TI-B-BITS

PHILADELPHIA AREA USERS GROUP NEWSLETTER COVERING THE TI99/4A AND MYARC 9640 COMPUTERS

JANUARY

1990













All Eyes oure On Tine NEW YEAR Witten A

Allan Silverstee

A new president

A New Treasurer





















COLOR FLYER











THE PHILADELPHIA AREA TL-99/4A USERS' GROUP (JAN '90)

The Philadelphia Area II-99/4A Users' Group meets twice a month. On the first Saturday of any given month. we meet at the Bucks County Youth Development Center, (YDC, which is next to Neshaminy Mall), Administration Building, beginning at 10:00 am. On the third Saturday of each month, we meet at LaSalle University, 20th Olney, in room H-329 located in the Science Building. Membership to The Philadelphia Area TI-99/4A Users' Group is available to all. We invite anyone that is interested in the TI-99/4A to visit us. Stop in and see what is available to you for your TI and how membership can benefit vou!

Current executive board consists of:

PRESIDENT	Allan Silversteen.	215-947-7353
VICE PRESIDENT	Eric Bray	215-885-7919
SECRETARY		
TREASURER	Don Arsenault	215-368-8446

Commit	tees consists of:	
TI-d-BITS	Ralph Field	215-362-2534
	Don Arsenault	215-368-9446
	Rice Hall	
LIBRARY	Ted Chemey	215-752-1458
	Rich Mascara	215-441-4868
MEMBERSHIP	OPEN	
ASSISTANT TREASURER.	Frank Passini	
EDUCATION	Barry Traver	
	Frank Passini	
	Ted Chemey	
	Tim Coyne	
	Carlo Angelico	
EQUIPHENT	Rice Hall	
PROGRAM	Dr. Eric Bray	

REMEMBER to be considerate when calling any of the above people. Limit your calls to the early evening hours. (6pm to 9pm)

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Classified ads are printed in blocks. A block consists of 3 lines, 55 characters wide, or any increment of 3 lines. Classified advertising is accepted from members at NO CHARGE for a one block ad, per issue. Additional ads from members may be placed at cost of \$1.00 per block. Non members may place classified ads at a cost of \$2.00 per block. All advertisements MUST be paid for in advance.

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The editor of TI-d-Bits or the executive board of The Philadelphia area TI-99/4a Users' Group reserve the right to reject any material submitted for publication for any reasons.

The Philadelphia Area TI-99/4A Users' Group's program library is available to all active members at NO CHARGE for copying to your disk. A charge of \$2.00 per disk is made for club supplied disks for members. Non members may obtain copies of the library for a fee of \$5.00 per disk. A catalog of the library's contents is given to all new members upon request and updates will appear in this publication from time to time. To obtain material from the library, contact the librarian for the best procedure to obtain your requests.

THE PHILADELPHIA AREA TI-99/4A USERS' GROUP (JAN '90)

PRESIDENT'S COLUMN By Allan Silversteen

President's Sililoguy

My name is Allan Silversteen(Al or Allan will be good enough), and I have been "duly elected" (read railroaded) into the position of president. Its a dirty job so they hired a dirty man to do it. My forte is hardware, heck I don't write so well, let alone spell. I may as well admit that all text I generate will be edited and reviewed by my faithful, loving and letter perfect wife, whom I wish to thank publicly. Thanks, Charlotte, you told me not to volunteer!

I don't use my TI as much as I could or should. The one massive project they(3 systems) did was so successful, we were removed from it because a Mang VS with 130 Megs could not follow up on it. Ask me about reinventing the wheel sometime.

We are the Philadelphia Area Texas Instrument User Group (PATIUG) and, as a user group, we should be driven by the needs and desires of our membership. We all know the "squeaky wheel" principle so I can't do something about it if I don't hear from you. The telephone number 885-7910 has an answering device on it and I try to return all messages, so call me if you have something to say or need help or what-ever.

- Gee. I wish I was a professional speech writer! The coming year of my reign of power I hope to accomplish the following:
- * Several Telecommunication courses using Fasterm, Masstransfer 80 and Telco. I would like about 90% of our group to have and use their modems and start to talk to other users and user groups.
- # We will re-affiliate our group with PACS as long as they keep their noses and hands out of our business. This means we will make a showing at Drexel University.
- # We will maintain the YDC environment, as long as we can, and continue to support the classes there.
- # I would like to establish an additional BBS at YDC using the group's equipment and YDC's Philadelphia telephone line at night and alternate weekends, execpt when the group will be using the equipment.
- \$ I am working with Dr. Eric Bray and indirectly with Lou Phillips of Myarc to utilize the PACS

BBS as an Official Myarc newsletter. This would benifit Myarc by having an electronic Newsletter accessable to PC pursuit. It would gain PACS by pushing its membership to a nationwide area, and finally would give the TI User group more numeric clout, since new members would be counted as members of PATIU6. Let's see if it flies.

- I took a straw vote as to the desirability of adding a Myarc Hard Floppy Controller Card to our group's system to allow the Geneve to utilize its full power, and allow the group's floppy drives to format to any user level. This suggestion met no resistance, so the next Myarc group purchase will include a HFCC for PATIUG. I have volunteered (I did it again) a Hard drive and power supply to implement same.
- * We will do everything possible to attract the members of the defunct Depford, NJ user group to our fold and try to get some mutual interaction with the Delaware Valley User Group(DVUG)
- * I would like to build a more transportable system for the user group since our equipment is awkward and bulky at present. Any inputs on what should be included and how it should be implemented?
- # Because of the change in PACS additutide we will recommence the 50/50 and the Disk of the Month offers. Remember to bring an initiallize disk with your name and address to every seeting! We will place new public domain software on it and return it to you the following month.
- # I would like to see another YDC type learning center established in city, Germentown, or Roxbrough area for a monthly evening class. Any suggestions would be appreciated.
- # We will continue to support and attend any local TI fests like TICOFF, and Harrisburg, as well as the Trenton State College Fair and any PACS sponsered affairs like the Han and Chips thing. Any offers of assistance would be appreciated.
- # The Swap Shop/Exchange will continue with your support.
- * We will continue to have group purchases when enough interest in a product warrants same, including Myarc products. Why not tell me what is on your wish list?
- * I will try to incorporate some articles that have a more general interest to the TI community than just of meeting proceeding to be included in the PACS Databuss

THE PHILADELPHIA AREA TI-99/4A USERS' GROUP (JAN '70)

As I think up new things I will run them up this flagpole and await the response.

In conclusion I wish to thank Yom Burke, Ted Chemey, and Don Arsenault for preserving the group to allow me to try to follow in their footsteps. And thank you all for your tolerance with my ramblings. Best Regards, Allan

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DECEMBER MEETING NOTES:

The Necember meeting was fairly brief due to the fact that the Geneve (and Don) didn't make it to the meeting due to extremely icy conditions; bad weather can do it to us, and we've had enough snow to last all winter, thank you...

The slate proposed by the nominating committee was voted on and accepted by the members present; officers for 1990 are:

Allan Silversteen - President Dr. Eric Bray ---- Vice President Don Arsenault ---- Treasurer Mark Wannop ----- Secretary

Barry Traver showed a few things from the latest release of GENIAL TRAVelER; I'll briefly review these issues below. The second volume of TRAVelER is now complete; it's time to renew if you haven't done so!

Eric Bray showed a few items that run on the II. Among them was a program that "doesn't exist" that looked an awful lot like Peter Pan...

Eric also displayed a program that, although it will run on a TI or Geneve, will not run on other personal computers. Here's the listing:

100 CALL CLEAR
110 N=1
120 FOR T=1 TO 84
130 N=N&T
140 IMAGE ## ##.########88
150 PRINT USING 140:T,N
160 NEXT T

Try it!

GENIAL TRAVELER

GENIAL TRAVelER Vol.2, No.5 and Vol.2, No.6 came together, along with a special bonus disk; they were loaded with lots of goodies!

Vol.2, No.5 had a medley of Christmas songs and graphics on side one, along with two utilities, T-SHELL and A/L/IGN. T-SHELL, written by Travis Watford, adds DBS commands to XBASIC. Commands include DRIVE (set drive name), PRINTER (set printer name), CATALOG, TYPE, RENAME (file or disk), PROTECT, UNPROTECT, COPY (file or disk), and SNEEP. One can alter the command names with a sector editor (i.e. change CATALOG to CAT or DIR).

A/L/IGN is a utility to line up Assembly source code that is not typed into columns, so that it makes a bit more sense when one goes to modify or analyse it.

Side two includes Irwin Hott's ST-CAT, which is a catalog of GT articles current to issue GT_2/4, and is sorted. It can be easily updated, and can be sorted using the Peter Hoddie sort on a previous GT.

GRAPHICOMP is an XB graphics compiler which will handle most of the XB graphics CALLs plus DISPLAY AT statements and converts them to Assembly Source code. You have a choice of three outputs:

- Many files with many entrance points, with a CALL LINK to each XBASIC line.
- 2) One file with many entrance points.
- 3) One file with one entrance point (one CALL LINK).

Programs must be written WITHOUT multi-statement lines. The program is then either LISTed to disk or SAVEd in MERGE format. When run through Graphicomp, A/L source code is created, which then is assembled with E/A or Funlweb. The final E/A file can be checked with GC/TESTER, also on the disk.

QUIZWRITE3 is a new version of the quiz creation program by Jim "Tigercub" Peterson that uses the 40 column screen.

GT_2/6 has not one, but three versions of "31", a strategy game in which one tries to make one's opponent exceed the score of 31. Strategy varies with the version...

Irwin Hott contributes an improved CALLSAY program. You need the Text-To-Speech files from !SINGINGII on GT_2/3. Along with the program MERGE-MORD, one can createnew words for use with XBASIC. Other programs include CAPS, which converts lower case text to upper case for use with speech, and PRINTSPEAK which uses the TE-II module to add speech to INPUT, PRINT, and DISPLAY statements.

THE PHILADELPHIA AREA TI-99/4A UBERD' GROUP (JAN '70)

An improved 3/COL/CAT is included, a disk cataloger that prints small 3 column catalogs that can be taped to envelopes.

Ron Wolcott has ported over many IBM PrintMaster/PrintShop PD graphics to TIPS (TI Print Shop) format. (These of course, can be converted to TI-Artist instances, and from there, to practically any TI graphics format.) He has contributed an article on how the conversion was accomplished.

Barry Traver added a few programs, including REMEMO, a program that schedules study and review for students and anyone who wants to build memory retention, and CHANGE/12, which resets that bit if it causes problems when cataloging from XB.

Karl Romstadt contributed several programs, including PANDRAMA4, which allows you to create graphics screen for inclusion in XBASIC programs. Also he has ALPHASPEAK and HOUSE/NUM, two educational XBASIC speech programs that teach the alphabet and numbers to young children. In addition, there is an entire flippy bonus disk of Karl's XB CALL LINKS, with the source code!

A SIDE NOTE..

You may have noticed the absence of Barry Traver's TI-FORUM column in COMPUTER SHOPPER; Barry told me that the reason for it's absence does indeed lie with COMPUTER SHOPPER itself, as the articles have been sent in. Furthermore, the word is that COMPUTER SHOPPER is dropping the entire "Classic Computer" section, which includes TI-FORUM. This would be a shame for more than just the TI users, as that section is also the only newstand support for Sinclair and Adam users as well. That section also includes the Commodore and Atari 8-bit machines.

This would mean that, with the exception of an occasional Amiga or Atari OT piece and a small Apple section - the magazine would become just another IBM clone journal. Consider also that the so-called "Apple" section is mostly MacIntosh, with one "Apple" writer devoting his column almost exclusively to the laserwriter printer. (This is in keeping with the unofficial and oft-denied orphaning of the Apple II line by the Apple Corporation itself...)

In other words, folks, mostly business machines for COMPUTER SHOPPER...

Barry stated that he couldn't understand the logic behind this editorial decision, as the result would be the loss of non-IBM subscribers and newstand purchasers with no copresponding increase in sales to IBM users. I for one would have no use for it without the 'Classic Computer" section; I'll just get by very well, thank you, with MICROpendium for my TI, Rainbow for my COCO, and Nibble for my Apple II clone.

PET PEEVE OF THE MONTH - OR IB IT YEAR?

This has nothing to do with computers, but it's annoying the H-E-double hockey sticks outta me... Everybody - including people like Astronomer Jack Horkheimer who should know better - is refering to 1990 as the start of a new decade. Wrong, wrong, WRONG!!! For the SAME reason that 2000 is NOT the first year of the next century!

The fact is, there was NOT a year zero A.D.; the first year A.D. was 1 A.D. This means that the LAST year of the first decade was 10 A.D., and therefore the last year of the CURRENT decade was not 1989, but is 1990. In other words, 1990 may be the first year of the "nineties", but it isn't the first year of the decade.

Likewise, the very first day of the 21st century will be New Years Day, January first, 2001.

(#)(#)(#)(#)(#)(#)(#)(#)(#)(#)(#)

This is a list of TI and Geneve dealers, manufacturers, and publishers. It is updated from a list published in the Sept. 87 issue of the Mid South 99er newsletter TIdbits. Many of these are "Ma and Pa" businesses and run out of people's homes, and because of this, it has been our experience that phone calls are often answered evenings and weekends as well as normal business hours. Comments in patantheses are those of Charles Good.

Tenex (monitors, printers, some TI Software)
P.O.BOX 6578
South Bend IN 46660
800-348-2778
219-259-7051

Joy Electronics P.O.BOX 542526 Ballas TX 75354-2526 800-422-3892 in Texas 800-527-7438 outside of Texas

THE PHILADELPHIA AREA TI-99/4A USERS' GROUP (JAN '90)

L.L.Conner Enterprise (Same or next day shipment of hardware or software if in stock; phone answerd evenings and Sundays, excellent service) 1321 Ferry St. Lafayette IN 47904 317-742-8146

Asgard Software (Largest software publisher in the TI/Geneve market. also quarterly magazine and several books, extensive free catalog; phone most likeky to be answered evenings and weekends) P.O.BDX 10306
Rockville MD 20850
703-255-3085

Texaments

53 Center 9t. Patchogue NY 11772 516-475-3480 voice 516-475-6463 24-hr. BBS

Competition Computer Products (good selection of unused TI brand modules and software. also used hardware. They quickly replace anything they sell that turns out to be defective.)
2629 W. National Ave.
Milwaukee WI 53204
800-242-7902 in Wisconsin
800-662-9253 out of Wisconsin

Triton (Nice free catalog) P.O.BOX 8123 San Francisco CA 94128 800-227-6900

Texcomp (Lg. catalog mailed 1st class if you send them \$2.00)
P.O.BOX 33804
Granada Hills CA 91344
B18-366-6631

Bud Mills Services (Horizon randisks, P-grm cards) 166 Dartmouth Dr. Toledo OH 43614 419-385-5946

Tigerclub Software (Extensive, very cheap library of PD software plus original software) 156 Collingwood Ave.
Columbus OH 43213 614-235-3545

Great Lakes Buftmare 804 E. Grand River Ave. Howell MI 48843 517-546-0566 Hunter Electronicas 4 N. 370 Pine Grove Bensenville IL 60106 312-766-9503

Disk Only Software P.O.BOX 244 Lorton VA 22079 310-340-7179 800-736-4951 (credit card orders for Asgard & JP software)

Not Polyoptics P.O.BOX 4443 Woodbridge VA 22191 703-491-5543

Quality 99 Software 1884 Columbia RD #1021 Washington DC 20009 202-667-3574

Myarc Inc (Geneve computer and hard disk controller card for TJ and Geneve and other hardware.) P.O.BOX 140 Basking Ridge NJ 07920-1014 201-766-1700 and 205-854-5843

Trio+ Software P.O.BOX 114-A Liscomb IA 50148

The Bunyard Group (Hardware manual) P.O.BOX 62323 Colorado Springs CO 80962-2323 719-488-2572

Midwest Engineering (Copy of Horizon Ramdisk) 203 Arcadis Dr. Vernon Hills IL 60061 312-362-9034

Alboes Computer/Suppliers 6298 Hamilton Rd. 36 Main Street Village Columbus 6A 31909 404-327-4900

LaFlamme Wrigley
5480 Canotek Rd. Unit #16
Glouchester Ontario K1J 9H6
Canada
613-745-2225

THE PHILADELPHIA AREA TI-99/4A USERS' GROUP (JAN '90)

Inscabat Inc. P.O.BOX 29160 Pt. Orange FL 32029

Genial Computerware (Now sells ONLY Barry Traver's magazine on a disk. Barry is kind of slow in answering his mail. It is probably best to phone.) 835 Green Valley Dr. Philadelphia PA 19128 215-483-1379

JP Software (Sales of all other titles that used to be under the Genial Computerware name, free catalog)
2390 EL Camino Real #107
Palo Alto CA 94306

Rave 99 (Enhanced keyboard for 74A, and ramdisk) 112 Rambling Rd. Vernon CT 06066 203-871-7824

CorComp 2211-6 East Winston Rd. Anaheim CA 92806 714-956-4450

CaDD Electronics (Sales of a GramKracker look alike) 52 Audubon Rd. Haverhill MA 01030 603-895-0119

Queen Ann Computer Shoppe 6102 Roosevelt Way NE Seattle WA 98115 206-522-6558

Pilgrim's Pride 5 Williams Ln. Hatburo Pa.19040 215-441-4262

Araatzs Computer Services 719 E. Byrd St. Appelton WI 54911 414-731-3478 (order line) 414-731-4320 (after 6 PM)

Harrison Software (The HARRISON word processor, music and games) 5705 40th Place Hyattsville MD 20781 301-277-3467 Rancharge Computers (Original TI modules, other software and hardware; phone evenings.) 6467 E. Vancey Dr. Brookpark DH 44142 216-243-1244

DIJIT Systems (the 80 column AVPC card) 4345 Hortensia St. San Diego CA 619-281-2667 (voice) 619-278-8155 (BRS)

Jim Lesher (Used software, hardware and parts.)
722 Huntley
Dallas TX 75214
214-821-9274

NcCann Software (TPA and TBA) P.O.BOX 34160 Dmaha NE 68134

MICROpendium (The best commercial publication, monthly 48 page issues, \$25/yr.)
P.O.Box 1343
Round Rock TX 78680
512-255-1512

Computer Shopper (\$21/yr, mainly MS-DOS stuff but with a regular TI column, extensive user group list, and lots of ads for monitors, printers, ribbons and misc. hardware)
P.O.Box F
Titusville FL 32781

9640 News (Newsletter on a disk for Geneve owners) C/O Beery Miller 5455 Marina Cove #1 Memphis TN 38115

FOR REPAIRS OF TI BRAND HARDWARE AND CARTRIDGES:

II will still exchange, for a flat fee, any broken consumer products ever made, in or out of warranty, that bear the II brand name. This includes toys, watches, calculators and 99/4A computer hardware and modules. Call either of these numbers for a specific price quote and shipping instructions. Exchanged products have a 90 day warranty.

800-T1-CARES

(4)(4)(4)(4)(4)(4)(4)(4)(4)(4)(4)

806-747-1882 (ask for consumer service)

TIPS FROM THE TIGERCUB

#52

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TIGERCUB SOFTWARE 156 Collingwood Ave. Columbus, OH 43213

Distributed by Tigercub Software to TI-99/4A Users Groups for promotional purposes and in exchange for their newsletters. May be reprinted by non-profit users groups, with credit to Tigercub Software.

Over 120 original programs in Basic and Extended Basic, available on cassette or disk, NOW REDUCED TO JUST \$1.00 EACH!, plus \$1.50 per order for cassette or disk and PPAM. Minimum order of \$10.00. Cassette programs will not be available after ay present stock of blanks is exhausted. The Handy Dandy series, and Color Programming Tutor, are no longer available on cassette.

Descriptive catalogs, while they last, \$1.00 which is deductable from your first order.

Tigercub Full Disk Collections, reduced to \$5 postpaid. Each of these contains
either 5 or 6 of my regular
catalog programs, and the
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been filled with some of the
best public domain programs
of the same category. I am
NOT selling public domain
programs - they are a free
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TIGERCUB'S BEST, PROGRAMMING TUTOR, PROGRAMMER'S UTILITIES, BRAIN GAMES, BRAIN TEASERS, BRAIN BUSTERS!, MANEUVERING GAMES, ACTION GAMES, REFLEX AND CONCENTRATION, TWO-PLAYER GAMES,

KID GAMES, MORE GAMES, WORD GAMES, ELEMENTARY MATH, MID-DLE/HIGH SCHOOL MATH, VOCAB-ULARY AND READING, MUSICAL EDUCATION, KALEIDOSCOPES AND DISPLAYS

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* NOW READY *

* TIPS FROM TIGERCUB VOL.5 *

* Another 49 programs and *

* files from issues No. 42 *

* through 50. Also \$10 ppd *

TIGERCUB CARE DISKS #1,#2,#3

and #4. Full disks of text files (printer required).
No. I contains the Tips news letters #42 thru #45, etc.
Nos. 2 and 3 have articles mustly on Extended Basic programming. No. 4 contains Tips newsletters Nos. 46-52. These were prepared for user group newsletter editors but are available to anyone else for \$5 each postpaid.

This one should come in handy for bowling league captains and Little League coaches.

100 DIM H(27,27),T+(30) 110 GOTD 130 120 N; 9\$; J; I; X; P\$; S\$; K 130 !@P-140 DISPLAY AT(3,7) ERASE ALL :"LEAGUE SCHEDULER":::"by th e Burwells ed by Tigercub" 150 DISPLAY AT(B,1): " This p rooram sets up a":"schedule for up to 30 teams": "so that each plays each": "other onc e and only once." 160 DISPLAY AT(12,1): If an odd number of teams": "are s cheduled, each gets one": "by e. * 170 DISPLAY AT(16,1): "Number of teams?" :: ACCEPT AT(16, 1B) VALIDATE (DIGIT): N :: IF N >30 THEN DISPLAY AT(18,1):"L IMIT OF 30!" :: 60TO 170 180 DISPLAY AT(18.1) ERASE AL L: "Schedule teams by name? Y * :: ACCEPT AT(18,25)SIZE(-1)VALIDATE("YN"): @\$:: IF @\$= *N* THEN 200 190 FOR J=1 TO N :: DISPLAY AT(20,1): "Team no."; J; "name? " :: ACCEPT AT(22,1):T\$(J):: NEXT J :: 60T0 210 200 FOR J=1 TO N :: T\$(J)="T eam No. "&STR\$(J):: NEXT J 210 IF N/2()INT(N/2)THEN N=N +1 :: T\$(N)="bye" 220 DISPLAY AT(23,1): *Schedu le by day, week, month": "er what?" :: ACCEPT AT(24,10):S \$:: FOR J=1 TO N-1 :: M(1,J

)=J+1 230 NEXT J :: FOR J=1 TO N-1 STEP 2 :: GOSUB 260 240 NEXT J :: FOR J=2 TO N-2 STEP 2 :: GOSUB 330 250 NEXT J :: 605UB 390 :: S 260 FOR I=1 TO N-2 :: IF M(I ,J)=N THEN 280 270 M(I+1,J)=M(I,J)+1 :: 50T 280 M(I+1,J)=M(I,J):: GDTD 3 290 NEXT I 300 X=I+1 :: FDR I=X TO N-2 :: M(I+1,J)=M(I,J)-1 310 NEXT I 320 RETURN 330 FOR I-1 TO N-2 :: IF M(I .J)=2 THEN 350 340 M(I+1,J)=M(I,J)-1 :: 60T 0 360 350 M(I+1,J)=M(I,J):: 60TD 3 70 360 NEXT I 370 X=I+1 :: FOR I=X TO N-2 :: M(I+1,J)=M(I,J)+1 380 NEXT I :: RETURN 390 DISPLAY AT(12,1)ERASE AL L: "Output to - 2":;: " (1) Sc reen": " (2) Printer" :: ACCE PT AT(12,13)BIZE(-1)VALIDATE ("12"):K :: IF K=1 THEN 440 400 DISPLAY AT(18.1): *Prints r? PIO" :: ACCEPT AT(18,10)S IZE(-18):P\$:: OPEN #1:P\$:: PRINT #1:"LEAGUE SCHEDULE": : :: FOR I=1 TO N-1 :: PRIN T #1:S\$; * #"; I :: PRINT #1:T \$(1);" vs ";T\$(M(I,1)) 410 FOR J=2 TO N-2 STEP 2 :: PRINT #1:T*(M(I,J));" vs "; T\$(M(I,J+1)) 420 NEXT J :: PRINT #1:"": : ~ 430 NEXT I :: RETURN 440 FOR I=1 TO N-1 :: PRINT TAB(7); "LEAGUE SCHEDULE": : :: PRINT "WEEK #": I: : :: PR INT T\$(1);" vs ";T\$(M(I,1)): : FOR J=2 TO N-2 STEP 2 :: P RINT T\$(M(I,J));" vs ";T\$(M(I,J+1)} 450 NEXT J :: PRINT "": : :: PRINT "PRESS ANY KEY FOR NE XT WEEK* 460 CALL KEY(0,K,S):: IF S=0 **THEN 460**

470 CALL CLEAR 480 NEXT I :: RETURN :: END

Some folks seem to think

that the subprograms on my Nuts & Bolts disks are just flashy screen displays. Not so! This one will be on the next diskfull, if I ever get it full, which is most unlikely. ACCEPT AT with a negative size is useful to accept a default string from the screen, but the length of the string is limited to 28 characters; and if you want something other than the default, you must be sure to delete any extra characters. CALL DEFAULT(R,C,M\$,R\$), where R and C are the row and column to accept at, MS is the default string which can be up to 254 characters

long, and R# is the string

accepted, will display the

default string, accept it if

Enter is pressed, or accept

any other string without

having to blank out the

extra characters. Just don't

type too fast!

100 M\$="TESTING" :: CALL CLE 110 CALL DEFAULT(12,1,M\$,R\$) :: DISPLAY AT(24,1):R\$:: 60 TO 110 10000 SUB DEFAULT(R,C,M\$,R\$) :: R\$="" :: X=ASC(M\$) 10001 DISPLAY AT(R.C):Ms 10002 CALL HCHAR(R,C+2,ASC(S EG\$(M\$,1,1))):: CALL HCHAR(R .C+2.301 10003 CALL KEY(0,K,S):: IF S =0 THEN 10002 ELSE IF K=13 T HEN R\$=M\$:: SUBEXIT ELSE DI SPLAY AT(R,C):CHR*(K):: ACCE PT AT(R,C+1):R\$:: R\$=CHR\$(K 1&R\$ 10004 SUBEND

CALL DEFAULT(R,C,N,RN), with N as the default value and RN as the value accepted, will do the same for numeric input, and will reject any non-numeric input. Errors due to fact typing can be prevented by omitting the DISPLAY AT(R,C):CHR\$(K) in line 1002.

100 N=176453.B97 :: CALL CLE 110 CALL DEFAULTN(12,1,N,RN) :: DISPLAY AT(24,1):RN :: 60 TO 9999 10000 SUB DEFAULTN(R,C,N,RN) :: DISPLAY AT(R,C):N :: N\$=S EG\$(STR\$(N),1,1) 10001 CALL HCHAR(R,C+2,ASC(N \$)):: CALL HCHAR(R,C+2.30) 10002 CALL KEY(0,K,S):: IF S =0 THEN 10001 ELSE IF K=13 T HEN RN=N :: SUBEXIT ELSE DIS PLAY AT(R,C):CHR\$(K):: ACCEP T AT(R.C+1):R\$:: R\$=CHR\$(K) ŁR\$ 10003 ON ERROR 10004 :: RN=V AL(R\$):: 60TD 10005 10004 CALL SOUND (200, 110, 5, -4,5):: DISPLAY AT(R,C):N :: ON ERROR STOP :: RETURN 1000 10005 SUBEND

Ed Machonis discovered an easy way to count the words in a TI-Writer file, using II-Writer itself. Just put in a line before line 0001, .LM O;RM 1;FI;PL nnn with with nnn being the sector length of the file multiplied by 40. Save it, go into the Formatter and print it to disk under a different filename. Return to Editor, load the resulting file, page through it with FCTN 4 counting any blank lines, subtract the number of blanks from the last line number, that's it! The Formatter takes about one minute to count 1000 words. If the resulting file is very large, you may have to load it in two sections.

100 MS="POS WILL FIND THE FI

6 WITHIN A STRING BUT I OFTE N NEED TO FIND THE LAST OCCU RRENCE SD I WROTE THIS SUBPR OGRAM"

105 INPUT "SUBSTRING?":L\$

110 CALL LAST(M\$,L\$,P):: IF P=0 THEN PRINT "NOT FOUND":

: GOTO 105 ELSE PRINT SEG\$(M\$,P,255):: GOTO 105

120 SUB LAST(M\$,L\$,P):: X=1

130 Y=POS(M\$,L\$,X):: IF Y=0

THEN P=0 :: SUBEXIT ELSE Z=Y

140 X=Y+1 :: Y=POS(M\$,L\$,X):

: IF Y=0 THEN P=Z :: SUBEXIT ELSE Z=Y :: GOTO 140

150 SUBEND

RST OCCURRENCE OF A SUBSTRIN

Here's a new way to make music. The algorithm in 110 sets up a 3-octave chromatic scale - note the N(1)=F, I have erroneously omitted it when I previously published that algorithm.

To change the key of the mu-

sic you have programmed, just change the value of f. Lines 190-220 contain the part of the music that is repeated within the melody. A is the subscript of the melody note, B is the subscript number of the chord. These must be above 13, as the frequency is divided by 2 in the subroutine. Each beat of the music has a GOSUB, to 230 to play a bass accompaniment with the first

accompaniment with the first note of each bar, to 260 for the other notes of the bar. The chord note is divided by different values to play the three notes of the chord in succession, and multiplied by 3.75 in the 3rd voice to produce a bass note two octaves lower in the -4 noise. The melody note is multiplied by 1.01 in the second voice to give a richer tone.

100 DISPLAY AT(12,3)ERASE AL L:"THE MADRI FAREWELL SONG" ! programmed by Jim Peterson

110 F=110 :: DIM N(36):: FDR J=1 TD 36 :: N(J)=INT(F#1.0 59463094^(J-L)):: NEXT J :: N(1)=F :: T=-999 120 GOSUB 190 :: A=30 :: B=2 3 :: 60SUB 230 :: 60SUB 260 :: GOSUB 260 :: A=32 :: B=28 :: GOSUB 230 :: GOSUB 260 : : GOSUB 260 :: A=28 130 GOSUB 230 :: GOSUB 260 : : GDSUB 260 :: A=30 :: B=23 :: 60SUB 230 :: 60SUB 260 :: A=28 :: 60SUB 260 :: A=27 : : GOSUB 230 :: GOSUB 260 140 A=28 :: 60SUB 260 :: A=3 0 :: GOSUB 230 :: GOSUB 260 :: 60SUB 260 :: 60SUB 230 :: GOSUB 260 :: GOSUB 260 :: G **OSUB 170** 150 A=30 :: B=23 :: 60SUB 23 0 :: 60SUB 260 :: 60SUB 260 :: A=32 :: B=16 :: 50SUB 230 :: GOSUB 260 :: A=28 :: GOS 160 A=33 :: B=23 :: GOSUB 23 0 :: 603UB 260 :: A-32 :: 60 SUB 260 :: A=25 :: B=13 :: G OSUB 230 :: 60SUB 260 :: 60S UB 260 170 A=27 :: B=23 :: 60SUB 23 0 :: GOSUB 260 :: GOSUB 260 :: A=28 :: B=16 :: 60SUB 230 :: GOSUB 260 :: GOSUB 260 180 B=28 :: GDSUB 230 :: GDS UB 260 :: 60SUB 260 :: B=16 :: 6USUB 230 :: 6DSUB 260 :: 60SUB 260 :: 60TD 120 190 A=32 :: B=28 :: GOSUB 23 0 :: GOSUB 240 :: GOSUB 260 :: A=2B :: B=16 :: GOSUB 230 :: 60SUB 260 :: A=30 :: 60S HR 240 200 A=32 :: B=28 :: 60SUB 23 0 :: GOSUB 260 :: GOSUB 260 :: B=16 :: GOSUB 230 :: GOSU B 260 :: GOSUB 260 :: B=20 : : 60SUB 230 :: 60SUB 260 210 A=30 :: 60SUB 260 :: A=3 3 :: B=23 :: 60SUB 230 :: 60 SUB 260 :: A=27 :: GDSUB 260 :: A=28 :: B=16 :: GOSUB 23 0 :: 606UB 260 :: 606UB 260 220 B=28 :: 50SUB 230 :: 50S UB 260 :: 60SUB 260 :: B=16 :: 60SUB 230 :: 60SUB 260 :: GOSUB 260 :: RETURN

230 CALL SOUND (T, N(A), 5, N(B)

/1.5B5,9,N(B) \$3.75,30,-4,9): : GOSUB 290 240 CALL COUND(T,N(A),5,N(B) /1.334,9,N(B) \$3.75,30,-4,9): : 60SUB 290 250 CALL SDUND (T, N(A), 5, N(B) /2,9,N(B)\$3.75,30,-4,9):: 60 SUB 290 :: RETURN 260 CALL SDUND(T,N(A),5,N(A) \$1.01,5,N(B)/1.585,9):: GOSU 270 CALL SOUND (T,N(A),5,N(A) \$1.01,5,N(B)/1.334,7):: 60SU B 290 280 CALL SDUND (T.N(A), 5, N(A) \$1.01,5,N(B)/2,9) 290 FOR D=1 TO 20 :: NEXT D :: RETURN

MEMORY FULL....

Jim Peterson

PROGRAMS THAT WRITE PROGRAMS Part 4 by Jim Peterson

Well, if you have tried your hand at any MERGE format program writing, you have already discovered that it is slow work, and you need to cram more onto a line than will fit. When a little CALL HCHAR(24.12.32.5 Jtuned into CHR\$(157)%CHR\$(2 00) & CHR\$ (5) & "HCHAR" & CHR\$ (183 1&CHR\$(200)&CHR\$(2)&"24"&CHR \$(179)&CHR\$(200)&CHR\$(2)&"12 "&CHR\$ (179) &CHR\$ (200) &CHR\$ (2)&"32"&CHR\$(179)&CHR\$(200)&C HR\$(1)&"5"&CHR\$(182) gave up? There is an easier way! Using DEF can make the job so simple that you might decide to do all your programming in MERGE format - well no, it's not quite that easy.

The DEF does slow up program execution time consider ably, especially when DEFs call each other, but we can tolerate that here.

For instance, that comp-

licated mess of parentheses to squish a line number can be written just once as DEF LINES\$(X)=CHR\$(INT(X/256))CH R\$(X-256*INT(X-256)) and then, whenever you need a line number, just write line \$(100) or whatever.

The flag token and counting of characters and all for an unquoted string can be DEF' as U\$(X\$)=CHR\$(200)& CHR\$(LEN(X\$))X\$. Then, to write "HELLO" just write U\$("HELLO") and let the computer do the work. For a numeric value in the unquoted string ,use UN\$(X)=CHR\$200)&CHR\$(LEN(STR\$(X)))&STR\$(X), and THEN 999 becomes UN\$(999).

CALL HCHAR can be DEF HCHAR\$=CHR\$(157) for CALL and, since one DEF can call another, U\$("HCHAR") and, since it is always followed by an opening parentheses, CHR\$(183) - but wait, let's define that open parentheses as DP\$=CHR\$(183). Now DEF

Now DEF HCHAR\$=CHR\$(157)&U\$(
"HCHAR")&OP\$, and you can
use HCHAR\$ for CALL HCHAR(.

Let's also DEF the comma with DEF C4=CHR*(177) and the closing parentheses with DEF CP\$=CHR*(182). Now that long HCHAR that had you discouraged can be abbreviated to CHAR\$£UN\$(24) &C\$£UN\$(12) &C\$£UN\$(32) &C\$£UN\$(5) &CP\$.

I have written a program of 162 of these DEFs, and another program to print out a handy look-up chart of them. It would take 4 pages to print them, so if you want them just ask me for a copy.

SPRITES, PART 2 ## by Jim Peterson

Several sprites can be

created by one statement, such as CALL SPRITE(\$1,42,16,10,10,\$2,65,2,20,20). The pattern of several sprites can be changed at once by CALL pattern(\$1,chr,\$2,CHAR) - this is very useful when changing the pattern of a character which has been created from two or more sprites.

Several sprites can be set in motion simultaneously, or have their motion changed simultaneously. by CALL MOTION(#1,RV,CV,#2,RV,CV,#3,RV,CU) etc. This is also very useful when moving a chaeacter formed of two or more sprites.

Several sprites can be recolored simultaneously with CALL COLOR(#1,C,#2,C) etc.

Several sprites can be relocated together by CALL LOCATE(#1, DOTROW, DOTCOL, #2, DOTROW, DOTCOL) etc.

The position of more than one sprite can be found at one time by CALL POSITION(#1,DOTROW1,DOTCOL1, #2,DOTROW2,DOTCOL2), etc.

A sprite can have only one color, unlike a screen character which can have a foreground and background color. Any dots which are not "turned on" in the character being used for the sprite will be transparent. However, a sprite with a higher number, using a redefined character with all dots turned on and of a different color, can be

created at the same dotrow and dotcolumn, giving the illusion of a sprite with foreground and background color. Up to 4 sprites can be stacked in this way to create a multicolored sprite effect. If the sprite is stationary, colored graphics behind all 4 sprites can give the illusion of even more colors.

Sprites always appear to be in front of screen graphics, and lower-numbered sprites always apear in front of higher numberes sprites. However, by skill ful swapping of sprites, remarkable 3-D effects can can be created, seeming to show a sprite passing before and then behind another, or and then behind a graphics object.

Another way to simulate 3D is to place a second higher-numbered sprite behind the first, of the same pattern but of a darker color, and offset by a few dotrows downward and to the side, so that when both are set in motion the one appears to be flying above the surface with the second following as its shadow.

Sprites can also be used to add an apparent third color to screen graphics, which can have only two colors in one character.

It is difficult to create the impression of curved lines with redefined characters because they are composed of dots rather than lines. This becomes even more obvious in sprite magnifications 2 and 4, when each dot is magnified into 4 dots. A circle will appear more round, and of the same

size, if it is composed of 4 redefined characters in magnification 3 than of one character in magnification 2.

Larger figures can be created using several sprites placed next to each other, providing that not more than four are in a row horizontally. These can be of several colors, and can be set in motion simultaneously.

Although it is stated that sprites, once set in motion, will continue to move regardless of what the program is doing, this is not quite true. If the program is doing a lot of calculating, the sprite motion will be jerky and irregular.

By setting a sprite in motion, and using a loop to change it through a series of patterns, remarkable animated graphics can be created, in much the same way that cartoon movies are made.

It is difficult to control motion exactly with CALL MOTION. For more precise control, sorites can be moved from one point to another, dot by dot, by using CALL LOCATE with a loop, such as FOR DC=1 to 100 :: CALL LOCATE(#1.50. DC):: NEXT DC. This movement will be very smooth but slow: adding a STEP 2 or STEP 3 will make it faster but less smooth.

If you have Memory Expansion, CALL LOAD(-31806,96) will freeze all sprite motion and CALL LOAD(-31806,0) will release all sprites to their normal

motion. By first freezing the motion and then creating up to 20 sprites with predefined motion, all can be set into motion at once, creating some very remarkable effects.

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LET'S ROUND UP THE MAVERICKS by Jim Peterson

A maverick, for the information of you tenderfeet, is a young Texas critter which has lost its mama. There are over a million of them hiding in the closets of America, and I think it's time for a roundup!

There are perhaps 200, possibly 300. II user groups in the United States and elsewhere in the world. A few boast of several hundred members, but some have no more than a dozen, and I doubt that the average is more than 50 users actually paying dues and attending meetings. That computes to at most 15,000 members of the "organized" II world. Of course, there are many others who keep in contact by subscribing to those magazines which support the II, and still others who are kept up to date on new developments by the catalogs from the big mail order houses. Still, no matter how you compute it, there are certainly well over a million owners of the II-99/4A who have no way of knowing that our computer is still alive and well.

These people have read that Texas Instruments abandoned the computer. They have seen the supplies

of hardware and software disappear from the big retail stores. Many of them bought their computer during the final suicide sales, therefore never got on the mailing list for the Texas Instrument newsletter.

And yet, relatively few of the TI-97/4A are showing up in the classified ads and in the garage sales. A recent national survey found that the TI-97/4A was owned by more people than any computer except the Commodore.

True, many of these owners are only interested in plugging in a module and playing a game. But some have a deeper interest - and even five percent of a million is an awful lot of people!

When I bought my II, in March of 1982, I searched in vain through the articles and ads of every magazine on the newsstand, for anything relating to my computer. It almost seemed that there was a conspiracy of silence. I had taught *vself to program, and written dozens programs, before I finally made contact with the II world. I was once a maverick, and I can sympathize with those who are mavericks now.

Is your user group dwindling away, as some of your members move on to bigger but not necessarily better computers, while others become so polarized in their interests that they have little in common with each other? Are your givers tired of giving to your getters, and your doers tired of being used by your

users? Do you miss the enthusiasm and excitement of your first meetings, when everyone was learning together? Does your group need a transfusion of fresh blood? The donors are out there and waiting, if you can find them!

Do you want to see new hardware, new software, new publications for your computer? The bigger the market, the more that will be produced to be marketed. And the market is there - it just doesn't know that it's there!

The user groups are the only ones who can round up the mavericks. You can do it by publicizing your meetings, by letting the II owners in your community know what you can do for them. You can get newspaper publicity and television publicity. Some of you are already offering classes in programming or in computer use to the general public. the schools. to ta libraries. to senior citizens, to foster children. t.o handicapped. These are very fine endeavors themselves, and they can also bring the publicity which will attract now members. And here and there among those new members will be an incenious hardware hacker or programming genius who will make our computer better than ever.