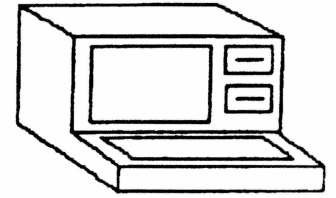

THE INTERFACE

NEWSLETTER OF SAGATUG

THE SAN GABRIEL VALLEY TANDY USER'S GROUP

THE CLUB FOR TRSDOS, MS-DOS, CP/M, AND LAPTOP COMPUTERS



Volume 11 Number 10

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RON MALO!

PowerSoft

A voice from the past. Those of us who grew up (computer-wise, that is) with the TRS-80 series of computers, also grew up with PowerSoft. In the glory days of the TRS-80, PowerSoft was there with AllWrite, Dot Print (which later became Fontasy for MS-DOS), and a host of other programs. Ron Malo was there at PowerSoft during that time, and he's going to tell us the way it was.

The OCTOBER SAGATUG Meeting will be held Friday, October 12, 1990 at 7 PM
in the Arcadia Park Senior Citizen's Center
405 South Santa Anita Avenue, Arcadia

-- SAGATUG meets the second Friday of every month --

WHERE ARE WE GOING?

SAGATUG is at a crossroads. . . it is time to come to a consensus about what direction the club should take. A discussion should be held in the RAM Session this month. Join in and be heard.

CLUB OFFICERS

President	George Madison
Vice President	Fred Berg
Sec'y/Treasurer	Mark Speer
Disk Librarians	Eric Bagai, John Phillipp
Members-At-Large	Lance Wolstrup, Eric Bagai
.....	Allen Jacobs
INTERFACE Editor	John Phillipp

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Contribute to the INTERFACE and Club Disk Libraries

A MESSAGE FROM
THE PRESIDENT



BY
GEORGE MADISON

Greetings once again!

This month, the demonstration is going to take a definite turn from our usual fare. I recently bought an Amiga 3000 computer, and I will be demonstrating it this month.

This is not to say that I have abandoned my TRS-80; I have not. I have yet to find a word processor on the Amiga that I like as much as AllWrite!, and I plan to keep my machine into the foreseeable future. However, there are areas I would like to explore -- primarily graphics -- that my Model 4P just can't handle as well as the Amiga.

In any case, I have always felt it interesting and beneficial to keep one's ears and eyes open to what's going on in the world of computers, even if one doesn't plan to purchase a new computer.

Finally, I think there should be a certain natural affinity between TRS-80 and Amiga users, as both groups are unfairly insulted by users of "mainstream" computers. WE know better, though, and that's really what counts.

Have no fear that demos featuring machines outside our club's normal scope will be a regular thing; next month we will return to our regularly scheduled programming.

Editor's note: since I didn't receive a President's letter for this month, I'm printing the one I got last month, too late for the INTERFACE. It is a little dated, since George demonstrated his Amiga LAST month, but I guess this is better than no President's letter at all.



FROM THE EDITOR'S DESK

John T. Phillipp, INTERFACE Editor

ENOUGH

At the last meeting, no one expressed an interest in taking over the job of INTERFACE editor for the coming year. If anyone wants the job, they should start thinking about it now. There are only two more issues left in 1990.

In case anyone missed the "From the Editor's Desk" column last month, this will be my last year as Editor. I have been doing this since 1983, and I can no longer spend the amount of time on the INTERFACE each month that it deserves.

The new Editor is welcome to all the WordPerfect 5.0 files that I use as templates each month: the masthead for the front page, the headings for the President's Letter, From the Editor's Desk, and the SAGATUG Question/Answer column. Of course, he or she is free to create a new masthead, etc., if desired.

An HP LaserJet would be a great asset for the new Editor. I will provide the new editor with the font files that I use for the face sheet. The body of the INTERFACE is plain old 10 point Times Roman, with a little 12 point Helvetica thrown in for titles. I use a font cartridge, but those are pretty standard fonts. If necessary, I can probably rustle those up as soft fonts.

If the new Editor doesn't have a laser printer, I can continue to print the newsletter IF I am sent all the articles on disk, formatted, and ready to print. The things which take up the most time in preparing the newsletter (aside from finding something to print, and writing my own articles) are typing in articles submitted on paper (I am a one finger typist), creating new logos (which is why I seldom make a new one), and playing with the columns, margins, word/letter spacing, fonts, and other formatting to make the articles look nice and take up the right amount of space on the page when printed.

This issue of the INTERFACE may not look like much, but I'm sitting next to a 57 page pile of scrap paper - test printouts of the face sheets and articles. Somehow, it's never until I have the final copy in my hand that I notice the typos and formatting problems (a program fragment split at the end of a

page, for example) that I have to correct and re-print.

Talking to Lance Wolstrup, I'm beginning to think that WordPerfect is the wrong tool for this job. Lance publishes TRSTimes using Ventura Publisher. I don't think there's a lot that Ventura can do that WordPerfect can't be forced to do, but Ventura does it more easily. The new Editor might keep that in mind.

THE INTERFACE

According to Mark, the subject of the INTERFACE was discussed at the "restaurant meeting" but we didn't go into that part of the discussion in detail when we spoke on the telephone.

What do I think the newsletter should be like? I base my opinion on what the INTERFACE used to be, years ago. The newsletter should be the "glue" that holds the club together, the place where the members go to get information about what's happened, what's happening, and what's going to happen.

There should be a monthly editorial message from the President. It should tell what is going on in the club, and what the President thinks should be going on. . . complaints, exhortations, informational items, whatever. Reading a year's worth of monthly President's Letters should give the reader a good idea of what went on in the club for the past 12 months. When I wrote the "History of SAGATUG" a few years ago, I got much of the material from the President's Letter columns. I doubt that I could do that from the past two years' issues.

There should be something each month from the Secretary/Treasurer. . . a summary of the matters discussed at the monthly Board meeting (there should BE a monthly Board meeting), and a summary of the club's finances.

And then the articles. I think that re-printed articles from other newsletters should be used as a last resort. And only when the article has something really important or useful to say. Other than those few (not more than one each month), the articles should be written by the members.

So what should the articles be about? Well, they should be tied in closely to the purpose of the club (see "Where Is SAGATUG Going" in this issue. Remember, the INTERFACE is supposed to be one of the things that attracts new members to the club, and helps keep them in once they've joined.

There should be articles on the major applications that are being used by the membership: word processors, spreadsheets, databases, utilities. "How-to" articles: how to install them, how to use them, how to make them do the things that need to be done. We need articles on MS-DOS. Many of the members are new to computing and need help with the DOS commands, and things like writing batch files and using MS-DOS utility programs. And articles on things to do with the computer: how to use a scanner, how to use a modem and telecommunications software. And articles about the hardware: how to install a hard drive, or more memory, or a tape backup unit, or a scanner, or whatever.

A few months ago, I published an article by Mark Speer which was just a list of possible topics for INTERFACE articles. A whole page of topics! Everyone agreed that they would be great topics for articles. Very few people wrote any, though.

You don't have to be an expert with 20 years in computing to write an article. If you're using WordPerfect, you know more about it than someone who isn't using it, but who might like to. Write a bit about what it is, what it does, any problems you've had with it, and how you solved (or didn't solve) them. Will your article teach me something (I've been using WordPerfect for years)? Probably not, but it will surely teach someone in the club something. If you use a spreadsheet like Lotus, or Excel, or Quattro, write about that. I've been computing since 1978, but I've NEVER used a spreadsheet. ANYTHING you write will teach me something. That's the attitude to have when sitting down to write - every member of the club knows more about something than someone else in the club. Don't be shy.

How long should the INTERFACE be? Well, Fred Berg, our Vice President, has gotten us an excellent deal on printing. The catch is that we have to print 500 pages per month. That works out to 6 pages (12 sides) per INTERFACE. As a result, I've been forced to stretch out the INTERFACE to 12 sides, even when there hasn't been sufficient material. We can't make it longer - even if I have enough articles - because anything over 6 pages requires 2 stamps, doubling the cost of postage. Not to worry, though,

a surplus of articles is a very, very, very rare occurrence!

I think the INTERFACE should be as long as is necessary. If there are only 4 pages of articles, then the newsletter should be only 4 pages long. No more padding. For the rest of the year, while I'm Editor, I'll make up the difference in printing cost so the short INTERFACE doesn't cost the club anything. Come January, the problem will have to be resolved on a more permanent basis.

By the way, as of this moment, I have NOTHING on hand for the November issue of the INTERFACE. Nothing.

WHERE IS SAGATUG GOING

Mark Speer and John Phillipp

At the "post-meeting meeting" held at the restaurant last month, after the regular meeting, a wide ranging discussion took place on the general theme of "where is SAGATUG going". I wasn't there, but Mark Speer was, and over the telephone he gave me a two hour summary of his recollections of the discussion. He suggested that I put something about it in the INTERFACE.

As I said, I wasn't there, so most of what follows is second-hand, and I got the impression that a lot of it was Mark's contribution. Still, I think this will get the main thrust of the discussion across.

SAGATUG has a problem. It seems that for the past few years we have been kind of floundering around without a clear sense of direction. Is SAGATUG a PC club? A TRS-80 club? Both? Neither? Why is it that we meet every month anyway? Are we getting new members? Do we need new members? Do we want them? What do we have to offer new members? What **SHOULD** we have to offer them?

SAGATUG has a long history - the club has been around since 1978. We originally were formed because computers were a new idea. The TRS-80 Model I (and Apple II) had just come on the market. No one knew what to do with them. . . no one knew what they **COULD** do. There was very little software available. . . if you wanted your TRS-80 to do something, you wrote a program to do it. SAGATUG was formed in self-defense. At that time, **EVERYONE** who owned a computer was a hacker.

Times have changed. The TRS-80 is obsolete. IBM compatible, MS-DOS computers are in. There is a ton of commercial software available. . . no one needs to write a program any more. The hacker is a dead breed.

So what is left for SAGATUG and the user groups like it? Are they needed any more?

There are people out there, confused by their computers - **THAT** much certainly hasn't changed over the past 10 years. TRS-80 or PC, a new computer owner still has plenty of questions. There is a lot of software available, and no one **NEEDS** to program any more. But have you looked at the programs these days? Lotus, WordPerfect, Ventura

Publisher, dBase. . . learning to use one of these is at least as hard as learning to program in BASIC! I picked these programs as examples because each one of these has been the subject of a SAGATUG monthly program in the past.

SAGATUG has a lot going for it. It has a long history. . . any organization that has managed to last as long as this one has deserves to survive. We have a staunch core membership - although the staunchness of the core has been wavering over the past few years. We have an excellent meeting place - two rooms that can easily hold 40 or 50 members for lectures and computers, a kitchen area, and bathrooms. We even have liability insurance under the County umbrella. Our club finances are in good shape - the rent is paid up almost to the end of the year, our expenses (donuts for the meeting and printing/mailling the INTERFACE) run 30 - 40 dollars per month, and we have around 300 dollars in the bank.

So given that SAGATUG should continue, what direction should it take?

This is the point where the discussion got interesting.

Mark's idea was this: SAGATUG should become a PC club, that is, one devoted to MS-DOS computers. No more TRS-80s. No one with a TRS-80 would be kicked out, but the focus of the club would be in the MS-DOS world.

This idea has a lot of merit, and I agree with it. Of the entire membership, there are only a few members who have **ONLY** a TRS-80 computer. Many have both a TRS-80 and an MS-DOS machine, and of those, in most cases it is the MS-DOS machine that gets the most use. By becoming a PC club, SAGATUG will be not only accepting the reality of computing in the 1990's - the TRS-80 is an obsolete machine, MS-DOS is "where it's at" - but also accepting the reality of what, to a large extent, the club has already become.

PC users tend not to be "hackers" in the TRS-80 sense, it is true. But they are newcomers to computers in many cases, just as intimidated by their computers as we were by our TRS-80s. They don't want help programming to control the lowest levels of their hardware as we did in the late 70's,

they want help understanding and using the major application programs. They don't want to force their hardware to do things its designers never intended (music and arcade games on a TRS-80 Model I?), but they do want help with their hardware - upgrading to VGA and higher, adding hard disks, adding 1.2 MB drives and 1.44 MB, 3 1/2 inch drives, adding mice and scanners and modems and so on.

So how can SAGATUG take advantage of this need? What can SAGATUG offer these people to get them to attend a meeting, join up, and keep on coming?

Mark feels that a six month, intensive effort by three really committed people could rejuvenate the club.

One person would run a large, well organized public domain/shareware library for the use of the members. Our current MS-DOS library consists of over 100 disks, but many of these are old versions. Many club members have purchased interesting shareware disks that could be donated to the library. Members could help by taking one or two disks each month and reviewing them. An extensive shareware library - up to date disks, indexed, and reviewed - would be a large drawing card for attracting new members.

One person would organize the monthly programs. These would be oriented to the topics that most interest new PC users - upgrading their hardware (remember how popular the "how-to" articles used to be in "PC Resource Magazine"? How to add on a hard disk, how to add on a 3 1/2 inch drive, how to add memory chips), coming to terms with MS-DOS (how to program batch files, how to use little used commands like SUBST and JOIN), and how to use major applications (word processors, spreadsheets, data bases, utilities). These programs could involve outside vendors or rely on "SAGATUG experts".

The third person would be in charge of "marketing" SAGATUG. It would be his or her responsibility to get complete, up-to-date, accurate notices of the club into MicroTimes, Computer Currents, Computer Shopper, the local papers, local BBS's, and anywhere else the cause of SAGATUG might be served. These notices would be able to point with pride to what SAGATUG has to offer - our extensive disk library and our interesting, educational monthly programs!!

I think there should be two other really committed people to complete the "rejuvenation" of SAGATUG, in addition to the three Mark mentioned. One would be the Editor of the INTERFACE, the club newsletter. An interesting, helpful newsletter, supported with good, useful articles from the members of the club, and club news and editorial material (as in a well written President's letter) is an important way for new members to "get into the spirit" of the club. When I joined SAGATUG in March of 1982, I was given the January, February, and March issues of the INTERFACE. Reading those back issues, their articles and editorials, gave me a good sense of what SAGATUG was all about. I don't think the current INTERFACE does that. . . just look at how little is in this issue.

Finally, when all the other sections are in place and working well, and when the membership starts to grow, a fifth committed person should start a SAGATUG BBS. A club BBS provides a means of communication for the members between meetings, a forum for discussion, and is a source of pride for the entire club. In addition, it will provide new PC users with an introduction to telecommunications.

So that's about it. Mark feels that SAGATUG is stagnating. We have few new members because 1) we have no marketing of the club and 2) we have little to offer new members anyway. He sees a lack of enthusiasm in the club, and the old members are getting tired. I have to agree with Mark.

So what do you think? Let's discuss this at the RAM session at the October meeting. Mark is right. . . we can't continue on the way we've been going. So what are we. . . you. . . going to do about it?

COMPILER PITFALLS

John T. Phillipp

When I originally wrote the billing/timecard system that I use in my office, it was written in TRS-80 BASIC. As time went on, the limited expansion abilities of the TRS-80 became too limiting, especially the fact that (at that time) it was almost impossible to get a hard disk to work with a Model 4. All the AT class computers were sporting 40 MB hard disks! So the office system was rewritten in GWBASIC for an MS-DOS computer.

Most of the code used in the system was transferred (kicking and screaming) from the TRS-80. Fortunately, TRS-80 BASIC and GWBASIC are close siblings, so the transfer wasn't too painful. (I made the transfer in 1986, so time has dulled my memory of the amount of effort involved. I'm sure there was a lot more pain involved than my mind is willing to remember!).

Because the code was originally written on the TRS-80, and transferred to GWBASIC, I was not able to take advantage of the more sophisticated features of Microsoft QuickBASIC. Still, because QuickBASIC is a superset of GWBASIC, I was able to use the QuickBASIC compiler to compile my GWBASIC code.

This has resulted in several advantages. For one thing, the programs run much faster. It appears that the QuickBASIC compiler is optimized for screen writing: screens that are slowly drawn under the interpreter literally "flash" onto the screen when the code has been compiled.

For another, I can work on the interpreted version, carefully squashing all the bugs, and not compile the program until I'm reasonably sure that it's working. If the compiled version does crash, it does it with an "ERROR AT ADDRESS 2345:1234" type of message, which tells me very little. I can then run the interpreted version which will crash at the same point, but give me an "ERROR IN LINE 2345" message. I can LIST the offending line, fix it, and then re-compile the program.

Since GWBASIC programs can be compiled and run by the QuickBASIC compiler with no changes, I was fooled by a couple of problems that occurred

with the compiled code. Are they bugs in the compiler? I don't think so. They just represent a difference in the way the interpreter and the compiler look at things.

First, look at the following code fragment:

```
10 OPEN "R",1,"filename",4
20 FIELD 1, 4 AS F$
30 CLOSE 1
```

this simply sets up a random access file called "filename" with four byte records.

Now:

```
40 OPEN "R",1,"filename",4
50 LSET F$="TEST"
60 PUT 1,1
70 CLOSE 1
```

This opens the file and stores the string "TEST" in the first record.

Now, retrieve the data:

```
80 OPEN "R",1,"filename",4
90 GET 1,1
100 CLOSE 1
110 PRINT F$
```

If you run this program under the interpreter, printing F\$ results in "TEST". Once the same code is compiled and run, printing F\$ is blank. the length of F\$ is zero. What happened?

When you close a file in the interpreted program, the field variable F\$ retains its value (the string "TEST"). The compiler clears all field variables when the file is closed. To get the program to work correctly when compiled, you have to assign the value of the field variable to a regular variable BEFORE the file is closed:

```
80 OPEN "R",1,"filename",4
90 GET 1,1
95 A$=F$
100 CLOSE 1
110 PRINT A$
```

A subtle difference, but it gave me plenty of grief when my compiled program refused to run the way the interpreted program did.

Here's another example of a difference in the way things are handled between the interpreter and the compiler:

```
10 Y%=1900
20 PRINT Y% * 360
```

When run under the interpreter, the program prints 684000, the correct result. When compiled and run, the same 2 line program prints 28640, which is plainly NOT the correct answer!

So what happened this time? Why does the same program give two different answers?

It all has to do with that "%" after the variable Y's name. The percent sign marks Y as an integer variable, that is, one which can have a whole number value between -32,768 and +32,767 (this is the largest number which can be stored in two bytes (16 bits) when one of the bits is used as a sign bit.

When the interpreter is asked to multiply an integer times a constant, and the result is greater than can be held in an integer, the interpreter treats the result as a single precision value. This is what we expect, and gives a correct result.

When the compiler does the same thing, it tries to put the result into an integer, even though it is too big to be held in an integer variable. So the result is wrong. The interesting thing is that the compiler gives NO error message (you would expect an "OVERFLOW" error message, indicating that the result is too large to fit into an integer).

To get around this, assign the result of the calculation to a single precision variable, then print that variable:

```
10 Y%=1900
20 A!= Y% * 360
30 PRINT A!
```

This will give the same result (684000), no matter if it is run under the interpreter or the compiler.

It is a great benefit to be able to run unmodified GWBASIC programs under the QuickBASIC

compiler, but there are a few "gotchas" to contend with. These two examples are easy to understand now, but, believe me, there was a lot of 2 AM headscratching done before they were figured out!

ARE YOU MICRO-MODULAR MINDED YET?

John E. Tufts II

Last month I discussed the concept of the IBM PC's expansion slot design. It enables people like me (a hardware clumsy clown) to purchase cards or boards (such as the Logix VGA1000 video card) from independent component manufacturers when I am financially ready to do so. The card slides into one of 5 or more expansion slots. Installation could not be simpler.

I also introduced the idea of carrying modular design one step further. Manufacturers of cards should have electronic components grouped together on square-shaped breadboard material, and then have the square plug go into the card. Diodes, capacitors, and resistors sometimes go bad. My micro-modular design promotes do-it-yourself replacement, if necessary. Including an auxiliary diagnostic test card with the main card would give the hobbyist the opportunity to discover if such replacement is necessary. No muss. No fuss. And also no soldering!!!

If the auxiliary test card greatly added to the cost of the product, then it could be made an extra cost item. Clubs like SAGATUG could have members pools their resources and collect such test cards. This would be the hardware hacker's answer to the software public domain libraries.

Here let me point out that vacuum tubes are inherently micro-modular. They go bad and need replacement. Remember the tube testing machine at your local supermarket? My squares would have the advantages of vacuum tube design, and also obvious advantages over vacuum tubes? Why did electronic component designers overlook the obvious advantages and not come up with retaining a micro-modular design?

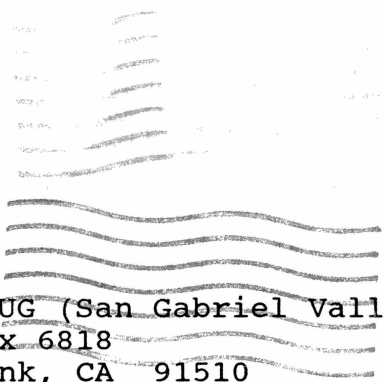
Anyway, all of the above suggests the following issue: What (or perhaps how much of the) electronic "goodies" should be put on the motherboard, as opposed to putting such "goodies" on the cards. The more we put on the motherboard, the faster our programs can execute. There is also a cost savings. BUT, the more "goodies" we assign to the motherboard, the farther away we get from modular and micro-modular design. Yes, I'm thinking here primarily in terms of memory expansion. I favor less emphasis on speed and cheap

prices, and more emphasis on micro-modular design. Sometimes memory goes bad, too!!!

I wish that someday TVs, VCRs, refrigerators, and microwave ovens would be built micro-modular. When purchased, the buyer would get an auxiliary diagnostic test card that slides into their IBM PC. Why should we be satisfied with putting only the computer repairmen out of work. Let's promote do-it-yourself replacement of all the parts of all electronic machines.

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FB



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-- FIRST CLASS --