

TI-99'ers In The 90's

Column
by Barry A. Traver

MICHAEL MAKSIMIK: FROM MICE TO MUSIC!

There's a (new) mouse in the house. We're talking about "Mike's mice" available from Asgard Peripherals (P.O. Box 10697, Rockville, MD 20849; phone: 703/255-3085). That's not the big news, but it's nice news (or mice news?), since (although mice are certainly available elsewhere) this mouse includes software for using it with programs like TI-Artist and for interfacing it with your own Extended BASIC or assembly programs. Also, the price is reasonable (\$49.95 plus S&H, 7\$ U.S. or \$7 Canada). It is compatible with both the TI-99/4A and the Myarc 9640, so if you've been wanting a mouse for your house, the Asgard Mouse may be the way to go.

The Asgard Mouse by Michael Maksimik requires a disk system, 32K memory, and an RS232 port. I don't get that excited about mice myself, but I know there are many who do, so it's a product of which you should probably be aware. I'm more excited, however, about another project Mike has been working on that makes use of the RS232 port, a project I predict will start a major revolution in the TI world (not to mention greatly extend the life and capabilities of our computer). It's nothing less than MIDI music for the TI! (This product will also be available from Asgard Peripherals, but no information on price or date of release are available at the time of writing this article; you should phone or write Asgard for the latest information.)

Mike outlined the plans in an on-line conference on TI FORUM on CompuServe in April 1990. MIDI stands for "Musical Instrument Digital Interface," but you don't have to have a musical background to enjoy MIDI, according to Mike. He claims, "If you invest \$100 for a CASIO MT240, or any other MIDI keyboard [like the CASIO CT650 or any Yamaha keyboard with MIDI], and then [invest in] the interface and software (between \$30 and \$50), you can listen to any music that exists for MIDI.... You will not have to program any music, just load and go...."

Why do I regard this as a major development, akin to Travis Watford's MAX-RLE, Paul Charlton's XMODEM or Picture Transfer, Mike Dodd's PC-Transfer or PCT-Utilities, or Peter Hoddie's MacFlix? Because

all of them "interfaced" in one way or another to a huge amount of useful material (much of it public domain) created on or for other computers (e.g., GIF or Mac pictures, or IBM text files), and the same is true of Michael Maksimik's MIDI project. According to Mike, "There is only one MIDI standard, the MIDI 1.0 set up by the musical instruments manufacturers association. MIDI is standard for all computers."

Mike obtained a copy of that standard, and then "used it to create a special cable for use with the TI RS232." He comments, "The IBM interface requires an expensive ROLAND MPU402 controller, but the TI or Geneve only requires an RS232 interface, something [many of us already] have...." In fact, the standard RS232 card - TI, CorComp, or Myarc - includes not only a parallel port, but also two serial ports (if an appropriate "Y" cable is used), so few of us make full use of the RS232 capabilities we possess. (Rumor has it that Mike is working on yet other projects involving the RS232, so I for one am anxious and ready to hear more about them!)

What does this mean to us? Among other things, it means (according to Mike) that "the tremendous library of MIDI music in the IBM world is now available to...TI people, music you can enjoy, modify, or mix to create new compositions." As I understand it, Asgard is planning to support fully this MIDI interface with software and utilities. For example, there are plans to modify the program Music Pro so that it can save its data in MIDI voice file format. And Mike's MIDI interface is "bidirectional": you can send music from your TI to your electronic keyboard, or you can send music from your electronic keyboard to your computer!

In short, the possibilities seem limitless. If you're into electronics and music, you can think about fooling around with mixers, multi-instrument sequences, etc. as well as electronic keyboards, saxophones, guitars, etc. If you aren't especially talented in electronics or music, you can still enjoy yourself thoroughly just listening to music created by others (like those of us who don't know how to play a piano or a guitar, but do know how to "play" a CD or cassette tape!). Unless there are unforeseen problems in final development, here is a product that everyone should be able to take pleasure from: music in one form or another seems to be appreciated by all!

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"THE ULTIMATE EXTENDED BASIC UPGRADE"?

That's what Texaments (53 Center Street, Patchogue, New York 11772; phone 516/475-3480) calls Harry Wilhelm's The Missing Link, "a powerful extension of the Extended BASIC language that allows programmers to access all of the high resolution bit-mapped graphics and advanced text modes of the TI-99/4A." (It will also work with the Myarc 9640 in GPL mode.)

That's not just "advertising hype": it's a fairly accurate description of the product, as may be evident from some of what I say here. I should mention at the start that I was a beta-tester for this amazing utility long before it ever found a publisher, which may or may not affect my "objectivity," but I have reviewed in print at least a dozen enhanced Extended BASICs, and I am enthusiastic about the possibilities this particular one opens up to the Extended BASIC programmer.

Imagine the following: (1) Cartesian graphics available for plotting points, lines, circles, and boxes. (2) Turtle graphics available with none of the ink or color restrictions found in TI Logo. (3) Sprite graphics available that can give you up to 32 (that's right - not 28, but 32) moving sprites on the screen. (4) Text graphics available, allowing different size characters and up to 32 rows by 60 columns on the screen if you so desire. (5) TI-Artist picture graphics, allowing loading of TI-Artist Picture (or Instances) from disk. With The Missing Link ("TML"), you can have all of these... plus all the usual other (i.e., non-graphics) features of Extended BASIC (such as music, mathematical functions, disk file access, etc.)!

One reason this is possible is that all of the graphics are done in bit-map mode (rather than the usual graphic mode or even text mode or multi-color mode). Since bit-mapped graphics require a lot of video memory, this does have as a consequence a reduction of useable stack space (what this means in your programming is the necessity to try to avoid unnecessary use of string arrays, a minor limitation compared with the programming possibilities opened up by "TML"). So far, I have not found that to cause significant problems in programming, and that's about the only thing you have to worry about in your programming.

If you know a little bit about bit-map mode, you may (mistakenly) expect another limitation. TI's Editor/Assembler manual, page 334, says concerning bit-map mode, "You can use

sprites, but not their automatic motion feature." Not true! As I stated earlier, you can have 32 moving sprites with TML, and the CPU can be turning its attention to doing other things while the sprites are moving (such as calculating the value of pi or whatever else you happen to want done at the time). That is, the automatic motion is driven by interrupts, essentially the same as you are accustomed to seeing in normal graphics mode in Extended BASIC.

And, yes, the program does windows, in case you're interested. Text may be displayed in a window, and graphics may be generated inside or outside the window (whichever you prefer). And there is automatic word wrap when displaying text. TML also has other features not yet mentioned here (e.g., a built-in screen dump), but I think I've told you enough about the program to whet your appetite.

The Missing Link, however, is a program that must be seen to be believed, so it is good that Texaments has released a TML demo program that may in fact be the best TI demo program I have ever seen. The demo shows off almost all of the more than 30 assembly subroutines that are included in The Missing Link. (If you can't get the TML demo from your local user group or BBS, you can order it for \$3.00 - shipping included - from Texaments.)

Incidentally, apart from a minor typo here and there (e.g., "Cartesian" for "Cartesian" on page 12), the 32-page manual for TML is well-done in general, clearly organized and written. If you can program in Extended BASIC, it is not difficult to learn how to use TML commands. It's mostly a matter of learning to use CALL LINKs in addition to (or instead of) regular CALLs. For example, instead of CALL SPRITE(#NUM,CHAR,COLOR,ROW,COL,ROWVEL,COLVEL), you would use CALL LINK("SPRITE",NUM,CHAR,COLOR,ROW,COL,ROWVEL,COLVEL). It's that simple!

The cost of the program itself is \$24.95 plus shipping (\$2.50 for U.S. or Canada). Warning: if you write programs that make use of TML routines, other people cannot use them unless they also have purchased a copy of TML. There seems to have been some confusion in this area. You're free to pass around the TML demo and you're free to pass around any XB programs you've written that access TML routines, but you are not allowed to pass around TML itself (in my opinion, a fair restriction that seeks to guarantee that the author receives appropriate remuneration for his work).

In case the name Harry Wilhelm sounds familiar, he's also the author of EZ-Keys Plus, an outstanding utility program available from Asgard Software (same address as Asgard Peripherals). Based on the ac-

complishments of EZ-Keys Plus and The Missing Link, I certainly hope we get to see yet more from this creative programmer!

PUBLIC DOMAIN SOFTWARE AT \$1.50 A DISK

Difficult as it may be to believe, Jim Peterson of Tigercub Software (156 Collingwood Ave., Columbus, OH 43213) is offering SS/SD disks of public domain software at \$1.50 per disk postpaid to U.S. or Canada (minimum order eight disks). (He is also making available fairware as well when fairware authors have given specific authorization for such distribution.) The PD material has been categorized and often improved (TI BASIC only programs modified to run in TI XB, minor bugs removed, XB loaders provided for assembly programs, better instructions added, etc.), so Jim is providing a real service to TI'ers.

Jim recently sent me a disk version of his TI-PD catalog containing all updates and additions to the end of April 1990. If you can't easily locate the catalog elsewhere, you can have Jim send you a copy (please send him a dollar or two to cover the expense, and specify that you want the TI-PD catalog, since Jim also has available a Tigercub catalog of 120 original programs; if you want that catalog as well, please enclose a dollar or two more.)

IT'S NOT TOO EARLY!

After winter and spring TI Faires in Tucson, San Francisco, Roselle Park (New Jersey), Ottawa, Boston, Alberta, Lima (Ohio), and Chester (England!), things seem to be slowing down for the summer, but it's not too early to begin planning for the fall. The Central PA 99/4A Users Group (P.O. Box 14126, Harrisburg, PA 17104-0126) is making plans for the Fourth Annual CPUG Computer/Electronics Exposition on October 14th at Hershey, Pennsylvania (phone Dave Ratcliffe at 717/238-5414 for details). Also planned for October is the Columbia Northwest TI Com-

puter Fair in Portland, Oregon on October 27 and 28, sponsored by NOVA (Ninety-niners Of the Vancouver Area), Washington, and PUNN (Portland Users of Ninety-Nines), Oregon (contact N. Michal Calkins, 1215 S.W. Cedar St., Lake Oswego, OR 97034, for information on the latter; phone 503/636-1839). That will give you something to do while you wait for the TI Faires in Chicago and Milwaukee in November!

CASSETTE USERS, TAKE HEART!

Most of the material in this column is oriented toward the TI'er or Geneve owner with a disk system (or even hard drive), but what about those who have a TI-99/4A with just a cassette storage system? Well, one thing you should not be without is Mickey Schmitt's 52-page booklet, "Getting the Most from Your Cassette System."

This very helpful collection of articles was originally published for the West Penn 99'ers newsletter, but the articles have been revised, and new material has been added. The author hadn't expected such continued demand for the material, but it may provide evidence that there are more cassette users out there than many of us may normally realize. (User groups, take note!)

If you would like to order this booklet, just send \$9.95 plus shipping (\$2.50 for U.S., \$4.00 for outside) to Mickey Schmitt, 196 Broadway Avenue, Lower Burrell, PA 15068. (And, yes, Mickey may already be known to you as the author of a fine survey available from Asgard Software on cassette-based and disk-based adventure games.)

Incidentally, the more I know about my readers, the more useful I can make this column to you. Even though I can't guarantee a personal answer to every letter, your input is helpful to me. If you would like to pass on suggestions, compliments, complaints, whatever, feel free to write me at the following address: Barry Traver, 835 Green Valley Drive, Philadelphia, PA 19128 (phone: 215/483-1379). In the meanTime, keep on computin'! ■

OS WORLD

National AppleWorks Users Group

The National AppleWorks Users Group (NAUG) recently released *The UltraMacros Primer*, a 250-page book that teaches readers how to use TimeOut UltraMacros with Appleworks. The book includes 17 lessons that describe all the details necessary to get started with UltraMacros, tricks to make it easier to learn and use UltraMacros, and advanced UltraMacros

programming techniques. Author Mark Munz is on the staff at Beagle Bros. and has developed numerous TimeOut enhancements for AppleWorks.

The *UltraMacros Primer* costs \$19.95 plus \$3 s/h from The National AppleWorks Users Group, Box 87453, Canton, Michigan 48187 (313) 454-1115. ■