

net99er news

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

Vol. 7 No. 4

APRIL 1989

NEXT MEETING:
SATURDAY
JUNE 3rd

at 9:30am in the NRH Community Center

CLUB OFFICERS

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

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

The reviews, evaluations, and opinions contained in this newsletter are the author's own and do not reflect the views of the **NET99ERS** HCUG.

----- Presidents Page -----

If everyone remembers last month at the meeting we announced that there was to be a computer faire at the Tarrant County Convention Center and there was one and we were there and we had some fun and had a chance to meet some new and interesting people, that said they might join the club. I finally got my P-Gram card minus the clock which I paid for. I sent off the money nearly a month ago and just got the card and kit a few days ago. After building the card and getting it running I started to get really interested in the way it works, more on this later, and by the way I finally got my clock three days ago and it all works fine. The solder SIG held at Jo Nell's house went off pretty good and we had some fun and completed several cards much to the delight of the owners. More SIGs are possibly going to be planned in the near future, if there is enough interest. The hard and floppy controllers came in last meeting and people are just now learning how to use them and I believe they will fall in love with them after they get used to them. Time is short this month so I will close, but first remember the meeting is going to be held at the North Richland Hills Library and Community center May 6, 1989 at 9:30 a.m. hope to see everybody there, till then see ya later. James

----- Treasury Report -----

We started this month with \$580.50. We had 5 people renew their membership and 1 new member along with the DOM and the sale of the 256k ram chips we collected \$316.02 and had expenses of \$107.52 leaving the club with a total of \$789.02. In the first five months of the year we have collected \$2653.00 and spent a total of \$2642.82. As long as we take in more than we spend we are doing fine. Lee W.DeForest

----- Phil's Quest -----

Got some old TI cartridges lying around gathering dust? Turn those babies into instant cash! I am engaged in the monumental task of trying to obtain a complete set of all the cartridges produced by TI for the TI 99/4 and TI 99/4A. Considering that TI produced 130 cartridges, that is really no small task. Anyway I would like your help in reaching my goal. After I complete my own set, I would like to develop a second set to become a cartridge library for the NET 99'ers Users' Group. If you have extras of these or simply don't use the ones you do have, let me know and we can discuss the price. You can leave me a message on Startext MC220059 or on the TI-Net BBS - (817)581-1421 (#1) or call me at metro(817)498-1551. Thanks in advance for your help!

----- Membership Department -----

The membership files are being updated. Please contact Bill Duncan for any information regarding membership. Bill Duncan - Membership Chairman.

This month the column deals with several topics. One being the last meeting. At our last meeting we had a very good discussion regarding what people want to see or experience at club meetings. I only wish more people were there to voice their views. A lot of good ideas came from the latter part of the meeting. I even volunteered to do a Demo on Joypaint. Several members said they wanted a demo on how to use Disk Utilities and Funnelweb. All good choices and each will be dealt with at future meetings. If you have a desire to see a program demonstrated or would like to demonstrate a program that you find useful, please contact the club Officers. Many thanks to new member Barbara Massey for her presentation on her video tape database.

Other business is as follows - Our secretary hasn't been able to make the meetings for quite some time. This is due to his job and his newest addition to his family. We need a volunteer to take the minutes at the meetings. It isn't hard to do. When the meeting is over, turn them in to Tom Collins, the newsletter editor. A volunteer would make things much nicer and take the pressure away from the club officers to press for someone to take them at the start of the meeting. Please do your part for the club

Now for my news. As of the end of this summer, I will not be able to do this job any longer. This club DESPARATELY needs members to become more active in club functions. We need new blood to bring different insights into the running of club business. If you choose to take a position for the club, remember that it doesn't take a lot of your time. Don't be afraid that you can't do it. I thought much the same when I took over the newsletter two years ago. I was amazed to find how easy it was to produce. I even took the effort to change the newsletter format myself, with no permission from the club officers. I did this to save the club some money in paper and printing costs. It went over very well with all who have voiced their opinions. Now it is time for someone else to try it. I will tutor or train or just plain help any member who takes this job. The newsletter is considered the link to the TI world outside our area. I would like to thank all the people who have sent me newsletter information and columns to include here. That's all for now! - Tom Collins - Newsletter Editor

--- For Sale ---

TI 99/4a, Home Finance, joystick. Contact Jim Clark - phone - 577 1128.
TI PE Box, 32K, Disk Cont, SSSD drive, software. Contact Tom Hall
Plato Module, diskettes and manuals.

----- Club Purchase Planned -----

This month we announce a CLUB MEMBER ONLY purchase of the Avatex 1200E Modem. The member price is \$65 each plus S&H (divided equally upon delivery). We require at least 5 members for a group purchase. Contact Lee Deforest at the meeting.

THE WORLD OF COMPUTERS
By Marcia Williams
KC 99er, Kansas City, MO
August 1988

Everyone knows that software creation is an art, but few people recognize that creating user manuals is also, an art. As with any art form, there are rules and guidelines that should be followed. Here are 10 preliminary suggestions:

1. Use at least 20 technical terms in the first three pages of the manual to discourage users immediately.
2. Make the manual as voluminous as possible - readers may delay using it indefinitely.
3. Assume your readers have already mastered BASIC or COBOL. At the very least, assume they are skilled word processors.
4. Sprinkle the manual liberally with inconsistencies. Was F-4 the clear button on page 4? Call it the Escape button on page 6.
5. At least once on every page, tell the reader to consult another page.
6. If you must include explanations of error messages, be sure not to include them all. This will create a thread of suspense.
7. Two weeks after the publication date, send out a packet of "new pages to insert". Mail such packets approximately once a month. By doing so, you ensure that all customers have their own individualized editions.
8. Publish your manual in an inconvenient format, one that will slip off a desk with ease, preferably opening its loose leaf holder and scattering its pages on the floor.
9. Make no distinction between key names and literals in your instructions. Do not include where or when the user should press the space bar. Let him/her practice guessing.
10. Follow these rules and you too may produce a classic of the genre.

----- From the Newsletter Librarian -----

I have volunteered to take over the newsletter library and keep it updated with the newsletters we receive from all over the world. I will try to bring them to each meeting so we can all check out the ones we would like to review. I am in the process of sorting and putting them in their respective manuals. Help is needed of all club members, PLEASE bring the manuals that were checked out when Roy Willis was the NL librarian to the next meeting. They have not been updated in 12 months and are in need of it. Remember, the checkout of any one manual is for a one month period only. Please be sure you put the pages back in the order they were filed after copying them. This will ensure that everybody will have the chance to see the material. One more item - at the last meeting there was a stack of newsletters on a table in the meeting room. Several people went thru this stack and apparently thought they were 'freebies'. They were not! Please return these newsletters - no questions asked. Thanks - Jo Nell Thompson

----- TECH TALK by Mike Maksimik -----
From the Chicago Times
This column is continued from last month

Still another rare peripheral was the GROM library peripheral. It essentially was a super-widget that could access ALL of the GROM in the cartridges. This would be handy for TI BASIC, since TI BASIC searches external GROM for subprograms. TI EXTENDED BASIC does this too, but doesn't search DSR ROM when a program is running. Modules like TE II, Personal Record Keeping, and EXTENDED BASIC could all be plugged in and the CALL routines could be accessible to BASIC. BASIC could use the commands it wished to whatever, and all you had to do is plug your favorite "flavor" modules into the library peripheral to get the necessary language expansion. Imagine a GROM cartridge giving advanced graphics to TI BASIC, another for print spooling, still another for expansion memory control. Others for high speed cassette routines, etc. so the language could expand by adding cartridges. It's the same technique used with the peripherals: the computer never becomes obsolete, because it automatically responds to any new device attached. This is true of the library peripheral. This is another device I would LOVE to see.

Some of us have the HEX-BUS controller. In the days of the 99/2, the CC40, and the 99/8, the hex-bus controller was introduced for the 99/4A to allow compatibility with these devices. Essentially, they were designed like the Commodore 64's peripheral system, where a slow serial transfer was appropriate for the hex-bus devices, a disk drive wouldn't be feasible. So TI never considered the HEX-BUS disk drive. The Wafertape drive, the CAT modem, the RS232/parallel interface, and the 4-color printer, were all developed. All were battery operated and could fit in a briefcase, as did the CC40. For the 99/4A, it was an inexpensive means to expand. The hex-bus controller was a small device containing a DSR ROM that controlled the I/O drivers which "spoke" to the hex-bus peripherals. Since the main use was for the CC40, it wasn't pushed for the 99/4A. The 99/8 could also rely on the PE BOX for it's devices. It had it's own special FLEX CABLE card, which used some special control lines to expand it's own capabilities. Since the 99/8 used a TMS9995, the same as the GENEVE, it could use the extra 3 address lines in the PE BOX, giving a total address space of 2 to the 19th power, or 512 k of directly addressable memory. Since some of these banks were probably switched, the address space grew to a total of 4096 k, which is sufficient for MOST of my needs. The speed of this processor was greater, and it's throughput was even greater, but more on that later. Some other control lines were used, some to indicate a 9900 or a 9995 present in the system, some to allow multi-level interrupts, still others to initiate HOLD sequences, which are found on the mainframes, and large multi-user systems as a way to deal with wasteful processing, and interrupt idling. TI had a HARD DISK controller in the plans, probably MYARC's, but the technical data I have is 1982. I own a rare card. Some of you may remember a company called A/D electronics, out of Sacramento, California. They produced a control card which allowed sampling of environmental data through an 8-bit analog-to-digital controller. This device allowed hookups of many items, such as temperature probes, light transducers,

etc. and was mainly used as a scientific device. Some possible uses included home control, because it also contained a real-time battery backed clock. Plus, there were separate digital inputs and outputs, for switches and relays, respectively. My main use for the A/D card, FIRST ADE, is a mouse. The RADIO SHACK color mouse contains two potentiometers turned by a rolling motion of the mouse. The potentiometers, when interfaced with the ADC0809 chip, (two channels, x and y) gives me mouse control with TI ARTIST. I wrote the -- myself, and have been using this device for about a year and a half. The MBP clock card is a similar device, although it does not contain a digital input or output array. The ADE card, however, could also switch external relays, or sample data on 16 lines (8 in, 8 out). If timing was correct, an 8-bit parallel interface was possible. I still use this card, and the clock is handy for keeping my P-system master disk up-to date. The FORTi music card was a device which allowed one to produce sound on not one but 4 extra TMS9919 sound generators. By arranging the frequencies on the 12 music channels available, different waveforms were possible. Now, with the FORTi, sounds even a c-64 owner could envy were possible. And, there were 4 percussion channels independent of each other. I can imagine "AXEL-F" running on this card!! And of course, we all know of the more common peripherals, the Triple Tech, the disk controllers, the 32k cards, the RS232 cards. Even these make our computers sophisticated enough to meet TI's long dead expectations. I also own the P-code card, and another article is devoted to THAT!

-- COMPUTER PROGRAMMERS ARE FULL OF BOOL --

By Art Byers, CW 99'ers

One of the features of a modern computer that gives it such tremendous power is the support for logical expressions, - generally known as Boolean logic. (Named after a well known English mathematician.). When you couple or chain multiple relational expressions and logical expressions, you present programmers with dynamite power! The chaining of both relational and logical expressions is done with the use of IF, THEN, ELSE. Lets take a quick look at all the relational and logical expressions that can be used, combined and chained in TI Extended Basic.

RELATIONAL:

Equal to (=) and Not Equal to (<>) Less than (<) and Greater than(>)

LOGICAL:

AND, OR, NOT, XOR (Exclusive OR)

The TI-99/4A returns a value of 0 if a statment is FALSE and -1 if TRUE.

Although the purpose of this article is to cover the Boolean Logic expressions, it is also necessary to understand the relational first, so let's go through the above, one at a time, to complete the introductory phase.

EQUAL TO (=): Therefore (1=2) returns a value of 0 (false) because 1 does not equal 2.

NOT EQUAL TO (<>): Accordingly (1<>2) returns a value of -1 (true).

LESS THAN: (1<2) being true returns -1

GREATER THAN: (1>2) being false returns 0.

EQUAL TO can be combined with > and < as in >= (Greater than or equal to) or <= (less than or equal to).

The computer makes the comparisons above based on the ASCII value. Consulting appendix C in the XB handbook, We find that the percent sign (%) has an assigned ASCII value of 37 and the Asterisk (*) 42. Therefore (%>*) returns a zero because it is false.

On to LOGICAL expressions: The logical AND returns a -1 (True) only if both the left and right parts are true. ie: IF 5<6 AND 7>8 THEN X=1 Will not set X to a value of 1 because the right hand 7>8 is false, therefore the whole AND clause is false even though the left part is actually true. The logical OR returns a -1 (True) if EITHER left or right parts are true or if BOTH are true. ie: IF 1<=2 OR 6=7 then X=1 would set X to equal 1 because the left part is true. Now let us chain 'OR' with 'AND'. Will the following set X to equal 1 or will it set X equal to 2?

IF (9-8)>(8-9) OR (2 2)>(2+2) AND (8*9)=72 OR (6*6)=35 then X=1 ELSE X=2
Notice that both the left and right sides of AND contain one part that is obviously not true - Is that Tricky? You better believe it is!!!

To answer the question you must decide what the final value of the logical statement will be. If it is true (-1) X will equal 1. If it is false (0) X will equal 2. Therefore take the AND as the center of the statement and evaluate the left and right parts. The answer is X=1. Do you see why?. Lets try one more:

IF (9-8)>(8-9) OR (2 2)>(2+2) AND (8*9)=72 AND (6*6)=36 THEN X=1 ELSE X=2.

What will be the value of X, 1 or 2? Why?

The logical expression NOT returns a -1 (True) value only if the clause following it is NOT true. ie: IF NOT (6>9) THEN X=1 ELSE X=2 would set X to equal 1. If NOT doesn't have you in a State of hopeless confusion, read on!

XOR (Exclusive OR) returns a true (-1) if either its left or right part are true but NOT BOTH! As a result, XOR is the most frequently misunderstood of the logical expressions. People ask "How can something return a FALSE when both parts of the logic are TRUE?". BUT that is exactly what happens. XOR returns a FALSE value because both parts are actually true. It also will return a FALSE value if both parts are not true. And you thought AND and OR were tricky! Child's play compared to XOR!

Here is an example: IF (4>3) XOR (6<7) then X=1 ELSE X=2. The value being False, the program sets X to equal 2. ELSE can be used to continue the chain of logical and relational expressions. For Example: IF (2*2=4) AND (6*6<>36) THEN X=1 ELSE IF (9<8) OR 8>5) THEN X=2 ELSE X=3. Is X now going to equal 1, 2 or 3??

Lets look at a practical application. For this purpose we will search an imaginary data base to prepare a mailing list. For a name to be placed on the list, the family must earn more than \$75,000 per year OR own an automobile rated as >=3 on a scale of 1=economy 2=Average 3=above average and 4=Expensive. However, we can disregard all of the above and place the name on our prospect list if the family owns and uses a "Gold" credit card, either Visa or American Express, MC but not Discover. As a final criteria, we will exclude all those where the principal income earner has a college degree. Our Boolean logical search might look like this: [SEE BACK PAGE]

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IF (INCOME >=75,000 OR AUTO >=3) OR (CREDIT=GOLD AND CREDITNAME<>DISCOVER) AND (CREDITNAME=AMEX OR CREDITNAME=VISA OR CREDITNAME=MASTER) AND DEGREE NOT COLLEGE THEN CALL LABELPRINT(NAME#, ADDRESS#,CITYSTATE#,ZIP#)

Can you rewrite the above to add the disqualification of any family that has not ordered an item of at least \$200 value by mailorder within the the last two years?? - (THIS ARTICLE WILL CONTINUE NEXT MONTH)