

K-TOWN 99'er

THE NEWSLETTER OF THE K-TOWN 99/4A USERS' GROUP

AND

THE ATHENS COMPUTER CLUB

AUGUST, 1988

AUGUST MEETING

The K-TOWN 99/4A Users Group will meet at the MLB (Mechanicsville, Lonsdale, Beaumont) Building on the second Thursday of the month. The date is August 11. Doors open at 6:30 P.M. The agenda has not been announced at press time. Everyone come and if nothing else we will have a lively discussion about the officers.

E.M. will again have his TI \$\$\$ SEARCH in operation, trying to match serial numbers of \$1.00 bills with numbers registered in his program. Cash awards for matching numbers. (See inside Article: TI SEARCH UPDATE)

Please remember that we must vacate the building by 9:30.

DISK OF THE MONTH

Irving Crowley's CHECKBOOK program
This program requires two disks and
thus the price for the Disk of The Month
is increased to \$4.00.

HIGH RESOLUTION GRAPHICS AND THE 99/4A

by Anne Dhein
reprinted from THE FRONT RANGER newsletter

Editor note - This is part 3 of 4. Part 4 will be reprinted in the next newsletter.

Section Three: Picture Storage, Color, and Unique Features

Scratchpad Memory - Most drawing packages have provisions for setting aside part of a picture and later adding it to another picture. This "scratchpad" memory can be handled in two ways: by saving a permanent version of the clipped picture onto a disk which you can reload as needed; or by storing the picture-part in intermediate memory where you can recall it when you need it, even though you have loaded new picture files in and out of the program since the picture part was saved.

When this type of picture-part is saved to a disk it should not be confused with a regular picture file. When a picture file is loaded into your program, whatever you had on the screen before is erased and gone, and the new picture takes its place. Picture-parts, however, are

loaded IN ADDITION to whatever else is already there. These small pictures have become very popular with the drawing community so that they have their own special term - clipart.

Each program is unique in its handling of this additional storage. Joy Paint uses internal storage for a Cut and Paste method much like the paint programs for other popular computers. All screens are saved in the same format. When something is wanted from another picture, save the current picture first, then load in the picture to be borrowed from, "Cut" out the piece you wish to use. Reload the original picture and "Paste" the new part any where on th drawing.

Bitmac uses the "Store" function for internal temporary storage. Current screen graphics can be overlaid with graphics stored on a disk, using what is called "Boolean Input". This allows special graphics effects which are uniques to Bitmac.

TI Artist also has unique storage methods. Besides the normal full screen picture files, parts of pictures can be saved as "instances" or "slides". Slides are a collection of up to 24 miniture designs that can be independently designed, rotated, and moved around on your drawing. Instances are images that can be added to your

drawings or combined together in whatever manner you wish. They can become a permanent, editable part of your drawing. The nice thing about instances is that they are saved in a DISPLAY VARIABLE 80 format which can easily be transported to Extended Basic programs or TI Writer files as well as being used for clipart.

Graphx has a very powerful "Clipboard" feature. With it you can create and store clipart permanently on a disk and it is also possible to copy a portion of one picture into another, much like Cut and Paste. A portion of a picture, or even several pictures, can be stored, then decided on later as to which ones to keep and which ones to erase.

Use of Color

In the high resolution mode each graphic position available to be used on our electronic drawing board is called a pixel. You may remember being told that the screen is like a grid with 256 pixels across and 192 pixel rows; and that each individual pixel on the screen can be turned off or on separately while you are drawing - all 49,152 of them! Right? Wrong, if you are using color!

Color resolution for the 99/4A is not the same as drawing resolution. We still have the same 192 rows of pixels, but instead of 256 pixels across, we have only 32 graphic positions across each row. Each row of pixels is grouped in eights, starting from the left of the screen, and each set must be the same two colors - a foreground and a background.

The foreground is the color assigned to the brush or pencil line in each eight-pixel group. The background is the color assigned to those same eight pixels when the pencil is not used. When you first begin using the drawing board, all of the eight-pixel groups have been assigned the same two colors. The color you see before you begin drawing is your background, and, of course, the pencil line is your foreground color. You may also see a third color in the form of a border around the perimeter of the screen. This is the screen color. If you don't see it, that means the screen has been assigned the same color as the background.

Now you can see why color resolution is 64 x 192 instead of the drawing resolution of 256 x 192. Any given group of eight horizontal pixels MUST be the same two colors. The groups on either side can carry entirely different colors, but each group is limited to two colors. Knowing this, and arranging your drawings according to the color boundaries is important when working with color.

Most programs make full use of the 99/4A's 15 brilliant colors, allowing control over the foreground and background colors, and in many programs over the screen color as well. Sometimes the screen color is called the "backdrop".

All programs using color allow the swapping of one color in a drawing for any other. When the exchange takes place, every incidence of that color on the screen is swapped for the new one. Additionally, some programs like TI Artist and Graphx allow selective repainting of a chosen area.

Some of the programs provide special helps for working with color. TI Artist provides a function that lets a special color cursor move on color boundaries. Graphx does the same; also providing a "Grey and White Checkerboard" function which is handy for planning drawings which will use a lot of different colors. This makes it much easier to plan the various colors in your picture so that they don't bump into each other. When you no longer need the grid simply choose the "Remove Grey Boxes" option.

For special color effects, two programs that shine are Draw-A-Bit with its Redraw feature described elsewhere, and Paint 'N Print which includes five extra rainbow colors in varying widths of horizontal and vertical stripes. Draw 'N Plot makes limited use of color. Only two are used at any one time - foreground and background. These colors can be easily switched so you can see how the various combinations of color look together.

Besides the Graphic Package, which doesn't use color either, Joy Paint is the only major paint program not using color. Here the emphasis is on the manipulating of picture components, and color is used only as a background, with the pencil line always being your choice of either black or white. Fainting refers to filling shapes with the many patterns available, or using the air brush to "spray paint" an area with a chosen pattern.

A Slide Show is a method of presenting pictures in a selected order. Bitmac is the only program with this feature built in; Draw A Bit and Draw 'N Plot have disk demos that you can adapt for your own pictures. TI Artist has an excellent companion disk called Display Master that gives you many options in designing your own slide display. Asgard Software puts out a slide show program for Graphx files.

The Undo command lets you "take back" the last step of a drawing. If something was moved or erased that shouldn't have been, no harm done, just "undo" it. Joy Paint is the 99/4A's only program with this feature but it is quite common in paint programs for other computers.

Like Undo, each program has special features not shared by the others. If you are in the market for a new paint program, one of these might be just the feature you were wishing you could find. For instance, Joy Paint has a drawing area that is actually 92% larger than the screen. To see the rest of the drawing board, the screen is used as a window, and can be moved from side to side or up and down. When the screen dump program is used the whole area, not just what is visible on the screen, is printed.

Do you have a second computer that you have wished you could tie in to your 99/4A? The Bitmac software will let you do just this. When the coprocessor function is in effect the other computer (not necessarily a TI) can manipulate data while the 99/4A is processing elaborate graphics from that data.

Bitmac has a Cursor Report feature which can be turned on or off as desired. It keeps track of the actual pixel location of the cursor. The program also lets you scroll your picture one pixel at a time to the

right or left, up or down on the screen. This is handy for getting a drawing onto color boundaries, and also for special effects using the Boolean inputs AND, OR, and XOR.

The TI Artist instance file was already mentioned above as being excellent additional storage for clipart, because these files can be added so easily to any picture you are currently working on. The instance file is invaluable for using as a vehicle to transport your artwork to other mediums. Many support programs have been built around the ability of these instances to be so easily used, including Font Writer (Asgard), Art Convert (Trio+) and Character Sets and Graphic Design III (Testaments).

Besides being used for planning color in drawings, the unique grey box function in Graphx can be used for designing schematics and other precision drawings which require precise measuring.

The Graphx clipboard also lets you experiment with computer animation. If you store the appropriate images on the clipboard, you can create short, animated sequences which you can display against a background of your normal Graphx pictures.

Like the Norton Graphics Package, Draw 'N Plot is primarily a programmer's tool. Unlike the Graphics package however, Draw 'N Plot has a very nice, full-featured drawing board. Also, the routines in Draw 'N Plot are in assembly language which considerably speeds up operations. Draw 'N Plot makes an excellent program to design your own Extended Basic programs around; however, memory can be a problem.

Draw A Bit is really a full-scale programmer's tool too, but the programmer must be somewhat conversant in assembly language as well as Extended Basic to use it with his own programs.

As you work in the Draw A Bit environment, your picture is automatically saved for you in intermediate memory. Any time you wish you may clear the screen and with the push of the right keys, redraw the picture, line for line. This is a fascinating procedure to watch. Pictures may also be saved in this Draw mode if desired. Also interesting to use is the Connect-Dots option. This is like a line function except that you plot all your dots first; then the lines appear when you are ready for them.

Built right into Paint 'N Print is a font editor that will let you easily change the shape of the resident alphabet. The companion disk additionally allows editing of the texture character for all sorts of special textural effects.

Paint 'N Print is the only drawing package which allows a screen dump to be in color, providing you have the right printer (the Axiom 6P 700).

Super Sketch is the only program that includes a touch tablet. This graphics tablet, although deceptively simple looking, is a precision tool that accepts commands through a control arm which determines screen position. The control arm moves the pointer (your pen) around the tablet, and the computer keeps track of where this pointer is at all times. In this manner, any picture

placed on the tablet can be traced onto the screen. The device is so simple that even a child can use it easily.

The Artist Extras package from Insebot allows the use of the Super Sketch touch tablet with TI Artist. When used this way, the tablet becomes an integral part of the TI Artist program and then is used in place of a joystick or trackball to allow designs traced with the tablet to appear on the screen.

TIBULL V

Perhaps the most useful tool in Basic or Extended Basic programming is the IF-THEN-ELSE statement. In Assembler language its equivalent is a set of conditional jump instructions: JEQ, JNE, JLT, etc. (Jump if Equal, Jump if Not Equal, Jump if Less Than, etc.). These are the things that give computers a reputation for being intelligent, but as always, they are based on the same binary arithmetic that everything else in a computer depends on: 0 or 1, no or yes, off or on, false or true.

The computer sets each IF clause equal to either 0 or -1: 0 if it is false, not true, or doesn't exist (equals 0); -1 if it is true or exists (not equal to 0). The value of the clause, either 0 or -1, can then be used to decide what happens next.

An IF clause can be a relational statement with =, >, <, <>, etc. or just a numeric expression (sorry, no strings) such as (5) or (Y-5) or (X>Z) which is evaluated and compared to 0. The result of the comparison is either true or false and so the IF clause is given a value of either -1 or 0.

You can combine as many IF clauses as you need. The computer uses simple arithmetic to combine them to a single value. OR is addition (+), AND is multiplication (*), etc.

Relational expressions can also be used as logical operators. (X=Y) is 0 if false, -1 if true. In playing Bridge the four Hands (H) play in sequence. To determine who plays next you write:

```
H=H+1 :: IF H>4 THEN H=-1
```

Another way is to use a logical operator:

```
H=H+1+(H>3)
```

The operator (H>3) is 0 if it is false, -1 if true.

This is often shorter, simpler, and easier to keep from getting confused. A long IF-THEN-ELSE series can be hard to keep straight.

All of this is in the User's Manual but I had to figure it out for myself. JHB

August MeEtIn5

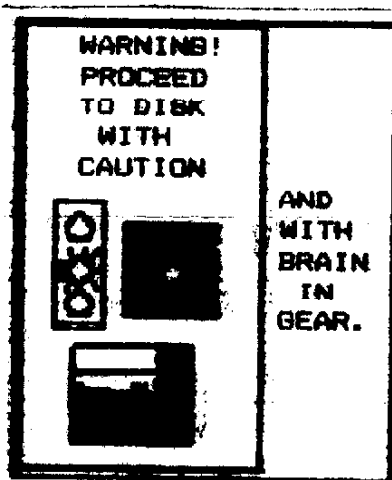
The Athens Club's August meeting will be held on Thursday, the 18th at 7:00 P.M. at Joe Simmons's

home in the Seven Cedars Subdivision in Etowah, Tennessee. Joel will demonstrate Plus+ a new utility program.

For our friends from K-town who have not been to Joe's home, you should plan to come down I-75 and exit at the Mt. Verde (Holiday Inn) road, take a left and cross over the I-75 and the U.S. 11 Hwy. by the Zesto Drive Inn into the Heart of Athens. Then you should take State Hwy. 30 East at the First Baptist Church towards Etowah. In about 8 miles you should look for the Seven Cedars subdivision on your left. Joe's house is on the third street on the right and the house on the left with the boats in the front yard. With these excellent directions you will not need to know Joe's phone number (263-2963) to call when you get lost.

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TRIBULATIONS
by E.M. SMITH



MY SAGA OF ERRORS

In recent months I have been reporting to you through our newsletter, references to articles as reported in the newsletters which we receive from other Users Groups. This month that article will probably be missing. Due to carelessness on my part while copying a disk for Bob Buehler I "bombed" the disk which contained the data files containing the addresses of the users groups which we exchange newsletters with. The time that I usually devote to writing that article has been consumed in rebuilding that file, as well as rewriting the special "print programs" that I would merge with the data file to print labels or to make a line print hard copy of those addresses.

This of course is Bob Buehler's fault. Had Bob not been so generous in volunteering his services to print the first draft of last month's newsletter I would not have been copying the newsletter disk for Bob. On the other hand if Art Gibson's Newsletter Print Program was

compatible with my printer, Bob would not need to have been so generous. So I guess I can blame it all on Art. Now I understand that Art is extremely busy with his work, requiring forty-eight hour days, and he has not touched his console for months. So in sympathy with an overworked President, I'll let Art off the hook and take the blame myself because I failed to take my own counsel - KEEP A BACKUP of important programs and data files!

In retrospect, I'm going to blame it on Carl Hinton. Had Carl's work not dragged him off to Atlanta, he could have furnished me with a "BACKUP" from his files. He promised to give me his Atlanta phone number but so far he has failed to do so and now that I have rebuilt the files they are more up to date than the version he has anyway. But, if Carl had not "dumped" the job of printing labels for our Guest Newsletters I would not have had the disk in drive two which is the default drive of my version of DM1000 which I was using to copy from drive one to drive three.

It now becomes obvious that my tribulations lay at the footsteps of the McGovern boys in Australia. You see, I was using a version of Funelweb which I keep on my Horizon Ramdisk, and as you know Funelweb uses a version of DM1000. Perhaps I should blame the authors of DM1000. Or perhaps I should blame it on the developers of my HRD. After all, had they not supplied me with the convenience of a ramdisk, I probably would have been more alert in using drives 1, 2, and 3. You see, without the ramdisk, I would have had the program disk in drive one, the disk to be copied in drive two, and the copy disk in drive three. The disk that I bombed would not have been in drive two. See how simple it is to get to the bottom of who is really to blame?

DOPS! I just remembered. The K-Town Users Group is the real culprit to blame. Were it not for my participation in this group I would not have had the "bombed disk" on hand in the first place. For that matter they are the ones that furnished me with a copy of Funelweb. They also motivated me to have the extra disk drives and the ramdisk. Or was I motivated by the Articles I read in our guest newsletters and MICROpendium? Finally I know who to blame! The whole darned TI Community.

!!!XYZOX#?!! 1,2,3,4,5,6,7,8,9,10 !XYXDDDCX#?!!
TO BE EXPLAINED AT THE END OF THIS ARTICLE!

After all if all those super skilled programmers and technicians in the TI Community had just minded their own business this Orphan would have been buried long months ago. Except for their contributions in hardware and software I never would have known the power of this mighty little orphan. It was they who drew me into this endless web of surprises, wonderment, excitement, and fulfillment of expectations. They hypnotized me into this world of madness. They unveiled the hidden secrets of my console and bit by bit they fed me seductive potions of addictive morsels that had been spawned in their imaginative minds. Yes they are the one to blame for this delirium that has been cast upon me and you.

And it was the Users Groups which worked in concert with these mad geniuses to distributive these addictive

morsels. Just wait until I can get my hands on the person who twisted my arm and forced me to become a charter member of the K-Town Users Group. That person(s) deserves a serving of champagne and caviar for all the joy I have found in this madness.

Now for the explanation of the the expletives in the third paragraph above: I took a dinner break while writing this article and you must learn about the stupid thing I did when I saved the prepared text to disk. Prior to starting this article I had written the TI-Search Update article and saved it to disk. I purged that article from memory and proceeded to write this one. When I took my break I proceeded to save my prepared text I did a Function 9, and on prompt I keyed in a (SF). And up jumped the default DISKS.UPDATE and with my brain in neutral I pressed ENTER and presto this article gobbles up the previous article I had saved to disk. Will McGovern you really saved me a lot of time with that choice morsel. With your brilliance, why didn't you include a prompt to force me to put my brain in gear? I know what you are thinking Will. You think I would error if I had these three prompts: 1-Overwrite existing file? 2-Are you sure? 3-Do you have your brain in gear? At this point I am not sure of anything!

I initiated this article as a reminder to an often expressed maxim in the computer world - **MAKE BACKUPS OF IMPORTANT FILES**. However, there is a second moral presented - Proceed to disk with brain in gear. So with brain in gear I now commit this article to disk. Whew!

I just had a telephone chat with Bob Buehler. Guess what? Bob is blaming me for losing his article -Kinder-9- which he had written and saved to disk. It seems that I somehow returned a wrong disk to Bob and he somehow got it mixed up with his data disk. He saved his article to the disk I had given him and in the process of transferring it to his data disk he zapped his article. He was lamenting the task of rewriting his article. I know how you feel Bob. Is it possible both of us have contacted some alien computer virus? I hope it is only a 24 hr. virus.

If you can empathize with this saga of errors, read my article TI-SEARCH UPDATE. You'll find more of the same. Whatever it is I seem to have a bad case of it.

P.S. On Tuesday I received a disk of articles for our newsletter from Joe Simmons. Joe included on the disk a message to me detailing the other articles on the disk. One of those articles, according to Joe's note was a special message to the members of the K-Town Users Group. At some time during the process of reviewing these articles and transferring them to the work disk for the newsletter I printed a catalog of Joe's disk. Somehow during this process Joe's eight sector article to the K-Towners became a five sector article and contained the same text as his article giving directions from Knoxville to his home in Athens. Sorry Joe, you just became an innocent victim of evil spirits which continue to haunt me. Believe me Joe, the postage due on your mailing had nothing to do with this happening. Hope you have a backup for the next newsletter.

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Irving Crowley's
CHECKBOOK MANAGER VER 5.3.1
a review by
Joe N. Simmons

For those of you who have read either the K-town and Athens Computer Club's newsletters you will find that I have been lauding this fine program for several months.

If one wants a program which will quickly take the entry of the checkbook data such as the date, account, check number (it will anticipate after the first check entry), the payee, and the amount. This is the one for you! After each twenty entries it automatically saves the data entries. This is helpful for we have all experienced the inconvenience of computer lockup.

After you have listed your checks, deposits, memos (we all have little explanations to our transactions), etc., this program will allow you to change entries by either insertion, deletion, or redoing. Oh yes, Irving has a screen dump to the printer ever present if you should want a hard copy.

A recent added feature which the Athens Club got credited allows one to code up to 40 items, categories and place your budgeted amount by each item. After which, one can colate by each month and get a listing of that months checks by each category along with the budgeted amount. Those of us who are ever wanting to know how we are doing will find this feature helpful.

Reconciliation a beautiful term and one which each of us does with our checkbook each month to see if we and the BANK agree with each other. First this program allows us to place an asterick between the payee and the amount on the TRANSACT file and there by clear that check, deposit, or transaction. Each check not previously cleared is placed upon the screen and can either be cleared or passed up until next month. Finally, you are ready to reconcile your checkbook. You are asked for the date and the balance amount shown on your bank statement. After pressing enter, Presto! you have a listing of uncleared checks, uncredited deposits, your balance, the bank balance, and the corrected balance which should be 0.00!

(note due to my forgetfulness, I will continue this article next month. See stumbles)JNS/0155 hours 7/25/88.

Oh yes, Irving's program in the SSSD two floppy disks format will be the K-town Club's Disk of the Month for August.

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JULY MEeTiNg

We met at Joe's home and discussed and later tried to find Joe's speed reading programs without success. It was unanimous that Joe needs to get himself in order.

Even his computer concurred that his order of things needs to be resequenced!

After the demonstration of Marty Krolls' new catalog program those present agreed to use it to put their disk library in order and then to report back at the next meeting.

Joe reported and demonstrated Irving Crowley's SSSD version of Checkbook Manager 5.3.1 to the group (see a more detailed report elsewhere in this newsletter). Afterwards, Jimmy explained how he was able to read the 'TRANSACTION' file of the Checkbook program and to utilize it in his church budget program.

Of the 200 diskettes and four diskette holders which the club ordered, only 75 diskettes remain. The diskette holders have only four dividers although they have spaces for more; but what can you say when they only cost \$5.00.

Radio Shack gets \$15.00 for them.

As with most meetings, the clock finally ran everyone home. If you only read the newsletter, you should come and share your ignorance with the rest of us.

Respectively submitted, JMS

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ITEMS FOR SALE:

Update UPDATE uPdATE:

Bob may donate his last three complete systems with PEB boxes to a local school systems unless he can get at least a decent offer.

Bob Lamb, P.O.Box 309; Athens, Tennessee, 37303 has Reduced his prices on seven black/silver consoles, three PEB boxes with 32k, TI disk controllers and drives and some RS232 cards and printers as well as XB cartridges for sale. Bob indicated he now wants \$300.00 for a console-PEB package with extended basic. The RS232 cards as part of the package will be on a first come basis. This is an excellent opportunity for those of you who have been looking for PE boxes. You need one to house the new GENEVE.

Larry Nelson has a bare (without power supply box) SSSD drive for sale at \$50.00 and has an Epson 80X printer for sale at your best offer. Call Larry at (615) 745-0648.

Joe White of the K-Town Group has a fully expanded PEB for sale at \$260.00. Included is 32K Memory, RS232, Disk Controller, and two half height DSSD Disk Drives. You can reach Joe at (615) 687-0656.

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TI-SEARCH UPDATE

by E.M. Smith

HELP! HELP! QUICK, some one tell me what evil spirit has cast a spell upon me? It is more than obvious to me

that I am out of sync with my governing planets. This is my third attempt to write this article. For a few brief hours it was complete and recorded on disk. With a burst of energy Saturday afternoon I set forth to write this article and also the article "TRIBULATIONS". In the course of writing the second article the first of my "creative works" got zapped. Details are in the article on TRIBULATIONS. And as if this article was to be denied, after writing the first paragraph on my second effort, I paused to turn on the switch to an exhaust fan and instead I flipped the switch that controls my computer circuits. So here I am in slow pursuit of my third effort. I remain apprehensive, lest something else goes wrong. Already this morning the condensate drain to my central air conditioning unit has stopped up and flooded the ceiling over the stairwell. The ceiling looks as it might drop at any minute. For the moment I believe I have the drain unstopped and the leakage stopped. If I don't have it stopped I know the ceiling will come down with the next "flood". I intend to replace the ceiling after it dries out but at the same time I intend to install a backup drain. Everything I do anymore seems to need a backup.

Saved to disk.

On the UPDATE to TI-SEARCH some more numbers have been registered in the program and thus the chances for winning cash have been further enhanced. But the real enhancement that I wish to address in this article is the one contributed by Reverend John Bull. I imposed on his programming skills to speed up my program and as expected he came through with flying colors. The program now runs a scan for a match with the blink of an eye. Many thanks John!

Saved to disk.

For those who are interested, I will make this program available at our August meeting. It will be free if you bring me a blank disk or \$1.00 if I furnish the disk. The program requires XBASIC.

As announced before, I will continue to register additional numbers in the program until November 1, 1986 and will honor my promise to pay cash for matching \$1.00 bills until the middle of December. Remember that there are two ways to win cash: one by submitting special wrappers from Hershey Chocolate Company's products which contain numbers for registration. And second, submit a \$1.00 bill with a matching serial number.

Saved to disk.

At our August meeting I will have my program set up and running at the first part of our meeting and I am expecting each of you to be present with a pocket full of \$1.00 bills to enter the serial numbers into the program for a lucky match. If you show up at the August meeting without a pocket full of \$1.00 bills I will know you have not read the newsletter. Your editor will not appreciate being availed of that message.

In closing, I pose a very profound question for your resolve. "Why do girls in short skirts make men look longer but not taller?"

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WANTED!

INFORMATION ON HOW TO LOCATE OUR TREASURER.
FUNDING FOR NEWSLETTER IS NEEDED.

STUMBLINGS

by

Joe N. Simmons

Have you ever stumbled on to a new technique either at the computer or in another club's newsletter? If so, this column is for you. The geniuses will be so deep in thought that they will never know that they missed these stumbles! Enough gibberish.

CONFESSION...It is said to be good for the soul; however it can be taxing to system. Until about 11:05 P.M. on Sunday the 24th I had not thought about this newsletter or of the articles which I had promised when the K-town and Athens Club's joined their two newsletters together. So, these stumblings will be brief.

I called Art Gibson and found him in his bath tub and as jovial as ever. Re-tooling his plant for a new order and customer has occupied Art 12+ hours a day for the past several months. He asked that I tell everyone hello and that he hoped to be able to once again to live a normal life and perhaps attend a club meeting after about mid August.

Lloyd, you should have gone fishing with me on Saturday for I slewed the fish! I really had a great time and I also got to enjoy the lake with my daughters and their friends.

Although it may sound foolish to some non-believers...LORD, thank you for a beautiful day and for helping me to catch fish for a change! Too often we only remember to complain to the LORD when things go badly.

John Bull has given me permission to distribute his Bridge program to other clubs as fairware. Hopefully, they will - after using the program and seeing its unique value - compensate you as I have. It is a great program and is one of the programs with which I played this month when I should have been preparing this newsletter.

Enough stumbling for this month...Joe//02:26 hrs.
July 25, 1988.

NEW MEMBERS

If you missed our July meeting then you probably have not learned that our membership increased by two new family memberships at the meeting. We welcome into our membership Norman and Diane Spector who have retired and settled in the Powell Community. Norman is a past president of one of the Florida Users Groups. We also welcome the return of Kelvin Kawik. In July, Mrs. Graham Lovelace also returned to our fold. A hearty welcome to each of you!

KINDER KORNER

By Bob Buehler

ALPHABETIZED FRIENDS, just like last time, but with a difference. This time IS THE LAST TIME for what began as Acquaintance List. After this August Newsletter I'll need to find a new gimmick for Kinder Korner!

Gosh, AUGUST, that rings a bell! Especially the FIRST OF AUGUST!! It was my wedding day. My wife's too. This was way back during prohibition, when Hoover promised a chicken in every pot and two cars in every garage. Who was Hoover? What was prohibition? Hoover was a Mining Engineer. He also made vacuum cleaners. In addition he became President, yep, of the USA. Prohibition was a federal restraint of free trade of booze. Liquor stores were different from today. Some were at the back doors of farm houses down narrow dirt roads with chickens pecking about. For chicken safety, Model T Fords were held to about walking speed by an innovative method, now widely copied. Today they are called 'speed bumps.' At the back door it was customary to order a pint. The 'clerk' disappeared briefly, then returned with a bottle of half raw alcohol, half water, with burnt sugar coloring. The buyer took a healthy sip, said, "Hey that's good," and handed over fifty cents. (For that I'd worked 2 1/2 hours as Ford Garage mechanic.) Home brew was available from the same dealer. Other liquor stores were at the ends of telephone lines. This kind delivered to your home. And the product was not burnt sugar stuff. It was the real McCoy and cost appropriate bucks.

My best buddy, Jimmy, and I had a better way. Jimmy's dad was a capable lawyer, including to Frank Lloyd Wright, no less. He was a kind man who would help a guy even if he couldn't pay cash. Substitute gratuities included seasonal fruits, vegetables, dressed chickens, sausage, and good meat cuts. Quantities overflowed storage space until sometimes the back porch plain stunk! Gratuities from more sophisticated clientele came in bottles. Top stuff, stored in a trunk in a closet. Jimmy would slip out an occasional choice. That's the first time I saw and tasted Hauge - Hauge Scotch in the triangular bottle. Also the last. Roosevelt put an end to prohibition during my graduate college year. Jimmy and I celebrated at the local brewery on opening day. That was in Wisconsin where beer is food.

Where was I in this Kinder Korner? Oh yes, my wedding day. But I had given you the romantic details in the April 1988 Newsletter. That issue is now exhausted. Orders being taken for reprints at roughly 1380 each. Call for quantity discounts.

In July we Kinder Kids alphabetized by slow bubble

sort because it was the easiest to explain. Now the faster SMETSORT is offered. You will be able to measure the time difference.

What is SMETSORT? An early version was named SHELLSORT after its inventor, Donald Shell. An improvement earned the name Shell-Metzer Sort by its dual authors, later shortened to SMETSORT. It is good, fast, and easy to code. I learned these details from a hand-out by Joe Amari in K-Town's Extended Basic SIG class that lasted for too few meetings.

I won't admit that I couldn't understand SMETSORT if I really tried, but I haven't tried that hard yet. Here comes the coding. Sure took a long time to get only this far during this session!

Back up to line 610 (last month), clear BREAK !RESERVED FOR SHELLSORT, and type in 600 PRINT "SORTING BY SMETSORT" as follows:

```

600 PRINT "SORTING BY SMETSORT"
610 P=COUNT
620 P=INT(P/2)
630 IF P=0 THEN 750
640 K=COUNT-P :: J=1
650 I=J
660 L=I+P
670 IF L<(I)<(L) THEN 720
680 TL=L*(I)::TF=F*(I)::TS=S*(I)::
TC=C*(I)::TZ=Z*(I)::TP=P*(I)
690 L*(I)=L*(L)::F*(I)=F*(L)::S*(I)=S*(L)::
C*(I)=C*(L)::Z*(I)=Z*(L)::P*(I)=P*(L)
700 L*(L)=TL::F*(L)=TF::S*(L)=TS::
C*(L)=TC::Z*(L)=TZ::P*(L)=TP
710 I=I-P :: IF I>1 THEN 660
720 J=J+1
730 IF J<K THEN 650
740 GOTO 620
750 PRINT "NAMES ARE SORTED"
760 GOTO 1000

```

NOW LET'S TALK. Like in the Bubble Sort last month, line 670 this month is the sort comparison based on LAST name, L\$. It was set up to look no further than last name. If there are two or more LIKE last names, NONE are lost in the sort. Their order simply is determined by the order in which they are entered with their DATA statements. No big problem.

Lines 680 thru 700 should be familiar. They accomplish any needed switching of positions. The real MAGIC of SMETSORT, though lies in the remaining program lines 'that I could understand if I really tried.' I'd not be one bit surprised if John Bull explained it to us soon. I never met a Preacher with such a curiosity! Or such smarts!!

Did you notice the new function in line 620? INT means Integer. An integer is the largest whole number contained within a numerical quantity. Thus, the integer of 1.69 is 1, also of 1.99999 and 1.00009. And the integer of 0.5 is 0, also of 0.999999 and 0.000001. Aside from its use here, which John may explain, INT is handy in rounding numbers so that unnecessary accuracy doesn't clutter mathematical printouts on the monitor, and

more important in hard copy printing. Say now, ROUNDING, using INT could be a future Kinder Korner topic. Don't let me forget.

I put 15 phony names into this program and timed the sorts. Bubble took 16.25 seconds. Smet took 6.59, a 2.5 to 1 ratio. Me thinks that added names will widen the ratio in favor of SMET. If there is time I'll add five to find out.

But the main thrust this August month is on PRINTING. I don't know why I waited so long to remind you. Remember, in the Pesky Outline we assigned line 1000 as the start for printing. So be sure lines 510 and 760 say GOTO 1000.

We need to set up printing codes for Pica, Elite, and Compr. HEAR THIS! It gives opportunity to use a new command: CALL KEY. Until now we have accomplished simple, two-way branching using IF THEN. Now for a three-way branch we will use the call key thing. Here we go in line 1000.

```

1000 CALL CLEAR :: PRINT "THIS IS THE PRINT ROUTINE" ::
PRINT "FIRST SET A CALL KEY COMMAND TO SELECT FONT"
1010 ESC%=CHR$(27)
1020 PICA%=ESC%&"B"&CHR$(1)
1030 ELITE%=ESC%&"B"&CHR$(2)
1040 COMPR%=ESC%&"B"&CHR$(3)
1050 PRINT "PRINT HARD COPY"
1060 OPEN #1:"PIO",VARIABLE 136
1070 PRINT " SELECT PITCH::PRINT " PICA=P::
PRINT " ELITE=E::PRINT " COMPR=C"
1080 CALL KEY(0,K,S)
1090 IF S=-1 THEN 1080
1100 IF S=0 THEN 1080
1110 IF K=80 THEN 1140
1120 IF K=69 THEN 1150
1130 IF K=67 THEN 1160
1140 PRINT #1:PICA%::GOTO 1170
1150 PRINT #1:ELITE%::GOTO 1170
1160 PRINT #1:COMPR%::GOTO 1170
1170 INPUT "ON ONE LINE OF THREE?(ONE/THR)":ANS%
1180 IF ANS%="ONE" THEN 1200 :: IF ANS%="THR" THEN 1300
1190 GOTO 1170!IN CASE YOU GOOFED IN LINE 1180
1200 PRINT #1:CHR$(14);" NAMES AND ADDRESSES"
1210 J=1::K=25::FOR X=J TO K
1220 PRINT #1:X;L$(X);TAB(16);F$(X);TAB(28);
S$(X);TAB(47);C$(X);TAB(62);Z$(X);TAB(68);
P$(X)
1230 IF X=COUNT THEN 1280
1240 NEXT X
1250 PRINT "BREAK TO CHANGE PAPER OR ROLL FORWARD":BREAK
1260 J=J+25::K=K+25
1270 GOTO 1220
1280 CLOSE #1
1290 PRINT "PRINTING IS COMPLETE":GOTO 1360
1300 PRINT #1:CHR$(14);" NAMES AND ADDRESSES";
1310 FOR J=1 TO COUNT
1320 PRINT #1:J;" ";F$(J);" ";L$(J);" ";S$(J);" ";C$(J);
" ";Z$(J);" ";P$(J)
1330 NEXT J
1340 CLOSE #1

```


1350 PRINT "PRINTING IS COMPLETE"
1360 END

SOME ADD ABOUT PRINTERS. Even KINDER KIDS know that the TI-9/4A is a fantastic device! You better believe that a Dot Matrix Printer is also fantastic in its own right! In mine the business part of its print head contains nine pins in a vertical array. Each pin can be shot like a bullet singly or in groups, striking the ribbon to make dots on the printing paper. By shooting these bullets selectively as the print head moves in quick jumps laterally the resulting dots on the paper form letters and numbers of remarkable clarity. The lateral jumps are the widest for PICA type and produce 10 characters per inch. They narrow some for ELITE, producing 12 per inch, and are most narrow for COMPR at 17 per inch. It all takes place at lightening speed, to form 120 characters per second with my Gemini 10X. Faster for later models.

All this and much more is controlled by the printer's internal computer under instructions which you give it in your program. **SAY, LISTEN GOOD.** It's worth your while to consult your Printer Manual under the Chapter on Function Codes, and also the Summary Table of these codes.

Now look beginning with line 1010. It defines the ESCAPE code, CHR\$(27), in a slightly simpler form, ESC\$, for later use in the next three lines. Thus, 1020 prepares to send a one-word-message to the printer to use PICA. Likewise 1030 and 1040 prepare for ELITE and COMPR. The actual selection is made and the message sent a few lines later in the CALL KEY command. Before that, though, 1060 OPENS device #1: defined as parallel printer, "PIO." On this same line is something new. It is VARIABLE 136. Without this only 80 characters could be printed on one line. This is barely enough for all of our Phony Friends using PICA as carefully allocated in line 1220. A longer name or address here or there would cause a printing overlap.

Practically, it would be best to use ELITE and VARIABLE 96. That is 8 inches X 12 = 96 characters. This would allow 16 more spaces in which to arrange the names, addresses, and phone numbers on a single line.

Here, though, VARIABLE 136 is used as a kind of learning experience. This is the number of characters that can be printed in 8 inches in the COMPR mode. To test this thing, the DATA statement for ALCORN was intentionally lengthened to 136 spaces by adding 56 letters. This is twice the alphabet plus 4 = 56. When run with COMPR on one line printing did take up the full 136 characters in 8 inches. When run with PICA the overlap was the 56 characters that had been added.

Back now to CALL KEY. Type in lines 1080-1100 just as shown and don't ask questions. Lines 1180-1100 make sense because 80 is the ASCII for P, meaning PICA. So is 69 for ASCII E, ELITE, and 67 for C, COMP. These had been defined in line 1070.

HERE IS SOMETHING INTERESTING. When you press P, or E, or C the printer will respond. It will roll one line telling you that the message was received and it is ready to print in which ever mode you entered. Only then

transfer is made to line 1170 to print on one line or three.

For one line printing I set up in line 1210 to print 25 names and then BREAK to let me put in a new sheet of paper or roll forward to a second page if in tractor feed. In line 1220 the last tab just leaves space for phone number to end in the 80th column. This leaves maximum room for the names and address.

Three line printing places the FIRST name ahead of the LAST name like it would likely be on an address label.

GOSH I forgot to tell about lines 1200 and 1300. CHR\$(14) instructs the printer to use double wide pitch for just one line. It was a handy way to doll-up the list by giving it a contrasting title.

THE DATA STATEMENTS. Remember? They are scheduled to begin with line 3000. I entered 15 phony names, addresses, and phones. There follow only 5 of these because it is enough for a test in case you type this up. Here they be.

3000 DATA FAYUH,JOHN,1356 NORCROSS RD,EXTREME
OK,73034,(404)345-6789

3010 DATA KOLDEN,BING,2928 BEARD RD,FORSTEL
WA,99011,(509)765-4321

3020 DATA KOATS,LAURA,2211 LLOYD AVE,GENOA
KY,40324,(502)789-3479

3030 DATA BURNS,MARY,2100 COLEMAN RD,CEDARSBURG
MA,04107,(207)907-3479

3040 DATA ALCORN,CHARLES,7809 SOUTH HILLS,KNOXVILLE TN,
37901,(615)521-7967ABCDEFGHIJKLMNQPQRSTUVWXYZABCDEFGHIJKL
MNPQRSTUVWXYZABCD

BYE BYE LIST. It's done me a lot of good. I had to restudy a bunch of stuff and enjoyed doing it. I hope somebody else learned or relearned a little something too; maybe even typed it and ran it. I'm going to bring it to a few meetings on a SS/SD diskette for copying.

GRAND RAM UPDATE. In June MICROpendium Mike Evander of DataBiOtics said that 100 Grand RAMS would be shipped by early July (thats last month). Further the back-lug will be cleared so that by fall orders can be shipped promptly. He credits the long, long delay with a resulting better product. Let's hope so! It wasn't much good when you couldn't get one.

It's a crying shame that this promising product has caused unpleasantness, or worse, but it did. In December '87 when I talked to Galen Read of Innovative Programming he was bitter because, as authorized distributor, for delivery in the prior September, he had sold a bunch, sent money to DataBiOtics, producer, but hadn't received a single one to send to his customers. NOW DataBiOtics is pursuing Civil Action against Galen for reasons that aren't clear, but Galen can't be found. I'd been siding with Galen, but his disappearance leaves him suspect.

Whatever: I'm getting such great performance from my MYARC 512K RAMdisk that I can await comfortably until unbiased positive reviews give me reason to go GrandRAM. BB 7/7/88, but retyped 7/23 after a stupid wipe-out!

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