

TI-99ers In The '90s

Classic Computer Column
by Barry A. Traver

Last month I reported on a number of vendors represented at the eighth annual Chicago TI International World Faire, including Arcade Action Software, Asgard Software/Hardware, Comprodine, MS Express, Notung Software and T & J Software. Unfortunately, I ran "out of time and space." Well, this month I have another opportunity to tell you more about suppliers of software and hardware for the TI-99/4A or MYARC 9640.

Here's a request: if you contact a supplier as a result of reading about them in this column, please mention that you read about them in Computer Monthly. (You might even suggest that they try advertising in CM for regular exposure in this magazine). As far as I know, CM is the only newsstand publication that currently and regularly supports the TI-99/4A and other "classic computers" each month.

Hard/Floppy Drive Controllers

I mentioned last month that Chris

Pratt was working on a Hard and Floppy Drive Controller (HFDC) for the TI-99/4A for a company known as ESD, but I did not have much other information at the time. Well, I have not yet seen their HFDC in action (I'm still hoping to borrow one for review purposes), but I now have an address and phone number for you: Electronic Systems Development Corporation, P.O. Box 23805, Washington, DC 20026-3805 (phone: 301/322-6150).

The MYARC HFDC, which has been available for some time, works not only with the TI-99/4A but also the MYARC 9640 (which is reportedly not the case with the ESD HFDC). In addition to their New Jersey address, MYARC also has an address and phone number in Alabama: MYARC Inc., 2624 Ranier Drive NE, Birmingham, AL 35215 (phone: 205/854-5843).

A hard drive offers the speed of a RAMdisk with the permanence of a floppy disk. The price of a hard drive controller for the TI is now much less than it was earlier (you can get a MYARC or ESD HFDC for \$200-\$240), and a hard drive is now almost as inexpensive as a floppy drive. I just ordered a 10 meg hard drive for \$65 with full warranty, and I

paid about that much not long ago for a half-height floppy drive! If you're serious in your use of your TI, you may want to get serious about possibly investing in a hard drive (and hard drive controller) for it.

9640 News On 9640 News

Another vendor represented at the Chicago TI Faire was 9640 News, P.O. Box 752465, Memphis, TN 38175-2465 (phone: 901/368-1169). In my opinion, anyone who owns a 9640 (or Geneve) should subscribe to Beery Miller's 9640 News, a magazine-on-disk specifically for the 9640. I regard it as a "must."

Each volume of 9640 News is priced at \$25 and is made up of five double-sided, single-density disks, full of programs, articles, utilities, source code, etc. As I'm writing this, Volume 1 has been released in its entirety, and three disks of Volume 2 have already appeared.

What kind of contents are included? Well, Volume 2 has seen the release of an MDOS editor, a "super fast" MY-ART scrolling demo, various Windows 9640 utilities (more about Windows in a moment), and--compliments of Al Beard of LGMA--

a full C compiler running in an MSDOS environment (many 9640 owners also have access to a PC) compiling code for the Geneve 9640. (And there are hopes that a full C compiler running in a MDOS environment may also perhaps soon be available from Al!).

As you can see, 9640 News is 9640 specific. If you want TI programs that will run on a 9640 in GPL mode, you can find them anywhere. But the contents of 9640 News are oriented toward the fact that the 9640 is much more than a /4A emulator. If you have a 9640, you want to take advantage of the specific features of the 9640, and 9640 News enables you to do just that!

In addition to publishing 9640 News, Beery Miller also carries separate software for the 9640, some of which is available at a discount to 9640 News subscribers. One significant utility is the Windows 9640 mentioned earlier, which permits control of running multiple programs under MDOS mode (with each program able to have its own "window" on the screen). Version 1 has already been released, but version 2 (expected out second quarter 1991) may be twice as powerful. Version 2 (cost

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\$25, but \$15 for 9640 News subscribers) reportedly will allow you to use up to 2 megabytes of RAM (80-column monitor and mouse are supported).

Speaking of mice, Beery also has available a Mouse Development Kit at \$14.95 which provides drivers for the MYARC mouse or Logitech serial mouse. (At the time this is written, the program has not yet been tested with the Asgard mouse, but I expect that that will be worked out as well, owing to the popularity of the Asgard mouse).

In addition to utilities, Beery also has some games available. One of these is MDOS Tetris (\$15), which runs directly from the MDOS prompt. I like games that require thought as well as quick reflexes, and Tetris is my kind of game. Evidently, it's a favorite of many other people as well. 9640 News is not the only company to make available an MDOS version of the game for the Geneve: Tris! is the name of Asgard Software's version of essentially the same game. I'm not sure which one I prefer. Both are lots of fun, although I think MDOS Tetris from 9640 News takes more advantage of the graphics capabilities of the 9938 chip in the 9640.

Beery Miller also has a couple of games available that run out of version 2.99A of MY-BASIC: Barricade (\$15) and Global War (\$15). Barricade forces players to line up appropriately colored boxes from a 3-dimensional pit. Global War (now in version 2) requires a mouse, and pits you up against one to four other players in a strategic offense to claim the entire world. In my opinion, the Geneve could be an ideal "game machine," so I'm hoping more and more games will be written capitalizing on the strengths of the Geneve. (I'm hoping not to have to buy my son a Nintendo or Segal)

By the way, if you own a MYARC Geneve and you joined the apparently now defunct National MYARC Users Group located in Texas, Beery has a special offer for you. If you can provide a copy of your cancelled check by which you joined that organization, and you are not a current subscriber to 9640 News, Beery says that he will provide you with Volume 1 of 9640 News absolutely free! (Warning: once you get Volume 1 of 9640 News, I predict that you'll want to purchase Volume 2.)

Peter, Paul And JP Software

(J.) Peter Hoddie and (J.) Paul Charlton, who are the partners behind JP Software, were unfortunately unable to attend the Chicago Faire, but the company has come out with excellent programs in the past and has announced plans for some worthwhile future programs as well.

Note that JP Software has a new address (according to JP Software News, prepared especially for the 1990 Chicago TI Faire): JP Software, 1014 Pine Street, Menlo Park, CA 94025. (Their phone number, however, remains the same: 415/328-0885.)

Although no new products have been released since FirstBase Utilities One (which came out several months ago), two products have been announced as "on the way" from JP Software. One of them, Wayne Stith's GEN-TRI, is an exciting program for the 9640 which includes a terminal emulator, a word processor and a disk manager in one neat package. It has lots of nifty features, such as supporting ASCII, XMODEM, 1KXMODEM and YMODEM data transfers (with plans to allow the later possible addition of such telecommunications protocols as Kermit, ZMODEM and BIMODEM).

We're told that "GEN-TRI includes, as one of its multitude of features, a powerful integrated spell checker ... written by J. Peter Hoddie." (The spell checker is also to be released in a /4A version). The name GEN-TRI comes from the fact that GEN-TRI is an extension for the GENEve of Trlad, a program Wayne released for the TI-99/4A in 1988.

To me, one of the most exciting features of GEN-TRI is the capability of script processing, of putting the terminal emulator on "automatic pilot," so to speak. I recently received a beta-test version of the program, so hopefully it may even have been officially released by the time this column appears in Computer Monthly. Wayne did a nice job in his Trlad program for the /4A, but his GEN-TRI for the 9640 looks like it will be the best yet!

John Birdwell's DISK ONE ("expected ... early ... 1991") is a complete rewrite of his popular DSKU, but DISK ONE will provide "complete support for the MYARC HFDC hard disk [and] there will be support for running it in 80 column mode as well," according to the announcement from JP Software. DISK ONE will reportedly run on both the /4A and the 9640. (John has suffered some health problems in recent months, so it was good to see that he was able to attend the Faire). Without having seen DISK ONE yet, my prediction is that it will become a "must-have program" for the TI-99/4A or Geneve (and that GEN-TRI will become a "must-have program" for the Geneve, at least for anyone seriously involved in telecommunications).

Other TI Suppliers

Bud Mills of Bud Mills Services, 166 Dartmouth Drive, Toledo OH 43614 (phone: 419/385-5946) was at Chicago, demonstrating his Memex expansion memory card for the

Geneve. Bud is a reliable source of hardware for the TI-99/4A and MYARC 9640, specializing in memory-type cards such as the Horizon RAMdisk and the P-Gram card--a gram simulator similar to the Gram Kracker or Gramulator, but designed to fit in the PE box rather than in the module port of the console.

John McDevitt of Rave 99, 112 Rambling Road, Vernon, CT 06066 (phone: 203/871-7824) showed his new PE/2 expansion box, featuring a 200-watt power supply. It is available in two formats, PE/2A and PE/2B. The former is strictly for the Geneve, but the latter I thought was especially interesting, since it permits the running of the TI-99/4A and Geneve in the same system (you switch from one to the other with the press of a switch!). Both formats include a 32-bit expansion bus which is not used by the TI or Geneve, but might be used in the future to install a co-processor to emulate an IBM PC, Apple, Atari, Nintendo, or whatever. (Whether such a co-processor card is actually built is pure speculation at this point.)

Bruce Harrison of Harrison Software, 5705 40th Place, Hyattsville, MD 207781 (phone: 301/277-3467), was also present at the Chicago Faire. The company is best known for its excellent classical music assembly software, but they have come out with other products as well, including a word processor, a game or two and (most recently) an up-to-date golf analyzer (also all in assembly). Since Bruce is also doing some programming for other computers (particularly the Tandy), I recommend that you support this company by purchasing their products if you want to keep them producing new software for the TI!

Larry Conner of L.L. Conner Enterprises, 1521 Ferry Street, Lafayette, IN 47904 (phone: 317/742-8146) had, as usual, some unusual items of hardware and software for sale. If you have (or want) a TI CC-40, or want software/hardware to support it, Larry is your man! The same is true of other hard-to-find or limited-release products (MBX, hex-bus, etc.).

Gary Bowser of OPA, 432 Jarvis Street, Suite 502, Toronto, Ontario, Canada M4Y 2H3 (phone: 416/960-0926) was in Chicago, as was Barry Boone representing Texaments, 53 Center Street, Patchogue, NY 11772 (phone: 516/475-3480), but I already (p)reviewed Gary's TI-Image-Maker and Barry's GIF Mania (earlier called "GIFFY") in previous columns in this magazine.

Chicago Graphics Tips

If you're into desktop publishing with your TI (even if it is just an occasional poster or brochure), you'll be interested in "The Chicago TI-99/4A User Group's Encyclopaedia

of Graphics for the TI and 9640 Home Computers." So far, two hardcopy volumes have been released, and I understand that more may be planned for the future.

The first volume is "Fonts," and it includes full printouts of fonts put out by Texaments (Artist's Companions, Character Sets/Graphics Designs (CSGD), Asgard (Artist Fonts, Page Pro Fonts), JP Software (Artist Fonts), McCann Software (Printer's Apprentice), Great Lakes (Certificate Maker), and more.

The second volume is "TIPS," and it includes printouts of the first 2000 or so images ported over by Ron Wolcott from the IBM world to the TI. (I understand that updates will be available as more files are added to the TIPS library, including, I assume, the 1900+ additional images Ron Wolcott released at the end of 1990.)

I must say that I thought the price for these volumes was unreasonable--unreasonably low, that is. The Chicago Group was selling them at \$10 per volume! (I've printed out the TIPS images myself, and I can confirm that it is a costly procedure, both in time and in money, considering the cost of ribbon, paper, etc.)

If you weren't at the Faire, no problem: you can order the volumes by mail. Just include appropriate postage for shipping and handling (\$3 for U.S. first class postage, \$2 for U.S. parcel post, or \$5 for European delivery). If you would like to order either or both, you can send your order to Chicago TI UG, P.O. Box 578341, Chicago, IL 60657. (Don Jones, who edited these volumes, tells me that if you order both volumes at the same time, you only have to pay the shipping and handling charge for one of them.)

Don Jones and the Chicago User Group have done a very professional job and have saved many people a lot of time and expense in making these volumes available. If you use fonts or TIPS, I believe you'll find these resources invaluable. (I got both volumes myself while at the Chicago Faire.)

Closing Comments

Proof of the continuing vitality of the TI-99/4A can be seen in the fact that although we're again "out of time and space," there are a number of vendors represented at Chicago that I was not able to mention, even after a second attempt. Apologies to those who may have been omitted; I suspect, however, that their names may appear in future columns if they continue to support the TI and Geneve.

One vendor not present in Chicago (as far as I know) but about whom you should be aware is TM Direct Product Marketing, 379 Beach Road, Burlingame, CA 94010 (phone: 800/336-9966). They are

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Your TRS-80 Column

Classic Computer Column
by Michael W. Ecker, Ph.D.

TRS-80 Resources and Completing A Collection

Welcome to another edition of Your TRS-80 Column! This month we have news of an alternative disk operating system to the decade-old TRSDOS 1.3 standby, plus news of a dedicated TRS-80 'zine. I'll also have a nice little program customized for the TRS-80, and we'll deal with collections as our main feature.

Before proceeding, I should explain that you are not getting a new columnist after just a half year. Contractual obligations with another computer magazine had prohibited me from writing under my own name--until now--so I had to use the nom de plume of David Wade. It's a combination of my son's first name and my middle name.

Activity: Completing a Collection

Have you ever noticed how long it takes to complete a collection? You could be recording winning lottery numbers, collecting baseball cards, trying to reach every potential voter or gathering coupons for a promotion. Somehow, you seem to keep seeing the same items before finding those last elusive ones.

Let's use our TRS-80s and BASIC to explore this. The program to follow implements a collection process until we have at least one of each element. The program keeps track of how many tries are made before getting a complete collection. You get to specify how many items make a complete collection, though the version shown has restrictions.

Specifically, we simulate a random collection of 2 to 13 items. When item 4 is chosen, an asterisk is placed next to the "4" at the left of the

screen. If 4 had been previously chosen, the asterisk appears next to the previous one or more there already. Thus, this creates a histogram.

I have deliberately limited this to 13 different items to take into account the usual screen size limits. There are ways to incorporate collections that allow larger sample sizes, the methods being both pictorial and non-pictorial. I leave that as a programming exercise for you readers to come up with on your own. In fact, I encourage you to contact me at the address at the end of this article to share your own ideas, implementations and improvements.

The Question

Let's paraphrase the foregoing this way: Suppose we are given a virtually infinite number of each of N types of items, and we choose or draw randomly one item at a time, not knowing which of the N kinds we'll get. About how long, based on this number N, must we expect to have to wait before getting at least one of each of the N different items? In other words, how many draws are needed, on the average, to complete the collection?

The visual display for our program--the histogram--graphically illustrates the counters showing our progress. Each star in a line indicates one more time that the number represented was chosen.

To make the program run slower to give you time to see the histogram emerge, I've deliberately included a delay loop--an empty loop. If the delay in line 100 is too long, change the value from 500 to a smaller value--for example, 200.

Because of display limits, don't use this version of the program for N13 or so. If you have a Model III or other TRS-80 with 64-column display, you may just hit ENTER when prompted for the number of columns.

Here's the aforementioned program, COLLECT/BAS, TRS-80 ver-

sion. I originally used a PC version in my newsletter, *Recreational & Educational Computing*. However, I've tested and debugged this thoroughly on my TRS-80:

```
10 CLS: PRINT "Program to simulate completing a collection"
20 PRINT: PRINT "Copyright 1991, Dr. M. Ecker"
21 PRINT "909 Violet Terrace/ Clarks Summit, PA 18411"
30 INPUT "How many items (2 to 13)"; N
35 DIM C(N): T=0
40 INPUT "How many columns for your TRS-80 (Default=64)"; W
45 IF W=0 THEN W=64
50 FOR J=1 TO N: C(J)=0: NEXT J: CLS
60 FOR J=1 TO N: PRINT@J*W+1, J: NEXT
70 K=INT(RND(N))
80 C(K)=C(K)+1: T=T+1
90 PRINT@ W*K+C(K)+4, "*"
100 FOR DL=1 TO 500: NEXT DL
110 FOR J=1 TO N
120 IF C(J)>0 THEN NEXT: ELSE 70
130 PRINT@ W*(N+2)+1, "Collection of"; N; "items complete in"; T; "drawings."
140 INPUT "ENTER to run again, or Q followed by ENTER to quit"; XX$
150 IF XX$<>"Q" AND XX$<>"q" THEN RUN
```

Epilogue

For 13 items, you should expect, on average, to require about 40 drawings. For 100 items, though this program won't display a histogram, the figure grows to 518.

To estimate the number required for N items, I've derived this estimator:

$$N*(\text{LOG}(N) + .577)$$

Here, the logarithm is the natural log (base e, not base 10), the one used by BASIC when you use LOG. On most calculators it is Ln, not Log. The number .577 is the three-decimal approximation to Euler's constant. It should be easy to add a line at the end of the program to show how many drawings are needed on average to compare it to the result of your Monte Carlo simulation. Bear in mind to expect a degree of variability.

If you don't wish to type this in yourself, please send a formatted TRS-80 Model III disk with a self-addressed mailer containing at least 65 cents postage. I'll send you this program FREE, plus any others I can scrounge up.

TRS-80 Resources: System 1.5

If you've never moved to the disk operating system alternatives to the Tandy-supplied ones, there is good news. A new operating system to replace sclerotic TRSDOS 1.3 is available from a third-party source.

I just got my review copy of System 1.5--without printed documentation (it's on the disk)--but I can tell you a little about it. Its overall functions patch up little shortcomings and add functionality. It's not going to displace the base of users of alternative TRS-80 DOSs (LDOS,

NewDOS, MultiDOS, etc.), as it's not as ambitious in most respects. But it does add lots of extra control missing in TRSDOS 1.3, and is therefore best seen as an upgrade system.

The new DOS does these things: allows creation of a configuration boot file; offers better control of date, time, cursor; improves TRON (trace for BASIC programs); enhances printer and editing functions; sets up print spoolers (enabling printing without waiting for file to print to regain computer use); defines macros; speeds or slows down computers (this might be for Model 4 only); utilizes double-sided drives more fully; changes master passwords; has an enhanced 'Dual' command for echoing output to printer; adds DOS capabilities even from within BASIC; plus more.

As I said, I just received this, but I already notice some nice little touches, such as the ability to omit semicolons in accessing directories and a better date prompt. I'll say more in upcoming issues.

On the negative side, I don't feel that a commercial program should omit printed documentation. True, most TRS-80 users have long had printers, but somehow this just doesn't seem right.

The assembly-language programmer will feel most at home, since there is a lot of technical information in the documentation.

System 1.5 is available for \$39.95 from Mr. Lance Wolstrup, Editor, TRSTimes Magazine, 5721 Topanga Canyon Blvd., #4, Woodland Hills, CA 91367.

TRS-80 Resources: TRSTimes, Casino 21

While you are at it, you should definitely look into Lance's magazine, TRSTimes, a monthly now in its fourth year. It's a little heavy on assembly language and light on BASIC programs for my personal tastes, but it's mostly well-done and

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now selling TI software and hardware that was formerly available from Triton (a major supplier, but one which ceased its involvement with the TI-99/4A when Triton was taken over by Activision). We are grateful to TM Direct Marketing for continuing the Triton tradition. Check them out!

FUNNELWEB 4.31 has just been released by Tony and Will McGovern, and the revisions are significant. For example, the 40-column

Disk Review program now contains most of the features available earlier only in the 80-column version. Next month I hope to tell you more about the latest FUNNELWEB.

In the meantime, feel free to send your comments and suggestions to me, Barry Traver, 835 Green Valley Drive, Philadelphia, PA 19128 (I do read all letters, even though I cannot promise to answer them all) or phone me at 215/483-1379--as long as you don't reverse the charges! And keep on compuTIn'!