T.I.-dings
from NewJUG/North

May & June 1989
Vol. 7 #5 & 6

P.O. Box 84
Dumont, NJ 07628

Your T.I.
'Monthly' Newsletter

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Next Meeting: June 19th at Bergenfield P.L. at 7 P.M.

"We are family enjoying the unspeakable peace and freedom of being orphans."
(Paraphrase of G.B. Shaw line in *Major Barbara*)

May flowers and June blooms!

New Jersey UG/North
P.O. Box 84
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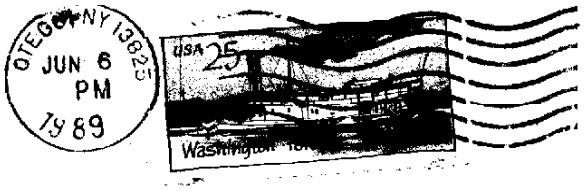

Dallas TI Computer UG*
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User Groups: Please Reciprocate!

T.I.dings from NewJUG/North
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Letters Welcome

April's Assembly Minutes
By James Ott

The April Meeting came to order at 7:15 pm with an attendance of 12 members. We began discussing where our meeting will be held in the upcoming months. The club agreed on keeping the meeting places the same. Meetings will continue to be held at Dumont H.S. September thru May and at Bergenfield Public Library June thru August. Frank Filice will check with the library about having the summer meetings there.

Walt continued the meeting by explaining how to use the MiniMem module. Then we began discussing the newsletter and gave our editor a 'well done' acclamation on his efforts of keeping the newsletter going.

Our treasurer reported a balance of $262.36.

We started the demonstration part of the meeting by checking out some unrunnable programs that Craig Sudman brought in. They were assembly language games that had a faulty XB loader program. The programs did run using the E/A loader. Frank Laes gave a demo of PrintArt. This program can print 14 fonts and is self loading.

Our president gave us a talk on what he has learned so far about MiniMem and demonstrated saving a program to the 4k mem in the module.

For the May meeting I will give a demo of FORTRAN 99. The demo will include a simple program showing the speed it has over BASIC.

Ed. Note: It's great to know that the the meetings are fruitful. It does require some leadership and cooperation to have an interesting meeting. Thanks to those who bring in the machinery to keep things interesting. Keep it up, folks, it's Your investment at stake.

I just wish I could be there!

xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx

RAMblings
By Henry

Sorry I missed out writing and publishing an issue for Mon's month. I just didn't have the time and my daughter's wedding is now a few days away. Besides my copier, as you noticed of the last double issue, was putting out poor quality work. I just arranged for a trade-in for a new one and it's costing some bucks. To keep a meager club treasury's expenses low I think it may be better to go this every other month route. Postage costs more than the printing, that is, when I publish it. So I'll save the club some funds.

By the way, if any of you have any news or questions to be discussed let me know so I can determine what to write about in these pages. Recently I heard from Dan Rosenkis about a few problems with TIW and he also gave me a hint about keeping platens soft!

He wrote that TEAC, who made his tape deck, also made a product for cleaning its rubber capstans (rollers) called TASCAM rubber cleaner RC-2. "It purports to counteract the evil effects of ozone, smog, hardening, and cracking. It has a strong smell of petroleum distillate. I'm no expert, but it reminds me of kerosene." Good Tip! Thanks Dan, I'll look it up!

Spring gardening is also taking toll of my time. With this wet weather spell we had it's tough to till mud! The grass is growing high the day after it's mowed. Maybe now I can envy the Traiger in Tucson who sent me a cartoon I published a while back in '87 which characteristically depicts his gardening pebbles in the southwest desert. Keep mowing Al! It reminds me of the guy in a cartoon who says he likes work and says that he WATCHES others do it all day!

The Star NX 1000 manufacturer says it has a fix for TI owners. It seems that when you turn off your computer it advances a blank page of paper. The company will send you a new EPROM free if old one is returned in 30 days. For my part I find it not to be a problem since I use single sheet feed almost always when hooked up to TI. As a matter of course I use it with the other computers from time to time as well and changing the EPROM permanently may hinder it in another way. If you use it exclusively with TI and you find it a serious problem, maybe you can find the price of it to find if it's worth changing. You CAN roll back the perfed paper with the current off with no ill effect anyway. If you insist on the easily installed user modification get your warranty card out for the company address and/or 800 number. It's included in your warranty papers.

P.S. Replacement ribbon cartridges for the above printer have come down in price and some generics are out there. To get the best buy is to purchase them in multiples of six from some of your mail order computer stationery houses. For my part I simply reink them! See April 88 TIdings or send me a SASE for a copy of my article on reinking. It was printed along with an article on pin cleaning.

Computer Shopper's June edition had a lengthy discussion on the new MYARC disk controller card and hard drive. This article really does a lot to explain why it's important to upgrade the TI for its capacity as a viable computer. TI's mem capacity doesn't really hinder its use as much as its lack of storage and recall ability. You needn't by the MYARC controller to do it. Just replace the single drive in your PBox with 2 half heights or 2 half height external drives with a power supply and the necessary cable connectors. Just make sure the drives you buy are IBM compatible. 'Nuff said.

Is your disk DV/80 file too large to load in your TIW? Jean Wilcox explains how, probably better than I can, in an article published in the Suncoast Beeper (Suncoast 99ers, St. Petersburg, Fla.). Printed on blue paper it may be difficult to copy, but worthwhile to keep in reference. I've used the same method in dealing with the late Tom Weithofer's docs on PILOT 99. Good reading.

Jack Sughrue, whose articles I frequently include in these pages,

suggests that editors should include some of the graphics to help in decorating NLs which may motivate members to stay with their TIs rather than switching. I think by now members of our group and others know full well our beastie's output capabilities, and for my part, believe they can take too much space from readable news space. Occasionally though, some graphics do appear when I include input from other UGs. It's hard enough for me to do this NL myself with hardly any input from fellow members. He makes a good point, though, that a good NL should be attractive. Sorry if I disappoint some of my fellow members about this. I could use YOUR suggestions what to write about. Would you like some hard copy of type in programs? What kind of programs? Reviews? How about your input, comments, questions, anything?

This is YOUR NL., how else can we prove that we are an ACTIVE group?

$$$

From the Mailbag
by You Know Who

TI BASE v 2.01 is getting more and more rave reviews by members of UG's writing for their NLs. *FIRSTBASE* also getting good reviews from some quarters. Many of the NLs are even publishing tutorials on *TI BASE*. Seems like it's the way to go for a better data base than PRBASE, the hottest program to happen to TI 3 or 4 years ago.

PR-BASE files can be made compatible to TI-BASE with the aid of a program made available thru the WestNY UG. User groups should inquire from Harry Brashear. NewsUG members write to NNY99er, 2753 Main St., Newfane NY 14108 for details.

PRESS, according to ASGARD, had some minor problems thought it was exhibited last November in Chicago with successful results. We can understand that ASGARD wants a Good Product to be merchandized without any bugs. As of this writing it may be on the market already. We can understand, I hope, and be patient.

Eric Zeno of the West Penn 99ers is working on a project that allows him to put XB, J2Kassex, speech synth, and battery backed clock INSIDE the console. He asks for input from YOU about whether you would buy a manufactured kit from him for $15. Sounds great. Let him know with a SASE. Write him at 414 Highland Rd., Pittsburgh, PA 15235. Thanks to Suncoast for this suggestion.

Maybe we CAN make the TI into a quasi portable. Next thing you know we may be able to get use of our old cassette recorders for TIW, E/A programs, etc.

Barry Boone updated *ARCHIVER*, v 3.03. Maybe for supercompression?

The WestNY 99ers offer a disk of writings (book) by Steven Steven Shaw called GETTING STARTED With the TI 99/4A. 433 Sectors of useful stuff for ONE buck! Write to Robert Coffee, 102 Woodgate Rd., Tonawanda, NY 14150. I think the price was for club members. Throw in another half buck for them to cover mailing costs. Steve Shaw wrote this in 1983 in England for TI users. I still see articles by him occasionally.

HORIZON ALERT! If you recently purchased one DO NOT install it. Return it for examination immediately. Some flawed ones may have been recently shipped that could cause permanent damage to your system. The manufacturer apologizes for this inconvenience. Several boards were etched with a possible short circuit capability.

SPEECH SYNTHESIZER: A downloaded article by Ron Albright was published by the TAMPA UG. It is too awkward to copy for this NL since it runs over to another page and starts in a likewise start position. Would like a member to volunteer copying it for me in 40 col format. Any volunteers? Well worth reading! It includes 2 small type in progs by Howie Rosenberg demonstrating the synth's capabilities.

TO THE DALLAS TI UG: In answer to your questionnaire: read our masthead, check the postmark, meeting date, etc., and you can get an idea of what we're up to. We've been at it more than 6 years. P.S.: We exchange with 45 UGs. We're in the same boat, let's not rock it! Read the NL! Best regards, Ed!

DID YOU KNOW? The new version (2.01) of TI-BASE is compatible with TIMP (MULTIPLAN).

GB MONITOR's (Queensboro UG) March issue has a number of interesting set of cute little type in progs by Ed Machonis, *Fortune Wheels*, a *Style a line*, *TINYLOTTO*, *TINYCATalogue* (disk), *WHETHATPHONE*, *FLEXILABEL*, *TINYCALC*, *COLISTER*, and *DISKLABEL*. For copies send me a SASE. Great going, Ed M! They would have saved me a lot of trouble in getting this NL together by using your stuff, but what'll happen to ethics if I did? Besides, I think you made many giveaways for the TICOFF booth. Great idea.

99-CALC, a Freeware spreadsheet program by Phil Barnes can be had by sending him SASE mailer and initialized disk to: 24631 Via San Fernando, Mission Viejo, CA 92692. If you like it, PAY HIM YOUR DUES!

89 TICOFF was a great success despite a few flaws mentioned last month. Lots of people showed up and it did raise money for the student scholarship fund. Congratulations are in order to the organizers, especially the stalwarts, Art Byers and Bob Guellnitz. And thanks to the UGs who set up booths and did some great demos, and the speakers.

NNY 99ers have a Feb. Disk of the Month which includes the use of Mandelbrot Fractals in a Maze game. Their March disk include more games, favorite American songs, and a Lotto Picker. See address above for details. Both are 3SS (half sided) sector disks.

ASGARD NEWS sent me a sample issue. It's great! Too bad it's only a quarterly. It has articles by some of my favorite writers in the TI community. They are offering it for $9/yr (4 issues). Write ASGARD PUBLISHING, P.O. Box 10697, Rockville, MD 20850.

- The sample issue tells us, sadly, that TEXEX is discontinuing the TI line, and TRITON ends its dealings with CORCOMP. It also says that Chris Faherty is working on an upgrade of TI-ARTIST v 3.0. Inquiries: TEXAMENTS, 244 Mill Rd., Yaphank NY 11980. Is he getting into the DTP field, too? Hope so, Ed.

MICROPENDIUM, the steady supporting monthly pub for TIers finds its subscriptions are climbing. Why not? They deserve our support for supporting

us. Have you subscribed? They get ALL the writers!

ASGARD reminds us that the 99/4A is now 10 years old. For computers it's old age. Not for US! Others have drifted off into oblivion while we still find new developments and breakthroughs. Also note the columns on TI's in the last six editions of Computer Shopper which may prove the point. ASGARD NEWS also states it well.

The LA UG's *Topics* is publishing, at last, an understandable tutorial on the *PRINTER's APPRENTICE* by Ken Gilliland, the author of several musical and graphics programs. I don't know how many of members have the prog, but if you do, SASE please.

NUTMEG 99ers announce the release of MX-DOS for the 99/4A written by Milo Tsukroff. Yep, that's us. It combines features of a disk manager and an auto-loader. You can see the files on the disk, view and/or print text, even delete files, with or without the use of a joystick. No address mentioned but send a check made out to him via NUTMEG TI 99ers, c/o Janet Ryan, 10 Jolly Rd. Ellington, CT 06029.

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Gleanings from Micropendium

Vol.6 No.2,March,1989

Feedback.....Page 8
-Press delays: meeting production deadlines -Agrees with Bingham: understandable documention
-Reviews fall short
-Myarc support felt to be lacking
-Needs printer help for module, typewriter -Sector editor solution
BASIC.....Page 10
-Printing random math problems
Extended Basic.....Page 11
-A printer utility that aids programming
Trials of a C99 Beginner.....Page 14
-Two-dimensional, floating-point arrays
Parking your hard disk drive....Page 16
-Or, how to protect that precious data from a bump in the night
Loaders.....Page 24
-First in a series on loaders, modular programming, linkages and overlays
A comparison of selected 80-column analog RGB monitors.....Page 28
1989 Fairs.....Page 29
-Various Fairs and locations for next six months Unfinished MAB on the boards.....Page 29
-Myarc Inc. uploaded "interiainteria" version Micropendium Index 1988.....Page 30
User Supported Software.....Page 31
Myarc Qs & As.....Page 34
-Utility card could add memory to 4A
MDOS.....Page 35
-BAT file loads command prompts
Father and son build portable computer from 4A.....Page 35
Tinygram.....Page 36
-Style-a-line: take control of your printer
MX-1000 Printer.....Page 37
-A printer with lots of options: product review
Home publishing on the 99-4A....Page 38
-Helps you create documents: product review
Micro-Reviews.....Page 40
-Form-Shop,Telsup Ver. 1.5,Boot/Menu Programs(New Versions),Arcade Action Software
Reader to Reader.....Page 41
Newsbytes.....Page 42
-Canadian fairs set for April 29
-Third International TI meeting scheduled
-Asgard announces new releases
-Ray Kazner relocates
-UK users meeting set
-C-CAD relocates
-Box Handler will help lift cartons of paper
User Notes.....Page 43
-Modification to Disk Label II
-Increasing Logo II workspace
-Error found in Supertrace
-Bypass XB autoload with GK fix
-More PEEKs & POKEs
-Computer mortgage lending limits
-Multiple designation for RAMdisks
-Alpha-Lock restriction applies to 99/4 only
-RCSD Pascal tip
-Optional 32K mod to replace 32K card

Gleanings from Micropendium

Vol.6 No.3,April,1989

Comments.....Page 6
-Programs in future issues to be offered on disk
-Listings more readable
-Postal problems should be over
Feedback.....Page 8
-Turbo Copy available?
-Keep dreaming: helping the elderly
-More on joystick (English)
-Another monitor
-Manual printed now
-Slow pace disappoints
-Myarc meets human error
BASIC.....Page 10
-Your TI can keep you in stitches
Extended Basic.....Page 14
-Good help is hard to find
-Trials of a C99 Beginner.....Page 17
Modular programs using the E/A system.....Page 23
-Second in a series
Micropendium Index 1988-Part 2..Page 28
Geneve.....Page 33
-XDIR does directories exceedingly well
Checkbook Manager III.....Page 36
-It's almost too good to be true: product review
TI-Runner Level Editor.....Page 38
-Put the excitement back into the race: product review
MICROreviews.....Page 39
-TI-Writer V4.01: A serious formatter for the TI-Writer
-Artist Borders I,II,III
-Multiplan Printer Codes
Newsbytes.....Page 42
-Tenex remains with TI market
-Trophy offered by Melbourne group
-CPUG schedules fair
-Reviews errs on price
-Italian seeks to form TI users group
User Notes.....Page 42
-The index saga goes on and on
-Program puts digital clock on the screen
-A modification to the SXB mod
-MORTCOMP bugs
-Advice on using SMITH Corona module
-Routine works like NEW in XB programs
-MULTICOL changes
-Garbled output from the formatter
-TIBase autoload
-Spice up prompts

TI-Dings

P. 4

May & June '89

A Page on the Big Blue (IBM) Under
by Henry Hein

The mailing page (masthead) was put together with a little pastemp and the fonts were from ProSofts *FONTASY* program. As the reader can see, it is far superior to the *MULTISCRIBE* program made for Apple. Thus far I have a few pics I could have included but none just appropriate for this page. I hope to make a few or convert some *PRINTSHOP* pics which may enhance next issue.

The text for this issue is done by TIW and *GUNDOCK*, as usual, with my multifont Star NX-1000 printer. By the way, it is offered for less than $150 now by TRI-STATE Computer. See ads in the Tuesday editions of the *NY TIMES*.

Though I forgot to include an IBM page in the last ML I'm definitely not this time! There is lot's of news for our TI members who own or have access to this big machine or its clones.

Let's start with DTP buffs. Some time ago I mentioned two DTPs I got for a Christmas present, namely, *FONTASY* and *PFS First Publisher*. By far, *Fontasy*, (FY) is the easiest to learn and deal with. It is cheaper, too. You can get it and the other thru mail order or computer fair less expensively than thru your neighborhood dealer who mostly deals with businesses who can write off expense accounts. We can't, at least not easily unless we can prove we're in a DTP business.

Compare the price differences in your latest Computer Shopper among the mail order dealers. You may get them for about half your neighborhood dealers' prices.

FONTASY claims to allow graphics pics to be included on a page with one, two, or three column texts. You can use it as a WP as well. You can mix fonts in your text, and do almost anything a DTP program should. Fonts can be enlarged at will up to 2 1/2 times, can be printed in 'dark' or draft modes, along with inserted pics. It has templates for pages, or you could make your own. The latter is also a feature in PFS. Getting the PFS picture files are expensive, however. Shareware pics are available and converter programs, too, at costs of 10 to 20 bucks for FY. Libraries of pics are out there, galore! PFS pics, though, are harder to find and converters into this mode is difficult to find.

The PFS program is harder to learn, on the whole, too. Lot's of help screens, though, but help on help? Sounds ridiculous, doesn't it?

PFS thirsts for an EGA or VGA. Lots of disk manipulation required unless you have at least two soft drives and one hard.

Both programs use up a lot of mem. Best to have 640K or more. They also require a lot of disk space. Keep a few formatted blanks handy with either program. Neither have a formatter program to help you out in emergencies, as far as I know.

PFS's fonts are sticky! Though, like FONTASY, you can't make your own, they are of good quality. FONTASY offers a tool disk at a pretty stiff price for making your own fonts, and PFS offers a number of other fonts at even higher prices without a tool for making your own. PFS fonts are, in many cases, fixed. Italic mode options are awfully dim in PFS printouts. FY's are excellent but there is no option between italic and normal mode, each font that has an italic mode is a distinct independent font that must be called up even for one word or letter. Each FY font can be made bold by using a simple command.

FY requires only a monochrome graphics card and monitor, and looks for a mouse, but not necessary.

PFS printouts are unbearably slow. FY's are much faster. I was surprised, to say the least. Both programs have merit, though, and DO rival the highly touted VENTURA, HARVARD GRAPHICS, and PAGEMAKER which are in the 500+ bucks range.

BOTH FY and PFS accomodate a variety of dot matrix printers, 9 and 24 pin. PFS additionally accomodates JET and Laser printers.

The NEWSROOM by Springboard has dropped its price to under $20 at your neighborhood supermarket. It's a cute DTP but is highly protected. You MUST use its MASTER program disk at all times to work it. The backup you 'can' make can only be used to repair damaged files on your MASTER. It's font reservoir is too childish for me, highly inaccurate in texture, and its Old English font so distorted on baselines and serifs.

Cute, though it's a nice toy for starters and kids, but you do need at least 2 drives, hard or soft, to run easily. Nice price, though.

BIG BLUE DISK, a magazine on disk, comes out once a month. In January, issue 28, there was a great set of tax preparer files to be used with LOTUS 1-2-3 or compatible. I have a compatible called ASEASY6. ASEASY is a shareware program that emulates 1-2-3 in almost everything.

These templates can be used for figuring out your taxes with formulae built in. It also prints out IRS acceptible forms in almost all categories. June's edition has another template called EXPENSE MASTER to help you keep an ongoing record of expenses in various categories for tax purposes, too.

Big Blue Disks are found in some bookstores monthly for $9.95 and can be had by subscription for much less.

Game capabilities of IBM and clones are no worse than APPLEs. Games for IBMs are proliferating rapidly and there are some that teach many skills, such as flight simulation, submarine warfare, helicopter flying, and more. One can learn some navigation, too, and maybe a little Geography along the way. You can learn some of the intricacies of flying a Jumbo Jet Boeing 747, too, in taking off and landing in various atmospheric conditions, and also simulated pilot/tower communications. We've come a long way, baby! Remember the cost of games and cartridges for the TI? I remember the CHESS cartridge I bought for (at a BARGAIN price) $70. For the IBM I can get a chess game that can move its board around for real simulation and display 3 dimensions for under $20, shareware.

I'm not writing this to diminish or belittle our little beastie! I'm still using it and still find it invaluable. Like this ML! It's still a viable fun machine as well as a workhorse in its own right. I only wish there was a TIW for BIG BLUE++ I mean it!

There is much to be said for the wonders that our computers can do for the owner. No matter which kind we own, we can put them to work for a variety of things we never dreamed of in yesteryear. We don't even know half of the many ways they are used nor their potentials in future use.

We TI users were way ahead of time in many aspects of computer technology. As demand rose we were limited to a small memory bank yet programs within its limitations are still being produced which emulate computers with larger memories. That powerful little TI 9900 chip still does wonderful things. Speech, music, graphics, GPL graphics, voice recognition, were all taken for granted by original owners, but these things were far ahead of computers with big memory banks today. A great machine done in by its own manufacturer's marketing practices. It is still viable, and even envied by some technicians as a wonder.

You can bet that improvements such as the Geneve made it faster than the XT, and probably as efficient as the 286 or 386, in some cases. But the average home doesn't need all that hype and memory. We should be satisfied with what we have, be glad we experienced it, and when, should it ever die, go for the new. Too many happy memories keep me from abandoning this great little beastie. Hoping we all feel this way I remain yours truly, *Henry*.

MAY'S MEETING NOTES

May's meeting was somewhat lackluster compared to April's, according to phone conversations. Walt Macieski passed out a few disks from our old library to members for their evaluation. This editor hopes to hear from them soon with a listing and pertinent reviews. Of course, many of them aren't worth a tinker's biggie because of the many better things that were produced in the years since the orphanage began. Remember when TI was too proprietary about their software?

It seems there were a lot of members who had TI ARTIST but didn't know much about using it. Well, thanks to Jim Lambert and John Bonito some apprehensions and mysteries in the application of this program were being cleared with their expert tutelage and demos. More in JUNE!

Meeting dates for the summer were set for JUNE (see cover), July 18th, and August 15th.

There'll be NO edition of *TI-dings* next month. Hope to be able to have a 'double edition' for August.

I'll be touring CANADA! Watch for me you Canadians, I may be dropping in on you! Got your names! Montreal, Ottawa, Toronto, Saskatoon, and Edmonton, etc. Gotta see your wonderful country, too. Haven't been up there for some 20 years and both my wife and I have a wanderlust.

The following articles were borrowed from the Greater Tampa Bay UG with an article worthwhile reading about the SPEECH synthesizer, et al. Guess I was able to squeeze them in!

Speaking About Speech

[Ronald Albright]

The more I read about the "new" developments and software for other machines, the more impressed/infuriated I become with Texas Instruments. Whether you realize it or not, TI was light-years ahead of the remainder of the home computer industry in virtually everything except, of course, consumer marketing and common sense. One of the features which remains the industry leader and is, at the same time, the most neglected and overlooked feature available for our machine is the Text-To-Speech access. With the speech synthesizer and the Terminal Emulator II cartridge (or disk-based Text-To-Speech program for XB), you have a feature unrivaled on any other machine. Sure, others have "speech" and some even boast "unlimited vocabulary", but, if you have ever heard these facilities on another machine, you realize how far ahead TI was (and still is) in synthetic speech. What I would like to do in this article is give you an overview of speech synthesis on the TI and, hopefully, revive some interest in this incredible facility. The chip used in our speech synthesizer is the TMS5220, a p-channel MOS device packaged in a 28-pin DIP. It is a second-generation speech chip, which followed the TMS5100 used in the Speak and Spell toys appearing in 1977. While the TMS5220 is capable of all 3 types of synthetic speech (linear predictive coding, wave-form modulation, and phoneme-stringing), our machine uses the most memory-efficient form linear predictive coding, or LPC (but has capability for allophone-stringing). LPC in our machine requires a small 3K memory to hold the 128-allophone library, 7K to accomodate the 650-rule TEXT-TO-SPEECH set for translating English-language text into allophonic equivalents and for contouring inflections with the help of pitch modifiers to help make the speech more natural. The allophone library and the rules for stringing them are held in the TEII 6ROM chips. The synthesizer holds the speech chip and the resident speech vocabulary (memory location >9000).The system is not perfect (as you may have learned HOPEFULLY by experience) but even with this small ROM requirement, TI achieved 92% translation accuracy. You can correct the remaining 8% with changing text. Let us digress for clarity. Of what do we speak when we discuss allophones? Allophones are the most fundamental of any of the other linguistic components, including phonemes, diphones, and morphs. An analysis of the English language shows that about 40 allophonic sound characteristics can provide the needed variations for all 45 standard phonemes. For example, the phoneme for the letter "p" in English is rounded and aspirated in the word "poke", rounded and unaspirated in "spoke", aspirated in "pie", slightly aspirated in "taper", released in "appetite". These acoustically different "p"'s - so-called voiceless bilabial stops - are allophonic variations of the phoneme "p". Thus, allophonic speech produces better quality than phonemics, because the allophones provide most of the subtle variations each English phoneme can encompass AND use each variation in the appropriate relationship. Phonemic speech sounds mechanical and is limited, allophonic speech is much better though still not perfect...the transition between allophones make the speech sound unnatural and intonations are charcteristically monotonic. But allophonic speech is an ideal compromise based on size of vocabulary, memory requirements, quality and versatility of speech. So, knowing that we use a allophonic speech system, how does it work, in generalities? Text, from keyboard input, is converetd into the appropriate allophones, which are then converted into LPC data which activates the TMS5220 to generate immediate speech. Well, its not quite that simple. For the text to be converted to the "appropriate" allophones, rules must be applied; 650 rules, to be exact. The rules, based on a U.S. Navy Laboratory system, are complex to say the least. For example, in the process of translating the word "space", the allophone-stringing algorithm looks first at the "s" and supplies an initial allophone for /s/. But for the "p", it finds a rule where the left environment is an "s". Also, since the "p" is not a final sound, the algorithm translates the "p" accordingly. Next the rule is invoked that applies to an "a", where the right-sided environment consists of a single consonant and the word ends with a word-final silent "e". This rule selects the appropriate "long-a"

allophone. Finally, the rule for 'ce' inserts an /s/ component in the allophone string to replete the 'c' in the text; the rule says the 'e' is silent. As we have stated, 92% of the time, the rules work...not bad! Compound words give it problems, often easily corrected by hypenating...e.g. "base-ball". Not only does the TI system convert text to component allophones, it also, through the rule set, translates secondary and primary speech-stress points into pitch variations. Contouring algorithms divide sentences into two major stress profile types: a falling mode, where the pitch level drops following a primary stress point (as occurs in a normal sentence making a statement), and a rising mode, which occurs in sentences terminating in a question mark. This adds even more normal quality to speech. Remember how many times your have heard "Ready to start?"...notice how the pitch varies in a rising tone on 'start'. So, all in all, a very complex system that TI engineers gave us. We have sparse but utilitarian documentation in the TEII manual. It discusses, ever so briefly) how to access both the text-to-speech via "OPEN #1:'SPEECH', OUTPUT" and the allophone library directly, through "OPEN #1:'ALPHON',INTERNAL". It briefly defines the manual override feature to vary pitch and slope through the "//XX YY". Perhaps this feature deserves more comment. You can vary greatly the pitch and slope of speech through the use of the //xx yyy command. I have heard a sparse few program where the computer actually sings. The most recently published was the "ABC SONG" seen in Tigercub Tips
(Jim Peterson, Tigercub Software, 156 Collingwood Ave., Columbus, Ohio 43213). Look at that program, and see how Jim changes the pitch and slope to poduce synthetic singing. The key formula is one which were the slope is calculated from the set pitch through Y(slope)=(X(pitch)/10). We are told in the manual (p. 34), that this gives the best results. So, by changing the pitch to simulate singing of notes and adjusting the slope through this formula, we can approach singing. Further, we can set stress points in our own text through use of " " (sets primary stress point in a sentence), "_" (sets secondary stress points within a sentence, and ")" (shifts stress points within a word). So, we need not rely on the 92% accuracy TI accomplishes with the rule set...we can achieve realism approaching 100% with manual symbols input within our text.

Through "OPEN #1:'ALPHON', INTERNAL" we can directly access the 125 alphons (but we said 128; 126 and 127 are pauses) in the TEII Grom library. They are listed in the manual with a rather Spartan description of their use. They are strung together as CHR$ statements;
CHR$(10)&CHR$(22)&CHR$(x)....Again, we are allowed to change pitch and slope through manual input. This time, by sending a CHR$(252)&CHR$(xx), where the CHR$ statement following a CHR$(252) sets a new pitch and CHR$(251)&CHR$(yy) where CHR$(251) changes slope to the following CHR$(yy). Stress points can be set with CHR$ numbers 253 (primary stress with rising contour), 254 (primary stress with falling contour), and 249 (secondary stress point). While you can change pitch and slope of allophones, the only way (I know of) to increase the _uration of the sound is to string allophones, i.e. CHR$(N)&CHR$(N)&CHR$(N) to increase the duration of allophone "N" three fold. A way to implement the RPT$ function in BASIC would do the trick!

What follows is a marvelous application for what we have learned about speech and allophones. There are other ways to use the marvelous utility of speech. I hope we can revive interest in the easily accesable facility and incorporate its technology into more programs.

The following 2 program listings were either written by (Program 1) or inspired by (Program 2) Howie Rosenberg, of the TI Forum EMB. They reflect an innovative way to use speech on the TI...i.e. music and sound effects. Program 1 plays a musical tune through several different allophones which simulate (to my ear) everything from a trumpet to a guitar. Program 2 simply loops through a musical scale with several of the 125 alphons to deamnstrate the possiblities. Try both and try variations yourself!

PROGRAM 1 by Howie Rosenberg

```
100 CALL CLEAR
110 DIM X(23)
220 DATA 1,3,4,5,7,13,14,15,32,37,59,
64,69,75,76,77,79,81,83,85,93
230 OPEN #1:"ALPHON",INTERNAL
240 RESTORE
250 FOR M=1 TO 21
260 READ X(M)
270 NEXT M
280 FOR M=1 TO 21
290 N=X(M)
300 PRINT M
310 A$=CHR$(252)&CHR$(21)&CHR$(N)&
CHR$(N)&CHR$
330 C$=CHR$(252)&CHR$(11)&CHR$(N)&
CHR$(126)
340 D$=CHR$(252)&CHR$(5)&CHR$(N)&C
HR$(126)
350 E$=CHR$(252)&CHR$(54)&CHR$(N)&
CHR$(N)& CHR$(N)&CHR$(N)&CHR$(N)&
CHR$(N)&CHR$(126)
360 F$=CHR$(252)&CHR$(50)&CHR$(N)&
CHR$(252)&CHR$(48)&CHR$(N)&CHR$(25
2)&CHR$(45)&CHR$(N)&CHR$(252)&CHR
$(38)
370 ARP$=A$&B$&C$&D$&E$&F$&CHR$
(N)&CHR$(126)
380 PRINT #1:ARP$
385 PRINT X(M)
390 NEXT M
400 CLOSE #1
```

PROGRAM 2

```
100 OPEN #1:"ALPHON",INTERNAL
110 DATA 54,53,52,51,50,48,47,45,44,4
3,41 3,4,5,7,13,14,15,32,37,59,64,69,
75,76,77,79,81,83,85,93
```

```
140 DIM X(36)
150 DIM A(12)
160 FOR Y=1 TO 36
170 READ X(Y)
180 NEXT Y
190 FOR Z=1 TO 12
200 READ A(Z)
210 NEXT Z
220 FOR AA=1 TO 12
230 S=A(AA)
240 FOR Y=1 TO 36
250 N=X(Y)
260 PRINT #1:CHR$(252)&CHR$(N)&CHR$(S)
270 NEXT Y
280 NEXT AA
290 CLOSE #1
```

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TI BITS Number 16 & 17
By Jim Swedlow

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[This article originally appeared in the User Group of Orange County, California ROM]

ON DISKS AND DRIVES

A while back the Disk Doctor attended one of our meetings. He had a number of interesting things to say. Since some of you missed it, here are a few of his comments.

o Don't clean your drives until you need to. Your system will tell you when it is time - you will have trouble reading disks.

o When you do clean your drive, use any brand name commercial disk drive cleaner and follow instructions.

o If this fails, you need to have your drive cleaned professionally. If you want to try yourself and you have a double sided drive, be careful with the second read/write head. It is very, very easy to bend the bracket to the point that the head must be realligned.

o He has tested the amount of residue left on heads with brand name disks ($1.00 + each) and the cheepies ($0.25 or so). He found no difference. This doesn't mean that they are of equal quality, only that the cheepies are not dirtier.

o He opposes flippies for single side users. His point is that when you flip the disk and it runs backwards in its cover, dirt is loosened and spun into your drive.

o His overall advise is the first rule of engineering: If it ain't broke, don't fix it.

SOME MORE THOUGHTS ON BACKING UP DISKS

Over the years I have mentioned the importance of backing up your disks. Simply put, disk drives eat disks. On the first weekend of October, I was working on some letters. This was the weekend where the temperature was well over 100 degrees. I blew both my word processing disk and my data disk.

I had a backup of the word processor, but it was not configured. That night, after it cooled down a bit, it took me about half an hour to recreate a working disk. The data files were simply lost.

The moral? Keep two back ups of your program disks. One of the disk as you received it (the master) and one of your configured working disk (back up working disk). Don't forget to back up your data disks every now and then. This will save you time and aggravation next time your drive gets hungry.

TI WRITER's INCLUDE FILE

One of TI Writers nicer features is Include File (.IF). It has a few limitations, but it extends TI Writers capabilities.

TI Writer cannot work on large files. No books in one file here. As you reach the size limit, the time it takes to load and save files increases markedly. Include File to the rescue.

Suppose your have written two chapters of your next book. Your named your files CHAPTER1 and CHAPTER2 (very original). At the end of Chapter 1 (the very last line), add this:

```
.IF DSK1.CHAPTER2
```

Name CHAPTER1 for the Formatter and it will print both chapters. All the formatting commands you set for Chapter 1 will be used when Chapter 2 is printed, so you don't have to restate the margins and such.

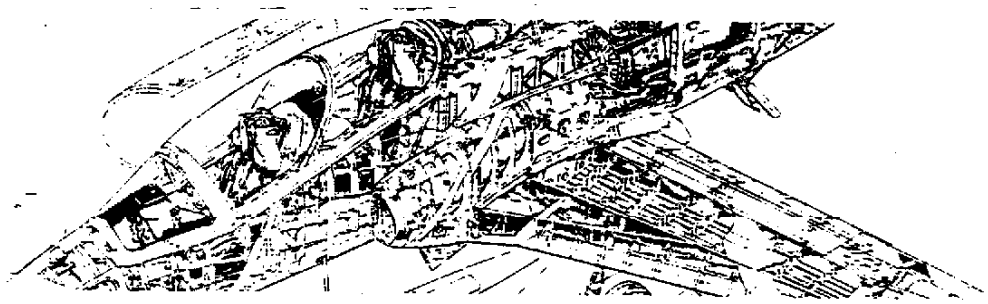
Ah, you finish Chapter 3. No problem. At the end of Chapter 1, add another line:

```
.IF DSK1.CHAPTER3
```

You cannot do this at the end of Chapter 2, as you can't chain these commands. Also note that you must specify the drive number (DSK1 in this case).

I prefer to make a master file (called CHAPTER0) will all of the .IF

TIdings
P. 8
May & June '89



From the Suncoast Beeper - St. Petersburg, FL. 3/89

ON THE BACK BURNER.....Jean Wilcox

TI-Writer can be a strange and wonderful thing, sometimes more strange than wonderful. Two of our members recently asked me how to load a file that was so large it locked up the machine when attempting to access it. The answer I gave them was an explanation of a method I have used many times. As many of you know, it's possible to continually dump ASCII information to a file opened in APPEND mode until the entire disk is full, all 358 sectors in the case of a SS/SD disk, without overwriting any of the preceding work. The most often encountered file of this type would be the file you open to dump the contents of the capture buffer of a terminal emulator program like Mass Transfer or Telco. Both of them will continue to append data, i.e., add it to the end of the filename you have specified. This is hot stuff until it comes time to try and read it or manipulate it in some way or other.

In the event all you want to do is read it, then not to worry. As I think mentioned in another article some time back, you can generally read it with a file reader like the one found on BOOT or the old HACKERJOY, and you can always read it with the editor of the E/A cartridge. But if you should want to do something with it, edit it, change it, reformat it, whatever, then it's tough huckleberries without a little maneuvering on your part. It'll lock you up every time.

I have, on too many occasions to count, neglected to start a new file when the old one was getting too fat and thus ended up with a monstrous 300-400 sector job which was totally unmanageable. The best way I have ever come across to handle this situation was to load it in piece by piece. I generally will bring it in by using the conservative approach of typing LF (LoadFile), <enter>, 1 200 DSKn. filename. This gets you the first 200 lines of the thing. Then save it out (preferably on a clean disk) under a new name, maybe DSKn. PART/1. Then purge your TI-W buffer with P, then Y(es), (you really mean it), and load up the next section by asking your machine to please LF, <enter>, 201 400 DSKn. filename. Here's the next 200 lines, which can now be re-saved as before on your new disk under the imaginative name of DSKn. PART/2. Keep this up until you have it all or you get an error message that most often means you have asked for more lines than you have. Sometimes that will happen and since you don't know what the last line number is, request, very nicely, the last one you successfully loaded, plus one, and E, which signifies END. That should satisfy the program under most circumstances, unless it's having a particularly bad day.

Now that you have all the chapters of your great American novel, you can proceed to make it into a book. Do whatever you need to each individual file to satisfy your creative instincts, and when you're ready to print it out, begin a new file with a completely new name, BOOK, or TOTAL, or ALL/OF/IT. In this file you are about to create there will be nothing but a few lines of formatter commands, because it MUST be printed through the formatter. The editor won't do. If you have any special requests about print style, or margins, or fill, or adjust, then specify those FIRST. When that stuff is taken care of it's time to put the pieces back together. On a line by itself, type .IF DSKn. PART/1, followed by a carriage return. The IF is shorthand for Include File, and it must be preceded by a period. The second line will be an exact duplicate of the first except the filename will be PART/2. Carry on until all your chapters are listed in this form. This file is the one that will be put through the Formatter, and all your deathless prose will be printed without a single character being lost in the process. It works every time, it's easy to remember, and it won't lock up the system. Plus the fact that if you do any editing or rewriting of the material, it will be in small, easily managed chunks instead of one unwieldy mass.

So now that I have gone into some detail about the wonderful part of TI-Writer, it's time to get on with the strange. Just now, before I started writing this, I decided to see exactly how much data I could get into the editor before it told me "BUFFER FULL, PURGE, SAVE, OR DIE", or something to that effect. I held down the J key until I had ten lines of Js. I told it to Copy, <enter>, 1 10 10, which is to say, copy lines 1 to

Continued on page 4

Courtinued from page 3

10 and put them after line 10. That gave me 20 lines of copy. By repeating this process, thus doubling the amount of material in the buffer with each Copy command, I soon had very nearly 200 sectors. Once in awhile, I'd change the letter being used to something else so I could be sure new material was getting in there. I saved it to disk with no trouble, used Show Directory to check the size of the file, then purged the buffer. That way, when I attempted to re-load the file, I could be positive it was all on the disk for sure and not hiding out somewhere in the expansion memory. I then began adding 50 line increments to the file trying to find the spot at which the buffer refused to handle any more. It never happened. I ended up with exactly 358 sectors on the disk, exactly 1071 full lines of copy (no spaces, remember), before I got the 04 error message, meaning the disk was full and would accept no more.

I purged the buffer again, loaded from disk, and it was all there, every line of it. I went to line one and changed it from a line of Js to NOW IS THE TIME FOR ALL GOOD MEN. I changed line 550 to THE QUICK BROWN DOG. And I changed line 1071, the last one, so that it ended with THIS HERE IS ALL THERE IS. Surely by saving this and then bringing it back in I would discover that something was pretty rotten in the state of Denmark and I could prove my hypothesis that it was completely impossible to save that much stuff and then retrieve it without a disaster. No Sir, and/or Madam. I saved it all and I got it all back. There is no moral to this story, (which I swear to you is true), unless it's that there is an exception to every rule, including this one.

Which brings me to the smile of the day, which fits right into my present frame of mind. I found this in the November issue of OH-MY-TI, and is reprinted with thanks.

HAVE YOU HEARD?
by Kent Sheets

If you work with computers, you have to maintain your sense of humor. Recently while shopping at one of my favorite computer stores I noticed several signs apparently made with a printshop program. Most of these signs seem to be true. They are provided for your enjoyment.

LAW OF ERROR

All computer programs contain errors until proved otherwise-which is impossible. Investment in reliability will increase until it exceeds the probable cost of errors, or somebody insists on getting some useful work done.

To err is human, to be able to blame it on a computer is divine...MURPHY

A computer program does what you tell it to do, not what you want it to do
....GREER'S THIRD LAW

If you put tomfoolery into a computer, nothing comes out but tomfoolery. But this tomfoolery having passed through a very expensive machine, is somehow enrobled, and no one dares to criticize it....GILLCIS'S REVELATION

IF ALL ELSE FAILS, LOWER YOUR STANDARDS....Gill's Rule (and mine.....J)

Some of my latest grafitty for office, kitchen, bedroom, and..?.. — June —

71-dings P. 10
May + June '89

enjoy,
Henry

NOTICE

While in here speak in a low, soothing tone and do NOT disagree with me in ANY manner.

Please be informed that when one has reached my age, noise and nonconcurrence cause gastric hyper-peristalsis* hyper secretion of hydrochloric acid, and rubus of the gastric mucosa.....And I become most

UNPLEASANT!

Scripsit: H. Hein

May He support us all the day long,
'til the shadows lengthen,
the evening comes,
the busy world is hushed,
and the fever of life is over
and our work is done.
Then in His mercy
may He grant us a safe lodging,
a holy rest,
and peace at the last.
Amen.

Cardinal Newman's Prayer

GOOD BETTER BEST
NEVER LET IT REST
UNTIL THE GOOD
IS BETTER
AND THE BETTER
IS BEST!

Baker's Motto

We, the willing,
Led by the unknowing
Are doing the impossible
For the ungrateful
We have done so much
For so long,
With so little.
We are now qualified
to do anything
With Nothing!