in operation.

-----JUMBLE DECODER DOCS-----

by Jim Lesher

JP4, 5 and 6 are for words of those respective lenths. The P is for printer, use these if you want to send the words to a printer. Enter the letters one at a time and press enter and when the right amount is entered, it will start automatically. If you do not have a printer use the programs JS4,5 and 6. IF you are a slow reader like me, use TI BASIC. If you can read faster than basic, it will run faster in Extended Basic.

Some history of this program. The program was originally a mathmatical program to provide all possible arrangements or combinations of a set of numbers. I extracted it out of a math book and modified it to fit my needs. Now it will every possible combination of any 4, 5, or 6 character group you want to pick from the keyboard.

NOTE: due to the space all three programs would require, the one for 5 characters, only, is revealed here. You may purchase this disk with all 3 pgms and docs for $2. plus postage.

Jim Lesher 722 Huntley Dallas, Tx 75214 211 821 9274

```
5 REM PERMUTATE 5 INPUT
10 CALL CLEAR
```



```
20 OPEN #1:"TIO"
30 CALL SCREEN(11)
40 CALL COLOR(5,5,16)
50 CALL COLOR(6,5,16)
60 CALL COLOR(7,5,16)
70 PRINT " ";"PERMUTATATING 5 IN 5 PLACES": : : : : : : : : :
80 INPUT "ENTER 1st character ":A$
90 INPUT "ENTER 2nd character ":B$
100 INPUT "ENTER 3rd character ":C$
110 INPUT "ENTER 4th character ":D$
120 INPUT "ENTER 5th character ":E$
130 N$(1)=A$
140 N$(2)=B$
150 N$(3)=C$
160 N$(4)=D$
170 N$(5)=E$
180 Z=0
190 FOR A=1 TO 5
200 FOR B=1 TO 5
210 IF (A-B)=0 THEN 340
220 FOR C=1 TO 5
230 IF (A-C)*(B-C)=0 THEN 330
240 FOR D=1 TO 5
250 IF (A-D)*(B-D)*(C-D)=0 THEN 320
260 FOR E=1 TO 5
270 IF (A-E)*(B-E)*(C-E)*(D-E)=0 THEN 310
280 Z=Z+1
290 PRINT Z;" ";N$(A);N$(B);N$(C);N$(D);N$(E);N$(F);N$(G): :
300 PRINT #1:N$(A);N$(B);N$(C);N$(D);N$(E);N$(F);N$(G);,
310 NEXT E
320 NEXT D
330 NEXT C
340 NEXT B
350 NEXT A
```

------from TOM HALL-----

The following is from an article I read in NORTH TEXAS PC NEWS and I immediately thought about TI'ers and their trusty TI99 compatille printers.

There is a place in Austin that will rebuild dot matrix print heads. They also carry replacements, too. They promise 2 to 3 day turn a round, and have 24 hour expediting. One year warranty on re-built print heads.

Impact Printhead Services
8701 Cross Park Drive

Suite 101
Austin, Texas 78754
Phones:
800-777-4323
512-837-9151
FAX
512-832-9321

Their current catalog lists 390 different print heads.

If you put this in the NEWSLETTER you might mention that there is also a print head cleaning kit available for several types of dot matrix printers, including EPSON type printers. This kit is by CLEAN IMAGE . The kits really work, if your only problem is a dirty print head. I have seen them from $5 and up.

I hope the USER GROUP is doing well. I certainly enjoyed my years of participation in the MET99ER'S.

Although, I no longer have a TI99, I still belong to the Dallas TI User Group (DTIUCG) pronounced "ditty bug". You and all of the MET99ER's have a standing invitation to join us at out regular INFOMART meeting in Dallas. I35 (Stemmons) and Oak Lawn - take the Oak Lawn exit. The next meeting is Feb 16 (Sat) then March 16 (Sat). We start at 9am.

-----CEOTICS90D-----
by Jim Lesher
FERROELECTRIC MEMORY CHIPS

Rantron Corp. Colorado Springs. is working on a 4-megabit static memory chip. The new process requires only 1/4 the amount of transistors on present day chips. Also present day static rams require a small current to keep them "fresh". These NEW static rams will hold thier information for ten years without batteries. The new static rams have thier own name; FRAMs. Some experts predict that by the year 2000, chips will be able to store more than 1 gigabit. Another company is presently making matchbook size solid state disk drives as replacements for the mechanical ones.

-----TIW COLOR CHANGE ON RAMDISK-----
by Jim Lesher

To change the color in TIW on your ramdisk, with a sector editor like, DISK+AID, find the second sector of WORD. Change byte 0c to whatever combination you wish. The original is F4 which of course is white letters on dark blue background. The F is the letters and the 4 is background. The color codes in hex are:

0	TRANSPARENT	8	MEDIUM RED
1	BLACK	9	LIGHT RED
2	MEDIUM GREEN	A	DARK YELLOW
3	LIGHT GREEN	B	LIGHT YELLOW
4	DARK BLUE	C	DARK GREEN
5	LIGHT BLUE	D	MAGENTA

6	DARK RED	E	GREY
7	CYAN OR AQUA	F	WHITE

-----CEOTICS90D-----
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Rantron Corp. Colorado Springs. is working on a 4-megabit static memory chip. The new process requires only 1/4 the amount of transistors on present day chips. Also present day static rams require a small current to keep them "fresh". These NEW static rams will hold thier information for ten years without batteries. The new static rams have thier own name; FRAMs. Some experts predict that by the year 2000, chips will be able to store more than 1 gigabit. Another company is presently making matchbook size solid state disk drives as replacements for the mechanical ones.

If you are having some difficulty with a program, and are wanting to have a SIG on that program, please leave your name and the program with Lee. Hopefully, in the near future, we will be albe to hold some SIGs.

------4 SALE/WANTED-----

HARD DRIVES!!! Guaranteed to work good. Real cheap prices. 5, 10 and 15 meg's. Also DSDD half height/half power disk drives, also guaranteed and at good prices. Contact James Crosson...498-8746.

TI Joysticks...Jim Lesher...214 821-9214

Loran Mann wants a TE II cartridge...577-3446

CorComp controller card wanted....Barbara Massey..292-3554

Anyone looking for a good buy on disks, contact Barbara Massey.

------DON'T FORGET! The DOM is FAMILY ACCOUNTING!-------

-*-*-*BRING YOUR ORIGINAL TIPS DISK FOR THE NEW VERSION *-*-*-

--------- WANT TO LEARN MULTIPLAN? NOW IS THE TIME! ---------

---

Is anyone intersted in the Turbo TI modification? If so, contact James Crosson at the next meeting, and he'll set up a SIG on the mod.

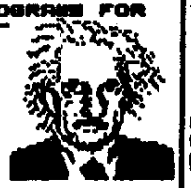
NEW-AGE/99

BY JACK SUGHRUE
Box 459
E Douglas MA 01518

#6 PAGE PRO - PART 1

DESKTOP PUBLISHING FINALLY ARRIVED FOR OUR 99. THERE ARE MATURE COMMERCIAL AND FAIRWARE AND PUBLIC DOMAIN GOODIES ALL OVER THE PLACE. THERE ARE SO MANY, IN FACT, THAT IT IS QUITE IMPOSSIBLE TO KEEP UP WITH THEM.

BESIDES TI-ARTIST-PLUS, WHICH WILL BE REVIEWED SOME OTHER TIME, THERE ARE PILES OF INNOVATIVE PRODUCTS FROM COMPRODINE WHICH I'VE READ AND HEARD ABOUT BUT HAVE NOT YET EXPERIENCED. THERE ARE C360'S GREAT PROGRAMS AND NUMEROUS PUBLIC DOMAIN AND FAIRWARE PROGRAMS FOR BANNERS, LETTER-HEADS, LABELS, AND SO ON.



YOU HAVE TO BE

TO FIGURE OUT SOME OF THESE PROGRAMS.

MANY OF THEM ARE SEVERELY LIMITED (THOUGH SOME LIKE GRAPHIC LABELER DO EXACTLY WHAT THEY'RE SUPPOSED TO IN A FANTASTIC WAY).

NOW THERE ARE A PAIR OF WONDERFUL TREASURES FOR ALL 99ERS WITH DISKDRIVES AND PRINTERS:

TIPS

(TI PRINT SHOP - PUBLIC DOMAIN PROGRAMS WITH A HUGE COLLECTION OF PIX)

& PAGEPRO

(FROM ASGARD, THE BEST PAGE MAKER AVAILABLE FOR THE 99 AND GENEVE)

RON HOLCOTT, WITH ABLE HELP FROM BARRY TRAVER AND OTHERS, HAS GIVEN TIPS TO THE TI WORLD FREE OF CHARGE (SEE YOUR USER GROUP OR CONTACT JIM PETERSON FOR THIS AND OTHER PD AND FAIRWARE GRAPHICS PROGRAMS). TIPS LETS YOU MAKE BANNERS, LETTERHEADS, LABELS, GREETING CARDS, AND MORE. WRITTEN IN XB, TIPS TENDS TO BE SLOW AND A BIT CUMBERSOME. YOU MUST PRINT OUT THE DOCS AND FOLLOW THEM CLOSELY TO USE THE PROGRAMS SUCCESSFULLY!

BUT IT TAKES A LITTLE TIME TO MASTER AND TO PRINT.

ONE OF THE MOST IMPORTANT ASPECTS OF TIPS IS ITS COLLECTION OF GRAPHIC ART FROM THE BIG BLUE WORLD. THERE ARE ABOUT 5,000 PIX NOW A PART OF THIS PACKAGE WHICH INCLUDES PROGRAMS TO CONVERT TO TI-ARTIST AND PAGEPRO, AMONG OTHER ITEMS.

THIS REVIEW USES ALL TIPS PICTURES WITHIN THE SUPERB FRAMEWORK OF PAGEPRO.

WHICH, OF COURSE, BRINGS ME BACK TO THE TOPIC OF THIS REVIEW. THE DAY I GOT THE ORIGINAL PAGEPRO I WAS UP TO THE VERY WEE HOURS PLAYING WITH IT IN ALL KINDS OF INGENIOUS WAYS. WITH PP YOU CAN PUT ANY GRAPHICS (OVER 5,000 IF YOU HAVE TIPS) ANYPLACE ON YOUR PAGE. YOU CAN TYPE OVER OR INTO THESE PIX (AS IN THE TOP AND MOON PIX). THE ORIGINAL PERMITTED 28 PIX PER PAGE. VERSION 1.5 ALLOWS UNLIMITED GRAPHICS BY SAVING PAGES FULL AT A TIME, ALONG WITH ALL TEXT.

Because of this saving method, PAGEPRO also permits an unlimited number of fonts per page:

Gothic 2 Sample, Script 1 Sample, TULO SAMPLE, etc.

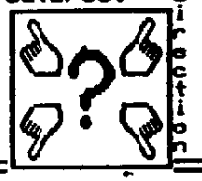
If you've written your text on FUNNELWEB or any DV/80 textfile maker, you can easily import that text into your PAGEPRO pages, though personally, I find it just as easy to type right onto my pages and place the graphics (TIPS) and borders and fonts (PAGEPRO) just where I want as I'm going along.

PAGEPRO us extremely user friendly. Of all the various pagemakers and semi-pagemakers I've used for the II (and for some other computers), I've found PAGEPRO by far the easiest to use. The commands are mostly single keypress and FAST! If you have any kind of RAM capacity, the whole activity is almost instantaneous.

It's not one of those programs where you'll stop often for tea breaks while the program churns and mopes along.

The latest PAGEPRO also has some great improvements, such as cataloging from any cursor. For me, this was a... LARGE improvement.

The columnizer that is part of PAGEPRO has been improved to auto indent and auto page number; two nice features.



A+ RATING

Typing in any direction let's you make quick borders, boxes, whatever, as well as puzzles and text patterns.

There are other neato changes in 1.5 regarding importing/exporting text, printing a page, and so on. But, basically, a great program was made even better.

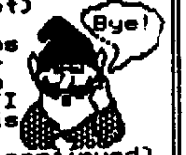
So while the band's playing let me add that PAGEPRO does not stand alone.

Asgard also has PAGEPRO PICS of all kinds of pictures done in neat, thematic packages.

There is also PIXPRO which converts GRAPHX, TI ARTIST PIX & INSTANCES, RLE, PICASSO, MACPAINT, & PAGEPRO into most of the above formats. This is great even if you don't own PAGEPRO.

Also available are PP FONTS (a few of the 50 are shown on these two pages); PP TITLES (which are works of art unto themselves); PP UTILITIES (which allow some extraordinary manipulations of the graphics for all kinds of on-screen pastups & designs.

PAGEPRO is a WYSIWYG ("wizzywig": What You See Is What You Get) program that more than lives up to its promise. It's the standard for TI as TI-ARTIST is for drawing.



(to be continued)

NEW-AGE/99

by Jack Eughrue, Box 459
E Douglas MA 01516

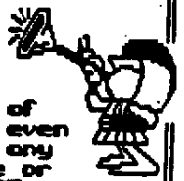
#7 PAGEPRO pt 2

Last time our wee leprechaun wished us a happy goodbye after exploring a few PAGEPRO delights. This exciting installment will uncover & show more ways to desktop publish via PP.

In limiting these explorations to 2-page segments some of the intricate nicieties of PP have to be left to your imaginations and time.

We'll show an example of the neat TITLES on the next page but will leave the greeting-card making up to you. Exploring such a program on your own is 8/10ths of the fun!

>>>>>> A NEWSLETTER EDITOR'S DREAM COME TRUE!



OKay. What do you need to make PAGEPRO the dream graphics/text program of the TI world?

Not much, really. Last time we suggested getting TIPS from your local user group or Jim Peterson of TIGERCUB for the thousands of graphics that come with it. That'll give you a big picture collection.

PAGEPRO will give you the state-of-the-art tools you'll need!

PAGE PRO 99 v 1.5 by Ed Johnson (& Chris Bobbitt) is the complete page-making software for 4A or Geneve. It includes all you need to make letterheads, newsletters, pages of all descriptions, text conversions, etc. $24.95.

PP FONTS by artist Paul Scheidemantle comes on 2 disks. There are 50 of them (small & large); PP PICS are 7 volumes of excellent thematic pictures; PP TITLES (see next page) are pretty dramatic eye-catchers; PP UTILITIES are extraordinary graphic manipulation tools essential for quick layout (cards), design, inversions, rotations, etc.; and PIX PRO, the single converter you'll need for converting to and from PAGEPRO, TI-ARTIST (pix & instances, ideal for CSGD & GRAPHIC LABEL users, too), RLE, PICASSO and even MACPIX. Yes, PAGEPRO does print full-page graphics!

As a matter of fact, PAGEPRO even lets you save any part of a page or THE ENTIRE PAGE as a single picture, thus giving you endless clipping and overlaying possibilities and greater reprint abilities than ever before imagined.

[This article, for example could be saved as two pictures on disk and sent to an editor elsewhere who has PAGEPRO. That person would simply load the program and load a picture (not a page!) & what you see printed before you, including all the graphics and borders are exactly what the editor would get fresh on his or her printer. Neat package, no?

I thought I'd complete this two-part review of PAGE PRO 99 from Asgard by a few bits of dazzle. It's so easy. Below, in case you didn't notice, is an example of PP TITLES. The font I'm using SCRIPT for small fonts. For the larger ones I'll use Antique which is quite different from any of the others I've shown so far in this lengthy review of PAGEPRO. Next I'd like to fill up and overlay a bunch of this page with pix of all kinds.

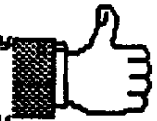
LOOK AT THIS!

WHEE!

You can see that with such a wonderful graphic program, you are limited only by your imagination.

There is NO

with this program. Only stuff.



As you have undoubtedly gathered by now, NEW-AGE/99 rates this program a solid A+. I haven't used anything so often since PUNCHED, nor had as much fun since the invention of the yo-yo.

To get yours contact:

ASGARD SOFTWARE
P.O. Box 10306
Rockville, MD 20850 Ph. 703-255-3065