Two Excellent Utilities: No Time Copier/GBS Sector Editor
Reviewed by: Andy Frueh, Lima U6

(EDITOR’S NOTE: Software described in this article is on disk 1508 of the Lima U6 software library.)

"No Time Copier" (c)1987 by Tonny Brouwer

This utility is one of the best utilities I have seen in a long time. And before the question gets asked, YES, it IS faster than Turbo-Copy. I want to make one comment right away however. I don’t believe that No Time checks sectors to see if they’re good. Turbo Copy does. However, as it has been documented in the past, the TI is MUCH more tolerant of disk imperfections than other computers, especially if you use SS/SD or DS/SD. Double-density disks are more likely to fail because the information is twice as packed. I have only had about five disks fail since I’ve owned my disk system (at least 3 years). Since these disks are usually the cheaper 75 to 40 cent disks I buy through my user group and copy programs from my user group library to these disks, I don’t mind. My commercially bought disks have never given me any trouble. For this reason, I cannot afford to worry about disk checks.

No-Time loads quickly from any Assembly PROGRAM loader, since it is only 11 sectors. It is a very sleek program, offering no special gimmicks or features of any kind. The only options available are copying, formatting, viewing a catalog, or quitting. Formatting is as fast as copying. When you do copy a disk you can do it in very few seconds. I copied a fairly full disk and only had to exchange disks 3 times. Time between disk swaps was very short. I don’t know how it copies disks so fast.

I know, a lot of readers are wondering what kind of flaws there are in this program. I never see to review a product with giving some sort of criticism. Are there any here? Well, besides the lack of error checking, there is one "minor" detail. No-Time Copier will only work with a TI disk controller. This means that you cannot use double-density anyway. I’m not certain if you can use the CorComp controller. This card is very similar to TI’s. I am certain that the NYARC card will cause problems. Unfortunately, I am unable to test this. All I can say is that the documentation states that this works with the TI controller only.

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"GBS Sector Editor"

This program has some features that make it worth looking at. First of all, the version I have is v3.1 created in 1987. It can be loaded from and return to Funnelweb. As the name states, it is a sector editor. It lacks many of the features of Disk Review and Disk Utilities, but it is simpler for the beginner to use. The above named programs have advanced features that a user first playing with sector editors may get a little scared of. The learning curve is also much smaller. The keys used to access various functions roughly correlate to keys used in TI-Writer. For this reason, I suggest that the beginner start here and move their way up to the more advanced programs.

The main menu appears as follows:

1. Catalog & string search
2. Sector Operations
3. Redo BIT-MAP (Sector 0)
4. Initialization
5. Copier

Catalog is similar to a disk review printout, showing the normal information, as well as sectors corresponding to file header sectors, and a listing of the beginning and ending sectors of each file. There is an arrow that can be moved to any of these sectors. For example, an excerpt from the catalog may read:

LOAD 15 003 115 130

Of course, the actual information is easier to understand and more complete, but this is roughly what the above states. The header of the LOAD file is on sector 3, the first sector is 115, and the last is 130. You could move the arrow to any of these three numbers. Pressing ENTER will let you edit the sector by the arrow. This is handy since you don’t have to remember any sector numbers. It can be likened to the Inspect file of Disk Review, or pressing E to Edit in the catalog of Disk Utilities.

I mentioned that the editing keys roughly correspond to the editing keys used by TI-Writer. The sector editing keys are:

FCTN 1 - Delete
2 - Insert
3 - Erase sector (to erase it on the disk, you must WRITE it)
4 - Advance one sector
5 - Toggles sector 0 and byte 0 readouts from ASCII to Hex
6 - Back one sector
7 - Write
8 - Back to catalog
9 - Enter another sector 0

NEXT PAGE
2. Sector Operations

This is the same as the sector editor described above. The only difference is, you must enter the specific sector to start with. This is useful if you want to examine a sector apparently not occupied by a file, or to look at sector 0.

3. Redo Bit-MAP

This will take a disk and examine it for bad sectors. The "bit-map" will be re-written so that bad sectors appear used. For those who don't know, a bit-map on a disk is a sector on the disk that tells which sectors are used and which are free. When initializing a disk that has a bad spot, most programs will automatically re-write the bit-map to say that this bad sector is "used". Sometimes, you may notice that a disk has fewer than 359 sectors right after it is initialized. That is the reason. I see no real need to be able to re-write the bit-map. It won't make a damaged file really recoverable, and most copiers can ignore bad sectors anyway.

4. Initialize

Initializing disks should be a familiar practice for computer users. This supports 85/SD to DS/DD, and no frills. It just does its job.

5. Copier

This copier has an interesting twist. It IS a sector copier, that is, a program that starts with sector 0 and copies all of the sectors from one disk onto another. This ensures a perfectly reproduced copy. The twist is, the user can select which sector to start with and end with on the master, and what sector to start writing to on the backup disk.

You use the CTRL E and the S and D keys as mentioned earlier to select the READ and WRITE drives. Pressing FCTN 6 starts the process. GB5 can handle 99 sectors in one pass, which means copying a 55/SD disk will require 4 disk changes. Not bad, but other copiers do it easier and faster. Still, the ability to select sectors as GB5 does is commendable, and can be very useful.

COMMENTS

This program does have a minimal learning curve, since a lot of key presses correspond to TI-Writer, and there aren't tons of functions or configurations to confuse the user new to sector hacking. However, though simple is good for beginners, I would have liked a few more features. The ability to copy file by file in addition to sector by sector, and being able to view files would have been welcome additions.

THE NEW BRAP FORMAT

As most of you CAN see, we are trying to save postage, paper, and xeroxing costs by putting two pages on each side of each printed page. The actual amount of material in the newsletter remains unchanged, but our postage and printing costs are greatly reduced.

However, we realize that some of you CAN'T see because of the small print size. We heard from several members concerning this problem. We will therefore print a limited number of "full size" newsletters with only one text page per printed page. These will be sent to those who specifically request the large format due to vision problems.

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************
The other night I was sitting downstairs with one of the 1992 Lima M-U-6 tapes on the VCR - we now have one that plays NTSC tapes - and there was scratch, scratch, bang, bang on the back door beside the TV. Sure enough, it was a visiting possum looking for its feed of bread. Possums are one of the few native marsupials that manage to coexist with suburbia. Around here there are two kinds, the little ring-tail possum which you don't see very much, and the larger and cheekier brush-tails, usually with a black brush tail and grey body, but sometimes a more gingery color. Normally they eat leaves and flowers and so on, but we have seen one sitting on a post on the neighbours' back veranda in the summer cicada season just grabbing them out of the air, holding them by the wings and eating the bodies before dropping the wings in a pile.

Possums have one baby at a time, which rides around clutching on to mother's back when large enough to come out of the pouch. They do this until they are almost as big as mother, and it is clear that being a mother possum was never meant to be easy. My visitor had been left to fend for itself at an early age, mother probably having been killed by a large dog, of which several roan the area uncontrolled by their owners. When very young it would hold onto a finger for balance while you held the bread for it. I think this one lives out in the rafters of the garage.

Why am I talking about possums in a computer newsletter? Well, they can be very territorial, especially the females, and it is really something to hear several of them in a snarling, grunting, roaring, travelling brawl over the roof at 3 a.m. in the morning. This has given rise to an old Australian phrase "stirring the possums", and I must confess to doing a little of this in the last letter, with my remark about the Myarc HFDC. Thanks for the network/BS8 transcripts Charlie! Sure did stir some HFDC possums! Yes, if you want a hard disk on your TI then that is for now what you have with, and maybe for some that equates to viability, but I do stand firmly by my comments on the state of engineering development of the device. Actually all Myarc products seem to have unnecessary flaws that more and better quality development could and should have cured, and the more recent the product the more flawed it is. I use several Myarc devices here, a Myarc S12K RD in the reserve machine at Hawks Nest, and a Myarc FDC in both machines. Despite its DSR failings and minimal software the Myarc FDC is the disk controller of choice for use with 80 column systems, as after power-up it never bothers VDP RAM again unnecessarily. That can be a trap when writing software for general use.

On viewing the tape, I was interested to see that a SCSI controller is in the wings. I was not quite convinced by the "all we have to do is write a DSR" bit though. That sounds even further away from finality than "97% done" for should that be Vn 0.97?%. The SCSI spec is a long and complex document (William FTPed the whole damn thing recently) and device manufacturers have not always come to the same conclusions in their interpretations of it. For instance I have seen magazine reviews of Floptical drives on PCs which refused to work with other than the SCSI controller supplied with them. I have seen them working on other PC SCSI controllers though. Some models sold for use with Amigas require an obscure SCSI command to remove write protection. You can also get into a lot more difficulty setting up terminations on the SCSI chain than a simple reading of instructions would have you believe. Will is an experienced writer of SCSI device drivers for Amiga third party hardware, so we do have a little background knowledge here in this area.

I am still not sure even if a good SCSI controller becomes available on the TI, that I would go that way. Part of it is a matter of economics - how much more $5 is it worth putting into the TI rather than into the PCs or Amigas around here. More seriously there is a matter of aesthetics - what makes an elegant TI-99 system without unbalancing overboard? Just to mention a couple of examples, clearly the HRD has been a marvellous invention in the true spirit of TI's design. Enhanced video with 80-column adapters are a little less easy in fit to the system but still essential for the serious user. The latest and best of these would appear to be the OPA T1K/S6B. I know they exist because I have seen Al L.'s here, but when I was talking to Geoff Trott in Molongong a couple of days ago, the Sydney order for a bunch of them from last year still had not been delivered. Floppy disks at 720Kb seem just about right, but hard disks seem to me to be out of scale with the TI though. Not that we have anything against them except their cost -- between the A5000UX and the 486 PC there is about 900 Hbytes total normally on line here. A SCSI system that works flawlessly, with its inherent other possibilities as well, would be a far more attractive proposition than the HFDC though. I expect the DSR/software model for the SCSI card will almost of necessity follow the pattern of the IEEE-488 (GP-1B) card of which TI only ever made a small batch. SCSI is a higher performance development of the GP-1B idea which allows a bunch of individually addressable devices on a common bus. I gather, without ever having seen it, that the even rarer Hex-Bus peripheral for the 99/4a followed this pattern too, as it also drives a bus (low performance in this case) which can have a variety of devices strung on it.

What has been driving me crazy though is the behaviour of the MK30000 in my AVPC system. I gather Bud Mills says the 3000 with 8.14 DOS is incompatible with the AVPC, but I still do not know whether the problem is in the hardware of the HRD3000 or in the 8.14 DOS or both (or the AVPC - see postscript). The card passes memory tests with flying colors, and I have bought and substituted every other IC on the board and checked every diode in the circuit. If anyone has a patch that works for the DOS, I would be delighted to

(continued on next page)
Bits, Bytes & Pixels

have it. The malfunctioning is very strange. I can in fact use it (and am doing so right now) as a repository for programs or text files - one 400K drive is set up as my Funnelweb and utility program drive, and I can store files on the other. But I cannot write 8/BO files to it record by record, even though they can be read that way. Maybe some of it has to do with the 8.14 ROM version, because I'm sure it has worked better. A check showed the ROM version used is dated 03/01/90. I also have a 03/21/90 version and if that is used the machine locks up entirely, the way it did when we tried installing the RAMBO, and the ONLY way to restore it is to pull the 8K RAM chip on the HRD right out of its socket (that card has a wired-in lithium battery). Maybe I was using yet another issue at other times, but I may have updated it out of existence while reorganizing disks. Geoff says it sounds like an interrupt problem. What we do need in any event from Bud Mills, as the HRD supplier, is a plain ROM which is compatible with the AVPC and other devices, works faster, supports 800K drives, and is without any of that RAMBO complication. The RAMBO version, particularly if inherently hostile to other devices, should be left as a proprietary item to be supplied with the RAMBO device. Even better would be release of the basic ROM source code, in the spirit of an open system, so that people could make fixes or enhancements as necessary for things that were never dreamed of by the writers. It certainly was a great plus to have the Miami Vn 7.3 source even narrowly available.

This console now has a GRAM device in resident for the first time after all these years. It is a SuperModul 2 from Germany, and in effect is a simplified version of the Mechatronics GramKarte. It fits very neatly into a standard cartridge shell and does not run particularly large even. There is no battery backup, and on initial power-up it comes up as E/A. It has a 40K GRAM bank (the 5 GRAMS 3-7) and 32K in 4 x 8K RAM banks at 36000. The second GRAM bank reached from Review Module Library is always E/A. It looks like a few more little utilities to handle RAM bank switching and write/protect are in order.

Time to close now on a miserable and rainy winter evening here at Funnelweb Farm. Maybe I will look at putting the wildcard function recently done for the 80-column editor in string searches into the 40-column version before sending it all off to Lisa.

POSTSCRIPT -- Since writing the above I have watched Bud's presentation on the Lima video. Maybe the solution is after all a revised EPROP for the AVPC, but I will believe it when I see it. I have not had a chance recently to try it in the Mechatronics 80-I machine, but I know the Myarc RD print spooler does not work in this AVPC machine either. On the other hand Bud seemed to say in the Lima tape that a HRD4000 is coming to fix problems in the 3000. Maybe that is one of thes. Also two cold, wet, and hungry pommies arrived at the back door at the same time, which is a guarantee of conflict.

******* TI-101 *******

OUR 4/4 UNIVERSITY

by Jack Sughrue

Box 459

E. Douglas MA 01516

#3 MCGUFFEY'S

Before we spend a class on the TI textbooks I mentioned at the end of our last session, I'd like to mention MCGUFFEY'S ECLECTIC READERS from the 1890's. They were the major source of formal, academic learning for young scholars 100 years ago. Today's McGuffey is Don Shorock. Let's analyze a bit of Shorock's eclecticism of the 1990's.

Ms. Bronte, I already gave you his address in my notes three or four classes ago.

Very well. He can be reached for these educational goodies - mostly fairware (and let's hope I don't have to explain that again) at P.O.Box 501, Great Bend, KS 67530. Hot that? Good. Now try not to interrupt with questions that have already been answered if you were paying attention during our classes.

I'm going to be using the overhead for this lesson, as some of the intricacies of this educator's materials are fascinating and unusual.

Last session, Class, we had a couple questions from Mr. Shakespeare over there by the window. He said he had a nephew in junior high and two elementary school grandchildren. I think Mr. Shorock's eclectic disks will be of great help here.

First, let me mention that Mr. S has the most extraordinary data base structure built into his programs.

Second, let me put up the menu of his first disk on the overhead here. He has four educational fairware disks: EDUCATION 1, 2, 3, and INVENTIONS.

This is the first menu for #1:

a) AMERICAN PRESIDENTS
b) ENGLISH MONARCHS
c) ANCIENT GREEKS & ROMANS
d) JOYSTICK AMERICA
e) WORLD MILEAGE
f) STATES & CAPITALS (groups)
g) SOLAR SYSTEM
h) WORD MATH
i) LADDLES OF GEESE
j) ESTIMATING TRIANGLES
k) FACTORING
l) AUDIO MATH
m) CATALOG
n) DOCUMENTATION
o) EXIT

There are 12 programs, plus a chance to look at the

**DONE**
catalog from the disk, plus a chance to read all the documentation. By using the alphabet instead of numbers, he is able to have the menu items lined up perfectly (as "10" and beyond would push everything one character to the right). Very neat is our Mr. Shorock. If we pressed "a" for the President program another menu appears, as you can see on this transparency:

1) NAME YEAR
2) NAME PARTY
3) NAME PRESIDENT
4) NAME STATE
5) FOR QUIZ
6) LEAVE (to go back to main menu, which is nice, and only "d" and "j" are unable to within their activities)

If, at this point, we press "l" and type in "1962" at the cursor, we get the following:

"Year '62 of the Presidency of John Kennedy; 35th President; Democrat of Massachusetts; served 1961-1963."

Typing "1963" would give both Kennedy and Johnson (who served from 1963 to 1969).

Pressing "2" above will give you the listing of all the parties under which our Presidents have served: 1) Federalist 2) Democratic-Republican 3) National Republican 4) Democratic Whig 5) Republican. And choosing "Whig," for example, will give you William Henry Harrison, 1841-1841; John Tyler, 1841-1845; Zachary Taylor, 1849-1850; and Millard Fillaire, 1850-1853.

When choosing NAME PRESIDENT and typing "John," you will get all the Johns: Adams, Adams, Tyler, Kennedy with all their accompanying info. So you can enter first OR last names and have the program seek out the proper data for you.

To enter STATE you must type in the full name, however, as the program will not accept MA or MASS for MASSACHUSETTS. When you type that full name, though, it will list its four Presidents and their biographical sketches. Entering the name of a state with no President will give you the cursor, just as typing in wrong info will.

Now, when you have mastered this info, you will have the QUIZ (a yes/no job): "Did Benjamin Harrison Rule in the year 1811?" (No. His term, as we all know, was from 1889-1893.) I don't like RULED, however, which is the reappearing term for SERVED that Mr. Shorock (probably a native of England) keeps using: Did Ronald Reagan Rule in 1818? (No. That's right, Class. Ronald Reagan RULED America from 1981 to 1989, though he may have behaved as if he RULED America in 1819.) Actually, I just listed the program and changed the RULE to SERVE, and it made the program so much better in our democracy. Particularly if this program will be used with children.

The English Monarchs and Ancient Greek and Roman programs are structured similarly. I don't intend to go through each of his delightful program packages for learners during our time today. Suffice it to say, Class, that you can see the amount of work that goes into a program like this and, by studying the program itself, the unlimited kinds of applications for which one may use these programs.

I would, however, like to delve into a couple of completely different educational programs here. WORD MATH deals with addition, subtraction, multiplication, and division as the bane of all elementary and junior high students: Word Problems. The answers may be typed as "SEVENTEEN" or "17," as in this problem: "If you have six dandelions and Kent has six daffodils, how many flowers do you and Kent have altogether?" At the menu you may choose specific processes (addition) or all. A running score is kept (as with most of Shorock's games and quizzes), and a wrong answer is corrected and explained. At the end of this program a flashy countdown in words from 100 to 1 takes place, using the TI's built-in wonders, and more options are given, including continuing the game.

JOYSTICK AMERICA is a geography game. Kind of a precursor, in a philosophical way, to Mr. S's highly successful AIR TAXI, his commercial venture which is a geographical masterpiece. I understand, Class, that he has a further development on even that one. When you write to him, ask. But J.A. has a golf-like scoring system. You're given a par (how many moves it would take you to go from a random starting point in America (say Western Tennessee) to a random destination (say Ohio or Indiana). As you must move north and east in 3 moves here, you can judge how you are doing by the constantly updated "current location." Complex structure, simple execution.

Although we've analyzed just three learning activities on the first disk, you can already see that directions are kept to a minimum, partially through superb sub menus; the structure is simple; the pathways direct; the learning concrete; the adaptive possibilities endless.

A quick look at the transparency of Disk 2's menu (of math and geography activities only) will show you how Mr. S jampacks these SSD disks:

GEOGRAPHY GAMES
0) North American Cities (comparisons: which is further north? west?)
1) Largest Cities (Chicago is the largest city in what state?)
2) World Capitals (multiple choice)
3) US Miséage (which is closer? how far is it to?)
4) Map: Eastern US (does Maine touch Vermont?)
5) Map: Europe (does France touch Luxembourg?)
6) Map: Latin America (does Equador touch Chile?)

MATH GAMES
1) Patterns (math drill with wallpaper graphics)
2) More or Less (greater and lesser numbers)
3) Roman Numerals (teach, convert, quiz)
4) Chinese Numbers (teach, convert, quiz)
5) Tardis (strictly for Dr. Who fans)required SS and TE(1)

PATTERNS is a flash-card-type arithmetic drill (5+17, 21+15, 14+11) on a solid background pattern that does not scroll when foreground "work area" does. The "wallpaper"
L is interesting. The signature tunes which are played by different countries before they begin their shortwave broadcasts are played (Switzerland, Canada, Kuwait, South Africa, etc.). Once learned, there is a quiz, of course.

After all the playing and using and trying and testing, I finally found an error, Class. In STATES 50 the program says New Hampshire does not touch Massachusetts. It does. Not bad. One small mistake in four jam-packed disks of educational programs.

Most of the programs I think you can figure out from the entries. Now last this overhead. Has two menus shown on it: the main and the one by pressing 3 on the main:

1) USE PROGRAM
2) PRINT DOC
3) LOOK AT DOC
4) SEE DISK CATALOG

1) A word about Fairware
2) Why I wrote this program
3) How to use this program
4) Programming techniques
7) Segment array items
5) Programming techniques
6) How LOOK AT DOC works
randomly filled array
you may leave docs for menu any time
for menu any time

From these menus you can see, Class, that these educational programs by the McGuffy of the 1990's are not just for children. The things you can learn about programming and data structure from the INVENTIONS disk, alone, is worth the price of admission; which, being Fairware in the TI Marketplace is always the best buy in the computer world. So, if you are like Mr. Shakespeare or Mr. Bell over there who are always looking for educational materials for youngsters or even like Ms. Bronte who always wants to get some adult learning materials, you would all be wise to order these disks right away from Mr. Shirrock. They are not available in the campus bookstore. Send what you think is a air amount for each of these disks ($5 to $10 per disk would certainly be fair, particularly when you know what is charged or commercialware elsewhere) and help yourself or your young learners in ways that the original McGuffy never dreamed of.

There will be items from each disk on the final.

No, Mr. Shakespeare, Mr. Shirrock is not the only person or company making educational materials for the TI. Chris Bobbitt's ASGARD SOFTWARE (P.O. Box 10306, Rockville MD 20850) and Ken Gilliland's NOTING SOFTWARE (7647 McGraw St., Tujunga CA 91042) are two companies that still put out various kinds of educational materials, too, and their catalogs are free.

And don't forget Jim Peterson's TIGERCUB SOFTWARE (154 Collingwood Ave., Columbus OH 43215), the very best source for excellent, inexpensive, very specific educational software on disks, including more adult learning materials.
A sample dump of the SHORTY/DOC screen that shows available dumping commands is printed immediately below. This public domain software is available from the Lima U6 library as disk 749A. It is also available on the C.OM.N.I. Newsletter Article Clearing House BBS.

6 August 1992
Harrison Software
5705 40th Place
Hyattsville MD 20781
301-277-3467

Dear Charlie,

This disk contains the modified source file DUMPXB/S, the object file DUMPXB/O, and the IB program SHORTYD, which will perform like my SHORTY from the KWIXDUMP, except that it will put in place Danny Michaels' screen dump and will activate the function-7 interrupt for screen dumping. Some of the annotation had to be removed from the original source file to allow all this source file to fit in memory for editing.

All the functions of the original are preserved, so one can do dumps by CALL LINK("DUMP") actions, one can send parameters just like the original with CALL LINK("SET") or CALL LINK("DUMP") statements and so on.

The only difference that may be noticed from the original is that the LOAD INTERRUPT is not set up by simply loading the object file, but must be activated if desired by a CALL LINK("SETL"), either in command mode or in a program. Like in my KWIXDUMP, the function-7 interrupt may be des-activated by CALL LINK("DEACT") and activated by CALL LINK("ACT"). I was not able to test the LOAD INTERRUPT switch operations, as I don't have that switch on any of my TI equipment.

This modified version still will retain its Public Domain status, for FREE distribution in any manner you wish.

Bruce Harrison

THE HARRISON BORD PROCESSOR IS NOW GENEVE COMPATIBLE

Bruce Harrison spoke to us on the phone in early August and asked us to announce that a Geneve compatible version of his company's word processor is now available. The price for both the TI and Geneve HARRISON BORD PROCESSOR has been reduced to $10. Call Bruce evenings at 301-277-3467 for more information.

THE 1993 LIMA MULTI USER GROUP CONFERENCE

We have scheduled the next all TI, free, Lima Multi User Group Conference for May 14/15 at the Ohio State University Lima Campus.
If you collect postage stamps, particularly those issued by the United States and the United Nations, then these data sheets will aid you in keeping track of your collection. The entire set is on 19 5.25 disk (disks 721A thru 731A in the Lima Software Library). These 5.25" disks print preconfigured data sheets with information about EVERY POSTAGE STAMP EVER ISSUED BY the U.S.A. and the U.N. Totally blank data sheets are also included for stamps of other countries and for future U.S. and U.N. releases. (For those who don't know, in many respects the United Nations has the legal status of a sovereign state, and as such issues its own postage stamps. These are sold mainly to collectors as a UN fund raiser, but you can use them to mail letters from UN owned property in New York, Geneva, and a few other places.)

Each file consists of a single printed page which can be loaded into a text editor. You can either print all the sheets put them in a loose leaf notebook and enter your data by hand, or you can load files into a text editor and enter your data on screen. Two different convenient sets of tabs are included, the second accessible from the Funnelweb editor. Each set of tabs allows you to move the cursor quickly over to the blank "user data" columns. For each stamp the data sheets include the SCOTT catalog number, the date of issue and face value, and a brief description. Blank "user data" columns are available for the collector to note the grade, purchase or selling price and/or date and other information about each stamp in the user's collection. The printed information about stamps not owned makes interesting reading. How many collectors have an 1847 Ben Franklin 5 cent two color? Did you know that some U.N. stamps were not issued in New York and are not priced in dollars and cents?

They say that a picture is worth a thousand words, so reproduced here is a portion of one of Bill's stamp data sheets. ANYONE, not just members of the Lima User Group, can obtain these files by sending 19 5.25 disk (don't have to be formatted) and a self addressed paid return mailer to the Lima User Group at P.O. Box 647, Venedocia OH 45894. After you look over these files, Bill Saner Jr. requests a "Whatever you think it is worth" fairware donation.

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### UNITED STATES POSTAGE

#### (Bill Saner Catalog)

**UPDATED 01/01/92**

**PAGE 061 =0812/0828**

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AN IMPROVED BASIC WORD PROCESSOR
FOR THE CC40 AND TI-74
by Charles Good and Palmer Hanson Jr.
Lima Ohio User Group and TI PCC Notes

In the May issue of the Lima newsletter I (Charles) published a BASIC word processing program for the CC40 and TI-74 which used DATA statements to store text. This is the only reliable way to store text in the battery backed RAM of these computers when they are turned "OFF". This was the first word processing program ever written for the TI-74. The accompanying article described several limitations to the program. Now thanks to efforts of member Palmer Hanson, editor of TI PCC NOTES, these limitations have been overcome. Our revised word processing program with enhanced features is published here.

Commas, quotation marks, leading spaces, and nicely formatted text cause no problems. The software includes instructions in the form of a sample document which can be viewed from within the running program. The use of quoted DATA statements to store text allows easy placement of commas within the text and the insertion of leading spaces at the beginning of each paragraph, things that couldn’t be done with my original program. It is interesting that the blank DATA lines with a pair of quotes (125 DATA "") used as a template to store text in our revised program occupy no more memory than the unquoted blank DATA lines (eg. 125 DATA) used in our original program.

Palmer has written a really marvelous text formatting routine that eliminates some of the usual limitations of word processing in BASIC. With Palmer’s routine you always get neatly formatted paragraphs with a maximum line width of your own choosing and with no splitting of words between lines. You can insert or delete text, even adding new DATA lines between existing DATA text lines as was done in lines 37 and 43 of the program listing. The length of each text DATA line is unimportant. You always get nicely formatted paragraphs. Note for example lines 37 and 43 of the program listing and compare them to the formatted program instructions that are at the end of article. Perhaps the only thing Palmer’s routine won’t do is right justification.

The program allows you to view either the instructions or your document on the CC40 or TI-74’s one line 31 column screen. Successive screens of text are displayed with proper word wrap, not splitting words between screens of text. Most important of all the program allows you to print to any printer or dump text to a 99/4A or MS-DOS computer. You need the TI-74 PC Interface Cable or the Hexbus RS232 to dump to another computer. When printing or dumping you are asked for a maximum line width and a left margin column. These two options let you print or dump centered or uncenetered text formatted to any line width up to 80 columns.

I use this software on my TI-74 for "do it anywhere" writing. Later I usually dump my document directly into the Funnelweb text editor running on my 99/4A for printing and disk storage. This article is being written on a TI-74 using our word processing program.

In some respects our program is BETTER than "MEMO PROCESSOR", TI’s cartridge word processing software for the CC40. When sending text to another computer, our program doesn’t drop the last line of text. MEMO PROCESSOR does. Also, with MEMO PROCESSOR if you have a document in memory you can’t do ANY command mode calculating or BASIC programming. Doing so destroys your document. With our program your document in memory is safe and you can do whatever you want in command mode. It has also been my experience with the CC40 that marginally low battery power will destroy a MEMO PROCESSOR document stored in memory, well before the LOW battery indicator turns on. Not so with our program. When LOW appears you have plenty of time to do a quick battery change and preserve your document in memory.

As a demonstration of the capabilities of our program, below are the instructions contained in lines 5-75 of the program, formatted by the program into lines with a maximum width of 60 characters and sent to Funnelweb’s text editor running on a 99/4A. What you see is the unmodified output of our program.

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Word processor for CC40 and TI-74 by Charles Good & Palmer Hanson Jr., June 1992. Lines 5-75 are a sample document. With Hexbus RS232 dumps ASCII text to any printer or to TI WRITER on a 99/4A. Dumps to an MS-DOS computer with TI’s TI-74 PC Interface Cable.

To enter text type 100 and down arrow, position cursor over second quotation mark in blank DATA line and type text. When text fills a line, press down arrow, continue entering text on the next blank DATA line. Text in each DATA line should be enclosed in a set of quotes. Quotation marks "WITHIN THE TEXT" require special treatment, as in lines 45, 50, 60 & 70. For carriage returns type "CR" preceded by a space at the end of each paragraph, as in lines 20 and 60. To leave blank lines between paragraphs type "CR" alone on a data line as in line 65.

If you get a MEMORY FULL error enter "DEL 5-75" to free enough memory to VIEW, PRINT, or SEND the document.

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5  DATA "Word processor for CC40 and TI-74 by Charles Good & Palmer Hanson"
10  DATA "Jr., June 1992. Lines 5-75 are a sample document. With HexBus RS232"
15  DATA "duets ASCII text to any printer or to TI WRITER on a 99/4A. Duets"
20  DATA "to an MS-DOS computer with TI's TI-74 PC Interface Cable. CR"
22  DATA "CR"
25  DATA "To enter text type 100 and down arrow, position cursor over second"
30  DATA "quote mark in blank DATA line and type text. When text fills a"
35  DATA "a line, end the line with a closing quote, press down arrow, and"
40  DATA "continue entering text on"
45  DATA "the next blank DATA line. Text in each DATA line should be enclosed"
50  DATA "in a set of quotes."
55  DATA "Quotation marks ""WITHIN THE TEXT"" require special treatment, as in"
60  DATA "lines 45, 50, 60 & 70. For carriage returns turn type ""CR"
65  DATA "a space at the end of each paragraph, as in lines 20 and 60."
70  DATA "To leave blank lines between"
75  DATA "paragraphs type ""CR"
80  DATA "alone on a DATA line as in line 55. CR"
85  DATA "CR"
90  DATA "If you get a MEMORY FULL error enter ""DEL 5-75"" to free up enough"
95  DATA "memory to VIEW, PRINT, or SEND the document. CR"
100 DATA "Start of document"
105 DATA **
110 DATA **
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965 DATA **
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975 DATA **
980 DATA **
985 DATA **
990 DATA **
995 DATA **
1000 PRINT "DATA STATEMENT WORK PROCESSOR":PAUSE 2
1010 RESTORE:CODE=0
1020 INPUT "$View 2=Print 3=Send 4=Inst. "$M$;
1025 IF $M="4" THEN RESTORE
1030 IF $M="1" OR $M="4" THEN LW=3:GOTO 3030
1040 IF $M="2" THEN 3000
1050 IF $M="3" THEN 4000 ELSE 1020
1060 INPUT "Printer device number":;P$;
1070 OPEN $1,P$,OUTPUT
1080 INPUT "Line Width":;LW:IF LW=0 THEN 3020
1090 INPUT "Left margin column":0=79;:LM
1100 PRINTS "=":PW=0
1110 PRINT 40,0 ERROR 5000
1120 READ TEIT$;
1130 IF I=0 THEN 3050
1140 I=I+1
1150 IF IIF=CR THEN PW=0
1160 ADD=S,E,S,E,I,Y
1170 PRINTS "PRINTS":PW=1
1180 PRINT 40,0 ERROR 5000
1190 PRINT 40,0 ERROR 5000
1200 IF CODE=32 THEN PRINT 51:CLOSE 51:N=0:LH=0
1210 IF CODE=32 THEN PRINTTAB(9);"End of document":PAUSE:RETURN 1000
1220 IF ADD=CR THEN TEIT$=S,E,S,E,I,Y
1230 IF ADD=CR THEN TEIT$=S,E,S,E,I,Y
1240 OPEN 01,":20",8,P$,$,C",OUTPUT,A,VARIABLE 80!HexBus RS232 to TIMewriter on 99/4A
1250 OPEN 01,":100",FILENAME,DO",VARIABLE 80,OUTPUT:PC interface cable to MS-DOS
1260 GOTO 3020
1270 END OF DATA routine
1280 CALL ERR(=CODE,$);
1290 CALL ERR(=CODE,$);
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