

The Boston Computer Society

TI-99/4A User Group

Meeting Newsletter

AUGUST 1989

Edited by Justin Dowling

C.COLUMN

by Donald L. Mahler

As time continues, slightly different forms of c99 are becoming available. The biggest difference is, of course, between the versions for the 99/4A and the 9640. This is most apparent in the handling of floating point numbers and graphics. For example, let us start with a simple floating point code I presented in the Dec86 Newsletter, using Tom Bentley's floating point-point routines: /* sphere for 99/4A */

```

#include dsk3.floati
#define x 8 /* constants */
int n=4;int d=3;
main()
{
spher(); /* call function */
putchar('\n');
puts(" YOU NAME UNITS!");
spher()
(char *p; float PI[x];
/* declare float pt numbers */
float a[x];float b[x];
float r[x],r2[x],r3[x];
float rs[x]; float f[x];
float v[x]; float sf[x];
char s[x],op[2]; p="3.1415926";
itof(n,a); itof(d,b);/*int to fp*/
stof(p,PI); /*string to fp */
fexp(a,"/",b,f);/*do calculations*/
locate(19,3); /* spot for text */
puts(" THE VOLUME OF A SPHERE IS \n ");
puts(" 4/3 THE CUBE OF THE RADIUS \n");
puts(" TIMES PI \n\n");
puts(" THE SURFACE AREA OF A SPHERE \n ");
puts(" IS THE SQUARE OF THE RADIUS \n ");
puts(" TIMES 4PI \n");
puts(" Enter the radius: ");
fpget(s,r); /* get input */
fexp(r,"*",r,r2); /*r2=r squared */
fexp(r,"*",r2,r3); /*r3=r cubed */
fexp(f,"*",r3,rs);
fexp(rs,"*",PI,v);
putchar('\n'); putchar('\n');
puts(" Volume of the sphere is \n");
puts("\40 \40 \40"),
/* 40 octal=32 dec='space' */
fpput(v,s); /* print result */

```

```

putchar('\n'); putchar('\n');
fexp(a,"*",PI,rs); putchar('\n');
fexp(rs,"*",r2,sf); putchar('\n');
puts(" Surface of the sphere is \n");
puts("\40 \40 \40"),
fpput(sf,s);
puts("\n\n\n\n");
/* and return to main */

```

We can modify this slightly by using Charles Kirkwood's MATH FUNCTIONS; note the different handling of squares and cubes:

```

/* sphere for 99/4A */
/* Kirkwood math functions */
#include "dsk3.MATHI"
#define x 8 /* constants */
int n=4;int d=3;
main()
{
spher(); /* call function */
putchar('\n');
puts(" YOU NAME UNITS!");
spher()
(char *p; float PI[x];
/* declare float pt numbers */
float a[x];float b[x];
float r[x],r2[x],r3[x];
float rs[x]; float f[x];
float v[x]; float sf[x];
char s[x],op[2]; p="3.1415926";
itof(n,a); itof(d,b);/*int to fp*/
stof(p,PI); /*string to fp */
fexp(a,"/",b,f);/*do calculations*/
locate(19,3); /* spot for text */
puts(" THE VOLUME OF A SPHERE IS \n ");
puts(" 4/3 THE CUBE OF THE RADIUS \n");
puts(" TIMES PI \n\n");
puts(" THE SURFACE AREA OF A SPHERE \n ");
puts(" IS THE SQUARE OF THE RADIUS \n ");
puts(" TIMES 4PI \n");
puts(" Enter the radius: ");
fpget(s,r); /* get input */

```

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```

/* here is the change */
an(r,2,r2); /*r2=r squared */
an(r,3,r3); /*r3=r cubed */
fexp(f,"",r3,rs);
fexp(rs,"",PI,v);
putchar('\n'); putchar('\n');
puts(" Volume of the sphere is \n");
puts("\40 \40 \40");
/* 40 octal=32 dec='space' */
fpput(v,s); /* print result */
putchar('\n'); putchar('\n');
fexp(a,"",PI,rs); putchar('\n');
fexp(rs,"",r2,sf); putchar('\n');
puts(" Surface of the sphere is \n");
puts("\40 \40 \40");
fpput(sf,s);
puts("\n\n\n\n");
/* and return to main */

```

Finally, we can use Clint Pulley's new c99 for MDOS; we are in 80 columns and have substituted "flop" for "fexp":

```

/* sphere for 9640 */
#include a:"stdio_h"
#include a:"float_h"
#define x 8 /* constants */
int n=4;int d=3;
main()
{putchar('\f');
spher(); /* call function */
putchar('\n');
puts(" YOU NAME UNITS\n\n");
exit(0);}
spher()
{char *p; float PI[x];
/* declare float pt numbers */
float a[x],float b[x];
float r[x],r2[x],r3[x];
float rs[x]; float f[x];
float v[x]; float sf[x];
char s[x],op[2]; p="3.1415926";
itof(n,a); itof(d,b);/*int to fp*/
stof(p,PI); /*string to fp*/
flop(a,"/",b,f);/*do calculations*/
puts(" THE VOLUME OF A SPHERE IS ");
puts(" 4/3 THE CUBE OF THE RADIUS ");
puts(" TIMES PI \n\n");
puts(" THE SURFACE AREA OF A SPHERE ");
puts(" IS THE SQUARE OF THE RADIUS ");
puts(" TIMES 4PI \n\n");
puts(" Enter the radius: ");
fpget(s,r); /* get input */
flop(r,"*",r,r2); /*r2=r squared */
flop(r,"*",r2,r3); /*r3=r cubed */
flop(f,"*",r3,rs);
flop(rs,"",PI,v);
putchar('\n'); putchar('\n');
puts(" Volume of the sphere is ");
fpput(v,s); /* print result */

```

```

putchar('\n'); putchar('\n');
flop(a,"*",PI,rs);
flop(rs,"*",r2,sf);
puts(" Surface of the sphere is ");
fpput(sf,s);
puts("\n\n");
/* and return to main */

```

INTRODUCTION TO THE UCSD P-SYSTEM by RON WILLIAMS

This month I will try to do something a little different I will go into setting your printer for different type print using UCSD Pascal I think you will find it to be quite easy. I will also give you a small printer setting program or procedure that you could use as a program all by itself or as a procedure you could add to a program. I use a very similar procedure in a few programs I currently use to set my printer. I have found that many times programmers in the P-system do not put in printer setting procedures in their programs this could be because there are so many different printers being used well I will show you how all the commands work so if my program will not work with your printer you could change the program to make it work with your printer.

The program is as follows: Program print;

USES SUPPORT;

```

var
pfile :text;
answer : char;
code : integer;

```

procedure codes;

```

begin
gotoxy(1,21);
write('Enter codes one number at a time');
repeat
gotoxy(1,22);
write('Enter 500 when finished=>');
readln(code);
gotoxy(26,22);
write(' ');
if code <> 500
then
write(pfile,chr(code));
until code = 500;
writeln(pfile,chr(7));
gotoxy(1,21);
writeln(' ');
writeln(' ');
end;

```

begin

```

rewrite(pfile,'PRINTER:');
page(output);
set_screen(0);
set_scr_color(1,8);

```

```

set_screen(1);
gotoxy(1,1);
writeln('printer set up');
gotoxy(1,3);
writeln('(1)condensed pica');
gotoxy(1,5);
writeln('(2)condensed elite');
gotoxy(1,7);
writeln('(3)skip perforation');
gotoxy(1,9);
writeln('(4)double strike');
gotoxy(1,11);
writeln('(5)letter quality');
gotoxy(1,13);
writeln('(6)expanded print');
gotoxy(1,15);
writeln('(7)cancel paper out');
gotoxy(1,17);
writeln('(8)reset printer');
gotoxy(1,19);
writeln('(9)enter your codes');
repeat
  repeat
    gotoxy(1,21);
    write('enter choice=>');
    gotoxy(15,21);
    readln(answer);
    case answer of
      '1':
writeln(pfile,chr(15),chr(27),chr(71),chr(7));
      '2':
writeln(pfile,chr(27),chr(77),chr(15),chr(27),chr(71),
chr(7));
      '3':
writeln(pfile,chr(27),chr(78),chr(6),chr(7));
      '4': writeln(pfile,chr(27),chr(71),chr(7));
      '5':
writeln(pfile,chr(27),chr(120),chr(49),chr(7));
      '6':
writeln(pfile,chr(27),chr(87),chr(1),chr(7));
      '7': writeln(pfile,chr(27),chr(56),chr(7));
      '8': writeln(pfile,chr(27),chr(64),chr(7));
      '9': codes;
    end;
  until answer in ['1'..'9'];
  gotoxy(1,21);
  write('continue set up Y/N=>');
  readln(answer);
  gotoxy(1,21);
  write(' ');
  until (answer = 'N') or (answer = 'n');
close(pfile,lock);
page(output);
end.(*print*)

```

This program should work with most Epson compatible printers I think the worst that could happen that the one touch key presses would not work the enter your own codes section should work with just about any printer. This program shows you just how easy it is to change your printer settings in UCSD Pascal. The

program starts with a uses statement this is to get a function out of the library this function will let me set the screen color you can change it to anything you want the first number in the function set_scr_color is the color of the text and the second number sets the screen around the text. The program currently sets the text to black and the screen to medium red. After this the program will display the nine choices some you can set the printer with one key press but the ninth choice will let you enter you own codes this is because there are many printer setting codes and I could not put all of them in the menu of choices with out the menu being very large. The ones I did choose are the codes I use most of the time. Try going to the enter your own code section and setting the printer to condensed elite print with subscripts some very small text is possible. My codes are 27,83,1 for subscripts and then press condensed elite after typing in "500" to exit this procedure the text printed out on the printer will be very small you could also change the line spacing to make the print more spaced evenly. I sometimes like to print disk directories like this for disk jackets and now you can do this in the p-system by printing out a volume directory in the Filer program after setting the printer. Remember that the printer will be set this way even after you exit the p-system shutting off the printer or printer reset is the only way to set your printer back the way it was. The program uses the chr function quite a bit this is very close to the chr\$ function in Extended Basic. The chr function will let you set the printer codes, by putting in the proper codes from your printer manual you can set your printer for any thing it is capable of doing. Also you can put in your own codes as needed if some of these codes do not work with your printer. Try entering in the codes first using the enter your codes section of this program to make sure they work correctly. This program also uses the case statement which is somewhat like the on goto function in Basic. This function lets each statement to set your printer work separately. Well I hope this program will be useful to you thanks, thats it for this month.

Almost...
The Boston Computer Society
TI-99/4A User Group
Meeting Newsletter
August and a half 1989

Random Ramblings

By J. Peter Hoddie

It may have been a couple months since I have written anything too profound for the BCS (or anything at all), but that doesn't mean you got rid of me. Actually this really isn't even much of a newsletter. It is 2:13 Wednesday afternoon and the meeting is about 5 hours away (ok 6 if you count the customary late start...). I'm sitting here at the BCS office putting together a few notes on the status of various things because I got the news that there would not be an official August newsletter (Justin is allowed a vacation once in a while). This would ruin our claim that this newsletter publishes every month. We were already purged from one user groups exchange list because our quality wasn't high enough - I would hate for the BCS to get grief for missing a month!.

I wanted to give some really great demos at the meeting tonight. Unfortunately, a certain individual (who will remain nameless) borrowed my hard disk controller before I left and hasn't returned it yet. This makes it impossible to boot my Geneve. So I didn't have a chance to prepare a demo (would that be so unusual..) Oh well. I'll use this space to pave the way for some new products, new product ideas, projects, and rumors and rebuttals.

TI Shows

There's a bunch of TI shows coming up. The "World's Fair of TI Shows" or something like that, is being held in Washington D.C. the weekend of September 16. I intend to be there - it sounds like there will be a lot of big names - people who are worth talking to like Al Beard, Jerry Coffey, Jeff Guide, Jim Horn, Chris Bobbitt, Tony Lewis, Barry Traver, rumor has it MYARC, I would guess Walt Howe (but you see enough of him locally, right?), and probably many more that I have forgotten (at one point I heard the Ottawa gang would be there - don't know about the status of that though). Two weeks later and three thousand miles west is the annual bash in Seattle. I've heard that I'm supposed to go since it is relatively close to my new home base. It too should be an interesting affair, and I may well be there.

The annual and ever mobile Fest-West is being held in sunny Tucson Arizona this year sponsored by the SouthWest Ninety-Niners. The people from this group have always been a strong and enthusiastic force at previous Fest-Wests and I expect they'll put on a fine show. The material they sent out had lots of information on tourist stuff in the area - so mark February 17 and 18 down on your calendar for your south western vacation and TI show. The prices for vendor tables are a fraction of their previous cost as well.

And of course, the Chicago group will put on their annual monster bash this year. I don't have the exact date, but the first weekend in November is usually a safe bet. I expect to be there as well. Lots of travel in my future, I guess. And those airplanes are so safe. For those of you who don't already know this minor fact: when I go to a TI show I tend to represent Genial Computerware, The Boston Computer Society, and any other worthy cause that contacts me in advance. And I always like to give a casual presentation/demo/bull-session at some point during the day. I just like to hear myself talk (or type) mostly.

New Book

At the Washington D.C. show, Tony Lewis hopes to be able to premier his new technical manual for the TI. His plans are to create a single reference manual that TI developers can turn to for hardware and software information pertaining to peripheral design for the TI. It may not be for everyone, but for those with an interest in the guts of how to TI works it looks like it will be a must have. Tony has sent draft copies out to many TI developers including myself, Mike Dodd, John Johnson, and Paul Charlton. Tony realizes this job is too big for one person, and is seeking help in what I consider respectable corners. He has sunk much money into copying and mailing, not to mention long hours in writing. When the official announcement arrives, please consider supporting this venture.

Asgard News

Since Washington is right next to Maryland and Asgard is located in Maryland, I have now created a transition to the next subject. Chris Bobbitt (who probably only uses one 't' in his name....) publishes a newsletter aimed at the entire TI community. The publication is called "Asgard News" and it provides general TI information, sort of a MICROpendium supplement. I know little about the publication or the subscription price, as I don't get it. I do find it a bit unusual that a major software company such as Asgard would publish a newsletter and try to pass it off as anything other than self promotion, propaganda, and expensive advertising. Major software companies like Microsoft, Claris, Ashton-Tate, and Word Perfect publish free newsletters for their customers. These newsletters publish information about the company's products and those vendors that they support. Clearly Asgard could claim no more. I sincerely doubt that if Genial were to release a word processor to compete with Press (called Press-ure...), that it would receive mention in Asgard News (unless of course it were to be roasted). I haven't heard AV-Indexer or Graphics Expander mentioned, perhaps because they directly compete with Asgard products (but then you don't hear me singing the praises of TI-Base in these pages, though I probably should since I hear that it is a good product for those willing to tackle its dBase II structure). I should mention here that it is pretty common knowledge that Chris and I don't get along all that well these days.

Continuing with some specifics. In Volume 2 Number 1 of Asgard News on page 20 (the Rumors section) there is some news about Paul Charlton's MDOS development system, GenProg. The headline reads "M-DOS Development Package Late." It states "no word is available when it will be making its appearance, but rumor has it that only the documentation is awaiting completion." This is no rumor. Anyone who asks, in public or private, either me or Paul will get this answer. Over 200 pages of

technical documentation exists. Much of the documentation could not be finished until recently because MDOS was changing as MYARC worked to finish Advanced BASIC. They further write, "But then, we first heard this rumor a month ago - how long can a manual take to write?" Actually we first heard this "rumor" in April when we began distributing partially finished versions of GenProg to those who wanted it as soon as possible. And to answer the question, a good manual can take many months to complete. I can understand Chris' amazement that a program could be finished, but not shipping because documentation is incomplete. After all, Asgard is hardly known for its quality documentation. In fact, the Asgard documentation that Chris has written has been poorly reviewed in many user group newsletters, and even in Computer Shopper. From comments at a recent CompuServe conference with MYARC it is clear that Asgard is rather upset with MYARC because Asgard didn't get the opportunity to market GenProg.

As for Asgard complaining about software shipping late, Press is coming up on its one year anniversary of non-shipment in November, and it still isn't shipping (this is not meant in anyway to be an assault on Charles Earl, who has my support and sympathy). Chris' two page ad for the product in MICROpendium produced many orders, but what have those customers received? Something about glass houses comes to mind.

Further down in the rumors column is a headline that reads "Genial Relocates?" It states "The major partner of Genial Computerware, J. Peter Hoddie, has announced that he is re-locating to the San Francisco area." Actually there are three partners, and all is created and shared equally. He continues, "A recent graduate of Boston College, Mr. Hoddie is evidently taking his newly minted Engineering Degree to employers in the thriving Silicon Valley area, away from ailing Massachusetts." Actually I attended Boston University - the only time I was at B.C. that I can remember was to see the movie "Say Anything" at a theater near the B.C. campus. I guess Chris can relate to the title of the film. As for "ailing Massachusetts" - I tend to disagree, but so goes. My reasons for heading west had nothing to do with dissatisfaction with Boston. In fine reporting tradition he continues "No word is available at this time of his future plans for Genial." Read the June BCS Meeting Newsletter (mailed to most user groups in the country) for the details.

Asgard News does state at the top of its "Rumors" column that "items reported below are ether incomplete or unconfirmed, and hence Asgard Publishing will happily publish a correction if necessary." Keep your eyes wide open...

I'll probably get sued for something up there. Don't ask me what. I'll try to be good from now on. I don't much care for these feuds.

Genial Computerware Status

Actually there are some plans for change in Genial's future. They have nothing to do with where I am living though. I can't really say much more now because nothing is final. The plans should benefit our customers greatly. Hopefully they will be announced in September.

Genial Computerware does have several products in various stages of completion. Aaron West is slowly going through the MY-Word source code. I'll leave that one to your imagination. Paul Charlton is really working on the GenProg documentation. Mike Dodd is putting together a package of transfer utilities for PC-Transfer users along with another utility that should be a "must-have" for anyone with a substantial pile of TI disks. Wayne Stith is working 90 hours a week on a 9640 version of TRIAD that can do everything except slice bread. He has blazing fast 1K XModem transfers and a full scripting language in the terminal emulator. Let your imagination wander on the other features. Some are really amazing. Warren Agee has given me a beta-test version of the FirstBase update. It will ship free to all registered FirstBase owners in September, assuming no major problems are found. It includes fuzzy searches, faster searches for sorted data, and many other features and fixes. Watch for more FirstBase news in the fall. Don and Aaron West's AV-Indexer, audio and video cassette label maker/librarian, is complete and will ship next week. A few projects with some other people are too early to tell. And me? I hope to complete SignShop (or whatever it becomes) in the fall, and I have a couple other major projects stewing that I may work on as well. Let it not be said that Genial Computerware is inactive!

Genial is also now distributing 9640 DISKASSEMBLER and The Bugger by T&J Software.

Quickies

I have a stack of disks for the BCS software library. I put them together in June right before I left and never got them to anyone. I don't even remember what is on them. I will give them to Tom Ward tonight and they will be in the library in September. (that sounds really familiar, no?)

If you are going to sign up for a telecommunications service, consider Delphi. Jeff Guide has done a great job with the TI-Net there.

The very early news about the Boston TI Fayuh sounds promising. More as it develops. Support Justin and the rest of the gang on this one. And yes, I will do everything I possibly can to be in town for the New England TI Fayuh. Remember, I have a job in the "thriving" Silicon Valley...

Graphic Standards

I have been hearing bits and pieces about trying to standardize TI font and instance disk storage formats. Asgard has been one voice promoting this, and I can hardly disagree with the suggestion. TI Artist disk formats are the *de facto* standard these days and they are far from ideal, being slow and big. I have developed a file format (for my SignShop project) that is lean and mean. It is very compact, stores all the data present in any TI-Artist or CSGD font, and is very easy for a programmer to handle. All the details of a picture can be determined by reading the first 128 bytes of the file. All the details of a font can be determined by reading the first 384 bytes. By all the details I mean height, width, amount of memory required to load into memory, what characters are present, their height and width, and other such things. I have a program that converts TI Artist fonts and instances to this format sitting on

my hard drive. If there is interest in the detailed specifications, I will make it available. I could probably even be talked into making the assembly source code public domain since it sounds like a worthy cause.

Macintosh Conversion

I have written a program to convert TI-Writer files to Macintosh text files. It runs on the Macintosh and contains several nifty features to minimize the amount of reformatting required when the documented is ported to the Macintosh. The program has been in use for many months in the production of this newsletter and Genial Computerware manuals. I would like to make this program available to the general public some how. It could be through Genial, the BCS, shareware, or something. I don't want to just give it away. If you are interested in such a program, drop me a note with your ideas and what you would be willing to pay. I will mail detailed information to all who respond when I reach a final decision. By the way, right now the program is called "TI Thing." Help me give it name!! (I also have a program that imports MY-Art pictures under some constrained conditions. We have a color laser printer at work, I should work on this project some more, eh?)

My Status

If you have made it this far - congratulations. I was never known for my easy to read writing style, or entertaining content. Some few of you may be wondering what I have done in the past few months on the left coast. I did get down to L.A. and saw Tom and Terrie (Terrie and Tom?). I didn't get in touch with the San Francisco TI user group, but I probably should at least drop into one of their meetings. I did interview at a few companies. I didn't accept a couple positions offered to me. I did accept a job at Apple about three weeks ago. (I'm working in the PSTG (peripheral software testing group) writing test tools and scripts for abusing the hell out of Apple printers and printer drivers - actually I'm having a pretty good time, even if the word testing is in there somewhere). I didn't buy a car, but I have to in the next week or so. I did find a good Ethiopian restaurant (the yuppie food of the 90's) in Berkeley (with some help from Paul Charlton). I didn't find my own place to stay yet, but mostly that's because I'm lazy. I did attend a few BMUG meetings. I don't have a good phone number to give out. If you have to reach me try me at work (408) 974-9545, either I'll answer or you'll get a sunny recording of me. I did go to a great amusement park and turned upside down many times. That should do it for the dids and didn'ts list.

The End

Things have calmed down enough in my existence, that I plan to be contributing a couple pages a month to this distinguished publication. This lengthy tirade should make up for a couple missed months, at least in part.

I can be written to at: Genial Computerware, P.O. Box 183, Grafton, MA 01519. Or even better - The Boston Computer Society, TI-99/4A User Group, One Center Plaza, Boston MA 02108.