

THE



SNUGLETTER

FROM THE SOUTHERN NEVADA USERS' GROUP

Volume 9 - No. 8

September, 1990

Next Meeting

7:00pm Monday, September 10, 1990
Nevada Power Meeting Room
6226 West Sahara, Las Vegas, Nevada



PRESIDENT'S MESSAGE

by Rudy Johnson

video device, it's unfortunate for the remaining users that the hardware sources are reducing in number. Of course this sort of follows the reduction in support that some of the larger dealers in TI equipment have demonstrated recently by reduction in number of catalogs and ads. We remaining users have to keep our profile up for those new and non-club members to notice.

Cindy will cover the plans for the next meeting in her column, but I will note in mine that I am going to demo a release of a drawing program which demonstrates some of the capabilities of the 9938 video unit at the September meeting. This is not a final release as there are many capabilities that have not been included in this release. The program is called HAL, and is being written by Alexander Hulpke of Germany. I will be running it on a Geneve but the program will run on a 4R which has a 9938 type 80-column card. The program is interesting and fun, especially since it operates with a mouse.

SNUG has received announcements of two upcoming TI Fairs. First is the "Columbia Northwest TI-99/4R, 1990 Computer Fair" to be held in Vancouver, Washington, October 26-28, 1990. Vancouver is just across the Columbia River from Portland, Oregon. The second is the "5th International TI-Meeting" in Wiesbaden, Germany, September 29, 1990. Time is a little tight on the second one but I doubt that any of our members would be making a special trip there. Only if your plans are to be in the area does it make sense to go that way. If you need information on either of these events give me a call or see me at the meeting.

I also have information on signing up on Delphi, which is the information service where a number of the better recognized names in the TI world spend some time. Typical rates are \$7.20 per hour with some special rates for special plans. This information is also available by asking.

Well, I'm out of time as it is late in the evening and George would enjoy seeing this before the weekend passes any further - so I'll see you at the meeting.

- Rudy -

September already! Summer is almost over, and the kids are back in school. Perhaps, just perhaps I'll get back and do something on the computer. Just a hope. I heard that the August meeting was lightly attended, but went well. At least when I'm writing this I expect to be at the September meeting. I am scheduled to be out of town the latter part of the week of the meeting but not on the Monday. So I won't have to hear about the meeting from someone else.

I did hear that the people at the meeting were informed that the power company's meeting room has been designated a no-smoking area. This was according to one of the guards who came through the area. Since smoking is allowed in the hallway adjoining the meeting room SNUG will abide by the power company's rules. We don't want to lose the meeting room, especially since it is FREE! So I want to ask the cooperation of all the smokers in SNUG to follow the rule and step out to the hallway for your R&R. If it is necessary we will insert a few smoke breaks into the meeting.

I don't have much information to pass along this month, mainly due to my lack of time to cover much in depth. I skimmed a bunch of newsletters, the latest MICROpendium, and the latest Vulcan's Computer Monthly (formerly Vulcan's Computer Buyer's Guide.) Vulcan's is carrying Barry Traver's column covering TI equipment and happenings. The one item that Barry mentioned was that Bijiit was going to discontinue making their 80-column card. That was the first I have heard that. Perhaps Bijiit didn't want to compete with Asgard's marketing of the Mechatronic 80-column device that is to be released in the near future. I guess the TI market is getting too small to support competition in the hardware area. Since some software seems to be appearing for the machines that are equipped with the 9938



LIBRARIAN'S COLUMN

by GEORGE CAMPBELL

WELL - I GUESS WE ALL FOUND OUT HOW MUCH WE MISS THE BBS WHEN IT ISN'T THERE. ABSENCE MAKES THE HEART GROW FONDER ETC.

I HAVE BEEN WORKING THE LIBRARY OVER THIS MONTH, TRYING TO MAKE SOME MORE ROOM FOR NEW MATERIAL THAT KEEPS SHOWING UP. I HAVE A NEW DISK BOX (60) AND WILL USE IT FOR GRAPHICS, AND THE PROGRAMS THAT USE THEM. THAT MAKES THE MAIN LIBRARY TWO BOXES NOW INSTEAD OF ONE AND PROVIDES SOME ROOM FOR GROWING.

AND NOW FOR THE DEPARTMENT OF GOOD HOUSEKEEPING. I GUESS EVERYONE WITH MORE THAN SIX OR EIGHT DISKS HAS LOOKED HIGH AND LOW FOR A FILE THEY KNOW IS IN THAT STACK SOMEWHERE, BUT CAN'T FIND IT. IN THE UTILITIES SECTION OF THE LIBRARY ARE SEVERAL PROGRAMS DESIGNED TO KEEP TRACK OF THOSE ELUSIVE FILES. THE FOLLOWING PROGRAMS WORK BEST FOR ME AT PRESENT.

OF PRIMARY IMPORTANCE IS A CATALOG OF EACH DISK, PRINTED OR HAND WRITTEN, AND PLACED IN EACH JACKET WITH THE DISK. YOU CAN'T KEEP TRACK WITHOUT THAT TABLE OF CONTENTS. THERE ARE SEVERAL PROGRAMS THAT DO THIS CHORE AND "FUCAT" IS THE ONE I USE THE MOST. 12 SECTORS AND FAST, IT WILL PRINT OUT ALL FILES ON THE DISK IN 1-2 OR THREE COLUMNS AND IDENTIFY MOST FILE TYPES, INDICATE FRACTURED FILES, AND # OF FILES ON THE DISK. A SCRATCH PAD OF PROPER SIZE (AVAILABLE FROM STATIONARY STORES) SAVES THE SCISSORS CHORE. I CAN PRINT A CATALOG OF MOST DISKS IN LESS THAN A MINUTE.

NEXT MOST IMPORTANT IS A LISTING OF ALL YOUR DISKS IN A DIRECTORY. WITH ONE KEPT REASONABLY UP TO DATE, LOCATING FILES IS MUCH EASIER. THERE ARE SEVERAL GOOD TO EXCELLENT PROGRAMS IN THE LIBRARY THAT DO THIS, AND THE ONE I USE NOW IS "SUPERDISK". A 60 SECTOR FAIRWARE FILE, THE LIBRARY COPY HAS AN EXCELLENT TUTORIAL BY BOB BIEBER AND IS EASY TO USE. ONE DRAWBACK IS THAT IT MUST BE RUN FROM E/A 3, BUT IT IS FAST AND CAN BE PRINTED, OR SHOWN ON THE SCREEN.

WITH ADEQUATE DISK BOX SPACE, AND LABELING, THESE TWO PROGRAMS WILL MAKE HOUSEKEEPING MORE FUN AND LESS MASSLE. A THIRD PROGRAM, BARRY BOONES ARCHIVER 3.03 IS MOST USEFUL IN CREATING YOUR BACKUP BOX. IT AMAZES ME HOW MUCH CAN BE SQUEEZED INTO A DISK, AND HOW EASY IT IS DONE. SEVERAL (OR A HUNDRED) FILES CAN BE ARCHIVED INTO ONE FILE. MOST FILES CAN BE SHRUNK 30 TO 70 %. THIS PROGRAM IS FAIRWARE ALSO AND THE BEST BARGAIN IN THE ENTIRE COMPUTER WORLD.

THERE IS A GOOD CHANCE THAT A PROGRAM TO DO WHAT YOU WANT HAS ALREADY BEEN WRITTEN. CHECK THE LIBRARY FIRST.
SEE YOU AT THE MEETING ---
GEO. CAMPBELL

My corner is cluttered, I can't find a thing.
The computer's always on, the phone constantly rings.
There's chips and disks and wires around,
the cats play with my toys so not a thing can be found!
Magazines and papers and fliers galore,
Footprints on printouts that are spread on the floor.
And with all of this mess you expect me to write,
all the day long and into the night?
The honks drive me crazy, what a hellacious sound,
if I had any sense I'd burn this place down!
So do me a favor and give me a break,
if this article stinks, PLEASE tell me its great...

And now the news: Chris Bobbitt of Asgard has announced that Alexander Kulpke of Germany has finished YAPP (Yet Another Paint Program) and it will probably be available this month. YAPP combines features of TI-Artist and Nyart, and will work with the Geneve or 4A's with 80 column display devices. Asgard has purchased the rights to the Mechatronic 80 column card and will market it after adding a 9959 video chip and composite video output. Their MIDI interface is also nearing completion as is a bare-bones terminal emulator which was designed with console-only users in mind. Chris also said that at least three new 80 column programs will be offered very soon.

Bud Mills and Ron Walters have their ears to the wind for indications that TI community would like to see a 4A specific MEMEX card. The demand would have to be great enough to ensure that they would recover R&D costs. Timing problems on the 2 MEG, zero wait state MEMEX continue to plague BMS. (and we too...) Bud described the timing in this way: "It's like trying to shoot a bullet through the windows of two cars traveling in opposite directions at sixty-five miles an hour." I haven't done much freeway shooting but it sounds tough!

DELPHI has announced new lower rates so now is the time to sign up. (Do mention my name so I can get some free board time!) Bud Mills has just signed up so it must be good. I will upload a file to the BBS that tells how to sign on as a new user. I have subscribed to the big three and DELPHI is by far the best even if their rates WERE as high as CIS or Genie.

Tidbit time! Did you ever say to yourself: "self, I wish those idiots would quit using slashes in filenames!?" MSDOS despises the "/" character since it is a reserved symbol, and refuses to play ball with any file that has a slash in its name. On occasion, I like to read DV80 files from MSDOS so I wrote a little batch file to display them in TYPE/M (page) format. I call the batch file "SHOW" and it goes like this:

```
ECHO OFF
CLS
IF NOT "%1"==" GOTO WORK
ECHO FORMAT IS: SHOW [drive] [filename]
ECHO
ECHO [drive] IS OPTIONAL IF [filename] IS ON DEFAULT DRIVE
ECHO
GOTO END
:WORK
IF "%2"==" GOTO CURRENT
ECHO SHOWING [ %1:%2 ]
ECHO
TYPE %1:"%2"/M
ECHO
GOTO END
:CURRENT
ECHO SHOWING [ %1 ]
```

9648 CORNER ... continued

```
TYPE "%1"/M
ECHO
:END
```

Lines three through nine can be omitted if you can remember the syntax. "SHOW A DOG" would type out the file DOG on drive A. "SHOW DOG/BDONE" would ignore the slash in the filename and type out the file if it were found on the current working directory. I should mention that I keep this batch file in my PATH so that it is available at all times. If anyone is interested in seeing more batch files in this column, leave a message on the BBS and I will start including them. If not, don't leave a message.

MY-ART FILE FORMATS

by J. Peter Hoddle

(From BCS TI-994A Newsletter, May 1990 --

Thanks to Rudy Johnson)

Recently I received a request from an individual about the MY-Art file format. Since this information is not entirely obvious and is not widely available (but was once published on Compuserve) I am providing the following:

There are two different MY-Art file types: low-res and hi-res. Both files save in nearly the same format - a form of run length encoding. The first two bytes of the file are a flag indicating whether or not the file is hi-res or lo-res. These are not always accurate. Earlier versions of MY-Art sometimes saved them incorrectly. In an ideal world, the first word is ">OFFF" to indicate hi-res and the first word is ">FF00" to indicate lo-res.

In hi-res mode the user can only access 16 colors, but can choose them from a palette of 256 colors. The hi-res mode header includes this color information; the lo-res header does not. The hi-res mode color header information lists 16 colors; each entry is one word long. The default color header is as follows (taken from the MacFlix source code).

```
>DATA >0000,>0200,>3000
>DATA >3200,>0003,>0203,>3003
>DATA >3203,>7204,>0700,>7007
>DATA >7707,>0007,>0707,>7007
>DATA >7707
```

In hi-res mode the horizontal scan line data then follows. It is encoded with the color code in the high byte and the number of pixels in that color is stored in the remaining three bytes. The count should not be greater than >0200 (512 decimal) since that is the maximum number of bits on one horizontal line in hi-res mode. There are 212 horizontal lines in total. A blank line appears as >F200 (color is white, and 512 bytes).

In lo-res mode, the horizontal scan line data is stored in a similar format. In lo-res mode however, there are only 256 pixels across the screen and there are 256 colors to choose from. Therefore, the color is stored in the high byte and the pixel count is stored in the low byte. The pixel count is one based, and the number 256 is stored as a zero (since it can't run into the next byte). Therefore, a blank line in this mode would appear as >0000. Again there are 212 horizontal lines.

Both of these file formats are stored as DIS/FIX 128 data. If the data does not completely fill a sector, the remaining space in the sector is ignored. There is no end-of-data mark. The picture data is considered to have ended when 212 horizontal scan lines have been read.

If you are writing a program to import or display MY-Art pictures, you should consider totalling the number of dots in each horizontal scan line to make sure they total 256 or 512 (depending on the mode you are in). If you find a line that goes over this you should alert the user to the error. This helps to avoid problems.

As noted above, sometimes the header work indicating whether the file is in hi-res or lo-res mode is incorrect. There is a way to determine nearly for certain what type the file is. Ignore the header word and assume that the file is hi-res modes. This means

SNUG TREASURER'S REPORT - 31 AUG 1990	
(in lieu of 31 Aug 1990 bank statement)	
Item added, changed or adjusted	
Ralph F. Guise - Treasurer	

FIXED ANNUAL EXPENDITURES	
SNUGLETTER (estimated cost per 100)	
Publication Costs (\$10/mo x 12)	120.00
Postage (\$25/mo x 12)	300.00
P. O. Box Rental (\$28 annually)	28.00
Bank Account Service Charge (\$8/mo x 12)	96.00
SNUG B/Board Phone Line (\$11/mo x 12)	132.00
Long Distance Phone Calls (estimated)	44.00
Miscellaneous Expenditures (estimated)	90.00
TOTAL ANNUAL OPERATING COSTS (estimated)	810.00
Annual Dues Collection (estimated)	300.00
ANNUAL DEFICIT (Estimated)	- 510.00

BANK STATEMENT BALANCE (as of 31 JULY 1990)	
(includes 7.64 July 90 service charge)	568.05
OUTSTANDING (uncashed) SNUG checks	166.95
ACTUAL CHECKING ACCOUNT BALANCE >>>	401.10

COLLECTIONS - Aug 1990	
Membership - Regular (2 x \$18)	36.00
Membership - Senior (2 x \$12)	.00
Membership - SNUGLETTER only (1 x \$10)	.00
Disk of the Month	.00
Library programs	.00
Miscellaneous TI Equipment raffle	.00
Miscellaneous TI Equipment sale	.00
(sub-total)	36.00

EXPENDITURES - Aug 1990	
Postage Mar-Aug 90 by check (uncashed)	122.00
(sub-total)	122.00

FUNDS MANAGEMENT (as of 31 Aug 1990)	
Adjusted Checking Account Balance	419.10
Petty-Cash (undeposited funds)	0.00
TOTAL FUNDS AVAILABLE >>>	419.10

MY-ART FILE FORMATS ... continued

that the data immediately following the header word should be a line of horizontal data. Start parsing the data (but not displaying it) and see if it totals 512 pixels of data, or it runs over. If the data you are parsing is hi-res data, then it will total 512 pixels. If it is lo-res you will be totalling the color data, which most certainly will not exactly equal 512 pixels. Adding this sort of test requires a little extra effort, but it spares your users the pain of trying to display files in the wrong way.



Several months ago I decided that more memory for my 9640 was a must since large chunks of RAM were being eaten alive by calling TIMODE or assigning an internal RANDISK. In order to load and run certain memory intensive programs, I needed to construct "dummy" AUTOEXEC files which didn't configure anything in order to free up enough memory for execution. Bassackward to my way of thinking. Since the Myarc 512K card didn't seem to be working out I opted for the 504K MEMEX from Ron Walters and Bud Mills. After installing the card most of my imagined troubles were over. I could leave TIMODE and RANDISK 360 in my boot AUTOEXEC and run almost anything! But one insidious thought kept nagging at my brain: "This is a two-megabyte card... shouldn't all of those empty sockets be filled with those RAM things?" This nagging thought turned to nagging obsession around the same time Horizon announced the completion of the Genmod upgrade. BFF went the check to Horizon. The Devil smiled and marked me for a nervous breakdown.

I noticed the rocker switch on my P-box... it was in the OFF position! I pressed the switch and behold, my beloved Bird had returned to me! "Thank You God." I reverently uttered and blasted a sigh of relief from my formerly frozen lungs. The release of tension was so overwhelming I sagged forward onto the HOT soldering iron! "Let the games begin..." I sighed.

After finishing and testing the little Horizon I realized that it wasn't so bad after all. My fingers are as nimble as a cow's hooves and my nervous condition had caused them to shake so severely that it registered on the seismograph at Cal Tech, so having the right tools for the job really helps. Here is a list of what you will need: Wire cutters or sharp teeth - wire strippers or sharp fingernails - magnifying glass or sharp eyes to check connections - good lighting or starlight scope - low-heat soldering iron and extra rosin core solder or welding machine and rod for attaching wires - sharp knife or hatchet for cutting traces - needle nose pliers and small screw driver or strong skinny fingers for bending and breaking off pins - extra wire or wire stretcher if you have several cards to do - small clamp or three hands - three hands or helper - telephone credit card or someone else's phone for calling Bud for help - Valium or Ron Walters.

After beta-testing was completed, a box arrived in the mail. Within that box were smaller boxes containing tiny "things" of assorted colors and shapes along with what appeared to be hundreds of pages of instructions written in some dead language of the ancients. With joy in my heart I ran to the phone to call John Martin. "He can read this stuff! He can put those "things" on my card and make it work! He's a genius!" After hearing dozens of recorded messages, my delight turned to panic when I remembered John had left the night before on a two-week vacation!

After finishing and testing my second card, an 800K Horizon randisk, I found that I had done the same job in about half the time! Look out Sanyo, I may go to work soldering for Magnavox! Here are a few tips which will save you several calls to Toledo, Ohio:

With quaking hands I snatched up the monstrous fourteen-page instruction manual and began my journey into the nebulous land of the chipheads. After reading the manual from front to back several hundred times I realized that FIVE of my P-box cards would need to be modified, including the 9640 card! When I awoke on the computer room floor, distinctly remembering my blurring eyes, the tidal wave of nausea, and the blood rushing from my head, I concluded that this was not a job for the faint of heart. With iron-willed resolve and using reversed triage, I chose the first victim for my surgical practice, the 256K Horizon bootrom. After all, if the patient died, I could always boot from hard drive. After backing up the drive and enabling LOAD/SYS I removed the first organ from the P-box, promptly dropped it, fished it back out of the box and quit for the night. This was really going to be tough.

Except where the instructions tell you to cut off the BOTTOM half of the pins, break them off by bending them up and down when the instructions tell you to cut them off. This is easy to do! I've done it several times by accident when installing chips in their sockets.

The next day after work I stopped by Radio Shack and picked up a brand new 15/30 watt soldering iron since my others have .50 caliber tips. Sharp instruments are a must for this type of operation. I returned home, did some deep breathing exercises, announced "I'm starting now honey," and marched into the computer room like a proud soldier going off to war. My wife just shook her head. I plugged in the iron and gingerly touched the tip. Hmmm. Cold. After waiting an eternal nanosecond I touched it again. HMMMMM. Still cold. This may take a while. Since it would probably take hours for the iron to heat, I decided to test my computer to see if it would boot from the hard drive and pressed the red rocker on my power strip. The hard drives whined, the modem blinked, the printer said hello, the power light appeared on my monitor, but no Bird, just a dark screen! "OH! NO! NO!" I screamed! The Bird is always there! It has never NOT been there! A tiny chuckle from the living room was barely audible through the noise of the blood rushing through my brain. Panic stricken, I tore the top from the P-box and began shaking cards and cables like an angry wife trying to revive her drunken husband. I tried the switch again. NOTHING! "Oh Lord, why me? I haven't even started yet!" I whined in despair. Then, in the depths of total and complete depression,

When running the two wires which attach to the back of the Horizon, I found it easy to drill a small hole in the blank spot just under U20 and run the wires through it. If you hold the card up to a light the spot stands out and can be marked. Do not mark the spot with hammer and chisel.

The diagram in the upper right corner of page 8 shows three wires on the 244 chip going to the edge connector. The written instructions tell you to attach the wires to different pins than the diagram shows. Do it either way as it doesn't matter which goes where for the decode to work.

As you complete an instruction, cover it up with a brick or park your car on it before proceeding to the next instruction. This will keep you from cutting or bending the right pins on the wrong chip or vice versa.

On 800K Horizons the U20 socket has chips stacked and pins bent out. This causes overcrowding problems stacking and bending out pins on the 244 chip in U21. The easiest way to avoid this is to do the modification on the 244 chip in U22. Don't worry. Bud says it's legal...

To avoid using your third hand when attaching wires to pins, put a little solder on the wire, put a dab on the pin, lay the wire on the pin and apply heat. Those suckers melt right together!

To keep solder from covering the entire edge connector pin when attaching the wires, turn the card upside down so solder runs towards the chips. Solder oxidizes and will cause a bad connection. Try not to cover the chips with solder.

Continued next month...

- Bob



Well, the record is still unbroken. I've never yet been able to take a vacation without the BBS crashing before I get back. The silly thing ran for a month straight before I left. I hadn't much more than gotten out the door before it started having problems, and by the time I got out of the state, it had died completely. Guess it missed me.

In the process of getting the board up and running again, I had some more problems with the cables that connect the hard drive to the controller card. After getting that straightened out, I thought about how the drives had been acting. It occured to me that the original 20 MEG drive had acted the same way when it died, so I decided to try it with the new cables. I was unable to access any data on it, but I did get a different error message than I had remembered from before. Just for fun, I tried reformatting the drive. In the past, this had caused the computer to lock up, but this time IT WORKED!! The drive formatted and showed no bad sectors. I backed up the main drive onto it and catalogged it. Everything was there! I now have the 20-MEG drive and one of the 10 MEG drives connected to the BBS. I suppose I could also connect the third drive (another 10 MEG) to the board, but I don't know what we would use it for.

It has been more than a year since I submitted a phone bill to SNUG for the BBS. I forget about it most of the time, but about once a year, my wife brings it up. The bill for the second line runs approximately \$11.00 a month (I don't have a phone bill handy to get the exact figure, but that's close). I thought that this year instead of submitting a bill and getting a check, that I would offer to trade the phone bill for the extra 10 MEG hard drive. The way I figure it, the club will make a little profit on the deal, and I will get a new backup drive without the hassle of phone calls, letters, and waiting for delivery. This proposal will be brought up at the meeting for a vote. If anyone else is interested in buying this drive, opportunity will be given to bid at the meeting.

Due to my vacation, I have not implemented any new features this month (except the quick catalog that I mentioned in last month's column). I have been working on expanding the message bases to at least 100 messages each. This has turned out to be a much more difficult project than I had anticipated. I could just create new message bases with as many possible messages as I wanted to, but they would be completely blank (all current messages would be lost) and they would start over at message #1. As a last resort, I will do this, but in the meantime I have been learning a lot about the organization of the message bases and how they work. I came very close to getting it to work right last week, but there are still a couple of nasty little bugs to work out before I put it on line. In the meantime, it is best to call at least once a week to be sure that you don't miss any messages. The current message bases have only 25 messages each. Each time a new message is left, the oldest message gets overwritten. This keeps

the message base from growing too large for the storage device. At the time I originally set up this particular message base, we were using floppy drives. We had had a failure of our disk controller and were forced to revert to SSSD to run the BBS. I had to make the message bases small enough to run from this format. Once we got our equipment back from repairs, we already had a full message base and I didn't want to start over (again) from scratch so I just left the 25 message limit in place. Lately, our volume of messages has risen to the point that 25 messages simply isn't enough to do the job anymore. I expect to have both message bases expanded out to 100 or more within the next week.

And now, on to the new stuff:

(file are listed in reverse order of upload)

NEW in the TI section this month:

16E31.....E/A OPT5 FAIRWARE ARCED GRAPHICS EDITOR FROM REJEAN FELTON

EDCON.....DELPHI CONFERENCE WITH EB JOHNSON, AUTHOR OF PAGE PRO, DV80

BUDCON.....DELPHI CONFERENCE WITH BUD MILLS. DV80

WORLDMAP2.....THIS IS THE XB VERSION OF WORLD-MAP! IV254 FORMAT. SORRY

THE OTHER VERSION WAS SAVED BY ADVANCED BASIC IN PROGRAM FORMAT SO IT WOULD NOT LOAD INTO XB...

WORLD-MAP.....MAP OF THE WORLD. INPUT TWO CITIES AND DISTANCE WILL BE DISPLAYED. ALSO INPUT LAT AND LONG AND ADD NEW CITY. RUNS FROM WAB WITH ADDITION OF CALL GRAPHICS(()) IN LINE 95 ELSE XB.

NEW in the Geneva section this month:

NYWD-V1/22....NYWORD VERSION 1.22 - SAW THAT IT WAS MISSING OFF OF THE BBS SO I PUT IT BACK.

IFIND.....SHORT NBBS-PROGRAM TO *FIND* THINGS FOR YOU...

IPAUICON.....IMPROMPTU DELPHI CONFERENCE WITH PAUL CHARLTON, RON WALTERS AND OTHERS. ARCED. DEARCS TO 90 SECTORS.

JU-SPELL.....INFORMATION ON A NEW SPELL CHECKER. DV80.

NEW in the Compter Graphics section this month:

MAC1.....ASSORTED MAC PICTURES. ARCED. DEARCS TO 1440 SECTORS.

MAC1-1.....RE-UPLOAD OF MAC1. DEARCS TO 1408 SECTORS.

INAGEL1.....MAC PICTURES BY PATRIC NAGEL. 10 FILES ARCHIVED. MACFLIX REQUIRED.

INAGEL2.....NINE ARCHIVED PATRIC NAGEL PICTURES. PART 2 OF ABOVE. MACFLIX FORNAT.

INAGEL2.....NINE ARCHIVED PATRIC NAGEL PICTURES. PART 2 OF ABOVE. MACFLIX FORNAT.

Tales of a Power Supply

(May 8, 1990 -- a Delphia download via 9T9 Newsletter
Thanks to John Martin)

Ever noticed your PEB gets really hot? Wished for a hard drive mounted in the PEB but know your PEB power supply can't handle it? Tired of your GENEVE and HFDC cards slowly turning brown around the power regulators?

I've been worried about it for quite some time. Tony Lewis advised me a while ago that the PEB power supply wasn't really designed for all of these new cards and drives which are being mounted in them. After losing a power supply (and sending \$50.00 to TI to get a new one) I decided that the way to go was to replace the power supply totally with a new "switching" supply.

TI designed the power supply around the technology of the time. The power supply is a "linear" supply. That means that your PEB has inside a huge power transformer, with simple regulating circuits that provide the power to the bus in the TI computer.

A switching supply avoids the huge transformer and heat problems by switching the power on and off very quickly (this has caused some interesting problems in offices that contain a large amount of PC-based equipment). Switching supplies are very cheap due to their wide applicability to PC's.

One mistake (in terms that it has caused untold grief for board designers of the PEB) is that the TI linear power supply is underpowered and generates too high a voltage for the cards on the PEB bus.

This is what the TI PEB manual says the voltages going to the PEB bus should be out of the power supply:

- BROWN = +16V
- YELLOW = +16V
- GREEN = +8V
- BLACK = GROUND

Per the TI design, the cards that you plug into the PEB must drop these voltages to something they can tolerate with their circuits:

- +16V drops to +12V
- 16V drops to -12V
- +8V drops to +5V

This isn't too bad, but the actual voltages I measured coming out of the TI supply were even higher than listed (I measure +20V instead of +16V, etc.). The drop in voltage means the cards must get rid of the excess energy somehow, and that means HEAT.

Also, the power going to the floppy drive(s) is inadequate for two full height drives, or even one 5 1/4" hard drive. I wanted to mount a 5 1/4" drive along side a 1/2 height floppy drive for a complete self-contained machine.

A New Supply

Browsing at the Trenton Computer Fair (in pouring rain) I found a Highlandbrand new power supply for \$50.00. Not a bargain, but I didn't want to trust this project to a used supply or one without a guarantee. The supply I picked up came mounted in a metal case ready to drop

into an IBM AT compatible. Because it was mounted in a metal case, it came with a few extra goodies, like a new power connector for the back of the PEB and a low-voltage (and quieter) fan.

The supply I picked is a 200 watt supply, which I decided would have enough for my PEB with full complement of cards.

I started this project on a Sunday evening by opening up my PEB (I have a spare so I wasn't too worried about destroying this PEB) and removing the following from the left hand power section of the PEB:

- a. Power Transformer (remove four nuts)
- b. Terminal Strip (remove two nuts)
- c. Power Connector (unscrew two screws)
- d. Power Supply (remove two screws and unsolder wires to PEB bus)
- e. Fan (remove four nuts)

I kept the wiring to the front power switch and to the fuse (new model PEB's seem to have removed the fuse on the rear of the PEB). I carefully cut two wires from the front power switch and soldered the 120 VAC power connections to the power plug which goes to the new power supply.

Working on the new power supply, I unscrewed the low voltage fan and mounted it to the back of the PEB (after cleaning everything in the PEB, gazing how dirty it gets after six years) using the four nuts which held the previous fan. I unsoldered the 110/220VAC switch on the power supply and soldered the wires together (to force 110VAC) and taped the wires to prevent a short.

Deciding how to mount the new power supply took much of my time. I finally decided to use the plastic vertical mounting unit from the old TI PEB power supply, and drill a couple of holes and mount the new power supply board to it. The new power supply then mounted vertically in the same manner as the old power supply.

Fortunately, the new power supply came with several disk drive connectors (four to be exact). I removed one of the disk drive cables (cut it off).

The power supply also comes with connectors which are intended to plug into an IBM PC Compatible motherboard. I also cut these off and removed all of the wires except for the wires which had the voltages:

- +12V
- 12V
- +5V
- ground

I then soldered these wires to the bus in the same place as:

- +12V went to BROWN
- 12V went to YELLOW
- +5V went to GREEN
- ground went to BLACK

(Warning: If you decide to try this yourself, try and make sure that the cables going to the drive connectors are long enough to run behind the cards in the PEB. Mine were a bit short but were still usable).

Next came the hard drive. I just mounted a hard drive and a floppy drive side by side in the PEB and ran the cables out of the box before putting the whole thing back together.

... continued on page 7 ...

THE TIGERCUB NUTS & BOLTS DISKS (Thanks to John Martin)

What are they? The Nuts & Bolts Disks are collections of 100 or more subprograms in merge format, ready to merge into your own programs.

And what does that mean? Well, TI-99/4A Extended Basic allows the use of user-written subprograms. And what are subprograms? You know them well, CALL CLEAR, CALL SOUND, CALL HCHAR -- those are all subprograms which are built into the Basic language. You can write your own subprograms, to do anything that Extended Basic is capable of, and tack them onto the end of your program to be CALLED whenever you need them.

To put it another way, using a subprogram is almost like running one program from another -- except that you can access it much faster, you can pass along any values you want to, and you can return to where you left the first program.

Also, with a disk drive you can save programs in MERGE format and then MERGE them into a program in memory. Providing that the line numbers are different, the program which you MERGE in will be added to the program in memory.

The variables used in a subprogram are entirely separate from those used in the main program, therefore libraries of utility subprograms can be developed in MERGE format, and MERGED into any program without conflict.

The Nuts & Bolts Disks are libraries of such subprograms. The first disk contains 100 subprograms, plus a tutorial on using them. Disk No. 2 contains 108, and Disk No. 3 contains 140 more in 114 files. Nothing like them has ever been offered by anyone else for the TI-99/4A computer.

These 348 subprograms have been consecutively line-numbered with high line numbers so that they will not overwrite your program line numbers, and so that any number of them may be MERGED into a program without overwriting each other.

Advanced programming techniques have been used to make these routines as compact as possible, averaging hardly more than 3 sectors each, so that a hundred or more could be crammed onto a disk and so that they would add very little to the length of a program. If you are learning to program, you might learn a great deal by studying these subprograms.

Each disk is accompanied by several pages of printed documentation, explaining the use of each subprogram and listing a short demo routine which you can key-in, run, and experiment with.

Many of these subprograms can be used by persons with almost no programming knowledge, to modify existing programs. For instance, a program written in Basic, which crashes with BAD VALUE when run in XBasic, will run with a simple CALL BXB, and CALL KILLQUIT will disable the infernal QUIT key. Many different screen character styles are available, as well as colorful wipes to replace CALL CLEAR.

However, it is the programmer who will find these disks truly invaluable. Even if you have the skill and ingenuity to develop these routines for yourself,

wouldn't you rather just pay five cents apiece for them?

The Nuts & Bolts Disks originally sold for \$19.95 each, later reduced to \$15 each. They are now available for just \$5 each, postpaid. However, if supplies of printed documentation are exhausted, it will be supplied on disk. Order from Tigercub Software, 156 Collingwood Ave., Columbus OH 43213.

GEOMETRIC SHAPES AND FORMULAS -- TI-PD 798.1
 excerpts from the docs of a \$1.50 Tigercub Fairware goodie by Marty Kroll --

GEOMETRIC SHAPES graphically illustrates many geometric shapes, labels the dimensions, displays corresponding formulas, and calculates volume, perimeter, area, or circumference. It is a fine teaching aid, making learning enjoyable.

Some of the geometric shapes you may select include square, rectangle, triangle, trapezoid, circle, sphere, cylinder, cone, rectangular prism, and rectangular pyramid.

RUNNING THE PROGRAM

After a colorful, motion-filled title screen, the main menu is displayed. One has 15 options from which to choose, selecting one of the geometric shape and formula combinations.

After entering your choice, the screen clears. The shape is then drawn, with sides, length, radius, etc. labeled.

The formula(s) is(are) then displayed, after which inputs for the dimensions are required. After these are entered, the calculation is made, and the answer displayed.

One then has the choice of entering new dimensions for the same problem, or of picking another shape by returning to the main menu.

[This excellent program has been around since 1985. I got it recently as one of five-six additions to a list of programs I knew I wanted. So far, I wouldn't trade any of the "add-ons" for my top choices on the "preferred" list. --- Geo T.]

BBS Report ... continued from page 5

The new uploads weren't quite as numerous this month, but what do you expect from a month where the board was down for better than two weeks. By the time you read this, I expect that there will be a number of new programs added beyond the ones listed here. The only way to know for sure and to keep up with the new stuff is to call the board regularly.

The SNUG BBS number is 702-648-1247. We are on-line 24 hours a day, 7 days a week except during user group meetings, BBS failures, and updates. We support 300, 1200, and 2400 baud and provide full access to all callers from first sign on.

That's about it for this month. See ya at the meeting!!
 -- John

HOTT NEWS (an idea whose time has come?)

The following is an excerpt from a column by Irwin Hott and published in the "Spirit of 99" newsletter of the Columbus OH user's group (C.O.N.H.I.).

"In this article we'll discuss a proposal from the Lima Multi-User conference."

"During the officers meeting at the Lima Multi-User conference, there was a considerable amount of discussion revolving around club newsletters. There was a discussion about a regional newsletter as well as the possibility of using a BBS as a "clearinghouse" for original material destined for club newsletters or possibly as a way to distribute newsletters."

He goes on to say that he was approached by Charles Good after the meeting to see if he would be interested in trying to set up such a clearinghouse. He agreed to look into it and detailed what he thought would be required as far as hardware/software to operate such a system.

After detailing the hardware requirements (he estimates approx \$500-600), he proposes possible fees to users to pay for the equipment and maintenance.

At the end of the article, he asks for ideas and correspondence (preferably on disk since he is blind). I have some ideas that might be helpful, so I have written to pass them along to him.

I apologise for the liberties I have taken in shortening up Irwin's article, but the newsletter deadline is, for all intents and purposes, already past and I didn't have time to re-type the whole thing. I will have a copy of it at the meeting for anyone who wants to read it.

The following is an excerpt from a reply letter that I have written to Irwin Hott in response to the proposals that he mentioned in his article.

I read with interest your recent article detailing plans to utilize a BBS for newsletter exchange. I understand that this topic was discussed at the Lima Multi-User Group Conference. Unfortunately, I was not able to attend, nor have I seen a transcript or video tape of the conference this year. I am writing this letter to you because you indicated that you would like to have some input.

I find the idea of having a central clearing house for newsletter exchange to be fascinating. There would certainly be many benefits including lower postage and copying fees, less redundancy, access to articles in word processor format so they can be formatted to fit in space available in your own newsletter, and many more. All in all, I'm surprised that someone hasn't thought of it before.

I would like to suggest contacting the SYSOPs on the various networks (CompuServe, Genie, Delphi, etc) to see if a file transfer section could be set up for this purpose. This would have many benefits over using a dedicated BBS. It would mean almost unlimited storage space, easy access to everyone at reasonable cost, NO equipment to purchase or maintain, and access to more

than one user at a time. This last item could become very important if a lot of groups and individuals start using the service.

In the interest of keeping on-line time to a minimum and to keep from downloading the same article several times in different newsletters, I suggest limiting the newsletter uploads to original material. Not uploading your reprints of articles from other newsletters would also help solve the problem that we currently see of not crediting authors and newsletters correctly when reprinting their articles in your newsletter. Only articles of general appeal should be included. How many people outside of your own group would be interested in your Treasurer's report for instance? For that matter how many people in your group would be interested in your Treasurer's report (grin)? ... But I digress ...

If there are graphics that accompany an article, they should be in one of the formats that are easily converted to other formats. This is not so important as it used to be, but not everyone has TPA for MDOS or PAGE PRO for instance. For the same reason, the text of an article should be in standard DV-80 format.

Archiving and compressing files would go a long way toward streamlining the process of uploading and downloading the newsletters. Here again, the emphasis is on keeping on-line time to a minimum.

I am very interested in this project and am willing to support it in any way I can. I am on the newsletter committee for the SNUGLETter, the voice of the Southern Nevada User's Group (SNUG). I also run the SNUG BBS (702) 648-1247. As with most TI groups, we have had a declining membership over the last few years. We have done a number of things to cut costs including printing our own newsletters on a borrowed XEROX machine.

If this idea works out, it could cut our operating expenses even more with the added advantage of easier access to newsletters from other groups. I can foresee setting up a directory on one of the BBS hard drives exclusively for exchange newsletters. This would give all members who are interested access to the latest newsletters immediately. Currently, the distribution of exchanges is painfully slow. It takes months for a newsletter to go from the mailbox through the officers and members, to the newsletter librarian. Once in the library, they generally never see the light of day again. On the bbs, they will at least be available in a more timely manner.

I am sure that by now all of these suggestions and ideas are old. You've probably heard them all again and again, but I am working in a vacuum here and don't know what has already been discussed. If you have any further information concerning this project, or if I can be of any help whatsoever, please contact me.

Thank you,

John Martin
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<p>SOUTHERN NEVADA USERS' GROUP The SNUGLETter is published monthly by the Southern Nevada Users' Group (SNUG). SNUG is a non-profit organization of individuals with an interest in all aspects of Texas Instruments' 99xx & 99xxx based computers including hardware and software by third party vendors. The GROUP meets 7:00 PM on the second Monday of the month - currently in the Nevada Power Company, Wengert Community Meeting Room, 6226 West Sahara Avenue. Visitors and guests are welcome to attend the meetings. Information on membership is available at the meeting. Articles may be copied from the SNUGLETter provided credit is given to both the author and the original source and that the article not be used for profit. (For-profit organizations wishing to use any articles from the SNUGLETter will need to make prior arrangements with the Executive of the Southern Nevada Users' Group.)</p>	<p>SNUG OFFICERS 1999-2000: President: Rudy Johnson - 871-9583 Vice President: Gordon Leonard - 658-0923 Secretary: Cindy Mitchell - 871-0309 Treasurer: Ralph Guise - 456-2926 Librarian: George Campbell - 564-1586 Associate Librarian: Lance Wilson - 649-6452 Membership: vacant BBS Sysop: John Martin -- 647-1062 Ass't BBS Sysop: Bob Sherburne -- 399-4042</p>
<p>SNUG Bulletin Board - (702)648-1247; 24hours 300/1200/2400</p>	<p>NEWSLETTER INFORMATION: Editor: George Tilley - 254-6005 Assoc. Ed.: Rudy Johnson - 871-9583 Newsletter submissions can be uploaded to the SNUG-BBS, Newsletter section or mailed to SNUG, P.O. Box 26301, Las Vegas, NV 89126, preferably on disk.</p>
<p>Currently SNUG supports Texas Instrument's 99/4 and 99/4R computers, and Myarc's Geneva 9640 computer.</p>	

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