Covering the TI99/4A and the Myarc 9640

MICROpendium

Volume 9 Number 3 April 1992 $2.50

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See Page 15

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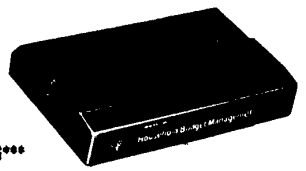

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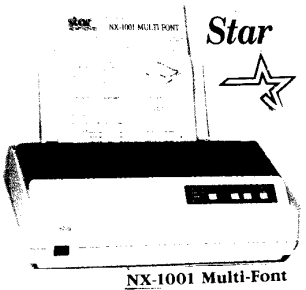

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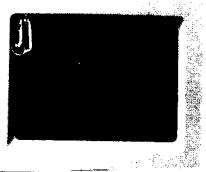

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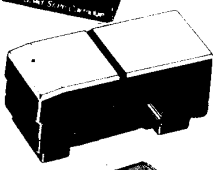

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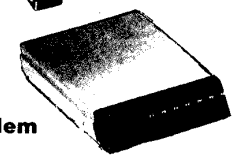

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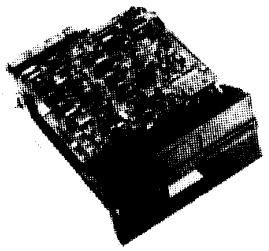

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Contents

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Geneve 9640

Consumer office works with Myarc ..... Page 7
Beery Miller heading up MDOS buyout attempt ..... Page 8

Regena on BASIC

Raglan pullover sweater ..... Page 9

Extended BASIC

Converting TI Extended BASIC to QuickBASIC ..... Page 11

Newsbytes

New products, new outlets for telecommunicating with and about your TI, and some speakers for the MUG conference .... Page 12

MICROpendium Index

The first half of 1991 ..... Page 15

The Art of Assembly

Structuring data ..... Page 23

Reviews

MICRO-Reviews: MY-Art Slide Show, MY-BASIC Patch Files, Casino Games, Harrison Software Word Processor ..... Page 27

User Notes

A warning on using 96 TPI disk drives with TI disk controllers, and taking a BREAK in MBASIC ..... Page 29

Classified ..... Page 31

Departments

Bugs & Bytes ..... Page 5
Feedback ..... Page 6
TI Fairs ..... Page 8
Reader to Reader ..... Page 25

*READ THIS

Here are some tips to help you when entering programs from MICROpendium:
1. All BASIC and Extended BASIC programs are run through Checksum, the numbers that follow exclamation points at the end of each program line. Do not enter these numbers or exclamation points. Checksum was published in the October 1987 edition.
2. Long XBASIC lines are entered by inputting until the screen stops accepting characters, pressing Enter, pressing FCTN REDO, cursoring to the end of the line and continuing input.

Comments

Myarc gaining on some repairs

Myarc apparently still hasn't caught up on its backlog of repairs, but according to the consumer affairs office of Somerset County, New Jersey, the company is doing better. Only one of four persons who complained has yet to receive his HFDC at this point. As an article on page seven notes, a county investigator says, "I've heard nothing but good reviews about the product. The fact that they can't get the service is what is bothering them."

TI SQUEEZED OUT OF TICOFF

It's not likely that any TI vendors will be at next year's TICOFF, if it is held. Over the past several years the fair has expanded to include PCs, and apparently there's precious little left for TIers. My understanding is that it wasn't a big success for anyone, which is unfortunate. TICOFF has been around for a long time and has seen better days. At any rate, there were only two TI vendors on site, so it had to be disappointing for any TI users who attended.

PRAY FOR IDA McCARGER

We have been saddened to learn that Ida McCarger recently had surgery to remove the largest of several brain tumors that have reoccurred. According to The Cactus Patch newsletter of the Southwest Ninety-Niners in Tuscon, the surgery gives her the possiblity of living six to eight more months. She has been one of the mainstays of the group, serving as its disk librarian and as manager of the Altman Fairware List.

MICROPENDIUM INDEX DISKS

We are holding all orders for the MICROpendium Index disks because we do not have all of 1991 available, yet. We expect to fulfill the orders in May. Meanwhile, the first half of 1991 is included in this edition, as well as on the monthly MICROpendium disk. The second half will be published in the May edition and included on the May disk, of course.

We've also added Bill Gaskill's Microdex 99 disk to our MICROpendium Index II series. There's a Newsbyte that describes Microdex 99 in this issue, but what it allows you to do is to modify your existing index records, as well as add to them or delete them. It's got a bunch of other functions as well.

—JK

BUGS & BYTES

How fairs are faring

The Ottawa Group made a late decision to have a fair again this year, which we received after we went to press last month. Their Fest was scheduled for April 25 at Merivale High School in Nepean, Ontario, Canada.

Bill Gard, who chairs the event, says the club "made the decision to go ahead as we view it an essential activity to keep the interest in the TI going."

He says the club had no expectation of attendance from US distributors because of customs hassles and the difficulty of realizing a profit. However, various Canadian distributors were invited as well as Canadian user groups.

For further information, contact Ottawa TI99/4A Users Group, c/o Bill Gard, 3489 Paul Anka Dr., Ottawa, Ontario, Canada K1V 9K6; telephone (613) 523-9396 (home); (819) 994-8856 (work); (819) 994-8873, attention DSE 2 (Fax).

Only two TI vendors, Harrison Software and Barry Traver, were in evidence at TICOFF in March, according to Bruce Harrison of Harrison Software. The fair started off as a TI event hosted by a high school student council because the group's faculty sponsor is a TI hobbyist. In recent years, IBM has been added to the fair. Harrison says he didn't make enough to cover his expenses and won't be back if the fair is held next year.

On the other hand, the Seventh Annual Northeast TI Fair sponsored by the Boston Computer Society's TI99/4A User Group had an enthusiastic audience, though attendance was down from last year, according to Dr. Donald Mahler of the group. Justin Dowling chaired the event, Ron Williams was in charge of vendor and group tables and Mike Francis moderated presentations. Groups represented included MUNCH, Pioneer Valley, Nutmeg, Magnetic, Brockton and Northeast 99ers. Vendors included Little Green Men Associates, Bud Mills, Harrison Software, M&S Software, Notung, House of Computers, D&L Software and Cadd Electronics.

"There were many excellent presentations and demos," Mahler writes. "The most impressive to me was Al Beard's 9640 SHELL."

ESD controller

Electronics Systems Design showed up at February's FestWest in Phoenix with an early prototype of its new hard disk controller. However, it was not functioning for any demos at the event. The company gave an April 15 release date for its IDE controller. Barry Boone will be writing the DSR. Prices are in the $160-300 range, depending on floppy and hard drive configuration.

Feedback

Praise for Bud Mills

I would like to say *thanks* to a man with an outstanding attitude — *Bud Mills* — he helped me to get my Geneve out of the Stone Age.

I was sent to El Paso, Texas, last year for study. I decided to upgrade my Geneve System; having a TI Controller and DSDD drives gave me the idea of expanding the system. What choice was there:

— DSDD-Controller — I never saw any advertisement.

— HFDC — nobody knew a place to find a new or used one, and then there is the need for a hard drive, too (rather expensive, too)!

— RAMdisk — expandable, time by time, just the right thing for my wallet!

The decision was made:

— Zero K Kit Bare Board, Manual + ROS 8.14, $110 at that time.

I was a bit experienced with a soldering iron and was thinking of buying the RAM chips myself for less!

The local stores didn't have any — the mailing ads were not that cheap, so I called Bud Mills and got them there; 4 x 128K at first. Later, when I had more money available, I bought the rest.

While building the board I never had any problems getting along. Checkout came and nothing worked ... so much money for nothing? I called Bud Mills; he tried to make it work over the phone, after that he asked me to send it to him to put it on a check-station of his. I had my stuff back in no time — he sent it express.

There was a solder-crossing between two lines and some flux on one of the edge contacts. No big deal for him to find.

I installed the drive as 256KBoot and 256KRAM at first. At that time I used the drive as F: and it was switchable between Boot and RAM with a program called RAMDOS. It was great not using a floppy for the Bootup. Just throw the powerswitch to on and the system comes up.

After getting used to the new stuff I enjoyed it a lot. After checking with my wife I ordered the other 4 x 128K chips. On the order I mentioned to Bud that I was using MDOS 1.14F on my system and he said, then you can use RAMDOS97 on the Install disk and you will have two drives with the Phoenix Mod. Having learned that even my soldering skills were not good enough, I sent the whole thing to Bud Mills again. A couple of days, and I got my stuff back.

I filled the Boot drive (F:) with various batch files which will load the corresponding program from drive G:(DSK8) or from a subdirectory like DSK8.DIRTPA.TPA with the help of an AUTOEXEC file because of lack of memory for that particular program, just to mention one. Everything works great, even faster than a hard drive, because there is no mechanical movement.

I like the Phoenix (256/800) very much.

Bud Mills was helping out when I made my mistakes — even on the most holy *Thanksgiving Day!* This attitude of Bud Mills was most helpful and I can't thank him enough for his time and effort.

As a long time customer of MICROpendium I ask you a favor: Please let the TI world know that there are some people who care about their products and most of all their customers in desperate need of help.

Heino Huenken
Welmbuettel, Germany

Accelerator delays disappoint reader

I read the Comments section of the February MICROpendium and I am appalled! The note that the "Accelerator" is no more disappointed me. I have had dreams of a really *hot* TI99 lately. The thought of a 12 megahertz TI with up to 4 meg of RAM in high memory was intoxicating.

Here was my trusty old TI with the familiar cartridge port and everything looking the same, but turn it on and the memory self test reads 4096K. I insert my trusty Funnelweb disk and this program that looks like "XtreePro" pops up, wow! On the hard disk (using the Myarc SCSI controller), the menu reads that I have an 80 meg hard drive. On this drive is TI-Writer with hot key help systems and the whole program menu driven (reminds me of "PC-Type"). Of course, Pascal is built in and a full ANSI C compiler is available. The graphics, boy oh boy, the graphics! Having to use an SVGA monitor was expensive but worth it! My TI-Artist Plus v.3.2 puts any 486DX clone to shame.

Dreams die hard. I was very excited about the "Accelerator." However, it does seem to be just another case of vaporware. Announced today, unavailable tomorrow. This one really annoyed me as it sounded like it was the right approach and would be done correctly. I hope the project does make it into the production stage. I don't think it would be the great resurgence of the TI and show Texas Instruments once and for all how stupid they were, but it would have been a good stab at it. I may even have bought one.

Frank Gehrling
Oakland, Maine

Order overdue

Very late — 1988 order, Databiotics Desktop Publishing Cartridge, sent money order plus airmail, no goods received. Bad P.R., annoying! Might as well have spent money elsewhere. Now 7 March 1992. Suggest stimulating editorial on how come *or* the goods —TIsHUG not amused.

Daniel Norman Harris
Hurtsville, New South Wales, Australia

Horizon and Quests

Recently, I came into possession of a Horizon RAMdisk. There were visions of adding it to my system along with the three ½ meg Quest RAMdisks I am using. Dutifully, I sent off to Bud Mills for the latest version of ROS so I would have the very latest of everything. Much to my chagrin, when I tried to load ROS it very emphatically "trashed" the DSR of my Quest installed at >1000 (the Horizon is at >1700). After reloading my Quest (several times) I called Bud Mills and was told that the Horizon ROS did *not* coexist with Quest RAMdisks — at least this 8.14B version.

After some discussion with other TI users, it was discovered that the original V8.14 ROS doesn't like the AVPC DSR either. Not having an AVPC card, I haven't been able to ascertain whether this V8.14B is any better.

In fact, there have been some modifications to the Horizon ROS from 7.4 upwards to allow it to peacefully coexist with the

(See Page 7)

Feedback

(Continued from Page 6)

Quest RAMdisk (and other devices). I have sent a copy of the Horizon CFG and ROS to Ron Kleinschafer to see if he can make some alterations to both programs to allow me to use the Horizon with my Quests. In the meanwhile, I have sent the Horizon card back to Bud Mills on the chance that there might be some other reason for the aberrant behavior of my Horizon. In the meanwhile, I'll use my three ½ meg Quests, which seem to coexist with everything except the Horizon.

If there are any other TI users who are having trouble with the Horizon 8.14B ROS, please write to Bud Mills and let him know what the problems are so that *maybe* the software can be rewritten to be compatible with these other devices. It sure would make things easier!

Bob Carmany
Guilford 99ers
Greensboro, North Carolina

Happy with articles

This is to express my complete satisfaction with your publication MICROpendium. The programming articles are all well done. Your product reviews seem to fairly assess the worth of the items being reviewed.

I especially enjoy the latest assembly language series by Bruce Harrison. And now Jim Peterson, with programs that seem to get 512K out of a 48K machine. All your columnists keep putting out information, ideas and programs, month after month. Where do they get the ideas for these articles? It is truly amazing!

I've missed seeing Barry Traver's BASIC Assembly series. Will it resume? I certainly hope so.

Courson L. Zauger
Huntsville, Alabama

Barry is now writing our Extended BASIC column. As to your high opinion of MICROpendium columnists, we agree. They are an amazing group.— Ed.

Response to reader's printer problem

Mr. Larry Reeves wrote (Feedback, March 1990) complaining that he couldn't get his Star printer to print past the 80th column when trying to run a program he purchased to print multiple columns. The problem is probably in the OPEN statement that opens the printer file. He needs to define the column width in the OPEN statement. For example, you would use the statement: OPEN #1:"PIO", VARIABLE 96 to print up to 96 columns in Elite mode or the statement: OPEN #"PIO,VARIABLE 132 to print up to 132 columns in Compressed mode. I don't have the program he's talking about, but there is probably somewhere in the program that allows him to define the printer name.

I hope this is of some help to Mr. Reeves.

Dennis F. Rebello
Swansea, Massachusetts

***The Feedback column is a forum for TI99/4A and Geneve users. The editor will condense submissions where necessary to conserve space. We ask readers to restrict themselves to one subject for the sake of simplicity. Mail Feedback items to* MICROpendium, P.O. Box 1343, Round Rock, TX 78680.**

Myarc working with consumer office

By LAURA BURNS

A New Jersey county consumer office has been working with Myarc to help resolve customer complaints.

Lou Phillips of Myarc Inc. responded Feb. 28 to a summons to appear in the Somerset County, New Jersey, Consumer Affairs Division office, according to Georgette M. Rooney, investigator for the office.

Rooney says she has had four complaints regarding Myarc in her office. As of April 4, three complaints had been resolved and one was pending. The complaints included three from United States customers and one from England.

As of April 10, Richard Arthur of Florida, with the outstanding complaint, says his Hard and Floppy Disk Controller has still not been returned from Myarc. He says he had received an HFDC card Jan. 13, 1992, which was an older version of the one he had sent for repair in March 1991, without the streamer tape connections his card had. Arthur returned the card March 2, 1992, he says, including $7 for second-day air shipping of the original card.

Rooney says Phillips was subpoenaed along with all his records.

She says that the postmaster at the Basking Ridge, New Jersey, post office where Myarc maintains a post office box told her that the box is still open, but that the mail is not being picked up. Myarc maintains a telephone listing at which a recorded message directs customers to send inquiries to the post office box and repairs to 50 Darren Woods Dr., Martinsville, NJ 08836.

Rooney says Philips had brought in a stack of unopened mail to Myarc to her office. However, she says that since he was subpoenaed, he provided her with a list of about 30 persons with outstanding repairs and has continued to update her as to the status of the persons on the list.

From persons dealing with Myarc, she notes, "I've heard nothing but good reviews about the product. The fact that they can't get the service is what is bothering them."

As long as Myarc remains in business, she says, persons with complaints about the company's consumer service can contact her at County of Somerset Consumer Affairs, P.O. Box 3000, Somerville, NJ 08876 or (908) 231-7000, ext. 7402. Fax (908) 707-4127.

Rooney says she has not found out whether Phillips expects to continue selling and repair of Myarc products. She says she has told Phillips he needs to consult a lawyer and come up with a decision about whether to stay in business.

"As far as I am concerned, he is still in business at this point in time," she says.

She notes that Myarc is basically a one-person operation, with Phillips working on the business when he has time apart from his other work.

A message was left on a recorder on a number listed for Phillips, and a certified letter sent to the Martinsville address, but MICROpendium had received no comment from him as of press time.

Miller to coordinate efforts for MDOS buyout

Beery Miller, publisher of 9640 News, has begun coordination of an effort to purchase rights to the MDOS source code from Lou Phillips of Myarc and Paul Charlton, author of the code.

Miller says he began the project because Myarc has officially released no version of MDOS for more than two years, and the versions released, 1.14F and 0.97H, have several, "if not many" bugs which require programming around and patches to function with other programs.

Miller says cost discussed nearly a year ago with Charlton for MDOS was $10,000, too large a sum for any individual to pursue. However, Miller has received pledges of donations to aid in purchase of MDOS ranging from $25 to $250 for the purchase, and he says he is donating $100 plus time for acquisitions and negotiations.

"On March 12, 1992, Lou Phillips returned my latest phone call regarding the acquisition," Miller writes on a message posted on Delphi. "He felt things would work out if the money was raised on my end and felt the price tag may be less than originally estimated. How much less, I don't know."

Miller says he plans to negotiate for the latest fully commented source to 1.14F and 0.97H on floppy diskette with any modifications available, and all utilities (assemblers, linkers, debuggers, scripts, etc.) required to compile and run the operating system. Miller plans to insure that the source he receives works with existing applications and versions of MDOS. He also plans to negotiate for routines that need debugging for HFDC support.

He plans a personal trip to meet with Phillips and Charlton to receive the files.

Miller says he plans to coordinate development of the source code with several programmers, and will also supply copies of the source code to persons contributing to its purchase, if they send in diskettes and postage-paid mailers. He notes that contributors should not send in diskettes yet. Although he forsees unofficial releases of MDOS versions by different individuals, Miller hopes to coordinate official releases by the development group.

Miller says he feels his method is the only alternative to a lawsuit, which he feels would be counterproductive because of its economic impact on Myarc.

Contributers should send a check, along with a self-addressed stamped envelope, to Beery Miller/9640 News, P.O. Box 752465, Memphis, TN 38175-2465. Miller says contributions will be deposited into a special separate account. Interest will be applied to his telephone and travel expenses in connection with the project. Once MDOS has been purchased, "numbers will be crunched tallying people's contributions and returning unspent money if contributions exceed purchase price and expenses," Miller says.

Delphi TI-Net adds Development topic

A new topic on TI-Net, the Development Area, has been formed for current discussion on the MDOS buyout and planning as the project goes along, according to sysop Jeff Guide. Guide says the area is also available to discuss other development areas in the TI99/4A/9640 community.

A database topic has also been set up with the same name.

Guide told Beery Miller, coordinator of the MDOS buyout, that primary programmers for MDOS would be offered some free time online to communicate about the project.

1992 TI FAIRS

FEBRUARY

Fest-West, Feb. 15-16, Days Inn-Phoenix/Camelback, 502 West Camelback, Phoenix, Arizona. Contact VAST Users Group, c/o Tom Pfeffer, 116 S. Stellar Parkway, Chandler, AZ 85226; H. Knight (602) 938-5446; R. Rees, (602) 869-8145; or the VAST BBS, (602) 233-0790.

MARCH

T.I.C.O.F.F. (TI Computer Owners' Fun Faire — The IBM & Clone Owners' Fun Faire), 9 a.m.-4 p.m., March 14, Roselle Park High School, Roselle Park, New Jersey, $5. Contact Robert Guellnitz, Roselle Park Public Schools, 185 West Webster Ave., Roselle Park, NJ 07204, (908) 241-4550 (voice) or (908) 241-8902 (BBS).

APRIL

Northeast Computer Fair, April 4, Waltham High School, Waltham, Massachusetts, sponsored by TI99/4A User Group of the Boston Computer Society. Contact Ron Williams, 14 East St., Avon, MA 02322.

Dutch Annual TI-Fair, April 25, Utrecht, The Netherlands, sponsored by Dutch TI-Usergroup. Contact Drs. Erik C. van Wette, Hanninkhoek 39, 7546 AD Enschede, The Netherlands, phone: 31-53-778723.

Ottawa TI Fest, 10 a.m.-4 p.m., April 25, Merivale High School, 1755 Merivale Rd., Nepean, Ontario, Canada. Contact Ottawa Users Group c/o Bill Gard, 3489 Paul Anka Dr., Ottawa, Ontario, Canada K1V 9K6; (613) 523-9396 (home); (819) 994-8856 (work); (819) 994-8873 (FAX, attn. DSE 2).

MAY

TI Orphan Reunion, 10 a.m.-5 p.m. May 9, Innisfail Lions' Hall, Innisfail, Alberta, Canada. Contact Fred Kessler, Box 20, Sundre, Alberta, Canada, T0M 1X0, (403) 638-3916.

TI99/4A Users Group, UK, Annual Meeting, May 16, Princess Anne Training Centre, 10 Trinity St., Derby (Derbyshire, England). Contact Stephen Shaw, 10 Alstone Rd., Stockport, Cheshire England SK4 5H.

Multi User Group Conference, May 15-16, Ohio State University Lima Campus. Contact Lima 99/4A Users Group, P.O. Box 647, Venedocia, OH 45894 or phone Dave Szippl (419) 228-7109 or Charles Good (419) 667-3131 evenings.

SEPTEMBER

State of Washington TI Convention, Sept. 19, Tacoma, Washington. Contact Jim Tomkins, (206) 756-0934.

OCTOBER

Chicago International World Faire, Oct. 30-31, Elk Grove Holiday Inn, Elk Grove, Illinois. Contact Chicago Users Group, 2515 Marcy, Evanston, IL 60201-1111.

NOVEMBER

Australia TI-Faire, Nov. 14, Sydney, New South Wales. Contact Richard Warburton, (ISD) 61-2-9188132 or (STD) 02-9188132.

This TI event listing is a permanent feature of MICROpendium. User groups and others planning events for TI/Geneve users may send information for inclusion in this standing column. Send information to MICROpendium Fairs, P.O. Box 1343, Round Rock, TX 78680.

BASIC

Raglan pullover sweater

By REGENA

I returned from a wonderful trip to Fest-West '92 at Phoenix, Arizona. It was great to see how much is still available for our TI computer and how much is being developed. Of course, the best part is seeing friends once again and meeting new people. The last five years Fest-West has moved around to different cities in the western states, so different groups have been hosts. If plans go well, it looks like the Ogden TI Users Group may combine with the Salt Lake City area (SLaVes) to host Fest-West '93 in Salt Lake City, Utah, next February.

At Fest-West I actually sold more custom-knit sweaters at $30 each than computer software. For a practical use of the TI, I have designed sweaters using the computer, then hand knit or machine knit them. I have done needlework all my life but started doing more a couple of years ago when I got a knitting machine. Then I really got involved when I started knitting sweaters in school colors for fundraisers for our local high school.

At that time, I knit children's sweaters on the machine and used the TI computer to help design the sweater for various sizes. "Knit Sweater Pattern" for children's sizes was published in the April 1989 MICROpendium. I also wrote "Fairisle," published in the October 1990 MICROpendium to help design multicolor patterns for knitting. Since then I have had some requests for computer programs for hand-knit patterns.

This month's program is for a very basic hand-knit raglan sleeve pullover sweater. The sweater is knit from the neck down, and if you use circular needles you have no seams (just a small hole to sew under each arm). The yoke increases as you go downward, then the sleeves are separated from the body. The body can then be knit to the desired length, and then the sleeves can be knit to their desired length. Use Size 8 or 9 knitting needles for the main knitting and Size 5 or 7 for the ribbing. Use standard 4-ply yarn (preferably machine washable).

Run this month's program to determine how many stitches to cast on, then the various lengths to knit. Children's sizes 2 to 16 and men's and women's small, medium and large sizes are listed in the program.

There are several ways to do a raglan increase. One way is to yarn over both before and after each seam stitch. Another way is to increase by knitting in the row below, then the regular increasing stitch before and after each seam stitch. Another way is to knit and purl in each increasing stitch. You will increase every other row on the yoke. Custom fit by adjusting the length of the yoke.

The program lists a simple 1-inch ribbing neck. You may want to do 2 inches of ribbing, then roll the ribbing under and slip stitch it around to give a bound neck. You may instead rib about 5 or 6 inches for a turtleneck sweater. Try ribbing of K1, P1 or K2, P2, or a cable rib. You can create a lower front neckline if you prefer.

Knit the sweater all in one color, or create a different look by adding stripes by changing yarn at the end of a round. Or design a fairisle pattern for the yoke and keep the body and sleeves solid. You may prefer to knit the sweater in a simple two-color pattern such as a houndstooth.

Another way to vary the sweater is to use different knitting patterns. The basic instructions are for stockinette stitch (knit every round), but you can combine knit and purl stitches for different textures. You may add cables if you would like — but I would suggest adding a few stitches for width if you do.

To knit a cardigan, simply split the front stitches into two equal parts and knit back and forth instead of in circles. After all the basic knitting is complete, add front bands. I think you can see how versatile this basic pattern can be.

Line 130 DIMensions variables for the number of **F**ront stitches, **SL**eeve stitches and **B**ack stitches for the completed length of the yoke **LY**. LS and LB are the length of the sleeve and the length of the body. Lines 350-380 read in the data for these variables using the data in Lines 390-430.

Graphics characters are defined in Lines 150-220, then placed on the screen in Lines 230-340. These draw a picture of what the raglan sweater looks like.

Lines 440-790 list the sizes from which to choose. Lines 800-970 are three subroutines that define the number of stitches to CAST on, then the number of stitches to start the back BK, sleeve SLE and front FR. RIB is the number of inches to have in ribbing at the bottom of the sleeves and the body.

Lines 980-1020 are the subroutine to press Enter to continue as the instructions are printed.

Lines 1030-1140 print the knitting gauge. If you knit in a different gauge, change the size of needles you use, and rib in a needle two or three sizes smaller. Line 1150 goes to the appropriate subroutine depending on which size you have chosen.

Lines 1160-1540 print the instructions using variables when different sizes are needed.

If you prefer to save typing effort, you may have a copy of this program by sending $4 to *REGENA, 918 Cedar Knolls West, Cedar City, UT 84720.* Be sure to specify "Raglan Pullover" for the TI and whether you want cassette or diskette. (And if you want to order a sweater, just write.)

RAGLAN PULLOVER

```
100 REM RAGLAN PULLOVER
110 REM BY REGENA
120 CALL CLEAR
130 DIM F(15),SL(15),B(15),L
    Y(15),LS(15),LB(15)
140 PRINT "** RAGLAN PULLOVE
    R **": : :
150 FOR J=96 TO 117
160 READ C$
170 CALL CHAR(J,C$)
180 NEXT J
```

(See Page 10)

REGENA ON BASIC —

(Continued from Page 9)

```
190 DATA FFFFFFFFFFFFFFFF,00
00000000007FAA,000000000000F
EAB,020F3DFFFBFFF7FF,40F0BCF
FDFFFEFFF
200 DATA 00000000030F3FFF,00
000000C0F0FCFF,030F3FFFFFFFF
FFF,EFFFDFFFBFFF7FFF,F7FFFBF
FFDFFFEFF,C0F0FCFFFFFFFFFF
210 DATA F,0F,FFFFF,FFFF0F,F
FFFFFFFF,FFFFFFFF0F,030F3FFF
FFFFF,C0F0FCFFFFFF0F
220 DATA 0000000302030203,00
0000C040C040C,AAAAFF
230 FOR J=1 TO 28
240 READ X,Y,G
250 CALL HCHAR(X,Y,G)
260 NEXT J
270 DATA 7,16,97,7,17,98,8,1
6,96,8,17,96,8,15,99,8,18,10
0,8,14,101,8,19,102,9,16,96,
9,17,96,9,15,104
280 DATA 9,18,105,9,14,96,9,
19,96,9,13,103,9,20,106,9,12
,101,9,21,102,10,14,107,10,1
9,108
290 DATA 10,13,109,10,20,110
,10,12,111,10,21,112,10,11,1
13,10,22,114,10,10,115,10,23
,116
300 CALL HCHAR(10,15,96,4)
310 CALL HCHAR(11,15,96,4)
320 CALL HCHAR(12,15,96,4)
330 CALL HCHAR(13,15,96,4)
340 CALL HCHAR(14,15,117,4)
350 RESTORE 390
360 FOR J=1 TO 15
370 READ F(J),SL(J),B(J),LY(
J),LS(J),LB(J)
380 NEXT J
390 DATA 52,37,49,4,8,6,56,4
1,53,4.5,9,6.5,60,45,57,5,10
,7
400 DATA 64,49,61,5.5,10.5,7
.5,68,53,65,6,11.5,8,72,57,6
9,6.5,13,8.5
410 DATA 78,63,77,7.5,14,9,8
2,67,81,8,14.5,9.5,86,71,85,
8.5,15,10
420 DATA 82,68,82,8,14.5,11.
5,90,76,90,9,15,12,98,84,98,
10.5,15.5,13
430 DATA 82,68,82,9.5,15,12.
5,90,76,90,11,16,13,98,84,98
,12,16.5,14
440 PRINT "CHOOSE SIZE:"
450 PRINT "1  CHILDREN"
460 PRINT "2  ADULT"
470 PRINT "3  END PROGRAM"
480 CALL KEY(3,K,S)
490 IF (K<49)+(K>51)THEN 480
500 ON K-48 GOTO 510,670,153
0
510 PRINT : :"CHOOSE:"
520 PRINT "1  SIZE  2"
530 PRINT "2  SIZE  3"
540 PRINT "3  SIZE  4"
550 PRINT "4  SIZE  6"
560 PRINT "5  SIZE  8"
570 PRINT "6  SIZE 10"
580 PRINT "7  SIZE 12"
590 PRINT "8  SIZE 14"
600 PRINT "9  SIZE 16"
610 PRINT "0  END PROGRAM"
620 CALL KEY(3,K,S)
630 IF (K<48)+(K>57)THEN 620
640 IF K=48 THEN 1530
650 SIZE=K-48
660 GOTO 1030
670 PRINT : :"CHOOSE:"
680 PRINT "1  WOMEN SMALL (3
2-34)"
690 PRINT "2  WOMEN MEDIUM (
36-38)"
700 PRINT "3  WOMEN LARGE (4
0-42)"
710 PRINT "4  MEN SMALL (36-
38)"
720 PRINT "5  MEN MEDIUM (40
-42)"
730 PRINT "6  MEN LARGE (44-
46)"
740 PRINT "7  END PROGRAM"
750 CALL KEY(3,K,S)
760 IF (K<49)+(K>55)THEN 750
770 IF K=55 THEN 1530
780 SIZE=K-48+9
790 GOTO 1030
800 CAST=67
810 BK=21
820 SLE=9
830 FR=24
840 RIB=1.5
850 RETURN
860 CAST=69
870 BK=23
880 SLE=9
890 FR=24
900 RIB=2
910 RETURN
920 CAST=80
930 BK=24
940 SLE=10
950 FR=24
960 RIB=2.5
970 RETURN
980 PRINT : :"PRESS <ENTER>
TO CONTINUE."
990 CALL KEY(3,K,S)
1000 IF K<>13 THEN 990
1010 CALL CLEAR
1020 RETURN
1030 CALL CLEAR
1040 CALL SCREEN(8)
1050 IF SIZE>12 THEN 1110
1060 PRINT "USE SIZE 8 CIRCU
LAR NEEDLES"
1070 PRINT :"GAUGE:  5 STS =
 1 INCH"
1080 PRINT TAB(9);"7 ROWS =
1 INCH"
1090 PRINT : :"RIB WITH SIZE
 5 NEEDLE"
1100 GOTO 1150
1110 PRINT "USE SIZE 9 CIRCU
LAR NEEDLES"
1120 PRINT :"GAUGE:  4 1/2 S
TS = 1 INCH"
1130 PRINT TAB(9);"6 ROWS =
1 INCH"
1140 PRINT : :"RIB WITH SIZE
 7 NEEDLE"
1150 ON SIZE GOSUB 800,800,8
00,800,800,800,860,860,860,9
20,920,920,920,920,920
1160 PRINT : : :"NECKLINE:"
1170 PRINT :"WITH SMALLER CI
RCULAR NEEDLECAST ON";CAST
1180 PRINT :"WORK IN ROUNDS.
"
1190 PRINT :"KNIT IN RIBBING
 FOR 1 INCH."
1200 GOSUB 980
1210 PRINT :"CHANGE TO LARGE
R SIZE       CIRCULAR NEEDLE
."
1220 PRINT :"KNIT AND PLACE
MARKERS ON   SEAM STITCHES A
S FOLLOWS."
1230 PRINT :"BACK";BK:"SEAM
 1":"SLEEVE";SLE:"SEAM  1":"
FRONT";FR:"SEAM  1":"SLEEVE"
```

(See Page 11)

REGENA ON BASIC—

(Continued from Page 10)

```
;SLE:"SEAM  1"
1240 GOSUB 980
1250 PRINT "RND 1.  INC 1 ST
. KNIT     ACROSS STS OF BA
CK.  INC 1  ST BEFORE AND AF
TER SEAM ST."
1260 PRINT :"KNIT ACROSS SLE
EVE STS.     INC 1 ST BEFORE
 AND AFTER   SEAM ST."
1270 PRINT :"KNIT ACROSS STS
 OF FRONT.   INC 1 ST BEFORE
 AND AFTER   SEAM ST."
1280 PRINT :"KNIT ACROSS SLE
EVE STS.     INC 1 ST BEFORE
 SEAM ST AND KNIT SEAM ST."
1290 PRINT : :"RND 2.  KNIT.
"
1300 GOSUB 980
1310 PRINT : : :"REPEAT THES
E TWO ROUNDS     WITH RAGLAN
 INCREASES UNTIL LENGTH OF A
RMHOLE IS";LY(SIZE);"INCHES.
"
1320 PRINT : :"THERE WILL BE
 THE FOLLOWING NUMBER OF STS
 IN EACH       SECTION.": :
1330 PRINT "BACK";B(SIZE):"S
EAM  1":"SLEEVE";SL(SIZE):"S
EAM  1":"FRONT";F(SIZE):"SEA
M  1":"SLEEVE";SL(SIZE)
1340 PRINT "SEAM  1"
1350 T=B(SIZE)+2*SL(SIZE)+F(
SIZE)+4
1360 PRINT :"TOTAL STS =";T
1370 GOSUB 980
1380 PRINT "KNIT ACROSS BACK
 STS AND    SEAM ST.  PUT SL
EEVE STS ON HOLDER.  KNIT NE
XT SEAM ST,"
1390 PRINT "FRONT STS, AND N
EXT SEAM ST.PUT SLEEVE STS O
N HOLDER.    KNIT LAST SEAM S
T."
1400 PRINT :"KNIT AROUND BOD
Y UNTIL      UNDERARM LENGTH
 IS";LB(SIZE);"INCHES."
1410 PRINT :"RIB";RIB;"INCHE
S AND BIND":"OFF IN RIBBING.
"
1420 GOSUB 980
1430 PRINT "USE SHORTER CIRC
ULAR NEEDLE OR DOUBLE POINTE
D NEEDLES."
1440 D=6
1450 IF SIZE<13 THEN 1470
1460 D=7
1470 PRINT :"TAKE SLEEVE STS
 OFF HOLDER  AND KNIT.  EVER
Y 6 RNDS DEC 1 ST AT BEG AND
 1 ST AT END OF RND."
1480 PRINT :"KNIT UNTIL SLEE
VE IS";LS(SIZE):"INCHES LONG
 FROM UNDERARM."
1490 PRINT :"RIB";RIB;"INCHE
S":"THEN BIND OFF."
1500 PRINT :"REPEAT FOR OTHE
R SLEEVE."
1510 PRINT :"AT UNDERARMS WE
AVE IN LOOSE ENDS ALONG SMAL
L SEAM.": :
1520 GOTO 1540
1530 CALL CLEAR
1540 END
```

EXTENDED BASIC

TI and PC BASIC comparisons

Converting TI Extended BASIC to QuickBASIC

BY BARRY TRAVER
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This is the second of three articles in a series comparing the TI-99/4A and the IBM. Last time we saw that — although it may have been surprising to some people - a "standard" TI has many features that are absent from many or most IBM systems. You cannot assume, for example, that all IBM systems even support color graphics on the screen. A special CGA, EGA, VGA, or "Super-VGA" graphics card is required, and even if that is present, there is still no support (as there is on the TI) of genuine sprites (much less sprites with automotion!). Without a special sound card (AdLib, SoundBlaster, etc.), the IBM does not even support music with more than one voice (whereas you get three voices on the TI plus a noise generator). Likewise, special equipment (which is possessed by a minority of IBM owners) is required if you want your IBM to talk to you, and most IBM systems do not support speech.

Thus Microsoft QuickBASIC for the IBM has no CALL SAY or CALL SPRITE commands. It does have a CALL SOUND, but only for one voice and there is no volume control (which may or may not make much difference, because on most IBM systems - including those that cost $1500 or more - the sound comes out on a cheap internal speaker that isn't much to listen to). Of course, the IBM was designed to be a business computer rather than an all-purpose home computer, so it is perhaps understandable that even the most basic TI system includes many features absent from "professional" IBM systems. After all, what need is there in most business software of capabilities for speech, multi-voice music, full-color graphics with animation, etc.?

Transporting TI Extended BASIC programs that make extensive use of speech, music, graphics, etc. to IBM QuickBASIC can be thus very difficult and at times impossible. The video chips that we use in the TI world (9918A, 9938, 9958) are the same chips used in various games systems (Nintendo, Sega, etc.), but such chips are lacking on the IBM. Likewise (unless you have a Tandy PC, which uses the same sound chip as is in our TI-99/4A) the sound capabilities are just not present on the ordinary IBM. It is not really that QuickBASIC for the IBM is inferior to TI Extended BASIC (in fact, QuickBASIC is, in my

(See Page 12)

Newsbytes

Andy Frueh offers DVM V3.01

Andy Frueh, a member of the Lima Users Group, has written DV Manager V3.01. He says the program will view, copy, delete, search for text, count words, print with or without dot commands, configure colors, write two pages of text or edit two pages of another file with text files. A provision has been added to run an Editor/Asembler program file, according to Frueh. Also, it is possible to load Funnelweb's Disk Review, and, if the Extended BASIC module is found, load DVM. Then, the usr can load the Funnelweb file from DVM, Frueh says.

Frueh is asking for a $10-15 donation for the program, stating that persons sending more than $12 will receive a printed copy of the instructions (5x8).

For further information, or to order, write Andy Frueh, 638 Maplewood Dr., Lima, OH 45805-3418.

MANNERS has new mailing address

The Mid Atlantic Ninety Nine'ERS (MANNERS) have a new address, according to Ted Stringfellow, secretary for the group. All correspondence should be sent to MANNERS, c/o Bill Howard, 15204 Louis Mill Dr., Chantilly, VA 22021.

Page Pro Cut-Outs offered by Marfisi

Three volumes of Page Pro Cut-Outs, each volume consisting of three to six disks, are offered by Mike Marfisi at $10 per set plus $2.50 shipping and handling per order.

The sets consist of designs which may be printed out for standup fig-

(See Page 13)

EXTENDED BASIC—

(Continued from Page 11)

opinion, a superb accomplishment), but that any language is limited to the hardware it has to work with, and typical IBM hardware is simply not equipped to do what TI'ers are accustomed to seeing (and hearing) their computer do.

MANY PROGRAMS EASY TO PORT

Having said all that, let me say that — as long as we're not talking about speech, fancy music, and tricky animated graphics — it is NOT difficult to port many TI Extended BASIC programs over to run on the IBM. In particular, if a program is basically text-oriented and its primary purpose is the manipulation of text or numbers, you may find it surprisingly easy to bring the program over from the TI to the IBM (or to go the opposite direction, as the next and final article in this series will show). I'm speaking here not from mere theory, but from real experience, having transported a number of TI XB programs (which had been custom-written in TI XB for an insurance actuary) so that they will run on his IBM. If you're willing to give up the "fun and games" for a "strictly business" operation, the IBM can do a quite capable (and, let's admit it, to be fair, sometimes a even better and faster) job. Again, business is what the IBM was designed for.

This month's article will suggest just some of the "basics" for converting a TI Extended BASIC program to QuickBASIC. There is no room in this one article to go into full detail (for example, I'm only going to mention the fact that in QuickBASIC you can have four different types of numeric variables — integers, long integers, single-precision decimals, and double-precision decimals, and not attempt to explain that any further). If you're seriously interested in exploring the topic more fully than is possible in this article, you can either (1) attempt to persuade MICROpendium to publish more articles on the same topic or (2) contact me for further help on converting programs from TI XB to QuickBASIC. (I have, for example, written a fairly extensive library of QuickBASIC routines that emulate various TI XB routines, including ACCEPT AT, DISPLAY AT, CALL GCHAR, CALL HCHAR, LINPUT, CALL VCHAR, MAX, MIN, RPT$, SEG$. For more information, send a SASE. to Barry Traver, 835 Green Valley Drive, Philadelphia, PA 19128, or send $15 for the library on an IBM 5.25" 360K disk.)

BEGIN WITH UNBASHER

Before you do anything else in the process, I recommend that you begin with using my UNBASHER program (to be published next month in MICROpendium) to get rid of multi-statement lines in your TI XB program. (Yes, QuickBASIC does support multi-statement lines, but removing them will make your task simpler.)

Then LIST the program to disk on your TI. The next step is to get this ASCII (i.e., text) file from the TI to the IBM. There are many ways to do this. If you have a double-density disk controller on your TI, you can use Mike Dodd's PC-TRANSFER to accomplish the job. (PC-TRANSFER is available, for instance, from Beery Miller, 9640 News, P.O. Box 752465, Memphis, TN 38175-2465 for $25.) If you have both a TI and an IBM, you may want to check out SMART CONNECT. (For a copy, send $10 to Bruce Harrison, Harrison Software, 5705 40th Place, Hyattsville, MD 20781.)

Both PCT and SC seem to work very well for the purpose, but there are also other ways to accomplish the same end. If both the TI and the IBM have access to modems and phone lines, you can run a terminal program on each machine (for example, Fast-Term on the TI and Pro-Comm Plus on the IBM), and then do an ASCII upload from the TI to the IBM. Or you can do what I usually do: connect an appropriate cable (NOT the same as the cable that goes from the TI to a modem) from the serial port on the TI to the serial port on the IBM, and again do an ASCII upload from the TI to the IBM. It's a joy to watch it scroll across the IBM screen at 9600 baud, and no modem is required! (You do have to know what you're doing, however, on a proper cable. Thanks go to my friend and hardware ace Allan Silversteen for getting me fixed up on that.)

The remaining thing is do is to "massage" the text so that it's talking language that QuickBASIC understands. What I ordinarily do before I start playing with the program and trying to run it is to

(See Page 13)

EXTENDED BASIC—

(Continued from Page 12)

make all lines into remarks. To do this in QuickBASIC, put REM (as in TI XB) or an apostrophe (corresponding to the exclamation point in TI XB) at the beginning of each program line. You can then modify lines (as described below) and then remove the REM or apostrophe when the line looks like it will run okay in QuickBASIC. (By the way, QuickBASIC doesn't require line numbers, but likewise it doesn't require that they be removed, so it's usually easiest to just leave them in.)

Important: TI Extended BASIC uses a double colon to separate statements in multi-statement lines, whereas QuickBASIC uses a single colon. Leaving the double colons in will not confuse QuickBASIC (although I recommend removing them), but what can cause a problem is the use that TI XB makes of single colons, especially in DISPLAY AT statements. For that reason, I suggest that you rewrite TI XB programs so as to eliminate single colons in DISPLAY AT statements.

WORDS WORK THE SAME

Many words work essentially the same way in TI XB and QuickBASIC, such as ABS, AND, ASC, ATN, CHR$, CLOSE, COS, DATA, DIM, END, EOF, EXP, FOR...NEXT, GOSUB...RETURN, GOTO, IF...THEN...ELSE, INPUT, INT, LEN, LET, LOG, NOT, OPEN (but see below), OPTION BASE, OR, PRINT (but see below), READ, REM, RESTORE, RND, SGN, SIN, SQR, STOP, TAN, VAL, and XOR. There are occasional differences, but they are usually minor. For example STR$ on the TI automatically trims of the leading blank space in front of a positive number, but that is not true of STR$ on the IBM.

One difference on the IBM is that track is kept of cursor postion (and the cursor may be visible or invisible). The cursor position determines where the next PRINT action will begin on the IBM, and you can designate the cursor position with LOCATE. (By default, printing ordinarily begins at the top of the screen.) Thus PRINT "HELLO" on the IBM will not necessarily print "HELLO" at the bottom line of the screen (unless that is where the cursor is currently located), whereas on the TI a PRINT always prints on the bottom line.

The way to handle a DISPLAY AT(ROW, COL):MESSAGE$ from TI Extended BASIC is to do a LOCATE ROW, COL : PRINT MESSAGE$ in QuickBASIC. Likewise, the way to deal with an ACCEPT AT(ROW, COL):MESSAGE$ is to do a LOCATE ROW, COL : INPUT (or LINE INPUT) MESSAGE$. The counterpart to LINPUT MESSAGE$ in TI XB is LINE INPUT MESSAGE$ in QuickBASIC. A word of warning: check the QuickBASIC manual to see what punctuation (if any) QuickBASIC expects. Often where TI XB uses a colon, QB will use a comma or a semicolon (since the colon is the statement separator in QuickBASIC).

By the way, our ACCEPT AT is much more sophisticated than the INPUT or LINE INPUT on the IBM, since we can provide a VALIDATE string, program a BEEP, designate a maximum SIZE, and (if we wish) accept a screen default (by using a negative SIZE). QuickBASIC (with its annoying "Redo from start" error message retained from GW-BASIC) is not superfriendly for user input, which is why one of the first things I did was write a QuickBASIC emulation of ACCEPT AT (complete with all the features I just mentioned). One nice thing about QuickBASIC is that the language is extensible. As with TI Extended BASIC, you can write your own subprograms, and they then become part of the language. Therefore I'm working on teaching my IBM to do an increasingly good imitation of a TI in those areas where TI XB has more sophisticated routines (which is especially true of a routine like ACCEPT AT)!

Floppy drives on a TI are DSK1., DSK2., etc., while drives on an IBM are ordinarily A:, B:, C:, etc. Fortunately, if you are familiar with working with disk files on the TI, you won't have much trouble with working with them on an IBM. Instead of OPEN #1:"DSK1.FILENAME", INPUT as you have on the TI, the IBM will have OPEN "A:FILENAME" FOR INPUT AS #1. TI filenames can have a maximum of ten letters, whereas IBM filenames can have a maximum of eight letters (but can have a three-letter extension if desired, e.g., FILENAME.TXT).

SEG$ on the TI is equivalent to MID$

(See Page 14)

Newsbytes

(Continued from Page 12)

ures and paper dolls.

For further information, or to order, write Mike Marfisi, 1425 E. Del Rio Dr., Tempe, AZ 85282.

Prodigy group begins for TI, Geneve users

Edward Kuehn and Frank P. DeCandia have started a TI/Geneve Club/Support group on the Prodigy system. No membership fees other than the regular Prodigy service fee apply.

To join the group, contact Kuehn (Prodigy member DTVH43A) or DeCandia (VSSN89A). Standard Prodigy BB rules apply, DeCandia says. They ask that all TI related Notes be written in the Computer Club section under the Other PC Topics section. DeCandia says related Notes should start with "TI"; for example, TI HELP, TI99/4A TODAY.

TI conference on BIX system

An active TI conference covering the TI99/4A and the Myarc Geneve 9640 is available on BYTE Information Exchange, an electronic conferencing system created by BYTE Magazine. Moderator is Ron Lepine and co-moderator is Al Beard.

BIX offers a fixed price of $156 per year in network charges (billed quarterly). Telecommunications (e.g., TYMNET charges) are extra.

To join BIX, dial with your computer software set to 7-bit, even parity, 1 stop bit, full duplex: 1-800-225-4129 (in Massachusetts, call (617) 861-9767), then log in:

login:bix

Name? bix.ville

Off-peak access to TYMNET is available at a fixed price of $20 per month or $3 per hour, Beard said.

(See Page 14)

Newsbytes

D&L Software lists available offerings

Dennis F. Rebello, author of Casino Games, has announced that he will be selling his software under the name D&L Software. For a free listing of software available, write D&L Software, 89 Little Neck Ave., Swansea, MA 02777.

Discount deadline set for Chicago fair vendors

Hal Shanafield, chairman for the Chicago TI International World Faire, has announced that booth fees will remain at the same $75-per-table rate as in the past two years.

As in the past, the fair is offering a rate of $60 per table for early sign-ups. Cutoff date for the $60 fee is June 15, this year, Shanafield says, and no exceptions will be made.

For further information, contact Shanafield at 2515 Marcy Ave., Evanston, IL 60201-1111.

Topics listed for Lima MUG Conference

Several speakers and topics have been announced for the Lima Multi User Group Conference May 15-16 at Reed Hall on the Ohio State University Lima campus.

They include: Ken Gladyszewski, "Do It Yourself Products for the TI, Including Analog to Digital Conversion"; Eunice Spooner, "Teaching TI LOGO to First Grade Students, an Actual Demonstration with a First Grader"; Jack Sughrue, "Using the TI Computer to Educate Children"; Bruce Harrison, "New Non-Music Products from Harrison Software"; Deloris Werths, "Programming Mu-

(See Page 15)

EXTENDED BASIC—

(Continued from Page 13)

on the IBM. CALL CLEAR is replaced by CLS. (CLEAR has a different meaning on the IBM.) There is nothing that exactly corresponds to CALL KEY(0,K,S), but often K=ASC(INKEY$) on the IBM will serve the same purpose. Instead of RANDOMIZE, use RANDOMIZE TIMER. If you use CALL SOUND, remember that QuickBASIC not only has only one voice but also calculates duration differently from the TI.

Often the best approach is to use QuickBASIC procedures (subprograms and functions) that emulate TI XB routines. Below are some QuickBASIC procedures that you may find useful, extracted from my TIXBQB package of QuickBASIC emulations of TI XB routines and reduced to the basics.

```
 SUB ACCEPTAT (Row%, Col%, AString$)
' TI XB format:    ACCEPT AT(Row, Col):AString$
' QBASIC format:  ACCEPTAT Row, Col, AString$  or
                   CALL ACCEPTAT (Row, Col, AString$)
'   Example:  ACCEPTAT 10, 1, "Now is the time...." or
               ACCEPTAT (10, 1, "Now is the time....")
LOCATE Row%, Col%, 0
LINE INPUT AString$
END SUB

SUB DISPLAYAT (Row%, Col%, AString$)
' TI XB format:    DISPLAY AT(Row, Col):AString$
' QBASIC format:  DISPLAYAT Row, Col, AString$  or
                   CALL DISPLAYAT (Row, Col, AString$)
'   Example:  DISPLAYAT 10, 1, "Now is the time...." or
               DISPLAYAT (10, 1, "Now is the time....")
LOCATE Row%, Col%, 0
PRINT AString$
END SUB

SUB GCHAR (Row%, Col%, Code%)
' TI XB format:    CALL GCHAR(Row, Col, Code)
' QBASIC format:  CALL GCHAR(Row, Col, Code)
'   Example:  CALL GCHAR(12, 14, CH)
Code% = SCREEN(Row%, Col%)
END SUB

SUB HCHAR (Row%, Col%, Code%, Repetitions%)
' TI XB format:    CALL HCHAR(Row, Col, Code, Repetitions)
' QBASIC format:  CALL HCHAR4(Row, Col, Code, Repetitions)
'   Example:  CALL HCHAR3(1, 1, 42, 28)
LOCATE Row%, Col% - 2
PRINT STRING$(Repetitions%, Code%)
END SUB

SUB LINPUT (AString$)
' TI XB format:    LINPUT Astring$
' QBASIC format:  LINPUT Astring$
'   Example:  LINPUT A$
LINE INPUT AString$
END SUB

FUNCTION MAX% (Number1%, Number2%)
' TI XB format:    MAX(Number1, Number2)
' QBASIC format:  MAX(Number1, Number2)
'   Example:  MAX(3, 5)
IF Number1% > Number2% THEN MAX% = Number1% ELSE MAX = Number2%
END FUNCTION

FUNCTION MIN% (Number1%, Number2%)
' TI XB format:    MIN(Number1, Number2)
' QBASIC format:  MIN(Number1, Number2)
```

(See Page 15)

EXTENDED BASIC—

```
'   Example:  MIN(3, 5)
IF Number1% < Number2% THEN MIN% = Number1% ELSE MIN% = Number2%
END FUNCTION

FUNCTION POSI% (String1$, String2$, Start%)
' TI XB format:    POS(String1$, String2$, Start)
' QBASIC format:   POSI(String1$, String2$, Start)
'   Example:  POSI("LIFELINES", "FELINE", 1)
 ' Note: We cannot use POS(String1$, String2$, Start) in QuickBASIC, because
'   POS is a reserved word in QuickBASIC with an entirely different meaning.
POSI% = INSTR(Start%, String1$, String2$)
END FUNCTION

FUNCTION RPT$ (Message$, Repetitions%)
' TI XB format:    RPT$(Message$, Repetitions)
' QBASIC format:   RPT$(Message$, Repetitions)
'   Example:  RPT$("**", 28)
Holder$ = ""
FOR I% = 1 TO Repetitions%
 Holder$ = Holder$ + Message$
NEXT I%
RPT$ = Holder$
END FUNCTION

FUNCTION SEG$ (Message$, Start%, Number%)
' TI XB format:    SEG$(Message$, Start, Number)
' QBASIC format:   SEG$(Message$, Start, Number)
'   Example:  SEG$("LIFELINES", 3, 6)
SEG$ = MID$(Message$, Start%, Number%)
END FUNCTION

SUB VCHAR (Row%, Col%, Code%, Repetitions%)
' TI XB format:    CALL VCHAR(Row, Col, Code, Repetitions)
' QBASIC format:   CALL HCHAR4(Row, Col, Code, Repetitions)
'   Example:  CALL VCHAR4(1, 1, 42, 24)
FOR I% = 1 TO Repetitions%
 LOCATE Row% - 1 + I%, Col% - 2
 PRINT CHR$(Code%)
NEXT I%
END SUB
```

1991 MICROpendium Index

Installment covers first half of 1991

By ELTON SCHOOLING

With this installment, the MICROpendium Index, which runs out of Extended BASIC, covers the years 1984 through the first half of 1991. Much of the early material is rather severely abbreviated in order to keep down the volume, and in order to print two columns on a page. The program ABBREV is intended to supply a list of these abbreviations, although it is not exhaustive. These programs have been through several versions; the programs with filenames ending in A/L use an assembly language sort for considerably more speed.

I figure that an index should be a good deal. For those of us who have all the back issues of MP (surely no one could have thrown them away!) it should save some time, and for those who don't, it's a good reason to get 'em — if only to find out what on earth is a 'TIBOING'! (see index '86)

I've made it useful for both those with printers and those who must read the info off the screen; the latter can approach a good buddy with a printer for a hard copy if they like. It's a personal index — I don't have a lot of interest in opinions, so I haven't listed all the letters in Feedback, but I have listed some: I find that some of the letters are as good as a User Note (and

(See Page 18)

Newsbytes

(Continued from Page 14)

sic for the Midi Interface; New Music from Harrison Soft-ware"; Charles Good, "A Preview of Funnelweb v5 with a Totally Rewritten Text Editor"; Lee Bendick, "A Demonstration of the TI 99/8 and Its Unique Set of Peripherals"; Barry Traver, topic to be an-nounced; Bud Mills, "Hardware Products from Bud Mills Services"; Gary Bowser, "O.P.A. Products"; and Bob Nelson, "Comprodine Products."

Admission and exhibit room tables are free. For further information, phone Dave Szippl (419) 228-7109 or Charles Good (419) 667-3131 evenings, or write the Lima Users Group at P.O. Box 647, Venedocia, OH 45894.

PV99ers have new mailing address

New mailing address for the Pomona Valley 99ers Computer User Group is c/o Howard McDonald, 6880 Gloria St., Chino, CA 91710.

CONNI conducts drive for new members

The Central Ohio Ninety-Niners Inc. (CONNI) offers memberships at varying rates, depending on the location of the member, according to Harley Ryan, membership chairman of the group.

Dues are $30, local and contiguous area; $35, continental U.S.; $45, outside continental U.S.; $17, newsletter only; $35, newsletter and disk of the month.

Ryan says the newsletter is not published in August and the January issue is an index of all articles published the previous year.

Ten SSSD flippy DOMs are published by the group are published annually, Ryan says, with offerings for

(See Page 18)

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The original BITMAC is now available at $4.95 with all original documentation. A powerful graphics program for the 4A which lets you print where you want..even over pre-existing text. Create great graphics in 16 colors, print text sideways, mirror image, upside down etc. etc. A must for anyone into 99/4A graphics. Comes with second bonus disk with utilities such as sign & banner makers. Even can computer generate your own signature!
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If you like Yahtzee this disk is for you. A great version written in high speed assembly. Also included is another version of Wheel of Fortune which also lets you create your own puzzles with a puzzle edit program included.
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Newsbytes

(Continued from Page 15)

some months consisting of two disks. He says disks are archived full most of the time.

For further information, contact Ryan with CONNI, 4178 Chandler Dr., Whitehall, OH 43213.

OPA offers product catalog

OPA (Oasis Pensive Abucators) has released its 1992 spring catalog on disk. The catalog comes on a SSSD disk and is in D/V80 format. The catalog is available in a hard copy format by request.

OPA also confirms that it has ended its development role in the TI Accelerator project.

Software that is available from OPA includes:

- TASS 2001 (Tri-Artist-Slide Show, used to produced color or black and white slide shows using TI-Artist, GRAPHX, Draw-A-Bit II or Draw-n-Plot files. Price is $10 U.S. funds, $15 Canada.
- Diskodex 2001, used to create master catalogs of disks, including comments. Users can search for files by prefixes, suffixes and wildcards. The program is written in assembly language. $15 U.S. funds, $20 in Canada.
- Recallit 2001, an assembly language database program that works with Rambo. The database can handle up to 4,000 records of up to 10 fields each. $8 U.S. funds, $10 Canadian.
- 9T9 User Group Game Package: Saturday Night Bingo, prints the cards, calls out numbers and checks for winners. Runs in automatic or manual modes. Supports speech; Brain Buster, creates puzzles of up to 60 words in any of eight directions. Has 12,000-word dictionary; Scrabble, up to four players or against the computer, includes 8,000-word dictionary. $3 U.S. funds for each program.
- Horizon ROS _9 Series,

(See Page 19)

MICROPENDIUM INDEX—

(Continued from Page 15)

better than some). You won't find every announcement of coming events, pregnant though they may be with fascinating conjecture and suspense. Yesterday's fascination may well be today's cold spaghetti. I figure we need all we can get on the various languages and other technical subjects, and have indexed and cross-referenced accordingly.

The printer instructions should suffice for any parallel printer. For those who will read the screen, the display scrolls more slowly when the "delay" number is larger — see the early "REM" statements in the program.

The program "FRONTPAGE" is for those who print out a hard copy: it produces a convenient cover for a stapled-up index, with a table of contents. The disk is in the public domain; please don't send me any Fairware fees. The disk can be obtained from MICROpendium Magazine. I plan to keep them up to date.

Should I have made info-obstructing errors, almost anybody can alter a data statement. Man is prone to error ... even I.

The assembly language sort routine is by David Romer and John Clulow; I obtained it from the Boston Computer Society TI99/4A User Group, and it works well. I much appreciate the chance to use an A/L sort, the program needed it.

I have probably made many errors, and I can lay no claim to elegance. I've not been particularly consistent; I began with the idea that I would have to be very miserly with computer memory in order to get everything in the same program. Then, when it became obvious that I wasn't going to be able to do that, (the "stack" memory wouldn't handle the large array I needed) I reworked it so as to cross-reference where it seemed a good idea. I notice that I have at least once used the same abbreviation for two words, rep=repair and rep=report. I left it that way — I have every confidence that our brainy folks wil be able to tell what is meant in each case.

About the 1988 and later indexes: because of the many entries, which would overload the sort routine, I have divided these years into parts A and B. And Robert Neal, with the help of some of his user group, has amplified the indexes, using PRBase, to include authors and other information for which there was no room in a 40-character line. For a copy, talk to Bob.

The MICROpendium index is available on two disks, including the many enhancements provided by readers over the years, for $6. Programs referenced in this article — ABBREV, FRONTPAGE, etc. — are also available on the index disks. However, since we do not yet have the installment for the second half of 1991, we are holding current orders until it arrives. We expect to ship the updated index in May. Of course, the April MICROpendium monthly disk will include this installment of the index.—ED.

1991 MICROpendium Index (Jan.-June)

```
10 REM INDEX91A MICROpendium
 INDEX for 1991, Jan to Jun,
 Publisher John Koloen, edit
or Laura Burns. !130
20 REM Compiled by Elton Sch
ooling, 4014 57th St., Sacra
mento, CA 95820 !173
30 REM Sort routine by David
 Romer and John Clulow.  Ob-
tained from Boston Computer
Soc., TI994/A User Group. Fo
r use with printer or with !
254
32 REM screen display. !126
35 REM Because of many entri
es the '91 index is divided
into '91A, Jan. to June, and
 '91B, July to Dec. !104
40 REM For your printer you
may need to change line 160.
 !202
50 REM For longer dwell time
 on screen increase the DELA
Y number in line 330. !210
52 CALL INIT !157
54 CALL CLEAR !209
56 CALL LOAD("DSK1.SORT")!07
9
60 OPTION BASE 1 !137
```

(See Page 19)

1992 MICROPENDIUM INDEX—

(Continued from Page 18)

```
70 CALL CLEAR !209
80 DIM N$(144)!205
90 INPUT "OUTPUT TO PRINTER?
(Y/N)":P$ !247
100 CALL CLEAR !209
110 PRINT "WORKING" !139
120 FOR I=1 TO 144 :: READ N
$(I):: NEXT I !068
130 CALL LINK("SORT",N$(),14
4)!192
140 CALL CLEAR !209
150 IF P$="Y" THEN 160 ELSE
290 !093
160 OPEN #1:"PIO" !253
170 PRINT #1:TAB(24);"MICROp
endium INDEX, 1991A, Jan to
Jun" !155
180 PRINT #1: : : :!103
190 FOR J=1 TO 144 :: IF J=1
05 THEN 200 ELSE 220 !121
200 PRINT #1: : : : :: PRINT
 #1:TAB(35);"PAGE 26" :: PRI
NT #1: : : : : : : : : : ::
GOTO 220 !199
210 PRINT #1: : : : : :: PRI
NT #1:TAB(31);"PAGE 27, INDE
X '91A" :: PRINT #1: : : : :
 : : : : :!142
220 IF J/2=INT(J/2)THEN 240
!249
230 PRINT #1:N$(J);:: GOTO 2
50 !240
240 PRINT #1:TAB(40);N$(J)!1
88
250 NEXT J !224
280 GOTO 360 !184
290 CALL CLEAR !209
300 CALL SOUND(500,110,0,131
,0,196,0)!005
310 PRINT TAB(7);"MICROpendi
um INDEX, 1991A" :: PRINT :
: :!059
320 PRINT "DATE AND PAGE NO.
 ARE LISTED TOGETHER. JAN 85
 p.16 BECOMES 1/85/16.": : :
!005
330 FOR J=1 TO 144 :: PRINT
```

(See Page 20)

Newsbytes

(Continued from Page 18)

EPROM to replace the 8K RAM chip on the Horizion RAMdisk. Supports all features of ROS__8.14 while eliminating the chance of corrupted files or mixing of ROS versions. Includes all necessary ROS programs, including ConFiG, menu and disk manager. Also includes RAMdisk testing program, power-up menu/directory, and manual. $45 U.S., $55 Canadian. (Horizon RAMdisk owners who want to obtain ROS __8.14 should contact Bud Mills Services, 166 Dartmouth Dr., Toledo, OH 43614; 419-385-5946.)

• RAMBO Horizon upgrade kit, software/hardware package for Horizon RAMdisks. Allows users to partition RAMdisk memory for use as both RAMdisk and program space. The program space is available to as-

(See Page 20)

HORIZON COMPUTER

RAMDISK BARE BOARD, Manual + ROS 8.14 $50
Zero K Kit = above + parts NO MEMORY $110
128k Memory NOW $30 each 32k= $9 each

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Quiet P-Box Fans $12.50
Modified 99/4A (kbd & video) $35
99/4A External Power Supply $5
P-Box (empty) $75
w/32k, TI Dsk Ctlr,FHDS Floppy $120
External Drive cases w/pwr supply
Floppy Dsk $45 Hard Dsk $65
PerCom stand alone Disk Controller
with 1/2 Ht DS Floppy $105
TI External Disk Ctlr $50

Del & Darla Wright
185 N. Post Rd.
Indianapolis, IN 46219
317-895-1765
Free shipping in Continental USA

Newsbytes

(Continued from Page 19)

sembly programs. Includes ROS_8.14 on disk $45 U.S., $55 Canadian; with ROS_9 on EPROM, $70 U.S., $85 Canadian.

• Morningstar RAMBO, used with the Morningstar 128K memory card, an 8K EPROM which emulates RAMBO. $10 U.S., $15 Canadian.

• RAMBO Developer's Package, for assembly programmers, provides standard method to access RAMBO memory in A/L programs. Includes assembler, linker, loaders and manual. $25 U.S., $30 Canadian.

• Geneve EPROM upgrade, an EPROM that contains the TIMODE system. Also has ability to boot any version of MDOS from any valid device and path; updated TI99/4A console ROM with improved keyboard driver and built-in mouse driver; software portion of Son of a Board upgrade for the 99/4A with additional 4K of GPL code used to load cartriges; 100 percent compatiblity with 99/4A operating system; compatibility with V9938/58 devices; true lowercase characters added to all modules/programs; and 4K Micro-Manager for cataloging drives (floppy, RAMdisk, hard disk). OPA says this is the first step in a complete rewrite of the Geneve operating system. $45 U.S., $50 Canadian. $5 if exchanged with old OPA upgrade EPROM.

• TI-Image Maker, internal console board for 99/4A that upgrades video display to 9958 processor. Compatible with V9938 processor. Board contains 192K of VRAM, V9958 processor, 25-pin monitor port, analog RGB video driver circuitry, manual, pinouts for recomm ended monitors. $179 U.S. or Canadian.

• Son of a Board, internal console board for 99/4A allowing users to replace GROMs 0 and 1 (the main TI operating system). Allows cataloging and loading of most programs without a TI cartridge. Accesses Review Module Library function (RML) built

(See Page 21)

MICROPENDIUM INDEX—

(Continued from Page 19)

```
N$(J):: FOR DELAY=1 TO 200 :
: NEXT DELAY :: NEXT J !022
340 PRINT : :!006
350 PRINT "DATE AND PAGE NO.
 ARE LISTED TOGETHER. JAN 85
 p.16 BECOMES 1/85/16." :: G
OTO 390 !062
360 PRINT #1: : :!178
370 PRINT #1:"DATE AND PAGE
NO. ARE LISTED TOGETHER. JAN
 85 p.16 BECOMES 1/85/16." !
146
375 PRINT #1: : : : : : : :
: : : :: PRINT #1:TAB(23);"M
ICROpendium Index, 1991A, Pa
ge 27" !144
380 CLOSE #1 !151
390 END !139
400 DATA 9938 CLARIFICATION
FEEDBACK 1/91/7,BAS ANNIVERS
ARY COLUMN 1/91/8,XBAS BASIC
 ORIGAMI 1/91/9 !164
410 DATA BAS-A/L SCREEN DISP
LAYS IN A/L 1/91/12,TI-BASE
STARTING A PROGRAM 1/91/17,M
IDI DEVELOPER 1/91/19 !221
420 DATA MY-BASIC GRAPHIC RO
UTINES 1/91/28,MISSION DESTR
UCT GA REV 1/91/32,PAGEPRO S
IDEWAYS REV 1/91/33 !034
430 DATA ARTIST CATALOGER RE
V 1/91/34,TI*MES BRITISH NEW
SLETTER REV 1/91/34,HORIZON
RAMDISK 3000 KIT 1/91/34 !03
4
440 DATA TEXT_PC FOR 9640 US
NO 1/91/35,TIPS FIX GREETING
 CARD USNO 1/91/35,ONE LINE
PATTERN USNO 1/91/35 !239
450 DATA REMINDERS FOR NOTE
PAD USNO 1/91/35,DM-1000 COP
YING DISKS USNO 1/91/36,TI P
ARTS GOLDMINE USNO 1/91/37 !
112
460 DATA XBAS TRACE TO PRINT
ER USNO 1/91/37,BRITISH NEWS
LETTER TI*MES REV 1/91/34,RA
MDISK HORIZON 3000 KIT 1/91/
34 !190
470 DATA 9640 TEXT_PC USNO 1
/91/35,NOTEPAD REMINDERS USN
O 1/91/35,DISK COPYING DM-10
00 USNO 1/91/36 !093
480 DATA TRACE TO PRINTER XB
AS USNO 1/91/37,NEWSLETTER B
RITISH TI*MES REV 1/91/34,TI
W & TIA ADDENDUM FEEDBACK 2/
91/8 !050
490 DATA BAS FAMOUS AUTHORS
GA 2/91/10,XBAS CRYPTIC PROG
RAMMING 2/91/12,TI-BASE BUIL
DING A MENU 2/91/16 !173
500 DATA XBAS-A/L GRAPHICS C
OMPILER 2/91/18,MY-BASIC MY-
SLEEVE GENEVE 2/91/27,MEMEX
GENEVE EXP CARD REV 2/91/31
!172
510 DATA GOLF SCORE ANALYZER
 REV 2/91/32,STAR TREX CALEN
DAR REV 2/91/33,ARTIST FONTS
 & BORDERS REV 2/91/34 !144
520 DATA ADVENTURE HINTS REV
 2/91/34,THE BIBLE REV 2/91/
34,GENERIC CALENDAR PROGRAM
USNO 2/91/35 !235
530 DATA REMINDERS CATALOG P
ROGRAM USNO 2/91/35,TIPS/24-
PIN PRINTERS USNO 2/91/36,24
-PIN PRINTERS/TIPS USNO 2/91
/36 !108
540 DATA CALENDAR PROGRAM GE
NERIC USNO 2/91/35,CALENDAR
STAR TREK REV 2/91/33,GENEVE
 MEMEX EXP CARD REV 2/91/31
!202
550 DATA GENEVE MY-BASIC MY-
SLEEVE 2/91/27,GRAPHICS COMP
ILER XBAS-A/L 2/91/18,CRYPTI
C PROGRAMMING XBAS 2/91/10 !
205
560 DATA AUTHORS GA BAS 2/91
/10,FASTER CHECKSUM USNO 2/9
1/36,CHECKSUM FASTER USNO 2/
91/36,SAVING LOST FILE USNO
2/91/37 !009
570 DATA JOYSTICK CHOICE USN
O 2/91/37,MONITOR SHADOWS US
NO 2/91/37,UNLISTABLE XB PRO
GRAMS USNO 2/91/38 !060
580 DATA BAS OPERATION DESER
T SHIELD 3/91/10,XBAS MEASUR
ES CHARTS 3/91/14,BAS-A/L GR
APHICOMP 1.5 3/91/17 !169
590 DATA MY-BASIC MYPAINT/CS
GD 3/91/25,MICROPENDIUM INDE
X 3/91/29,FEST WEST '91 REPO
RT 3/91/32 !089
600 DATA MAC LABELS V2.6 REV
 3/91/33,PAGE PRO LINE FONTS
```

(See Page 21)

MICROPENDIUM INDEX—

(Continued from Page 20)

```
 REV 3/91/33,SON OF DISK OF
DINOSAURS REV 3/91/33 !166
610 DATA PAGE PRO EFFECTS UP
DATE REV 3/91/34,ONE CHIP 32
K IN CONSOLE USNO 3/91/35,IN
DEX MICROPENDIUM 3/91/29 !22
8
620 DATA D/V80 TO MERGE PROG
RAM USNO 3/91/36,VELCRO ON C
ONSOLE CABLE USNO 3/91/37,RO
ANOKE UG ADDRESS USNO 3/91/3
8 !084
630 DATA PAPER SAVE WITH TI
WRITER USNO 3/91/38,TIPS FRO
M OHIO NEWSLETTER USNO 3/91/
38,FILENAME CHARACTERS USNO
3/91/38 !172
640 DATA DESERT SHIELD BAS 3
/91/10,MEASURES CHARTS XBAS
3/91/14,GRAPHICOMP 1.5 BAS-A
/L 3/91/17 !206
650 DATA CONSOLE 32K ONE CHI
P USNO 3/91/35,TI-WRITER PAP
ER SAVE USNO 3/91/38 !162
660 DATA BAS UNITED STATES I
NFORMATION 4/91/10,XBAS PROG
RAM WITH TOKENS 4/91/13,INDE
X MP SECOND HALF 4/91/17 !07
8
670 DATA TI-BASE CUSTOM INPU
T SCREENS 4/91/18,TOKENS PRO
GRAMMING XBAS 4/91/13,UNITED
 STATES INFORMATION BAS 4/91
/10 !156
680 DATA QUAD DENSITY DISKS/
MANAGER 4/91/27,MY-BASIC PAI
NTSEE VIEWS 4/91/25 !174690
DATA BAS-A/L GRAPHICOMP & SP
RITES 4/91/29,GRAPHICOMP & S
PRITES BAS-A/L 4/91/29,TURBO
-PASC '99 TUTOR REV 4/91/31
!093
700 DATA SLIDING BLOCK PUZZL
ES REV 4/91/31,YAPP UPGRADE
REV 4/91/32,RING COMPANION R
EV 4/91/31 !148
710 DATA PAGE PRO BANNERS RE
V 4/91/32,TI-BASE CHECKTRACK
 REV 4/91/33,CHECKTRACK TI-B
ASE REV 4/91/33 !092
720 DATA XB UNIVERSAL SORT U
SNO 4/91/35,MDOS TIP & QUEST
ION USNO 4/91/35,TEXT GLOBAL
 SUB PROGR USNO 4/91/35 !047
730 DATA BALLDROP TAKES SKIL
L USNO 4/91/36,GASKILL MP IN
DEX DISKS USNO USNO 4/91/36,
INDEX GASKILL MP DISKS USNO
4/91/36 !091
740 DATA COMPUTER REPAIR COR
COMP USNO 4/91/36,SUPER XBAS
/PRINTERS USNO 4/91/36 !246
750 DATA BAS WORDS TO READ 5
/91/9,XBAS ALL SORTS OF SORT
S 5/91/14,SORTS XBAS 5/91/14
,MY-BASIC PAINTPRINT 5/91/17
 !044
760 DATA ART OF A/L STRUCTUR
ED PROGRAMS 5/91/25,BAS-A/L
PEEKS AND POKES 5/91/27,TI-B
ASE THE FIND DIRECTIVE 5/91/
29 !084
770 DATA WINDOWS V2.0 REV 5/
91/30,HIGH GRAVITY GA REV 5/
9/32,FILMLAB (FOR TI-BASE) R
EV 5/91/33 !178
780 DATA VIDEO TRACKER REV 5
/91/33,USER GROUP UPDATE 5/9
1/34,CSGD LABEL MAKER REV 5/
91/34 !231
790 DATA BARCHART COMMENT US
NO 5/91/36,DOUBLE COLUMN USN
O 5/91/36,DISK FIX USNO 5/91
/36 !179
800 DATA PROGRAM DOES CONVER
SIONS USNO 5/91/36,CONVERSIO
NS HEX DEC BINARY USNO 5/91/
36 !003
810 DATA PAINTPRINT MYBASIC
5/91/17,PEEKS AND POKES BAS-
A/L 5/91/27,TI-BASE FILMLAB
REV 5/91/33 !089
820 DATA LABEL MAKER CSGD RE
V 5/91/34,BAS ACCORDION SOLI
TAIRE 6/91/8,XBAS PROGRAMMIN
G IN THE DARK 6/91/11 !038
830 DATA BAD WEATHER GOLF GA
 6/91/15,LIMA FAIR REPORT 6/
91/19,BAS-A/L SNAPSHOT SOURC
E CODE 6/91/25 !252
840 DATA MY-BASIC MY-PAINT U
PDATE 9640 6/91/29,FAST-TERM
 PARAMETER FILES 6/91/30,TI
IMAGE MAKER REV 6/91/33 !093
850 DATA TI-BASE QUERIES ON
THE FLY 6/91/36,DAYS OF THE
WEEK USNO 6/91/37,MULTIPLAN
COMPARISONS USNO 6/91/37 !08
```

(See Page 22)

Newsbytes

(Continued from Page 20)

into the 99/4A console. Supports hard drives. Pop-up menu allows the RML function of the console to work with John Guion's Multi-Mod for Super Extended BASIC, PGRAM Plus by Bud Mills Services and the GRAMulator by CaDD Electronics to catalog modules they contain. Also includes Micro-Manager, true lowercase character set, V9938/58 compatibility. $49 U.S., $59 Canadian.

• GPL Programming Package, 200-page manual on use of GPL. Includes disks with two GPL assemblers, linker for GROM devices, linker for OPA POP-Cart device, loaders, GPL simulator and debugger as well as GPL source files. $25 U.S., $30 Canadian.

• POP-Cart (Piles of Programs), cartridge that allows users to order a personalized set of selected TI modules/programs owned by the user. These programs are burned into the POP-Cart by OPA. OPA also offers customizing, such as modifiying TE2 to run at 2400 baud, or changing "TP" (Thermal Printer) designations to "PIO" for use with parallel printers. Users can return the custom EPROM to OPA for modification or upgrade. POP-Cart contains 8K of RAM, 128K of ROM and 512K of GROM. 448K is available for user designated modules/programs, allowing for up to eight ROM and eight GROM selections. Version 1, $150 U.S., $170 Canadian (the user decides what modules/programs will be included on the POP-Cart; Version 2, $120 U.S., 140 Canadian, includes TI Extended BASIC, Terminal Emulator II, Multiplan, Logo II, Plato Interpreter, Editor/Assembler plus files, TI-Writer plus files. The assembly programs include Disk Utilities — for TI, CorComp and Myarc disk controllers, Diskodex cataloger, CSGD Label Maker V1.1, Archiver V3.03, and more. (Contact OPA before ordering the Version 1 POP-Cart for specifications.)

(See Page 22)

Newsbytes

(Continued from Page 21)

For more information, contact OPA at 432 Jarvis St. #501-502, Toronto, Ontario, Canada M4Y-2H3; 416-960-0925 (8 a.m.-1 p.m. ET), 416-963-TITI (24-hour hotline), 416-921-2731 (24-hour BBS).

Microdex 99

Microdex 99, by Bill Gaskill, is a companion program to Gaskill's MICROpendium Index II programs. Microdex 99 allows owners of MPI-II to modify their MPI-II databases.

Functions supported include:

- Append new records
- Browse data file (displays 4 records at a time)
- Count number of records
- Disk catalog
- Edit records (search by string, can modify or mark records for deletion)
- Find recorders (using 1 or 2 keywords)
- Create index file
- Merge database files
- Purge deleted records
- Query using an index
- Report printer (outputs listing of database contents in columnar format)
- Sort in ascending order
- Create subfile
- Utilities (convert record format, create counter, count and delete duplicates, library update date, global delete, print data disk labels, edit and print legends, link to archiver program)

Microdex 99 allows users to completely modify their existing MPI-II databases as well as expand them. The cost is $10 when sold separately, $6 when purchased with MPI-II. Current owners of MPI-II may purchase Microdex 99 for $6. MPI-II, covering 1984-1991 of MICROpendium is $24.

Order through MICROpendium, P.O. Box 1343, Round Rock, TX 78680.

Reach thousands of TI and Geneve users free. Send your product and event announcements to MICROpendium Newsbytes, P.O. Box 1343, Round Rock, TX 78680.

MY-BASIC

Video XOP 6 and MY-BASIC

By JIM UZZELL
©1992 DDI SOFTWARE

This month's program is a demonstration using MDOS video XOP(6). The various modes have been documented and can be found in many user group libraries or on bulletin boards, or in Vol. 3 of 9640 News.

First, type in the MY-BASIC program and save, then type in the object code file and save it as a D/F80 file (E/A editor). Be sure that line 120 of the MY-BASIC program uses the same disk and filenam that you saved the object file to.

The MY-BASIC program demonstrates the most powerful assembly routine ever written for use in MY-BASIC. Well, I think it is and maybe you will agree after this series of three articles has been published. To understand using CALL LINK, you should read SUB and LINK in the MY-BASIC manual.

The following is the format used to pass 9 arguments in each LINK statement. R equals Register.

CALL LINK("START",R0(VIDEO OP MODE),R1,R2,R3,R4,R5,R6,R7,(6)XOP)

The following is an explanation of the program lines:

140 Sets R1 to graphic mode 6(>8)

180 Start loop of default colors for what follows

200 Read data in 130 and use HCHAR(>2E) to put on screen

220,230 Sets R0 to HCHAR w/color (>2C)

240 Sets R0 to border color (>0C)

280 Sets R0 to set cyan palette to dark blue(>0D)

320 Sets R0 to blockmove (>14) HCHAR information then paint where it came from red

340 Sets R0 to blockcopy (>15) and do it

370 Set up loop to do a bscrolldown (>17)

380 Waste some time so you can see it happen

420 The way a bscrolldown should be done

450 A loop to setvectorcolor (>10) using logic OP 3

460 Waste some time so you can see it happen

490 Reverse setvectorcolor (>10)

Part 2 of this series will detail the use of setvectorcolor

Note: Those who decide to use this routine to create their own program will have to provide a screen reset, i.e. if a program line is longer than 80 characters and after running a program you try to edit that line it will not be displayed correctly.The simple solution — at prompt in command mode, type CALL GRAPHICS(3,3) prior to editing (not the correct way).

For source code, send a self-addressed, stamped business size envelope to Jim Uzzell, 2004B Leeann, Austin, TX 78758-2504.

INDEX—

(Continued from Page 21)

```
6
860 DATA 9640 VIDEO MEM 192K
 USNO 6/91/37,VIDEO MEM 192K
 9640 USNO 6/91/37,MY-PAINT
MY-BASIC UPDATE 9640 6/91/29
 !115
870 DATA SNAPSHOT SOURCE COD
E BAS-A/L 6/91/25,DARKROOM P
ROGRAMMING XBAS-A/L 6/91/11,
SOLITAIRE ACCORDION BAS 6/91
/8 !219
880 DATA 9640 = GENEVE,GENEV
E = 9640 !004
```

XOP6-MANY

```
1 !XOP6-MANY
100 CALL GRAPHICS(3,3)
110 CLS
120 CALL INIT :: CALL LOAD("
DSK.XOP6DEMO.DDIXOP")
130 DATA 42,42,42,69,82,65,8
```

(See Page 23)

MY-BASIC—

(Continued from Page 22)

```
7,84,70,79,83,32,73,68,68
140 CALL LINK("START",0,8,0,
0,0,0,0,0,6)
150 CALL TCOLOR(16,13)
160 DISPLAY AT(3,1):" Hchar
 HCharcolor BlockMove Bloc
kCopy Scrolldown VectorCol
or BorderColor ";
170 DISPLAY AT(4,34):" Mix P
alette "; :: CALL TCOLOR(16,
6)
180 FOR X=15 TO 1 STEP -1
190 IF X=15 THEN DISPLAY AT(
13,2):"HChar at work";
200 READ Z :: CALL LINK("STA
RT",46,13,(X),(Z),1,0,0,0,6)
210 IF X=15 THEN DISPLAY AT(
22,33):"HCharcolor at work";
220 CALL LINK("START",44,(X+
5),(40-X),32,(X),(X),3,0,6)
230 CALL LINK("START",44,(X+
5),40,32,(X),(X),3,0,6)
240 CALL LINK("START",12,(X)
,0,0,0,0,0,0,6)
250 DISPLAY AT(6,60):"Set Bo
rder Color-->";
260 FOR Y=1 TO 600 :: NEXT Y
270 NEXT X
280 CALL LINK("START",13,000
7,654,0,0,0,0,0,6)
290 DISPLAY AT(13,52):"Mix c
yan palette to dk blue";
300 DISPLAY AT(15,2):"Move b
lock right";
310 DISPLAY AT(16,2):"& Pain
t space red";
320 CALL LINK("START",20,104
,23,104,211,7,90,9,6)
330 DISPLAY AT(14,52):"<---C
opy this down";
340 CALL LINK("START",21,104
,211,112,211,7,90,0,6)
350 DISPLAY AT(17,35):" Scro
llDown ";
360 FOR X=1 TO 8
370 CALL LINK("START",23,90,
127+X,211,127+X,301,3328,0,6
)
380 FOR Y=1 TO 1000 :: NEXT
Y
390 NEXT X
400 DISPLAY AT(18,58):"Real
time";
410 DISPLAY AT(19,58):"Scrol
lDown";
420 CALL LINK("START",23,630
,128,350,135,430,3328,0,6)
430 DISPLAY AT(15,52):"<--Ve
ctor logic 3 & reverse";
440 FOR X=1 TO 7
450 CALL LINK("START",16,211
,111+X,300,111+X,3328,3,0,6)
460 FOR Y=1 TO 600 :: NEXT Y
 :: NEXT X
470 FOR Y=1 TO 600 :: NEXT Y
480 FOR X=1 TO 7
490 CALL LINK("START",16,211
,111+X,300,111+X,3328,3,0,6)
500 FOR Y=1 TO 600 :: NEXT Y
 :: NEXT X
510 CALL TCOLOR(4,14)
520 DISPLAY AT(24,19):" To S
ee Again--Press Any Key Then
 Type  RUN 130 ";
530 CALL TCOLOR(16,6)
540 CALL KEY(0,K,S) :: IF S=
0 THEN 540 :: CALL RESETPLT
550 END
```

XOP6 Object Code

```
000E8DDIXOP  A0000B0000A0002A0004B0000BC80BC0000B02E0BF000B02007F240F      0001
A0010B0000B0201B0009B0420B200CB0420B2018B12B8BC820B834AC00047F31AF        0002
A0026B0200B0000B0201B0008B0420B200CB0420B2018B12B8BC1E0B834A7F30BF        0003
A003CB0200B0000B0201B0007B0420B200CB0420B2018B12B8BC1A0B834A7F302F        0004
A0052B0200B0000B0201B0006B0420B200CB0420B2018B12B8BC160B834A7F31DF        0005
A0068B0200B0000B0201B0005B0420B200CB0420B2018B12B8BC120B834A7F31BF        0006
A007EB0200B0000B0201B0004B0420B200CB0420B2018B12B8BC0E0B834A7F2FCF        0007
A0094B0200B0000B0201B0003B0420B200CB0420B2018B12B8BC0A0B834A7F310F        0008
A00AAB0200B0000B0201B0002B0420B200CB0420B2018B12B8BC060B834A7F307F        0009
A00C0BC801C0002B0200B0000B0201B0001B0420B200CB0420B2018B12B87F331F        0010
A00D6BC020B834ABC060C0002B2C20C0004BC2E0C0000B045B7F4E9F                  0011
50006START 7FD20F                                                         0012
:       9640 AS                                                           0013
```

THE ART OF ASSEMBLY — PART 11

Structuring data

By BRUCE HARRISON
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Back in No. 3 of this series, we showed a Menu Driver, derived from our Golf Score Analyzer. To make that one driver work for a number of different menus, we had to organize the data for the menus in a particular fashion, so that the driver could, among other things, auto-center the menu items between the top and the bot-

(See Page 24)

THE ART OF ASSEMBLY—

(Continued from Page 23)

tom of the screen, and use a loop to display the items in the body of the menu. If you'll recall, the data also was organized as strings, so that the display subroutine would know how many characters were to be displayed on each menu line.

That was just one example of how making a specific structure for the data could make the code much more efficient in both memory and speed. In this article, we'll extend that concept a bit, showing how we structured the data for those "Fill-in" screens in the Golf Score Analyzer. By entering this data in a carefully structured manner, we were able to provide one small subroutine that could produce any of a number of screens full of prompts. This saved memory, and also made the display of whole screens full of data happen very quickly.

DISPLAY SCREEN SUBROUTINE

The sidebar shows the code for invoking the DISSCR (Display Screen) subroutine, the subroutine itself, and the data for one of those screens. There are two pointers required, (R1 and R6) and two separate data sections for each screen. The "Location" block (LOCTB1) is a set of words of data, each giving the starting screen location for a corresponding text string. The group of text strings (TXTTB1) is just that, each string having a length byte, followed by the text to be displayed.

The subroutine is nothing but a simple loop which continues displaying the strings at the desired locations until it finds the "stop" screen location. We used >FFFF as our stop code because that's an impossible number for screen location. This subroutine uses DISLI to display each string on the screen, and takes advantage of the fact that DISLI leaves the pointer at the length byte of the next string each time it displays one. The version of DISLI shown here is a very simplified one for use with programs to run under the E/A module. When used with Extended BASIC, a more complex version of DISLI was used, (see No. 3 in this series) so that the XB Offset could be added to each character in the string before displaying it.

Harking back for a moment, you'll see here again our old friend SCRWID used to designate a screen row of characters. In the Golf Score Analyzer, everything is done on the normal Graphics screen, so SCRWID EQU 32 was included early in the source code.

Again we've used the Assembler to do math for us, so an entry like SCRWID*4+2 will be computed by the Assembler to the correct value for Row 5, Column 3 of the screen. This made it much easier for us, during development of the program, to adjust our screen positions when necessary, since there's an easy mnemonic for translating our source code to Row, Column form.

In this particular case, we didn't display anything on the top row of the screen, so the first three entries in

(See Page 25)

```
* EXAMPLE OF DATA STRUCTURING FOR A SCREENFUL OF STUFF
* FIRST, THE CODE TO INVOKE THE SUBROUTINE
*
FILSCR  BL    @CLS          CLEAR THE SCREEN
        LI    R6,LOCTB1     SET R6 TO LOCATION TABLE
        LI    R1,TXTTB1     SET R1 TO TEXT ADDRESS
        BL    @DISSCR       CALL SUBROUTINE
        (GO ON TO NEXT OPERATION)
*
* THE SUBROUTINE DISSCR DISPLAYS A WHOLE SCREENFUL
*
DISSCR  MOV   R11,*R15+     STASH RETURN ADDRESS ON STACK
DISCR1  MOV   *R6+,R0       GET SCREEN LOCATION INTO R0, INCREMENT R6 BY TWO
        CI    R0,>FFFF      IS THAT "END OF SCREEN" CODE?
        JEQ   DISCRX        IF SO, GET OUT OF SUBROUTINE
        BL    @DISLI        ELSE DISPLAY STRING POINTED TO BY R1
        JMP   DISCR1        THEN JUMP BACK FOR NEXT ITEM
DISCRX  B     @SUBRET       USE HIGH-LEVEL SUBROUTINE RETURN
*
* DISLI IS SHOWN FOR REFERENCE
* IN THE ORIGINAL PROGRAM, A MORE COMPLEX VERSION
* OF DISLI WAS USED, FOR COMPATIBILITY WITH EXTENDED BASIC
*
DISLI
        MOVB  *R1+,R2       GET LENGTH BYTE INTO R2
        SRL   R2,8          RIGHT JUSTIFY IN R2
        JEQ   DISLIX        IF R2 = 0, GET OUT OF SUBROUTINE
        BLWP  @VMBW         ELSE DISPLAY STRING CONTENT
        A     R2,R1         THEN ADD R2 TO ADDRESS IN R1
DISLIX  RT                  RETURN TO CALLING PROGRAM
*
* DATA SECTION
*
* LABEL LOCTB1 IS FOR ENTIRE FILL-IN SCREEN
* EACH ENTRY GIVES SCREEN LOCATION FOR ONE STRING
*
LOCTB1  DATA  SCRWID+2,SCRWID+14,SCRWID+21
        DATA  SCRWID*4+2,SCRWID*4+10,SCRWID*4+20
        DATA  SCRWID*6+1,SCRWID*7+1
        DATA  SCRWID*8+1,SCRWID*9+1
        DATA  SCRWID*11+2,SCRWID*11+10,SCRWID*11+20
        DATA  SCRWID*13+1,SCRWID*14+1,SCRWID*15+1
        DATA  SCRWID*16+1,SCRWID*18+1,SCRWID*18+9
        DATA  SCRWID*18+23,SCRWID*19+2,SCRWID*19+11
        DATA  SCRWID*19+21,SCRWID*20+2,SCRWID*20+11
        DATA  SCRWID*21+2,SCRWID*22+2
        DATA  >FFFF         END OF SCREEN INDICATOR
*
* TXTTB1 IS COLLECTION OF STRINGS FOR FILL-IN SCREEN
*
TXTTB1  BYTE 7
        TEXT 'COURSE:'
        BYTE 4
        TEXT 'PAR:'
        BYTE 5
        TEXT 'DATE:'
OUTSTR  BYTE 3
        TEXT 'OUT'
        BYTE 5
        TEXT 'PUTTS'
        BYTE 3
        TEXT 'PAR'
        BYTE 2
```

(See Page 25)

THE ART OF ASSEMBLY—

(Continued from Page 24)

LOCTBl have SCRWID plus one less than the desired column. If we were to have these displayed on Row 1 the entries would read DATA 2,14,21.

In its application, this particular "fill-in" screen is used in several places, both for user entry and for displaying data from a golfer's old records. The subroutine DISSCR is of course used in other places, with other data, to produce screens for adding and editing course data, for example.

HIDDEN ASSET

There's another hidden asset in this data structure, in that some strings which were needed in other places than within the fill-in screen were given labels. This made it easy to use small parts of this big group of strings wherever we needed them. For example, if we wanted the word "PUTTS" to appear at Row 6, column 5, we could accomplish that by:

```
LI   R0,SCRWID*5+4
LI   R1,PUTSTR
BL   @DISLI
```

That idea was of course used in the program, to "recycle" parts of that long array of strings.

As you're probably all too aware by now, we are very fond of doing things with loop structures in our code. We were not always so skillful in using them, and some of our earliest attempts at programming in Assembly used very long sequences of operations where simple loops would have done the job.

Let's just for the moment assume that the fill-in screen data we've shown in today's sidebar were not organized in this fashion. Let's suppose it was just text lines, not strings.

Let's also assume we didn't make that table of screen locations for the various strings. Our text part would take up fewer bytes in memory without the length byte before each text line:

```
TXTTBl  TEXT  'COURSE:'
        TEXT  'PAR:'
        TEXT  'DATE:'
        (and so on)
```

Now our code would not be able to operate on a simple loop basis, but would need separate steps to display each part. For example:

```
DISSCR  LI    R0,SCRWID+2
        LI    R2,7
        LI    R1,TXTTBl
        BLWP  @VMBW
        A     R2,R1
        LI    R0,SCRWID+14
        LI    R2,4
        BLWP  @VMBW
        (and so on)
```

Also, of course, each fill-in screen we used would need its own tailor-made code section like that shown above. A DISLI subroutine would be unnecessary, but at a very high cost.

We think this small example will once and for all make our point, that bytes spent in a well-organized data structure can be saved many times over when they permit a simple loop in the code section to display a bunch of data.

We've applied this concept of looping and data structuring in our music programs, and this has contributed materially to our ability to cram tons of music onto our disks. In the music, the data is organized into measures, and labels are placed at the beginnings and ends of measures. Then our "action" part of the code can use loops to repeat playing of sections of the music, and even to perform what musicians call a "Da Capo" (That's Italian for, literally "From the Head", or more colloquially, "From the Top"), which repeats the entire piece.

Like anything done in Assembly, our method won't feel comfortable to some programmers, nor is it necessarily the "best" way to accomplish the task. We use our own methods as examples of how structure in both data and code can become your servant, and invite our readers to modify and improve on our methods to their heart's content.

There are things referenced in today's sidebar that are not included there, such as the CLS subroutine, for which we gave two examples earlier, and the High level subroutine return SUBRET, also given previously. (See No. 2 of this series in the July 1991 issue.)

This would be kind of a short article if we stopped here, yet we don't want to open a new and major topic either. Instead, let's go into a discussion on our design philosophy for developing programs. This may cause gnashing of teeth in some circles, but the following are our opinions, not those of MICROpendium or anyone else. (Try to imagine the word "COMMENTARY" flashing in your mind while reading this.)

(Continued from Page 24)

```
        TEXT 'HL'
        BYTE 2
        TEXT 'PA'
        BYTE 2
        TEXT 'SC'
        BYTE 2
        TEXT 'PU'
INSTR BYTE 2
        TEXT 'IN'
PUTSTR BYTE 5
        TEXT 'PUTTS'
PARSTR BYTE 3
        TEXT 'PAR'
        BYTE 2
        TEXT 'HL'
        BYTE 2
        TEXT 'PA'
        BYTE 2
        TEXT 'SC'
        BYTE 2
        TEXT 'PU'
GRSSTR BYTE 3
        TEXT 'GRS'
HCSTR BYTE 10
        TEXT 'HI HC'
NETSTR BYTE 3
        TEXT 'NET'
        BYTE 5
        TEXT 'BIRDS'
        BYTE 6
        TEXT 'EAGLES'
        BYTE 5
        TEXT 'PUTTS'
        BYTE 4
        TEXT 'PARS'
        BYTE 6
        TEXT 'BOGIES'
        BYTE 13
        TEXT 'DOUBLE BOGIES'
        BYTE 4
        TEXT 'CMNT'
```

COMMENTS

We believe that programmers serving the TI community should, first and foremost, serve the person with the minimal system. For Assembly programs, this means the person with 32K, XB or E/A or TIW module, and one SS/SD disk drive. Does that mean we preclude serving those with three or four drives? No, it just means that we think the guy with the minimal system should be able to use any of our products.

(See Page 26)

THE ART OF ASSEMBLY—

(Continued from Page 24)

What we won't do is get caught up in what we might call the "Hardware Mania" that currently infects the TI Community. What do we mean by "Hardware Mania?" This: We don't own a hard drive for either of our TI machines. That means, among other things, that we can't effectively program for things involving hard drive. In our opinion, nobody who owns a TI should invest in putting hard drive on it. The cost is high, and the payoff very questionable, mainly because the TI system was not designed for it. We do have a hard drive on one of our three PC computers, and find it very useful in the environment of MS-DOS.

When we program things on the PC, we take advantage of service routines provided by the BIOS and DOS that are omnipresent on those machines. Thus our programs have no problem with finding out what the current drive and directory are, because we can simply invoke a DOS interrupt service to get that information. We used that service in the PC version of our Golf Score Analyzer so that all the files it creates automatically reside on the same drive and in the same directory as the program.

On the TI, there is no equivalent of the DOS services. We can and do find out the device name from which a program was loaded, but if that turns out to be WDS1, we're stumped about what directory or sub-directory we loaded from. Incidentally, if any of our readers does have a way of doing this, we'd be happy if he or she would share that information with others through User Notes or any other handy forum.

Should we decide that we must serve that subset of the TI community that has hard drives, we would have to invest a lot of money and valuable time learning how to program for it. In a good year, that might increase our sales by ten disks or so, which would mean that in only 25 or 30 years our hard drive would pay for itself.

We feel the same way about such wonderful gimmicks as 80-column cards. We don't have those, either, and can't see enough extra sales potential out there to ever make acquiring one a viable financial investment.

We do have Horizon RAMdisk on one of our two TIs, but that's mainly to speed up the process of Assembling source code. The Horizon is something we use every day, and thanks to some very excellent work by its developers, it does very faithfully emulate the normal floppy drive, except of course that it performs many times faster than the floppy drive. Our Word Processor, which takes something like 27 seconds to load into memory from floppy disk, loads from RAMdisk in about 3.5 seconds.

We also have Horizon's P-GRAM cards in both of our TIs, because those got us out of the unreliable cartridge connection. This way, we have Editor/Assembler and Extended BASIC just a keystroke away.

That, however, is all we do with the RAMdisk and P-GRAM. We don't have any "Rambo" or "Plus" memory on either of these devices. Again, that's a matter of economics for us. Writing programs that require Rambo or P-GRAM+ would be foolish, since it would severely limit our market. Perhaps we could program cleverly enough so that our programs would work without those devices, but work better if they were present. Nevertheless, buying them just to reach that marginal extra market would never, in our opinion, pay off.

Okay, we're back off our soapbox. We hope people will understand why this column will not get heavily into how to program for RAMBO or 80-column cards, or any other exotic new gadgets that come along. We've got enough problems just making sound programs for the "Baseline" TI system, and we'll concentrate on helping our readers with those problems.

Our next article will give some ideas on how to make effective use of the 10,198 bytes of VDP RAM (>1000 thru >37D6) that's normally not used by the E/A module. We may touch other topics, but that will be the main one.

READER TO READER

☐ Antonio Benvenuti, Via Borgolungo 24, 01100 Viterbo, Italy, writes:

I own an old WDS/100 Myarc hard disk controller, which worked in conjunction with a Western Digital WD 1002-05 card; that one died some months ago, and I haven't been able to have it fixed or replaced anywhere in Italy. Is there anyone in the U.S. who could provide me such a card? I do not know even on which kind of PC it worked; the one I had was purchased from Myarc with the mentioned WDS/100 board, but I have never seen it elsewhere in Italy.

My TI99 worked very fine with the hard disk; can you help me to get it working again? The trouble is only on the Western Digital WD 1002-05 board. Thank you very much.

☐ John Tomchick Jr., 4 Vassar Ave., Stratford, NJ 08084, writes:

I have been using T-C Mail by Thi Chau for a number of years with great success. Since I maintain a mail list which is used for bulk mailing of a newsletter, the post office now wants us to use ZIP code 4, which the current program does not support. I called Ramsoft Enterprises, but they were of no help. Does anyone know of a good mail list program for the TI that will support the new ZIP code+4.

☐ Chuck McConnell, 2232 S. Clarence Ave., Berwyn, IL 60402, writes:

Several people have contacted me concerning my question about the equivalent replacement for PSET that appeared on page 6 of the March 1992 MICROpendium. It was suggested that I use the Super Extended BASIC module. My next question is, using Super XBASIC, how do I write the BASIC code that can be incorporated in the program listed in the March 1992 MICROpendium?

☐ James T. Harris, 2022 10th St., Cuyahoga Falls, OH 44221, writes:

For the past six years I have operated my Star SG 10 printer through a MULTICOM box manufactured by Rocky Mountain Micro in Sandy, Utah. Two years ago I bought a modem and found that the RS232 port in the box was inoperative. I called Sandy, Utah, and ordered a replacement unit planning on sending the original to them for repair.

The second unit operated intermittently so I delayed in sending the first unit to them

(See Page 27)

MICRO-REVIEWS

MY-Art Slide Show, MY-BASIC Batch Files, Casino Games and the Harrison Software Word Processor

By STAN KRAJEWSKI

I just received the 1992 catalog from Asgard Software. It is good to see this 41-page booklet offering so much software for our computers instead of those "other" computers. Also, an update to the Code Breakers program by Harrison Software has been released. It will be sent to owners who request the disk.

Ratings for the software reviewed in this column are based on the Star system that follows.

★ Leave it alone, back to the drawing board.

★★ Needs improvements, but workable.

★★★ A good program, worth trying.

★★★★ Send your money and buy it.

★★★

MYART SLIDE SHOW & MYBASIC BATCH FILES

The author of the well done Global War now has a couple of new programs available. Tony D'Alfonso has already mastered BASIC and PASCAL and is working on mastering "C" and other languages. He is a talented programmer, and we are lucky to have him in the Geneve community. We can expect to see a lot more from him in the future. System requirements are; Geneve 9640, MDOS V1l4F or higher and MYBASIC 299A. For the MY-Art Slide Show program, MY- Art Files are required for display.

There are two programs available depending on your configuration. MYSLIDE2 is for Geneve users without the mouse. MYSLIDE4 is available for users with the mouse. After loading MYBASIC you type RUN MYSLIDE4. This gives you the title screen. Pressing any key brings you to the main menu. At this point you can use your mouse to bring your arrow cursor to any one of these options: SETUP, DIRECTORY, BEGIN SLIDESHOW and QUIT. If using MYSLIDE2 you can type in your options. At first it asks whether or not you want to see a directory. This is useful as you may not remember the file name, and might want to see which file you want to use. Pressing N brings you to the next option asking whether you want to use a batch file. Batch files can be made by typing what disk and what file name you want to use in the program. You then have the option of selecting how many MY-Art pictures you want to use in the slide show. You may also select the pauses between pictures in seconds.

The next program is a simple one that was written because of the non-existence of Batch Files in MYBASIC. This allows the use of nine MDOS commands. They are TIME, DATE, DIR, CLS, ECHO, MODE, PAUSE and REM, plus a command called WINDOW, which allows you to use a portion of the screen for the batch file using MYBASIC'S CALL MARGIN. Even though this is a small and simple program the object is to inspire other users on the possibilities of using batch files in BASIC or to convince Myarc that having a link to drop to MDOS would be a nice feature.

These programs are available on disk as public domain, and a donation would be appreciated by the author. A donation is not necessary, but a letter or MY-Art pictures would be nice. Also suggestions and changes should be sent to the author. MY-Art Slide Show and MYBASIC Batch Files can be obtained from me or from Tony D'Alfonso, 289 Mathewson St., Maple, Ontario, Canada L6A 1B3.

★★★

CASINO GAMES

This program on disk features two games played in Atlantic City. You are given $500 in an account already waiting for you. System Requirements are Geneve 9640 or TI99/4A console, Extended BA-

(See Page 28)

READER TO READER—

(Continued from Page 26)

for repair, for it still had a good parallel port for printer operation.

Recently I acquired an RS232 card for my PEB and when I tried to reach Rocky Mountain Micro for repair of the MULTICOM units I found that the phone has been disconnected and the Post Office returned my letter addressed to their P.O. Box stating that the box was closed and that they had no forwarding address.

Do you or any of your readers know the status of that company? If they are out of business, does anyone know where I could get my MULTICOm units repaired?

Reader to Reader is a column to put TI and Geneve users in contact with other users. Address questions to Reader to Reader, c/o MICROpendium, P.O. Box 1343, Round Rock, TX 78680.

JOIN THE MDOS DEVELOPMENT DISCUSSION ON TI NET – DELPHI

Free membership offer: dial 1-800-365-4636. When connected, press RETURN. At the PASSWORD prompt, type 123, and press Enter.

Choose the Delphi rate plan for you — the Basic Plan of $5.95 per month includes one non-prime time connect hour and $6.00/hour thereafter — or — the 20/20 Advantage Plan which includes 20 hours per month for 20.00. — The lowest rate of any network.

MICRO-REVIEWS—

(Continued from Page 27)

SIC, 32K RAM and disk drive.

Video Poker is the first game on the menu. It is a near carbon copy of the game played in casinos. You may play either the 25- cent, 50-cent or dollar machines. The graphics on both the front and rear of the cards are good, and look like real playing cards. Posted above the cards are the jackpots. You can wager one to five coins beginning each play of the five-card deck. The computer generates your win or loss and displays your Credits and Bankroll on the screen below the cards. Pressing keys are easy, one to five keys are for marking the card, "C" lets you cancel a mistake and "D" draws new cards.

After each play, the cards stay displayed on the screen until the bank is calculated, and then the cards flip over automatically ready to start again. The loading time of the program takes about 35 seconds, but once loaded play is good with a 3-to-5 second delay between shuffles. Pressing 0 at the start of each play brings you back to the Menu, also known as "The Lobby."

Blackjack is the second selection. This game resembles sitting at the Blackjack table in Atlantic City. At the top of the screen are your options: 1 — Hit 2 — Stand 3 — Double Down 4 — Split. Next on the screen are the Discard Rack (used for the benefit of card counters using the High-Low system) and the Dealer's cards. Below that are the Players' cards, and finally, below that is the display of your Wager and the Bankroll. The delay between deals in Blackjack is not noticeable. As in Poker, pressing 0 as your wager takes you back to the Lobby for more withdrawals as needed.

Game play is terminated when your bank account is depleted, or by going to the Lobby and Exiting the Casino.

The program is written in Extended BASIC with assembly language routines. It has a Load program installed on disk to auto-load from Extended BASIC. A Help file along with complete instructions are included on disk. The Help file is a Basic Strategy Chart which tells you when to Hit, Stand, Double Down or Split, depending on the total value of your hand and the value of the dealers Up-card.

Casino Games is available from the author, Dennis F. Rebello, 89 Little Neck Ave., Swansea, MA. 02777 for $12.95 plus $1 S&H.

★ ★ ★ ★

HARRISON SOFTWARE WORD PROCESSOR

"For those who hate TI Writer." Sound familiar? I have heard and thought that also, many times. This program on disk was created for us because the author has used other word processors, like the Wang Word Processor and the Multi-Mate Word Processor and favored them over what we had.

System requirements are; TI-99/4A, 32K RAM expansion system, at least one disk drive, RS232 card, Extended BASIC module or the Editor/Assembler module and a printer.

Loading the program could not be simpler. It has an auto-load feature for Extended BASIC. Also, if using the E/A module you just go to E/A option 5 and press Enter. The program and configure files will load in less than 30 seconds.

The first and most important thing is your text is in sight as you type. You do not need to use a formatter or transliterate commands to see the text and have it come out in 80 columns on the printer. The main menu will look like this:

- Edit Old Document
- Create New Document
- Print Document
- Change Defaults
- System Utilities
- Document Filing

Two drives are not necessary. The program prompts you to remove the disk, and its default is drive 1. If you have only one drive, you can remove the program disk and insert a file disk. When starting to create a document, pressing the space bar moves the cursor to your selection. On selecting Create New Document it first asks for your document name. It will then create the records needed, tell you the name of your disk and how many pages are available. The Title line located at the top indicates what mode you're in, the document name, the page number, line number and the position within that line where the cursor presently sits (whether you are at position 40, 70, etc.). After position 80 it resets to 1 to start over again. Since the screen is set up in 40 columns, the second line on screen is the 41st to 80th position.

Edit Old Document brings back your old file. Print Document is impressive. You can set your left margin, top margin, type style, line spacing (1, 2 or 3), line pitch, print strike (1 or 2), number of copies (1-99), print from page, through page, line limit, lines per page and paper type. Features are also imbedded in the program for italics, underline, superscript, subscript and bold print.

An Imbed Mode exists to take advantage of the features your printer has that cannot all be handled by the built-in control system. Change Default brings you to another menu. Disk Drive asks the number of drives attached, where your document disk is and what drive your program disk is in. Printer Port lets you enter what port your printer is in. Printer Types prompts you for either dot matrix or daisy wheel. Printers supported are, Epson F Series, Star Delta/Gemini, Star NX 1000, Epson M/R series and Generic. Format lets you change your tabs or indents, which you can also enter any time in a document by pressing FCTN 8.

If you were wondering if you could use this program after having most of your files in TI-Writer format, you can. System Utilities lets you change, Document to ASCII File or ASCII File to Documents. This first option will automatically limit the length of each file created to 300 records, letting it fit in memory with TI-Writer and the Editor/Assembler. If the document is too large it will create a series of files, with sequential numbers added as the last character of the file name. And if that is not enough, it goes to alphabet characters if your files should exceed nine.

The Create Printer Table and the Edit printer table are designed to allow you to tailor the program to almost any make and model dot matrix printer. Configure System permits you to tailor the printing configuration to your setup instead of the defaults.

The last utility, Document Filing, will allow you either to Catalog Disk for document files, Delete Document, Delete Pages and Document Summary. The Doc

(See Page 29)

User Notes

Beware of 96TPI disk drives with TI disk controllers

This comes from Merle Vogt, of Von Ormy, Texas. He writes:

Disk drive production has phased out the old 48 TPI (Tracks Per Inch) drives which we 99/4A users must have in favor of the higher capacity 96 TPI, 80-track drives used by all of the clones. This is a deadend upset for us.

I have been corresponding with a MICROpendium reader who has started using TEAC FD-55GRF-140/040 96 TPI model drives in his system. He found that disks from that unit could not be used on his Shugart drive. Since then I have run very extensive tests using a Tandon TM100-4 drive, also a 96 TPI unit. I used Disk Manager 2 and a TI disk controller card. The problems revolve around formatting disks on the 96 TPI drives.

I used DM2 because it is the only utility which allows specifying how many tracks to be formatted onto the disk. It has this feature because the original Shugart 400 drive had only 35 tracks.

TEST 40 DSSD

Tracks	=	40
Single-side	=	N
Single-density	=	Y

Results: Formatting only ran in halfway on the disk surface, for 40 tracks. This gave 720 sectors. Scanning the codes in Sector 00 there was:

Bytes >A	=	>B	=	>02D0 (720 sectors)
Byte >11	=	>28		(40 tracks)
Bytes >12	>13	=	>0201	(DSSD)

TEST 80 SSSD

Tracks	=	80
Single Side	=	Y
Single Density	=	Y

This time the format ran all the way to the disk center, laying 80 tracks in place. This presumed 720 sectors. However, the verification phase blows up. Here the heads are stepped in only 40 tracks, then it attempts to read the other side of the disk by back-stepping the heads. But nothing was put there so it bombs. Looking at bytes >A, >B, >11, >12 and >13 shows codes for 80 tracks (single-side, single-density) but these codes are meaningless because you cannot get to those inner 40 tracks on side zero of the disk.

I tried formatting 60 tracks. Results were the same as for the TEST 80 SSSD test above. Verification or use of the tracks past 39 were not possible.

Many other efforts were made to get at the tracks on side zero past 39. All failed. This included File I-O, DM-1000, Disk Patch, Disk Fixer and Advanced Diagnostics. So, it appears, there is a function, probably in the disk controller, which always reverses the step direction from IN to OUT when track 39 is passed.

You can use 96 TPI drives, but understand that only half of the disk space is used and you must format to 40 tracks, double-side, single-density, getting 720 sectors. If you have a CorComp disk controller then possibly you could specify double-density. Most important, never forget these disks cannot be used on the old 48 TPI drives.

MBASIC break

This comes from Norm Sellers, of Broomall, Pennsylvania. He writes:

I have had a problem with Myarc Advanced BASIC on the Geneve in that while writing a program, I often want to BREAK and print variables, as is possible with Extended BASIC, or console BASIC. To solve this problem I wrote a small GOSUB routine that reads the keyboard. If F4 is pressed, I issue a BREAK. If any other key is pressed, I loop until the key is freed again. If no key is pressed while executing the GOSUB, it just RETURNs doing nothing.

If you drop into any loops in your programs a GOSUB 32000, you will be able to BREAK your program at any time, print variables, then CONtinue. Just be careful that you do not have a syntax error in the CON or PRINT statement that you enter while the program is at a break. This will bomb out your run. Also remember that as soon as you find a bug and type a corrected or new line in the program, this immediately ends your test run and all variables are reset.

Note that this does not work well if you are using TRACE, because TRACE enters line numbers while in this routine. If you wish to use TRACE and this routine, just temporarily un-comment line 32050 at the end of the routine.

I this routine starting at 32000 but you may move it to other line numbers if these

(See Page 30)

MICRO-REVIEWS—

(Continued from Page 28)

ument Summary gives you a page/file count.

This program really puts the TI through its paces. The program is always calculating memory used, memory available and error trapping. First time users should not be afraid of this program. Although some keys are different, Insert and Delete keys are the same. This program also has many of the same functions of TI-Writer such as Move, Copy, Find, Replace and Search. As you fill the screens with text, they will instantly change to the next screen. Also the machine will do its word wrapping into the fourth line of the new screen and replicate the title line at the top, plus the last two lines you typed from the previous screen. The 48 pages of on-disk documentation, tells you everything you need to know plus more about the program. The program is easy to use and does not take long to get started. A table of contents lets you get started and refer to the pages as needed. Also included are a Text Control Keys list that lies on the computer, and a Overlay for the keys.

So if you just hate TI-Writer and its clones, or just never learned how to use its formatter and transliterate commands, this valued program is a welcome addition to your software library. Harrison Software Word Processing program is available for $14 including S&H from Harrison Software, 5705 40th Place, Hyattsville, MD 20781.

If you would like your software or hardware reviewed in this column, you may send it to: Stan Krajewski, Route 6, Box 568-15, Live Oak, FL 32060. If you would like it returned, please include postage. If you need to discuss something, for any reason, you may call me at 904-364-7897 Eastern.

User Notes

(Continued from Page 29)
are already in use. I have tried to use variable names that will not accidentally be used by other programs. Again, any variable names may be used which are not already used in your program.

The following is a short BASIC program shell that can be used to begin typing a new program, or MERGEd with an existing program. Just be careful of line No. 1 when merging. I keep this comment to make sure I do not save a program with the wrong name and overwrite another program. Also, statement 100 should be erased if using this as a MERGE file. The GOSUB 32000 should be put in each loop in your program.

```
1 !SAVE DSK1.BASICPGM
100 GOSUB 32000
32000 UNTRACE
32010 CALL KEY(0,KYZX1Q,STZX
1Q)
32020 IF STZX1Q=0 THEN 32050
32030 IF KYZX1Q<>2 THEN 32010
32040 BREAK
32050 ! TRACE
32060 RETURN
```


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