

DALLAS TI HOME COMPUTER GROUP JULY 1984

Meetings: 7:00pm, 3rd Friday each month
At Northlake College, Room E-206, Irving, Texas

>>> NEXT MEETING: Friday, 20 July, 1984 <<<

President: Robert Bayne
Vice-President: Keith Althar (STARTEXT: 49530)
Secretary: Richard Roberts (SOURCE: T13552; STARTEXT: 7772)
Treasurer: Earl Bullock
Editor: Robert Lee Hoffbauer (SOURCE: T13700; STARTEXT: 51547)

This newsletter is the official publication of the DALLAS TI HOME COMPUTER GROUP, a non-profit organization serving member/users of the Texas Instruments 99/4A HOME COMPUTER. For more information you are invited to attend our next meeting or send a SASE to: DALLAS TI HOME COMPUTER GROUP, ~~2000~~ Irving, Texas 75061.

SECRETARY'S MINUTES: Richard Roberts

Last month's meeting of the Dallas TI Home Computer Group was on June 15, 1984. The meeting was brought to order by club vice-president, Keith Althar. Robert Bayne, club president, had previously announced that he would miss the June and July meetings, due to business travel.

After the minutes of the previous meeting were read by club secretary Richard Roberts, Keith mentioned the possibility of purchasing disks in bulk for \$1.00 each. The idea of putting an advertising flyer in the newsletter in exchange for newsletter postage was discussed as one way to make the offer available to all members.

Keith then turned the meeting over to Dan Johnson, who presented a very nice program on graphics, and how to get them to a printer. Dan has written several programs, printed copies of which were made available to members, that help the 99/4A user accomplish bit-map graphics and printer dumps. One program allows the user to set-up his printer for certain typesets, then it dumps them to the printer for use by the next program, such as Multician. Another program used DATA statements to store the necessary information to allow the printing of Dan's signature in bit-map graphics.

We also had several new members join the group, and I would like to welcome them, and encourage them to get involved in group activities. Several club chairman positions are still open, also, and need to be filled.

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JULY PROGRAM PLANS: Dan Johnson

By popular demand, our July meeting program will be on the FORTH computer language! Since the time that Texas Instruments announced its version of FORTH for the home computer (then promptly orphaned our systems), most of us have heard a lot of talk about the language and little else. This month we plan to remedy that situation on at least a couple of fronts.

First, we have arranged to have Mr. Chuck Gurrett (from the Dallas chapter of the FORTH Interest Group) present some basic information about FORTH. Since few of us are intimate with the language, we asked that he explain how FORTH differs from other languages, how it can be used, what typical FORTH applications might be and other such general topics. Mr. Gurrett graciously agreed and asked how many sessions we wanted him to present, two or three perhaps? Needless to say, if he has several meetings worth of general interest topics, we can expect quite a bit of useful information at the July meeting. More about the FORTH Interest Group in another short article.

The second point of significance (with regard to FORTH) is that Glenn Ashe now has a copy of TI-FORTH available in

the club library. At the June meeting, he indicated he would also be acquiring a copy of the TI-FORTH manual this month. This should result in making FORTH generally available to all our members (at last!).

You asked for it, so come on out in July and let's see if the campus security people will let us in one more time. Bring your FORTH questions and be prepared to PARTICIPATE.

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EDITOR/ASSEMBLER: Robert Lee Hoffbauer

I am so embarrassed. I got my system working this month, and for only ten dollars. The problem was in the female-connection of my outboard disk-drive cable, where two of the channel connections were tangled and shorting my disk access attempts. That was the original problem. That was compounded by my failure to thoroughly explore every possibility. I apologize to all of you for my mental cobwebs and the failure resulting therefrom to produce two month's of newsletters. In any event, I am back in business (again).

I want to thank Eddie Knutson who volunteered at last month's meeting to take on the editor's responsibilities during my system's apparent incapacitation. I think he was relieved when I told him I was back on-line and able to continue as editor. Eddie had written a short article for this newsletter asking the membership's support and help, and briefly summarizing the events of last month's meeting. He transferred the file to me by modem (which is just plain 'nifty') and I had intended to include it until I read it thoroughly and realized that the return of my system had made his request for your support irrelevant (although I could use a monthly column on BASIC and EXTENDED BASIC programming), and that the summary of last month's meeting was covered by the Secretary's Minutes. However, I will be after Eddie to write me an article for future publication on some topic of interest to him. Again, thanks, Eddie.

By the time this reaches you, I think Tom Dasura will be in Albuquerque, New Mexico, beginning a new life and practice after the very unfortunate theft of his mobile clinic (van) and the loss of his equipment and supplies. Just before the theft, Tom had written a review of a book on Multiplan (included in this month's issue). Tom has been a sometimes fiery, but always sincere member, who will be missed -- I will miss him. If the Post Office forwards this newsletter to him, "My very best wishes for your health and happiness, Tom."

I would like to change an evaluation I made in the March newsletter of a publication called "Home Computer Compendium," which has changed its name to "MICROpendium," due to threats from some unnamed magazine of legal action for use of the 'Home Computer' in the newsletter's name. I had reserved judgement as to whether the "MICROpendium" would develop into a worthwhile publication. I would now, after several more issues have been received, like to recommend "MICROpendium" as a worthy source of news and information for 99/4A owners. "MICROpendium" is a monthly, twenty-four page newspaper published here in Texas. It seems to be accurate, reliable, and timely. It also has a number of good reviews of software, hardware, and books in each issue, as well as tips and comments from users (which are interesting in their own right.) "MICROpendium" is available for twelve dollars a year from:

MICROpendium
P. O. Box 1343
Round Rock, Texas 78660

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MULTIPLAN BOOK REVIEW: Tom Dasura

Title: Multiplan Models for Business
Authors: Douglas Cobb, Gene Cobb, and Thomas Henderson
Publisher: Que Corporation (1983) Indianapolis, Indiana
Price: about \$ 15.00

Anyone who has invested in Multiplan would do well to invest the additional fifteen dollars for this book. In creating template models for business applications, this book is excellent in a number of areas. It is divided into eight chapters that contain twenty complete model templates. The areas covered include cash and debt management, fixed and working capital management, financial statement analysis, and planning and budget projections. It is a versatile book having many uses.

Each chapter is divided into four sections. The first explains the principles used to develop the model. The second section shows an exact replica of the finished template -- complete with the cell references and the names used. The third section explains the individual cells, the way they are referenced and named and how they fit together. The last section explains how the model can be modified for individual situations.

The beginning of the book explains the various features and functions of Multiplan, but in more readable form than the Multiplan manual with more easily understood and more detailed explanations. One important thing that can be learned is the formatting of tables and data in the construction of templates. There is a neat trick used in all the templates that could be utilized by anyone. It uses the 'GO TO NAME' feature to move around the template easily without interminable scrolling. All of the templates follow a common format. First there is a statement of pointers, then of assumptions, then data, and last the instructions. The book is very well laid out and logical in its presentation of the subject.

I would recommend this book as a source for people who are serious about getting full value out of Multiplan. It will solve the difficult problem of building templates, give ideas for special applications, and help refine techniques in building individualized models.

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ADVENTURE GAMING: Dan Johnson

While the T199/4A offers some excellent opportunities for arcade type games, I personally find adventure and role playing games more satisfying. But, the neophyte adventurer often gets 'stuck' and is unable to complete the game, all for the lack of a clue or two.

If there is sufficient interest in adventure games (and if you have as much trouble as I do), I propose we dedicate a newsletter column to their pursuit. If you will describe the predicament in which you find yourself, I will attempt to offer some (cryptic) help if I can. If I am unfamiliar with the game (or more likely, I haven't been able to get any farther than you), I'll publish a general request for assistance. The object will not be to make the games easier, but to give you a gentle nudge in the right direction, when you THINK you have already tried EVERYTHING.

Now... the first problem for you to ponder. I can't seem to get beyond the first level of Scott Adams 'GHOSTTOWN'. I have discovered 3 treasures and a map, but can't get beyond that (yet). I'll admit to having dumped the database to print (using diskfix!), but my desperation has not paid off. Either I have missed some necessary actions, or the clues are a little TOO cryptic! Any help would be appreciated.

If that game is not a familiar one, how about the 'MYSTERY FUNHOUSE?' In this game I've been unable to do much of anything that appears significant. Any clues to get rolling would be gratefully received.

I would like to hear from anyone that is playing or has played any of the INFOCOM games. I understand that they are a collect (if a little difficult for beginners). Please give me any input for this column in some sort of written format (although I'll welcome any hints given orally as well). If you can't find me at club meetings, my address is:

Dan Johnson
 818 Northwind Lane
 Garland, TX 75044

I would also welcome E-mail with questions (or answers) on either of the Esoteric bulletin boards.

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FORTH INTEREST GROUP: Dan Johnson

On June 25, Robert Hoffbauer and I attended a meeting of the Dallas chapter of the FORTH Interest Group. The group seems to be generally composed of persons 'fluent' in FORTH. Although they did ask first time attendees to sign-in, we saw no evidence of any sort of 'newcomer' program on the group. They seem to be mostly oriented toward the experienced FORTH programmer.

That is not to say they are not friendly or helpful, however. The meeting was relatively informal, and I found it to be most interesting. The members were intelligent and articulate, and they all participated in making it an enjoyable evening.

Chuck Durrett, who will be speaking at our next meeting, presented a system for the data sent during transmission from one system to another. While most of the FORTH programming was far beyond my understanding, the technique he used was presented quite clearly, and I was able to grasp its concept easily. In doing so, I actually gained a little insight into the workings of FORTH (hey, this may not be so bad after all!).

Their meetings are held on the FO(u)RTH Thursday each month, and are publicized in the Dallas Morning News 'DISCOVERY' section on the Monday preceeding each meeting. The next meeting topic will be FORTH-83, the latest 'standard' FORTH implementation.

I would encourage anyone interested in FORTH to attend their meetings. You may find you have to think a little (Editor's Note: a lot!), but you will be rewarded for doing so.

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THE HISTORY and TRAVELS of FORTH: Robert Lee Hoffbauer

In the early '60's, Charles H. Moore was a professional programmer working at the Stanford Linear Accelerator Center in Palo Alto, California. In those early days of computing there were few of the computer languages, compilers, and development systems that the modern programmer has available to him. Essentially, all serious systems programming was done in assembly language. Mr. Moore calculated that a good programmer, using the tools available to him at that time, could write only some forty-odd applications in a lifetime of work; and he felt that there were too many important things yet to be done -- and that he wanted to do some of them. He began his search for tools and methods which would increase his personal productivity, and allow him to write eighty or a hundred programs or more before he turned old and grey.

Being a professional programmer, Moore moved around the country to be close to his current job. Following his stint at Stanford he was associated with MIT, and much later with the National Radio Astronomy Observatory (NRAO). As he moved from job to job, he implemented first one idea and then another, discarding those that didn't work well, adopting and adapting those that did. It was at NRAO's Kitt Peak Observatory that the first full implementation of FORTH appeared, used for data acquisition and control of the radio telescopes. FORTH became the standard programming language of the international astronomical community within a few years of that first implementation. Due to that success, Mr. Moore and several associates formed FORTH, Inc. Later, one of the associates made the decision to 'give' FORTH to the DEC user's group (DECUS), from which all later public-domain versions evolved.

Mr. Moore did not set out to create a 'computer language' but only to find tools and methods that would make his job easier and quicker. This is a major distinction between FORTH and other computer languages. FORTH was developed 'in the field' and grew one idea or concept at a time. Most languages have been designed as whole cloth by academics or, worse yet, by some committee. Considering his early association with Stanford and MIT, it is not surprising that many of the features of FORTH resemble LISP and/or LOGO; but FORTH puts it all together in it's own unique way, as you will see.

FORTH, it is claimed, has been implemented on a greater number and variety of computers than any other language (with the possible exception of BASIC). It is equally at home on giant main-frame, large mini, and small micro systems. For a long time it was the only language (again, besides BASIC) that was available for the Atari line of computers -- Atari having developed their own version of FORTH (gameFORTH) for internal use in their arcade game division. FORTH was implemented in ROM several years ago as the dedicated operating system for the Craig Language Translator (a hand-held device that would translate, say, English to Spanish or English to French). It has been used to control the special cameras used to film some of the special effects sequences for some of the more famous movies of recent years (may the FORTH be with you, Mr. Spock). These examples are drawn from material published in 1980, so I am sure that FORTH has gone forth to even greater things since then.

More, in some later issue.

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SETTING UP YOUR FORTH SYSTEM: Robert Lee Hoffbauer

The very first thing you should do with your FORTH disk is to back it up! You can use the Disk Manager to do the back-up. The second thing you should do is put a write-protect strip over the write-protect notch on the original diskette. Don't load your FORTH and play with it until you have done these two things, because it is ~~VERY~~ easy to wipe-out parts of a FORTH disk if you don't know (yet) what you are doing. I didn't, and I did!

Now, using the back-up copy of FORTH, and the Editor/Assembler cartridge, VERY CAREFULLY do the following:

1. Using option 3 (load & run) type DSK1.FORTH. This loads the basic FORTH vocabulary. You should see a menu of options displayed as soon as FORTH is loaded.

2. (FOR PARALLEL PRINTERS ONLY) If you use a parallel printer as I do, you must change the disk, as it is originally set up for a serial RS232C printer. Type -EDITOR and press <ENTER>. Wait while the editor vocabulary is loaded. As soon as the "ok" prompt is given, type 72 EDIT and press <ENTER>. This will display SCREEN 72 which contains the printer vocabulary (FORTH disks are organized into SCREENs of four sectors each, which contain 1K bytes each SCREEN.) Using your arrow keys, on lines 0, 2, 3, and 4, change every instance of RS232 or >RS232 and of RS232.BA=9600 to PIO or >PIO and PIO, respectively. When you have made these changes enter Fctn 9 (BACK), type FLUSH and press <ENTER>, and the updated SCREEN will be written back out to your disk. To test, type -PRINT and press <ENTER> to load the printer vocabulary; then, enter SMCH 72 LIST UNSMCH COLD and press <ENTER>. This sequence should print SCREEN 72 to your printer, and if it doesn't, you've done something wrong. Reload the EDITOR vocabulary (-EDITOR) and re-edit SCREEN 72.

3. To auto-load most of the menu options (at the same time that the FORTH vocabulary is initially loaded) we can save those options in binary image format (machine code) on disk so that all preselected options will be loaded in one smooth pass. It will load much quicker this way than if loaded in ASCII format (the way it is stored originally). We will load most of the options available, and when we are more familiar with FORTH we can be more selective. Type each of the following, pressing <ENTER> after each option: -GRAPH, -VDPNODES, -COPY, -TRACE, -FLOAT, -PRINT, -BSAVE. Next, type : CHNGEDIT ; (including both the colon and semicolon) and press <ENTER>, type -EDITOR, and press <ENTER>, and finally : TASK 51 BSAVE and press <ENTER>, being sure to include the apostrophe. This will save all of the applications we have loaded as one continuous binary image starting at SCREEN 51. Now we must modify the instructions on the load SCREEN, SCREEN 3. To edit SCREEN 3, just type 3 EDIT and press <ENTER>, then change it as follows:

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0 ( WELCOME SCREEN ) BASE->R HEX 10 SYSTEM ( CLEARS SCREEN )
1 0 0 GOTOXY ." Loading... TI-FORTH " CR 10 B3C2 C! ( QUIT off )
2 DECIMAL 51 BLOAD 16 SYSTEM MENU ! VDPMODE !
3
4
5
6
7 0 DISK_LO !
8 ( 90 DISK_HI ! ( SET-UP FOR 1 SS DRIVE )
9 ( 180 DISK_HI ! 90 DISK_SIZE ! ( SET-UP FOR 2 SS DRIVES )
10 ( 180 DISK_HI ! 180 DISK_SIZE ! ( SET-UP FOR 1 DS DRIVE )
11 ( 360 DISK_HI ! 180 DISK_SIZE ! ( SET-UP FOR 2 DS DRIVES )
12
13 : FREE SP HERE - . . ; ( DISPLAYS FREE MEMORY )
14 : PAGE 0 0 GOTOXY CLS ; ( CLEARS SCREEN & HOMES )
15 R-BASE

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Be very careful that all punctuation and spacing is just as shown. Before using FLUSH to write the corrected screen to disk, you must remove the initial parenthesis only from the line that describes your system -- line 8, 9, 10, or 11. Remove the first parenthesis only, and only for the line that describes your drives. Now you say Fctn 9 and FLUSH. To check, type COLD. Your system should re-boot FORTH, and all of the options we BSAVED earlier in one smooth operation. Exit FORTH by typing MON, which will return you to the TI monitor screen.

NON. MAKE A BACK-UP COPY OF THIS DISK!

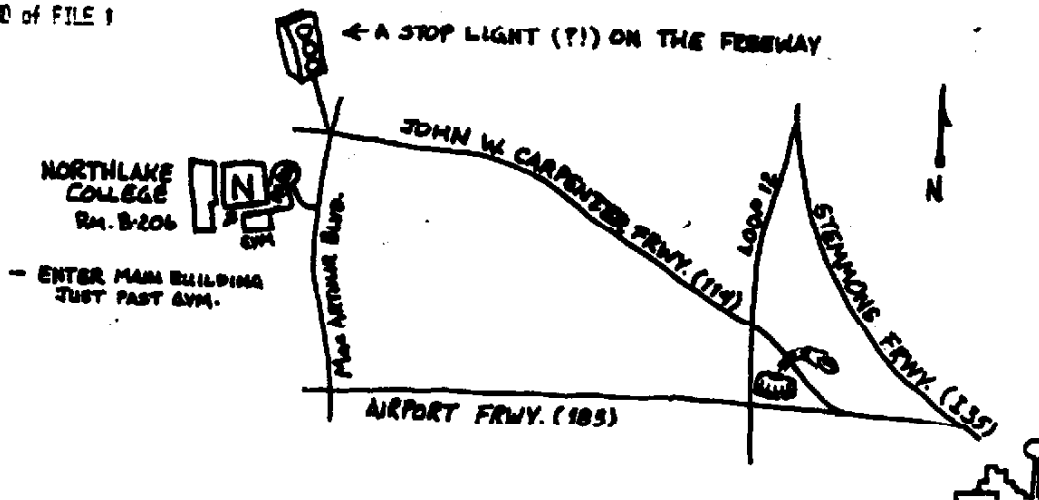
When you have made the back-up copy, reload FORTH, and, just for fun, type FORGET CHNGEDIT -64SUPPORT 3 EDIT and press <ENTER>. Feel free to play around (using your TI-FORTH manual) -- if you mess up the disk you will still have a fully formatted FORTH disk from which to make another copy. When you are tired of the 64 column display, type MON, press <ENTER> and you will be returned to the TI title screen. When you re-boot FORTH you will again have a 40 column screen and can change to the 54 column editor by following these same instructions. If you find that you prefer the 64 column editor, you will have to set-up your disk again, from scratch, substituting -64SUPPORT in the place of -EDITOR.

I must give credit where it is due -- while I have not followed their procedure exactly, I gleaned most of the information for this article from the March 1984 issue of THE SMART PROGRAMMER by Miller's Graphics (I highly recommend it!) This monthly newsletter covers FORTH, assembly language, and advanced X-BASIC programming; and is available for \$12.50 per year from:

The Smart Programmer
1475 W. Cypress Avenue
San Diego, California 92177

If you should decide to subscribe, I recommend that you ask that your subscription be back-dated to begin with the February, 1984, issue, because the issues received since then are so full of information about our home computer, you won't want to miss even one of them.

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