SHCC Info

OFFICERS:

President	Rick Schummer	939-6346
	CIS:70254,1643	
Vice President	Jerry Carson	548-0331
	jcarson@mcgh.org	
Treasurer	Dick Morawski	573-9648
Secretary	Don VanSyckel	939-4154
	CIS:70414,1176	

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SPECIAL INTEREST GROUPS:

MS-DOS	IBM compatibles
FoxPro	FoxPro users on the DOS and Windows platforms
Power user	Advance users discuss various topics

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COORDINATORS:

BBS info	Jerry Carson	548-0331
Disk librarian	Tom Grish	826-8449
Door prize	Bill Soborowski	247-0884
FoxPro SIG	Rick Schummer	939-6346
Greeting table	Ralph Osinski	469-3472
Joke	?	
Newsletter editor	?	
Newsletter editor	Tony Adams	399-5857
Newsletter publ.	Don VanSyckel	939-4154
Novice SIG	Olga Firchau	751-8551
Power Users SIG	Ed LeBioda	264-1632
Resource person	Tom Grish	826-8449

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RESOURCE PEOPLE:

DOS	Jerry Carson	548-0331
FoxPro	Rick Schummer	939-6346
Hardware	Jerry Carson	548-0331
MS-Works	Wayne Pingel	978-0217
PCFile	Don VanSyckel	939-4154
Spread sheets	Rick Schummer	939-6346
WordPerfect	Jim McNeil	978-3953
WordStar	Don VanSyckel	939-4154

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Newsletter submissions are due 8 days before the club meeting, but the earlier the better. They should be sent to:

   Newsletter Publisher
   at the club's PO box

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DUES: $20/year

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Guests and visitors are welcome. People can attend any of three consecutive club meetings before deciding to become a member or not. Membership includes admission to all SHCC functions and the newsletter. Membership is open to anyone, it is **not** limited to residence of Sterling Heights.
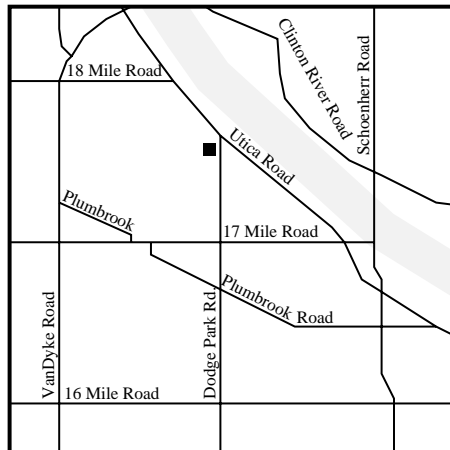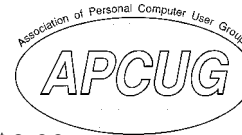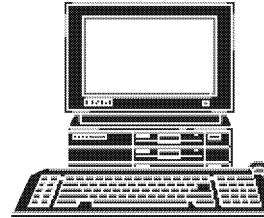
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SHCC at Sterling Heights Library

This newsletter was produced using WordStar 6.0 and a postscript laser printer. Scissors and tape were not even used to mount the Joke of the Month.

WYSIWYG Gazette

SIGS

MS-DOS: 7:30 PM - First Tuesday (except July & August no meeting) at the Sterling Heights Public Library (40255 Dodge Park Road)

FoxPro: 7:30 PM - Monday before the third Tuesday (except July & August no meeting) at the Sterling Heights Public Library

Novice: 7:30 PM - Third Tuesday (except July & August no meeting) at Oakbrook Elementary School

Power User: 7:30 PM - Forth Tuesday (except July & August no meeting) at the Mount Clemens general Hospital

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(For questions, call an officer or send mail to SHCC PO Box)

This month SHCC member Sara Scholl will present *Instant Artist*. Sara believes this graphics package to be better many others. Come judge for yourself!!

will soon happen is that you will pay for each support call. Either 900-lines will become common or you will provide your favorite credit card number before you get a chance to ask your question.

This makes the SHCC a great deal and I anticipate that user groups will become even more popular. Groups like our provide an excellent "knowledge base" for users to get questions answered. I bet that for almost every common question that software users call the tech support lines, there is a user group member that can give the correct answer. Our own organization has proved this many times with our regular meeting Q&A sessions, SIG meetings, WYSIWYG "Ask the Expert" columns, and wealth of resource people.

The SHCC will never completely replace the software companies tech support lines since they offer hours that one would not normally call a fellow member. On the other hand one might wait until the next day instead of paying $10 to get the answer.

I will gladly pay for support as I need it as long as these companies keep making soft-

ware affordable. More features, better documentation (online and paper manuals), and the new dedication to make software easier to use by the software industry will hopefully make support minimal in the future.

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Last Meeting Highlights

Last month Mr. Chris Sherbak, a member of TEAM OS/2, representing IBM presented **OS/2 v2.1**. OS/2 is an innovative operating system runs DOS, Windows, and OS/2 programs concurrently. This presentation was very interesting to most members.

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This Month's Meeting

This month SHCC member Sara Scholl will present *Instant Artist*. Sara believes this graphics package to be better than many others. Come judge for yourself!!

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Membership Packets

Packets will be distributed to renewed and new members at the SHCC meeting the month after the dues are paid.

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The President's Bits And Bytes

Rick Schummer

The commercial software producers have never released such powerful software for such inexpensive pricing. Free technical support will be the casualty of this era of inexpensive software.

The cost of commercial software for spreadsheets, word processing, databases, presentation software, electronic mail, and personal information managers use to run, on average, $495 retail. This meant that the average software consumer would pay $300-$350 for one major licensed title. With Microsoft, Lotus, and Borland/WordPerfect offering their "offices/suites" for $230-$250 in the competitive upgrade modes, consumers are finding themselves with single titles averaging close to $60. This cuts profit margins substantially. This also increases the number of packages that are sold and the number of technical support calls that are taken. All the major players in the software industry are beefing up the technical support lines and services to handle the new heavy volumes of calls.

Buttonware started a 900-line (pay per minute) a couple of years ago. Most companies have regular phone lines which are toll calls if you do not live near the support location. There is never a charge for the call, just phone line connect charges. Many companies are on the online service forums on CompuServe, America Online, etc. With the explosion of CD-ROM users, the major players are publishing their corporate "knowledge bases" on CD-ROMS. Many of the common support questions and answers, online manuals, bug reports, sample code and template files, and press releases are included on these disks.

Microsoft, Lotus, and Borland are starting to form support packages that users and corporations can purchase for big bucks. WordPerfect is still providing to toll-free phone support. All the new support packages are coming with high priority phone service and with the top gun support people. The home user will never pay high yearly fees ($295-$10,000) to have questions about how to make words bold in a word processor. Alternatively software vendors will not give these services away for free anymore. What

SHCC has received several books from computer vendors. These books were donated to the Sterling Heights Public Library where any member (and citizen of the city) can take them out. It is much easier for the library to lend out these books than for the club to administer this process.

The following books were donated:

Running Microsoft FoxPro for MS-DOS
By Sal Ricciardi
Published by Microsoft Press
ISBN 1-55615-556-5
Donated by Microsoft

Running Microsoft FoxPro for Windows
By Sal Ricciardi
Published by Microsoft Press
Donated by Microsoft

Windows NT Answer Book
By Jim Groves
Published by Microsoft Press
ISBN 1-55615-562-X
Donated by Microsoft

10 Minute Guide to OS/2
By Herb Tyson
Published by Alpha Books
ISBN 1-56761-000-5
Donated by IBM

If you are interested in any of these books please stop by the Sterling Heights Public Library.

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SHCC Dues

Dues for 1994 are past due. All members expired at the end of the year. 1993 members who did not renew received the January newsletter as a courtesy. Beyond that the newsletter was stopped.

If you or someone you know has not renewed for 1994, please renew at the February meeting to keep the good things from SHCC coming.

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SHCC BBS

Please note: Only one member sent in a response, with this level of interest the officers will not go any farther with this idea. The officers will accept responses about this until the February officers' meeting on the 8th. The original article is below:

Several members and non-members of the SHCC have expressed an interest in a club bulletin board system (BBS). The officers have debated some of the pros and cons of running a BBS as well as some of the expenses and resources needed to sustain the existence of one. As we began to do some research into the feasibility of starting a BBS the fol-

SHCC Swap Meet

SHCC will once again hold a swap meet at the regular April meeting. As in the past, the swap meet will start early before 7:30PM (normal start time) and extend until some designated time after 7:30PM. At this time the normal meeting sequence will begin.

The presentation will be about Antique Computers, operating systems, and their history. SHCC member Bruce Honeck will do the presentation.

Why not begin now setting aside those unused computer items to bring in April. You know it's really true that *what is one person's trash is another person's treasure*. See you there!!

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Door Prize Coordinator Needed

By Rick Schummer

Bill Soborowski has served as the SHCC Door Prize coordinator faithfully for the last two years. Due to his schedule, he cannot continue in this roll. This means that we are looking for a new coordinator.

All that is required is to visit some of the local computer stores and talk with the store managers to see if they are willing to donate a software package or piece of hardware for our monthly give-a-ways. The officers will provide you with an introductory letter telling who you are and about the club you are representing. I know many members already visit the local stores regularly.

Once the door prizes are collected you need to notify the president who will write a thank-you note to the person who donates the prize. The final requirement is to make sure that the prize is delivered to the meeting. You can either bring it yourself or can give it to someone else who is going. Prizes can also be delivered to the president in advance.

If you are interested in serving in this important role, please contact Rick Schummer by phone, by PO Box, by Compuserve, or at one of the SHCC meetings.

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SHCC Donates Computer Books to Public Library

Over the last few months the

Novice SIG Information

The idea for this special interest group is to help the members learn the basic and intermediate functions of DOS, Microsoft Windows, and other software that runs on the PC.

The Novice SIG met on January 18th. *Managing Your Files*, the second chapter of *Quick Course in DOS*, was completed. Thanks to Tom Grish who has done a fine job as the SIG's first instructor.

The next meeting will be February 15 at 7:30pm.

Covering the material is moving slower than planned, but everyone is satisfied that the pace is good. The topics get side-tracked by excellent questions from the members.

Quick Course in DOS can be ordered from: Online Press at 800-854-3344

This book costs $15.00 (including shipping) and is the basis of this SIG. The past orders were sent in and the books will be at the next regular club meeting. The club is no longer processing orders for the book.

There is no formal sign-up for

the SIG anymore, please feel free to join the group at the meeting. The only requirement is that you are a member of the SHCC.

The meeting schedule for the SIG is as follows:

First Things First
    Completed
Managing Your Files
    Completed
Setting Up Your System for Optimum Performance
    Jerry Carson
When Things Go Wrong
    Mike Greenen
Enhancing Your Productivity
    TBD
The DOS Tools at a Glance
    Rick Schummer

Once the materials in the book are covered, the group will decide on topics for the meetings. There is so much that can be learned and so many resources within our club to teach these members. Please pass any ideas to Olga Firchau, the Novice SIG coordinator.

The SIG meets at 7:30pm on the third Tuesday of the month at Oakbrook Elementary in the Resource Room. Oakbrook is located on the northeast corner of Metro Parkway and Dodge Park Road. Heritage Junior

lowing question was asked: "What would the SHCC membership want from a BBS and what would they use a club sponsored BBS for?"

As the officers do so often, we decided to ask for your input. Please remember that we are not committing to starting a BBS at this time, we are just starting to look at the possibility. It is very important that the cost, time, and resources needed to run the BBS be justified with some good benefits to the membership.

Please submit your comments to any officer by January 11th (officers' meeting). Either hand them in at the January meeting, e-mail them, or US mail them. It only takes a few minutes to write it down or type it up. The officers are very busy at meetings and most likely will forget your ideas if you just speak your mind to them.
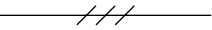
As always, your input is vital to the way this organization functions, please participate. If you feel that a BBS is a waste of good resources, time, energy, and money, please let us know this as well.

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Power Users' SIG

The February meeting will be the 22th. The topic is still undecided.

The January meeting was held the 25th. The newsletter preparation date made it impossible to include an account of the meeting.

Other topics which may be covered in the future include:
- DRIVERS.SYS
- MIDI interface
- OS/2
- SCSI & multi-media
- Windows 3.1 OLE/DDE
- X windows

Meetings are held in the Board Room at Mount Clemens General Hospital for meetings. Thanks go to Jo Woodman for arranging this meeting place. These meetings will be on the forth Tuesday at 7:30PM.

Mount Clemens General Hosp.
1000 Harrington Blvd.
Mount Clemens, MI
- Go on 16 Mile Rd to Groesbeck Rd
- Turn North on Groesbeck Road
- Go about one mile to Harrington Blvd. (this is at a traffic light)
- Turn right (East) on Harrington
- Go East about two city blocks
- You should see the hospital
- Park in lot before (west) hospital
- Go in the main entrance
- Take the elevator to the 6th floor
- Follow the signs to Board Room

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Public Domain Library

Please contact Tom Grish with disk orders and remember to use the disk order form. He can bring the disks to the next meeting. The prices are: $2 - 5.25" and $3 - 3.5" disks. An additional charge of $1 per disk for non-SHCC members.

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Door Prizes

SHCC offers a door prize(s) at regularly scheduled club meetings. The door prize coordinator resigned last month, see article about volunteering for this position.

This month our vice president, Jerry Carson, is on a search for door prizes. At this writting, he has not gotten any firm commitments, however, he has assured me that he is on the track of a hot door prize for a cold February meeting.

Door prizes for January were donated by **IBM** through their Team OS/2 representative, Chris Sherbak.

All but about six members present received a door prize of some type including full OS/2 software packages, t-shirts, books, disk cases, pens, mouse pads, and magnets.
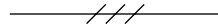
Gary Kaiser and Bruce Rittenhouse each won OS/2 software packages.

Thanks to:
  IBM User Group Relations

SHCC members, please remember to show our appreciation whenever shopping for computer products by frequenting our participating local merchants.

If you have software you are not using, consider donating to the club as a door prize. It's a great way to make space in your storage area and help a fellow SHCC club member.

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SHCC by EMAIL

CompuServe:

Adams, Tony	70550,560
Brown, Martin	71554,1344
Pingel, Wayne	71011,2213
Schummer, Rick	70254,1643
VanSyckel, Don	70414,1176

America Online:

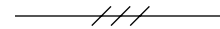|	
Click, Bob	robertc204

Internet:

Carson, Jerry
          jcarson@mcgh.com
VanSyckel, Don
          vansycke@gdls.com

High in on the corner and Oakbrook is immediately behind it.

From **Dodge Park Road**, turn onto Danforth (east). Turn right onto Greenway. Greenway takes a bend to the left. Turn right onto Ashby. Ashby dead ends in Oakbrook's parking lot.

Metro Parkway East, go north on Dodge Park Road and follow the instruction above.

Metro Parkway West, go north on Barrington, just after you pass the Edison Corridor between Schoenherr and Dodge Park Roads. Turn left onto Greenway. Turn left onto Ashby. Ashby dead-ends into Oakbrook's parking lot.
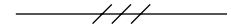
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FoxPro SIG

The last meeting of the SHCC FoxPro SIG met on January 17th. The meeting started at 7:30. It was attended by only one member who discussed the Relational Query By Example (RQBE) power tool with himself. This is a very fast way of getting specific data reported from your databases.

In February the FoxPro SIG will have an open question and answer forum. This meeting will be Monday February 14th, mark your calendars.

All SHCC members are welcome! The discussions and topics will benefit everyone from beginners to the expert developers. The meetings are held at the library meeting room on the Monday before the third Tuesday of the month. The FoxPro SIG starts at 7:30 and ends approximately 9:30.
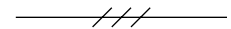
Any inquires about this SIG can be addressed to Rick Schummer, the FoxPro SIG Coordinator (phone number on page 2 of this newsletter).

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Welcome New Members!

There are sixteen new member this month at SHCC. Please welcome Lindell Beck, Ronald Bertani, Barbara Demeniuk, Adam Emerson, Terry Fisher, Wendy Fisher, George Goetz, Judith Lynne Klein, Richard Kucejko, Adam Marks, William Peters, Jamie Lynn Smith, Judy Smouter, Don Washburn, Don Zollner, and Judy Zollner.

We hope you enjoy SHCC and will gain computer knowledge and understanding from our meetings and other members.

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card, cables, manual, & software. Reads CD-ROM data tracks and plays audio tracks, of 5" and 3" music CDs through your headphones, stereo system, or VCR audio. Fits 1/2-ht drive bay & short slot. Installation available, but easy to install yourself. Includes your first CD-ROM and a CD-single music disc - free. $150 (or trade?) Call Ralph Osinski @ 469-3472 after 5:30 PM.

Panasonic printer KX-P1124, 24 pin, large buffer, cords, excellent condition. $150 or best offer. Bill Soborowski 247-0884.

October 1993:
Quattro Pro 4.0 for DOS for sale. Full software and documentation with legal license and upgrade path. Can get latest version for only $40 instead of $99; $15 or best offer. Call Rick Schummer at 939-6346.

Wanted MFM hard drive. My old hard drive gave out on old PC and want to replace it with inexpensive but reliable MFM drive. Call Rick Schummer at 939-6346.

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"Ask The Expert"

The "Ask The Expert" column appears in the *WYSIWYG* every month. This column is here to answer any questions that we can get answers to. Please remember, there is never a stupid question! If you feel funny asking a question, send it in anonymously. We will tell the people when their question is answered ahead of time if you include your name. All questions can be mailed to the SHCC PO Box or given to any officer during a meeting. If you want to be an expert just give an officer a holler!

We need more questions, please send some in!!!!!

Dear Expert,

I was running a Computer Associates CA-Textor which is a Windows word processing software package and received the following error:

WINT6 Caused a GENERAL PROTECTION FAULT in MODULE WINT6.EXE at 001:0191

What cause this to happen and how can I fix it.

SHCC member, Richard Kotch

Prodigy
Click, Bob   XJKM02A

CompuServe to internet:
use address:
internet:<internet_address>
Where <internet_address> is replaced by the recipient's internet address. Example to Don VanSyckel:
internet:vansycke@gdls.com

Internet to America Online:
use address:
<AOL_ID>@aol.com
Where <AOL_ID> is the recipient's America Online id. Example to Bob Click:
robertc204@aol.com

Internet to CompuServe:
use address:
<CIS_ID>@compuserve.com
Where <CIS_ID> is the recipient's id with the "," (comma) replaced with a "." (period). Example to Don VanSyckel:
70414.1176@compuserve.com

Internet to Prodigy:
No information is currently available about this. If anyone has this information (with example), please send it to the *WYSIWYG* editor. Thanks.

Between CompuServe and America Online:
Since each of these two services offer internet access their members can email to members on the other service. A CompuServe member can mail to an America Online member by using the internet address of the recipient. Example to Bob Click on America Online from Don VanSyckel on CompuServe:
internet:robertc204@aol.com

To mail in the opposite direction the America Online member would simply use the internet access method to mail to the CompuServe member's internet address.

If you are on the internet, CompuServe, America On-Line, or Prodigy and would like your email address listed here, please send email to Don VanSyckel.

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WANT ADS

February 1994:
Wanted: monitor for PC-Junior, hard drive for PS/2, and ESDI hard drive. Contact Jo Woodman 468-2475.

January 1994:
CD-ROM reader/player. Exciting new multimedia technology as featured in the November meeting and Power User's SIG discussions. New internal TRS (Mitsumi made) 350-msec caddyless drive with interface

Library Access

In months past we ran an article about accessing the public libraries' data base by modem. An 800 access number has been added for people in areas not covered by local access numbers. If you can use a local access number, please do, so that the library group will not incur needless charges.

Communications protocol is 8 bit, no parity, and one stop bit (8N1).

Local access:
286-1723
689-7406
727-3160
752-0339

Toll free:
800-241-5512

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Computer Clubs

SHCC has contacted six known computer clubs in the area with an offer of reciprocating admission to meetings. Three clubs have responded positively, one is considering the offer, and the other two have not answered so far. The results are listed below:

Apple P.I.E.
Time: 1st working Monday 7:00PM
Place: Jefferson Middle School, 29700 Rockwood Street, St. Clair Shores
Reciprocating: Yes

Cue 80
Time: 2nd Monday, 7:30PM
Place: Intermediate School District Admin. Bldg; Range Road; Marysville (I-94 East to Exit #266; keep to right on exit ramp to Gratiot Avenue; 1/8 mile to stop light, Range Road; turn left; 1/2 mile to I.S.D.; left into complex, first building on right)
Reciprocating: Yes

Detroit Computer Users Group
Time: 2nd Wednesday, 7:00PM
Place: The church on Mound Road 1/4 mile south of St. Annes
Reciprocating: No response

MI Computer Users Group
Time: 3rd Friday, 7:00PM
Place: Eastpointe Community Center; 19200 Stephens Road; Eastpointe; (just east of Kelly Road); 751-3971
Reciprocating: No

Sarnia Computer Users Group
Time: Last Wednesday, 7:30PM
Place: St. Bartholomew Anglican Church; 718 Cathcart Blvd.; Sarnia; 519/542-3227
Reciprocating: Yes

South Eastern Michigan Computer Organization (SEMCO)
Time: 2nd Sunday 1:00PM
Place: Dodge Hall; Oakland University; 398-7560
Reciprocating: Yes

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Dear Richard,

First of all thanks for sending in your question, it has been months since the "Experts Column" has been challenged!

I cannot say for sure what caused CA-Textor to spit out this incredibly complex message that no mere mortal would understand.

I will however discuss MS Window General Protection Faults, also known as GPFs. Microsoft Windows prior to version 3.1 did not do a good job of "protecting" programs from violating other programs or the environment. Many users complained that Windows was unstable. Programs could do strange things like make illegal calls to functions which might infringe on other programs memory space or just make Windows lock up which required the user to reboot their PC. MS Windows 3.1 built in more protection so when programs did violate the Windows function conventions, or was about to step on another program, or do something that would cause older versions of Windows to crash, it displays the GPF message. This message will make sense to the developer of the application. The numbers in the message will help the developer figure out the problem. Sometimes it is not the actual application that causes the GPF, it might be a buggy printer driver or video driver. Some of the ATI video card drivers cause programs to GPF when printing. Windows is easy for users to use, but very difficult to develop software in.

Microsoft also included a program called Dr. Watson. You will find this program in your Windows directory. It was designed to capture a whole bunch of system and environmental information on the state of the PC when a GPF occurs. This information is saved in a log file and can be sent to the software developers if they request it. It will assist them in finding the bug that caused the program to crash.

Call Computer Associates and ask them for help on your GPF. They might already have a fix for it!

Your expert in GPFs (NOT!),
Rick Schummer

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Featured Diskette

The Disk Librarian will have five copies of this disk available for sale at the club meeting and will take orders for any additional.

Software Labs
3360 PC-LEARN
3361 PC PRIMER
2 disks for the price of one.

PC-LEARN v5.6
This program is for BEGINNERS! This series of short, basic, easy-to-understand tutorials is what every new PC user should have. Topics include: introduction & basic technology; DOS for beginners; deeper DOS and keyboard skills; batch files for efficiency; word processing; spreadsheets; databases; hard disks; modems; and more! Users include the Dept. of Labor, University of California, and others.

PC PRIMER v3.1
This is a menu-driven tutorial for learning about your computer and DOS. Topics include: first time user, hardware, DOS (3 levels), and hard disk (2 levels). Also includes an optional quiz for each topic. Requires DOS 2.11 or higher and 512K.

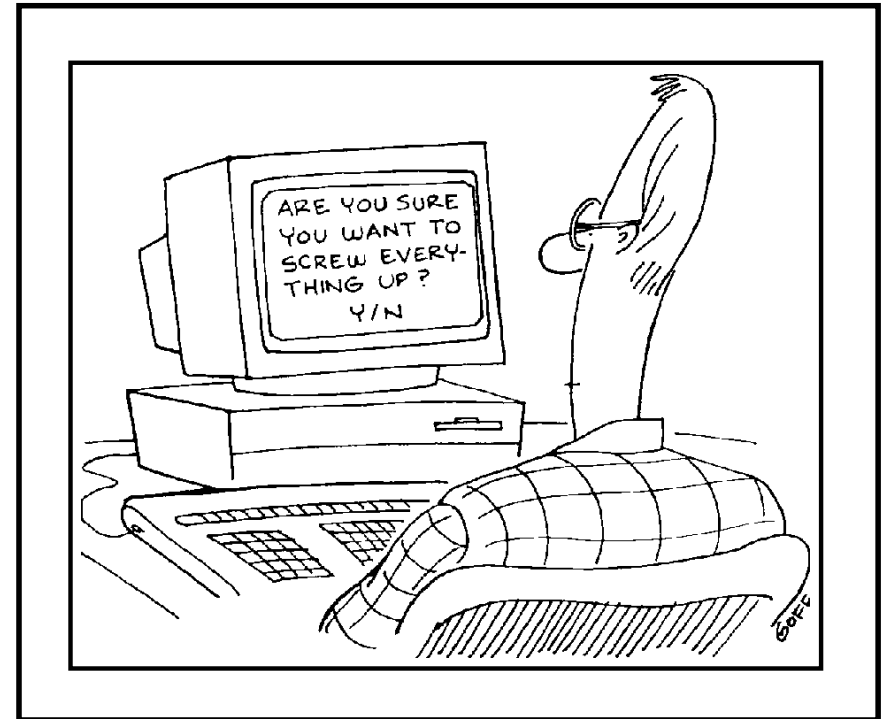———///———

"Backgrounder on IDE"

Iomega Corporation

(Editor's note: Even though this article has some advertising in it, the information content far outweighs it.)

The most popular interface used to attach hard disk drives in PCs today is IDE which stands for Integrated Drive Electronics. For those who are not familiar with IDE this article will provide some background and comparison of IDE and SCSI for Bernoulli drives.

A Brief History of Disk Controllers
In the early days of the desk top personal computer, Seagate Technologies' 5 MB hard disk drive was the first to be widely adopted. This product attached to the computer via an interface that was called ST-506. Other manufacturers adopted the Seagate interface and it became a standard. This interface is rarely used on new PCs today.

The next interface that had multiple vendor support was ESDI which stands for Enhanced Small Device Interface and was promoted by Maxtor Corporation starting in 1983.

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included an embedded SCSI controller.

Comparing IDE and SCSI

A single IDE interface can support up to two drives, one as the master and one as the slave. Additional IDE adapters may be used in a single computer to attach more drives if necessary. IDE is not used for other types of peripherals such as printers, scanners, or communications devices. Cable length is limited to about 18 inches so IDE is almost always used for internal drives.

Bernoulli drives with SCSI offer flexibility to customers using a wide range of computer platforms including ISA/EISA PCs, Microchannel computers, Apple Macintosh systems, Unix workstations, Commodore Amiga systems, and others. For users who need cross platform interchangeability, configuration flexibility, and expandability for other peripherals, SCSI is the best choice.

IDE for Bernoulli

Many users want to connect a Bernoulli drive to one IBM compatible PC and want to attach it the same way as an internal hard disk drive. For PCs with an existing IDE hard drive the Insider 150 IDE is the answer for these needs. This drive will work in about 70% of desk top PCs. It installs easily inside the computer occupying a single half-height 5 1/4 inch drive bay and attaches to an existing IDE interface. It can share the IDE interface with a hard drive and operate as a "slave," or be installed as a master drive and even a boot volume in the system. It is also the lowest cost solution since many Bernoulli customers will not need to purchase a new host adapter. The three key advantages of the Insider 150 IDE are:

- Fits in more computers
- Easy to install
- Lowest cost where IDE interface is already installed .pm

Summary

Iomega offers a wide range of Bernoulli models for different systems and different applications. The Insider 150 IDE is the latest product and features the same capacity, performance, reliability, and interchange capability as other Bernoulli models. See the literature from Iomega for more information on these products/

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This interface overcame many of the limitations of ST-506 such as speed, data encoding, and flexibility for handling a wide range of disk drive types. This interface would be used more widely today if it were not for the development of two *system* level interfaces: IDE and SCSI.

The IDE interface is a high level or system interface that relies on a disk drive controller built into the drive itself to manage low level functions of the drive. This approach frees the computer system from the low level tasks of converting data signals into patterns that can be recorded on the media and retrieved. Originally developed for IBM XT and AT compatible PCs, it later became adopted for other system bus types such as IBM's Microchannel machine. As these systems represent the majority of computers shipped during the 1980's, IDE became the standard hard disk drive interface simply because of the huge volume of drives built. There are three main types of IDE interfaces with differences based on bus standards:

    IBM PC XT IDE (8 bit)
    IBM PC AT IDE (16 bit)
    IBM PC Microchannel IDE
     (16 bit)

The IBM PC AT computer used an "AT Attachment" IDE adapter, sometimes called an ATA/IDE adapter. Iomega's new Bernoulli Insider 150 IDE product is based on this standard.

Since IDE is a system level interface as described above, the functions performed by adapter are relatively simple. IDE interfaces for these systems are often built into the mother board of the computer or are available as a separate adapter board at a very low price.

Finally, no discussion of disk drive interfaces would be complete without mentioning SCSI. Shugart Associates created SASI, Shugart Associates System Interface, as a system level drive interface. The name was changed to Small Computer Systems Interface or SCSI as other manufacturers supported it. SCSI allows up to eight controllers to be attached on the same bus. Each controller on the "SCSI Chain" converts data to a device such as a disk drive or other peripheral. One controller on the chain is a host adapter that converts signals from the SCSI bus to the computer system interface. All previous Bernoulli drives

Sterling Heights Computer Club
PO Box 385
Sterling Heights, MI 48311-0385

CALENDAR OF EVENTS

Use of the library meeting room has been arranged through the end of 1994. SHCC has the first Tuesday of the month.

February 1994
1 - SHCC - SHCC member Sara Scholl will present *Instant Artist*
7 - APPLE P.I.E. meeting
8 - SHCC officers' meeting
9 - DMUG meeting
13 - SEMCO meeting
14 - FoxPro SIG - TBD
14 - CUE 80 meeting
15 - Novice SIG @ 7:30 at Oakbrook Elementary
18 - MCUG meeting
22 - Power Users' SIG - TBD
23 - SCUG meeting

March 1994
1 - SHCC - MicroSoft will present one or more of their Home Series packages
7 - APPLE P.I.E. meeting
8 - SHCC officers' meeting
9 - DMUG meeting
13 - SEMCO meeting
14 - FoxPro SIG - TBD
14 - CUE 80 meeting
15 - Novice SIG @ 7:30 at Oakbrook Elementary
18 - MCUG meeting
22 - Power Users' SIG - TBD
30 - SCUG meeting

April 1994
4 - APPLE P.I.E. meeting
5 - SHCC - Swap shop and SHCC member Bruce Honeck will present antique computers and their history
10 - SEMCO meeting
11 - CUE 80 meeting
12 - SHCC officers' meeting
13 - DMUG meeting
15 - MCUG meeting
18 - FoxPro SIG - TBD
19 - SHCC Novice SIG @ 7:30 at Oakbrook Elementary
26 - Power Users' SIG - TBD
27 - SCUG meeting

May 1994
3 - SHCC - TBD
8 - SEMCO meeting
9 - APPLE P.I.E. meeting
9 - CUE 80 meeting
10 - SHCC officers' meeting
11 - DMUG meeting
16 - FoxPro SIG - TBD
17 - Novice SIG @ 7:30 at Oakbrook Elementary
20 - MCUG meeting
24 - Power Users' SIG - TBD
25 - SCUG meeting

June 1994
6 - APPLE P.I.E. meeting
7 - SHCC - TBD
8 - DMUG meeting
12 - SEMCO meeting
13 - CUE 80 meeting
14 - SHCC officers' meeting
17 - MCUG meeting
20 - FoxPro SIG - TBD
21 - Novice SIG @ 7:30 at Oakbrook Elementary
28 - Power Users' SIG - TBD
29 - SCUG meeting

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