BITS, BYTESEPIKELS

LIMA 99/4A USERS GROUP



DECEMBER 1989 VOLUME 5 #10

THE 1990 LIMA T.I. MOLTI HOUR GROUP COMPONDING

LOCATION: Reed Hall/Student Activities Aldg., Obio State University Lina Campus, Lina Obio.

SCHEDULE:

Friday May 25: Setup starting at 6PM.

Saturday May 26: Doors open 8AM

Scheduled formal presentations begin 9AM
Cleanup starts at 6PM

Dutch treat pizza party- 8PM

We had hoped that another user group in this area would organize their own Spring 1990 T.I. faire, but apparently everybody thinks the Lima UG did such a good job with our 1988 and 1989 MUG Conferences that we have been asked to do it again!

The 1990 MUS Conference will be similar our past conferences. EVERYTHING IS TOTALLY FREE. There will be no charge for admission and no charge to dealers, user groups, and induviduals who want tables in the exhibit room. We will have simultaneous one hour formal presentations in tem different rooms with starting times at staggered 1/2 hour intervals. These presentations will be video taped in each of the two seminar rooms using simultaneously both a video camera and a VCR recording output directly from the computer. As edited version of these tapes will be made available to the T.I. community for only the cost of media and postage. We sent out 60 sets of the video tapes made at our 1989 MUS conference. If you assume, conservatively, that an average of 5 people saw each of these 60 sets this means LOTS OF EXPOSURE in the T.I. community to those who gave formal presentations at the 1989 Conference. We encourage ANYONE who has something to say or demonstrate relating to the 99/4A er Seneve computers to schedule a formal presentation at the 1990 conference.

As in the past, the tima U6 will open its disk library to representatives of all user groups. Any user group can have anything in our library at no charge! Just provide your own disks. Annotated library listings will be sent to all groups likely to attend prior to the Conference. To avoid the delays we had in past conferences getting everything copied we will have two copies of our library available as masters and two computer systems set up for copying. Copying will be on a "self service" basis. Rather than having members of the Lima U6 make the copies, user group representatives will make their own copies on our computer systems using either TURBO COPY or REDISKIT as the whole disk copy programs. For those from other groups who arrive Friday evening to help us set

up, capying from our library can be done Friday as well as during the Conference on Saturday.

To date the following individuals and organizations have told us they definately plan to attend:

Harry Brashmar- Micropendium columnist and author of MANNE PUBLISHING ON THE 99/44.

Barry Traver- Computer Shopper columnist and publisher of the magazine on a disk GENIAL TRAVELER.

Jim Norm- of DISK ONLY SOFTWARE.

Chris Bobbitt- owner of ASGARD SOFTMARE, the largest publisher of commercial software and books for the T.I.

Nud Hills- of BUD MILLS SERVICES, manufacturer of Morizon Randisks, P-Bram cards and other hardware devices for the /4A and Geneve.

Larry Conner- of L.L. Conner Enterprises, a dealer with lots software as well as new and used II hardware.

Specific information about discount rates at area motels will be available to us by January and will be then published in this newsletter. For individuals who are exhibiting or who are giving formal presentations and who plan to arrive by public transportation, we will try our best to arrange at no cost to pick you up and deliver you back to the Dayton Ohio airport or the Lima train and bus stations. We will also try to arrange no cost lodging at the homes of local Lima US who plan to attend. In both these cases (free pick up and delivery and free lodging), please LET US KNOW NHAT YOUR PLANS ARE AS SOON AS POSSIBLE.

To reserve free tables in the exhibit room, schedule a fermal presentation, or obtain additional information, call Bave Szippi evenings at 417-228-7109 or write the Lima US at P.O. Box 647, Venedocia OH 45894.

And now a personal note from me, Charles Good, to those who have attended our MUG Conferences in the past and/or will attend our 1990 conference. It was not easy scheduling FREE use of the Campus facilities for our 1990 conference. It required some delicate negotiations with various campus administrators. In order to "not compete with the private sector" the campus has changed its previous policy of allowing non profit community groups free use of the facilities. One of the deciding factors that tipped the scales in favor of the Lima UG's continued free use of the campus, according to one campus administrator, was that "In all the years your group has met here, we have not had one peep of complaint from anyone about your group." As far as the MUG Conferences, this means that the Campus doesn't have to hire any extra personnel to provide security or to clean

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up after us. When we pull out at the end of a NUS Conference YOU CAN'T TELL THAT WE NAME BEEN THERE. We clean up and put the place back exactly as we found it. Those who have attended our conferences in the past have been polite, have left so messes, and have caused no damage. YOU ARE ALL TO BE COMBRATULATED. If NUS Conferences are to be held at the Lina Campus in future years, it is ABSOLUTELY NECESSARY that this situation continue. The TI community has a good reputation on campus. No mess, no damage, no trouble for anyone. Komp the faith!

**DONE **

AND THE PROMISE OF MORE MEAT STUFF IN THE FUTURE A report by Charles Good of Alexander Hulpke's latest

We just received the latest release of XHi, version 3.6, from its author Alexander Hulpke. This software allows those with a Geneve, AVPC, or Mechatronics 80 column peripheral access to high resolution screens with up to 512 colors from within the extended basic environment. New features since v3.5 include a CALL LINK("FILL"). This fills any enclosed area with any color. The last part of XHI's HIRESDEND program has been modified to show off this FILL feature.

The HARDCOPY program that comes with XHI v3.6 is now totally compatible with unmodified 99/4A systems that lack a 9738 video processor. THIS IS A SIGNIFICANT IMPROVEMENT. Now ALL TI USERS with a basic disk system can make printer dumps from available libraries of PD Myart format pictures. With MORDCOPY you can print these pictures as big as a wall and make new wall paper for the interior of your home, if you have lots and lots of time. 99/4A users still need a 9738 video processor (Geneve, AVPC, or Mechatronics 80 column peripheral) to view these pictures on a monitor screen.

Alexander writes: "Since several people with an 80 column peripheral have asked me, I've changed my plans a bit. How, I'm working on a program that will resemble MYART for 99/40 weers but without the various bugs lurking in MYART. I hope I can also add some new commands that MYART does not have. I have a first preliminary version - at the moment you can only paint (with Mouse) in one color."

New! A MYART clone for those of us with a DIJIT AMPC. Natch future issues of the Lima Ohio US's newsletter for more information as it becomes available.

Any user group as well as individuals who are paid members of the Lima Ohio UG can obtain XHI v3.6 by sending a disk and paid return mailer to us at P.O. Box 647, Venedocia BM 45094.

DONE

ONE MAY OF MANDLING BLOWN DEEKS by Michael Martinko Lima Dhio and Great Lakes User Groups

I am one of those fellows who because of the extrame reliability of the TI System have not been in the regular habit of making disk backups. Last week I lost my first disk of files (DV80). Sector 22 developed an error and the disk directory was all askew. Whatever caused the error I will probably never know. The directory listing showed only one file (and even that would not load), a strange disk name, and a sector available listing that was garbled as well. I did not even have a directory listing of all my lost files. Using the Recover File option of DM1000 I tried to recover a few of the files I knew were on the disk, however this disk was too messed up to even do that. Here is a simple 5 step method I used to recover all but one of th lost files:

STEP DNE: Initialize 2 disks with the same specifications as the damaged original. In my case it was SS/DD. If you do not know the original specifications you will merely have to guess. Nothing will be damaged further if you guess wrong. Label one of the new disks as your "TRANSFER DISK".

STEP TWO: Using a sector copier such as comes with Funnelmeb copy the entire original disk onto the transfer disk.

STEP THREE: If, as in my case, you do not know all of the files that were listed on the original use a sector editor such as Funnelweb's DISK PATCH and start paging through the sectors starting with 000. Use FCTN/2 to change the screen numbers to ASCII characters you can read. The masses on the top right corner of a screen will be the masses of the files on the disk. The blown sector will probably not be legible, just go on to the next sector until you have written down on paper all of the files on the disk.

STEP FOUR: Recover Files from DM1000 will now retrieve these files on the transfer disk. The directory, however, is still messed up, and in my particular case DM1000 still would not give a directory listing.

STEP FIVE: Using the editor, from Funnelmen, individually load each file from the transfer disk and them save them on the second newly initialized disk. I had recovered better than 90% of my work and lost only 1 short file (a letter).

It seems logical that basic and extended basic programs could be retrieved in a similar fashion using the "OLD" and "SAVE" commands from extended basic in step four. Note: It may not be necessary to use the final disk if the transfer disk will give a directory listing through EM1000. I have had such fortune recovering Assembly language programs that were damaged in the mail.

1909 CNICAGO FAIRE REPORT by Charles Good

Lima Ohio User Group

The main event, Saturday Nov 4, went very smoothly, marred only by some thefts from exhibitor's tables. No attendance figures were made immediately available, but it seemed to me that croud size was comparable to last year. The Chicago group again did an excellent job organizing the whole thing. An extensive printed exhibitor list and seminar schedule was given to all who attended. There were no long lines at the ticket table or at the enterance door to the exhibit area. Once inside, there were wide aisles and it was easy to get up to the exhibit tables.

The seminar room was large, and there were 18 inch televisions on small tables spread around the room. A small transmitter broadcast on channel 3 the video audio and output of the demonstration computer in the front of the room and this was received off the air by all the televisions. It was easy to find a seat within easy viewing distance of one of these IVs. Most of the demos that required a Geneve were done using composite color output so that the video could be seen on the IVs. This system really worked well except that some of the IVs did not have VHF antennas and thus had trouble receiving the transmitted signal. Speakers had about 1/2 hour, which wasn't long enough, and the presentations were not videotaped.

MEN HARDNARE

Gary Bowser of OPA (Oasis Pensive Abacutors) had for sale at \$45 (Canadian or US currency) a really neat 1 inch square circuit board that can be attached to any Horizon Randisk using any ROS. This board, called RAMBO (Random Access Nemory Bank Operator) allows the HRD to be partitioned between RAMDISK and PROGRAM space. The extra program storage area can be as large as the randisk is and allows the creation of really massive XBASIC and (I think also) assembly programs for the Geneve and the 99/4A.

module library box that allows full implementation of the **P*/4A*** REVIEW MODULE LIBRARY obtion that is built into the **4A*** REVIEW MODULE LIBRARY obtion that is built into the **4A*** sperating system. You can plug ANY 8 modules into this box, which looks sort of like an extra large "widgit". There are no limitations to the types of modules used, and CALLS from any module can be accessed from any other module. Me **saw a demonstration of the TE2's unlimited speech (OPEN **1:"SPEECH", OUTPUT) run from extended basic. This product includes a 2 foot cable to get it out of the way of the console keyboard. The part of this cable that plugs into the console module port has gold plated contacts. The module box itself will have a clear plastic enclosure to protect the modules inside. Price will be \$100 US and shipping is expected in December 1989.

Bud Hills (Bud Hills services) had for sale MEMEX 512k and other size (potentially up to 2 mag) memory expansion boards for the Geneve. These are made of zero wait state dynamic ram chips (not battery backed). Although these hourds normally add to the memory of the Geneve, they can also be wired to replace the Geneve's internal memory and double the speed of this memory. A really fantastic graphic display was running at Bud's table utilizing one of these cards for extra memory. A quote from Bud's presentation in the seminar room: "Today MEMEX for the Geneve, maybe next year for the 4A for those who need extra program memory for the 4A."

Bud also had P-Gram+ cards that give you over 100K of Grom module space and allow you to page through several Grom modules and one module that uses cartridge ram. Previous P-Gram owners can have this modification done on their cards for \$100.

RAVE 99 apparently no longer has a supply of 105 key keyboards. Instead, they are selling 101 key XT keyboards interfaced to the 99/4A. These look really slick and have lighted capslock number and scroll lock keys as well as a separate (enter) key for the numeric keypad. These are features lacking on the 105 key RAVE keyboard I am using to write this article. There are only 12 function keys on the new keyboard, so I suspect that all FCTN and CTRL TI-Writer keypresses are not supported by single keypresses as they are on the 24 function keys of ay 105 key keyboard. The price is an expensive \$224.95, or you can buy an interface for \$149.95 and use your own 101 key keyboard.

Mike Maksimik (aka The Frogman) of the Chicago User Grame gave an unscheduled formal presentation of a very cheap MIDI interface for the 4A. This is simply a cable between the RS232 and a \$100 CASIO keyboard. Details of the cable's wiring (no electronic components needed) will appear in the Chicago UG's newsletter. Mike wrote about 40 lines of assembly code (also to be published) which allow him to code music on an ordinary DVBO file (can be edited with TI-Writer), send this file to the keyboard via the RS232 and have the keyboard play FANTASTIC music! I asked, in astonishment, "Is what we are hearing encoded on a disk running from a 99/4A?" The answer is yes. The DV80 file tells the CASID what notes to play, their wave form and duration. Since it is the CASIO that is actually producing the music, you are not limited by the capabilities of the sound chip in the 99/4A. Mike figured out how to do this after reading a book "Mind over MIDI" purchased at a local computer software store. An unlimited number of channels are possible with this system. Data is sent out the RS232 at the baud rate of 31200.

Mike also showed how a cheap (\$30) serial mouse, the Kraft Micromouse, could be hooked directly to the R\$232 and run from XBASIC. No special hardware is required. The needed assembly code either has or will soon be published by Mike.

SOFTMARE:

I am sure I didn't see all of the new software releases at the various tables and shown in the formal presentations. The following items seemed particularly interesting to me.

FBOS- In addition to his hardware demos, Nile Maksimik demonstrated his MSDOS-like software for the 99/4A called FBOS. You need a super cart or equivalent to run this software. On powerup an AUTOEXEC file will load your favorite char set, clear the screen, set screen and character colors, and set 32 40 or (in the near future for the AVPC) BO column mode. You can bring up a disk directory and then mark an assembly file and it will boot. This software is FREE. No demation to the author is expected. The latest FDOS can be found on the Chicago User Group's BBS and on national information systems. Personally, I like 80 column Funnelweb's QDAV better, in part because with QDAV you don't need a supercart and can boot XBASIC programs from the disk directory. However FDOS and QDAV are not exactly comparable.

THE PRINTER'S APPRENTICE (McCann Software) for the Senave boots from NDOS v1.14 and is 100% memory resident. It is totally What You See Is What You Set with an 80 collumn screen display, and can use TPA or TI Artist pictures and instances for clipart. Numerous fonts are available. You can make rays lines boxes ellipses triangles and polygons on screen. You can magnify to create fine detail and you can invert and rotate. This looks to me to be better than PagePro for disktop publishing from a Geneve. The price is \$22.50.

PAGE PRO vi.5 (ASGARD) was previewed. This is not yet ready for release. It has a catalog routine that, when asked for a path name, will page through all possible files. A bell now sounds when you change cursor direction. Any part of a page can now be saved as a picture file and one result of this is that you are no longer really limited to only two feats on a page. Just add a "picture" of some text created using additional fonts. The Geneve version is still not in 10 columns, which is too bad considering what was said in the proceeding paragraph.

HARRISON SOFTWARE demonstrated their classical music dieks. Using assembly language these disks come the closest I have ever heard to making the 99/4A play what sounds like real musical instruments rather than "computer music". Drums and harps sound very realistic. If you like classical music you might want to purchase the whole series of disks. Each disk has about 1/2 hour of music and a written commentary about the historical background of the particular music on the disk. The cost is only \$4.50 per disk.

TYRO is a full length James Bond type adventure newel that comes on five 583D disks. This is an interesting may for new authors to get themselves in print. Files for printing a fancy main title page, table of contents, and chapter title pages are included. This \$10 fairware package was offered at the at the Will County User Group table and

was written by one of their members H. Matthews Mullen. I bought it sight waseen (you usually get to try Fairware first) because I believe in the Fairware concept and because I believe in supporting the little guy. Mullen is new entry to the TI market. The novel is similar to others of its type, with lots of action and a little sex.

IDENTA-FILE (JP software) will scan a disk of files and tell you exactly what kind of file each is. Now you can identify the nature of each of those PROGRAM and DF128 files. Some of the 55 different file types recognized include ADVENTURE and PRK data files and Mac Picture and TI-Artist graphic files.

PC TRANSFER UTILITIES, when used with PC TRANSFER, will automatically sense a Geneve or AVPC and produce an 80 column text display. Now, finally, you can transfer MULTIPLAM to and from the TI and other computers.

"IT WILL BE READY ANY DAY NOW!"

There were two big enteries in this "no show" category at the Chicago faire.

#1 Software that is supposed to be bundled with mack Geneve computer: Lou Phillips of Myarc had the following comments. "Non-H" MDOS is (hopefully) finished. H MDOS isn't. The P System software is partially done and awaits crucial information from the reluctant P system copyright holder. The current MYBASIC (aka Advanced Basic) has been out 2 months with no reported bugs.

*2 PRESS. This ultimate word processor for the TI was supposed to be ready one year ago at the 1988 Chicago faire, and Asgard has been saying "any day now" ever since. I knew a week before the Chicago faire that PRESS wouldn't be ready because I talked to Asgard's Chris Bobbitt over the phone. "But what about that OCT 1 relase date you published in your recent software catalog?" I asked Chris. "I didn't say which year," was his quick reply. Oh well. I understand that Chris probably cannot force a speedup in PRESS's development time. However I think (and Chris agrees) that taking advance payments for PRESS at the 1988 faire was a stupid thing to do. Chris offered on the spot cash refunds or the equivalent value of Asgard software to those at the 1989 faire that wanted their money back.

In a demonstration of those parts of PRESS that have been completed, Chris provided the following information. You can switch back and forth between text and bitmap mode. Bitmap is slower but shows on screen such features as italic, underline, and enlarged print. There is a ZK keypress buffer, so it is almost impossible to type so fast that bitmap mode can't keep up. Text files will be partially in memory and partially on disk. The size of the "in memory" text buffer is 200K for the Seneve, 100K for systems using a DIJIT AVPC, and BK for the T199/4A. Super carts, GramKrackers, and Horizon randisks can be used to add to this "in memory" text buffer.

ABONEMES OF THOSE HENTIQUED IN THIS ARTICLE:

Casis Pensive Abacutors (Gary Bowser) 432 Jarvis St. Suite 502 Toronto Ontario CANADA M4Y 2H3 416-860-0925

Bud Mills Services (MEMEX, P-Gram+) 166 Dartmouth Dr. Toledo OH 43614 419-385-5946

Mike Meksimik %Chicago User Group P.O. Box 578341 Chicago IL 60657

McCann Software (T.P.A.) P.O. Box 34160 Umaha NE 68134

Asgard Software (Chris Bobbitt) P.O. Box 10306 Rockville ND 20849 703-255-3085

Harrison Software (music) 5705 40th Place Hyattsville MD 20781 301-277-3467

JP Software 2390 El Camino Real #107 Palo Alto CA 94306

H. M. Mullen %Mill County User Group P.O. Box 216R Romeoville IL 60441

MYARC (Geneve computer related software) P.O. Box 140 Basking Ridge NJ 07920-1014 201-766-1700

DONE

FOR MILE

Foundation 128K card. \$120
Two 192K (=720 disk sectors) Horizon Ramdisks, each with Gamial Computerware ROS operating system on ROM chip: \$150 each.

Contact Mel Nomina Route #3, Box 132 Belphois Ohio 45833 419-672-7364

BITS, BYTES & PIXELS Published by Lima OH 99/4A User Group Material contained herein # may be copied by any user # \$ group as long as credit \$ DV80 files of # **‡** is given. # most articles in BB&P can # # be obtained by sending a # # disk and return postage. * ADDRESS-P.O. Box 647 Venedocia Ohio 45894 Published monthly except July and August GROUP OFFICERS President-Mary Garrett 419-238-3222 # Vice Pres-Mark Chavarria 419-238-3222 * Treasurer-Leonard Cummings: 419-738-3770 * * Newsletter editor and Librarian-Charles Good 419-667-3131 # ****<u>**</u>*************

PAGE PAG HTILITHER

reviewed by Charles Good Lima Dhio User Group

PP Utilities allows you to manipulate PP graphics, as shown on the next page. You can enlarge, shrink, rotate, "ghost", and make mirror images. You can take a picture file that has already been processed by PP Utilities and process it again. For example, the enlarged console on the next page could be enlarged again so that it fills an entire page. Another feature of PP Utilities is a file "stripper" that removes unnecessary data from the file making the file makiler without altering the graphic. Reduction in picture file size when using stripper can be significant.

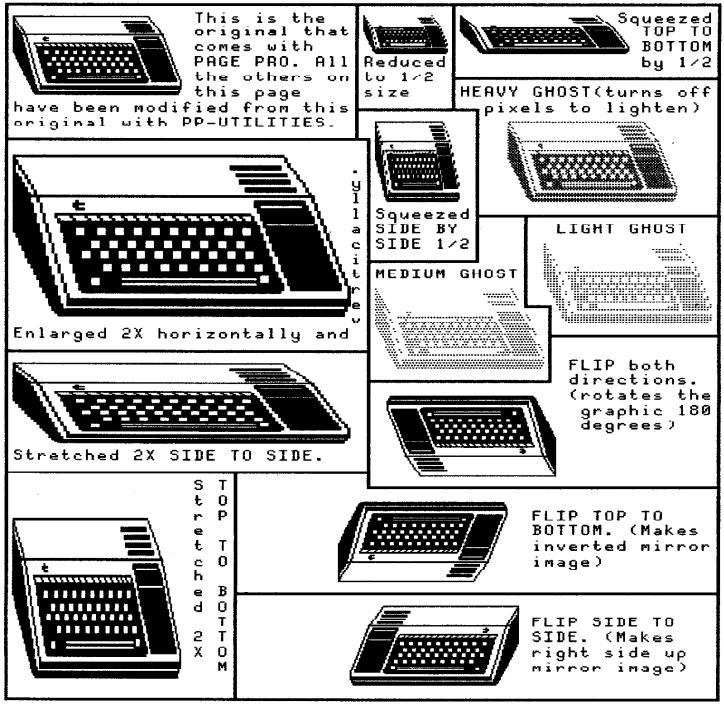
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PAGE PRO UTILITIES

Written by PAUL SCHEIDEMANTLE Published by ASGARD SOFTWARE

Reviewed by Charles Good, Lima Ohio UG.

They say that a picture is worh a thousand words, so I am using the illustrations below show how PP-UTILITIES can manipulate existing Page Pro format graphics files.



ACCESS TO THOUSANDS OF PUBLIC DOMAIN GRAPHICS
review by Charles Good
Lima Chic User Group

There are lots of programs out there in TI land designed to manipulate graphics (TI-Artist, Page Pro, CS6D, Graphic Labeler, etc) and they are almost all commercial or fairmere. They cost money. Not TIPS. TIPS is not freeware, it is FREE, author Ron Walcott's public domain gift to the TI community. Ron has converted over 2000 public domain clip-art style graphic pictures from IBM land into a ferm

For starters TIPS allows you to create full page poeters that incorporate TIPS pictures and text in any of three character sizes. The Lina U6 meeting announcement that accompanies this article is a sample of such a poster. The top line of this poster using 1/2 inch high lettering called a HEADER by TIPS. You input up to 15 characters for a MEADER and TIPS prints the text automatically centered. The mext size text, 1/4 inch tall, is called MSG (message) by TIPS. Each MSG line can have up to 30 characters and is automatically centered. The smallest text in the poster is called LINE by TIPS and represents the enlarged character set of the printer. You get about 40 characters per line, and this LINE text is not automatically centered.

KOALA BEAR



BOTH TEXT AND IMAGES HAVE BEEN PRINTED AS A MIRROR IMAGE FOR HEAT TRANSFER TO A SWEAT SHIRT

usable by the TI, and he has written a PB program to manipulate these graphics. That program is TIPS, which is currently in version 1.2. Bon't use v1.1 because it is buggy.

TIPS is written in extended basic with some assembly language routines. There are no fancy screen graphics, and TIPS is slow. In fact, TIPS has the "look and feel" of an all text TI-Basic program with text scrolling up slowly from the bottom of the screen. Its capabilities are, however, significant. You can't draw with TIPS, but you can use TIPS to print the newly available IBM land graphics in a variety of ways.

TIPS prints each line of text or each graphic one at a time from top to bottom and them stops and asks you what to print next. This allows you, if you want, to insert colored ribbons in your printer and print a multi colored poster, a different color for each line of text and each graphic. You don't need a Rainbow printer to do this. Ribbons in a variety of colors are available for most printers from

PRINTER RIBBON SUPPLY (Norcross GA) 800-438-7745, and RAMCO COMPUTER (Manteno IL) 800-522-5444

The very same software that prints posters also makes greeting cards. A sample accompanies this article. The larger MSS size 1/4 inch text is automatically centered. You

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THE TI/994A

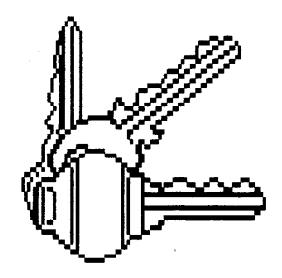
HOME COMPUTER USER GROUP



WILL MEET SAT. NOV 19 IN 334 GALVIN FROM 9:30-NOON.

For info see Dr. Good or phone 228-7109

SOCCESS IN LIFE



THE KEY TO

Granting card ru

IS LOVE!

You can enter from the keyboard, or load from a DV80 file. up to 14 lines of text with each line having a maximum of 35 characters. This text will be printed on the inside of the greeting card immediately opposite the inside graphic. This permits great flexibility in the creation of greeting cards using TIPS version 1.2!



LOTS OF HUGS
KISSES TO YOU

can include on the inside of the card a 14 line 35 char/line VERSE. This VERSEcan be entered from within TIPS and optionally saved to a DV80 file for later use, or can be imported from an already created DV80 file. TIPS prints upside down as necessary so you can fold the single sheet of paper into a nice greeting card with one graphic on the outside and a separate graphic on the inside.

Yes, there is more. The same software also prints mirror image text and graphics that you can use for iron an transfers to T-shirts or sweat shirts. A sample is mboom here. Hold it up to a mirror to read its text. TexComp (818-366-6631) sells special printer ribbons for this purpose. Using the special ribbon you print onto ordinary fam fold computer paper and then transfer the image from paper to fabric with a hot iron. Prices range from \$20-925 per ribbon depending upon type of printer.

And more and more, all from the same program. You can incorporate TIPS graphics into really neat mailing labels. A sample is shown. The entire library of over 2000 pictures can be converted within TIPS to instance (_I) files of two different sizes for use by other TI graphics software. You can print text as a banner. Pictures can be printed with normal orientation, as shown in the samples that accompany this article, or sideways for incorporation into a banner. TIPS graphics come packaged in large files, most containing over 100 separate graphics. You can from within TIPS print the names of all the pictures in a graphic file to a printer and can preview each individual graphic on the monitor screen.

Utility programs that improve the usefulness of TIPS are appearing, some by Ron Wolcott and some by others. TIPSUMM, by Ron, allows your printer to print small samples of each TIPS graphic, 40 graphics on each 8.5 x 11 inch page. With this utility you can create a reference notebook showing all the TIPS graphics. Another utility allows you to display an entire file of TIPS graphics on the monitor in slide show format. My young children find this one very entertaining. An improved (faster) instance conversion program is available, as is a program to convert TIPS graphics to PagePro format. Everything is public domain except the PagePro conversion utility.

Just think of the possibilities! Multicolored posters banners greeting cards and mailing labels, as well as heat transfers and thousands of new graphics to play with are all FREE. TIPS and associated utility programs and graphic files can be down loaded from TI sections of all the national information services. Paid members of the Lima UG can obtain the complete package on 24 \$380 disks by sending disks and a paid return mailer to the user group address.

DONE



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supporting the TI99/4A and Geneve computer
P.O. Box 647

Labels - printed with TIPS