

CHECK OUT OUR NEW LOOK!

Welcome to the new style of the Orange Coast IBM PC User Group monthly newsletter. This is the second facelift for our newsletter since 1984. Several times in the past we have discussed making these changes, but time is a precious commodity for all of us on the newsletter staff. The former style was almost two years old and beginning to show it's age. What was needed was someone to make things happen.

This effort has all been possible since the appointment of Stephen Burnside to the Board of Directors in July. As the Chairman of the Public Relations Committee and with his expertise in Ventura Publisher, this presented a opportunity to change our style and format. Most of what you see here is the result of his personal efforts over the last two months designing our new look.

Other considerations were also a part for the change. With the rising cost of publishing and mailing, it is important that costs be controlled with every issue. By changing to this new format, we

are able to include in twelve pages what once took sixteen pages to cover. We think that readability will also be improved with varying fonts and type styles.

Let us know what you think of the new look. Be sure to express your thanks to Steve and Jean Stevens for their fine efforts in maintaining a professional look to our members and those outside our organization.

September is also time for the first round of nominations for Officers and Directors. The Nominating Committee, chaired by Tom Sutro, has been contacting members this past month in regard to members interested in running for office. We encourage all interested members to either contact Tom and let him know of your interest, or be prepared to accept a nomination from the floor at the September General Meeting.

Making OCIPUG a great organization requires your help. Be a part of the team that makes things happen. Success to the best User Group in the nation!

IN THIS ISSUE

SEPTEMBER GENERAL MEETING	1
PRESIDENT'S MESSAGE	2
MEMBER SPOTLIGHT	3
GENERAL MEETING REVIEWED	4
GIBSON'S CORNER	6
SPECIAL INTEREST GROUP REPORTS	7
TECHNICAL CORNER	8
FROM THE BOARD	11
MEMBERSHIP AND FINANCIAL REPORTS	12
IMPORTANT INFO	BC

**General Meeting, September 30, 1989 at 9:00 AM
Orange Coast College Science Hall**

"Life After DOS - Part 1"

README.DOC is published monthly by the ORANGE COAST IBM PC USER GROUP, P. O. Box 6100-211, Costa Mesa, CA 92628. The group's recorded message number is (714) 843-2048.

IBM is a registered trademark of the INTERNATIONAL BUSINESS MACHINES CORPORATION. Neither the User Group nor *README.DOC* is connected with IBM in any way.

ORANGE COAST IBM PC USER GROUP, contributors and editors of *README.DOC* do not assume any liability for damages arising out of the publication or non-publication of any advertisement, article, editorial, or any other item in this newsletter. All opinions expressed herein are those of the individual authors only and do not necessarily represent the opinions of the ORANGE COAST IBM PC USER GROUP, its officers, Board of Directors, the *README.DOC* newsletter, or its Editors.

GUIDELINES FOR README.DOC ARTICLE SUBMISSIONS

Send all submissions to the Editor, on or before the deadline listed below, using one of the following formats:

1. **UPLOAD** to the Bulletin Board indicating the format by extension, such as: ASCII.TXT, MSWord.WRD, WordPerfect.WP.
2. **5 1/4" DISK** mailed to the Editor in time to meet the deadline.
3. **HARD COPY** is acceptable only if typed and double-spaced.

DEADLINE FOR ALL SUBMISSIONS WILL ALWAYS BE THE SATURDAY FOLLOWING THE GENERAL MEETING.

All items submitted for publication are subject to editing.

The User Group does not intend to endorse, rate, or otherwise officially comment on products available, and readers are cautioned to rely on the opinions presented exclusively at their own risk.

README.DOC, Copyright© 1989 is a publication of the ORANGE COAST IBM PC USER GROUP. Unless otherwise noted, other nonprofit user groups may reprint without prior permission any of the articles appearing in this newsletter, provided that proper author, title and publication credits are given to the ORANGE COAST IBM PC USER GROUP's newsletter.

README.DOC Newsletter

Created by:

Publisher Steven Dela
Editor Jean Stevens
Production Editor Steve Burnside
SIG Guide Editor Richard Villa

Proofreading Laura Dela

Production Steve Burnside
Steven Dela
Richard Villa

Distribution Jennifer & Melissa Dela
Mary Lou Kennedy
Gordon Lewin
Christine McDonald

Contributors Steve Burnside
Jerry DeAinza
Neil Carman
Paul Curtis
Steven Dela
Steven Gibson
Harv Haight
Dave Lorenzini
Stan Sabin
Jean Stevens

Camera ready copy produced with:

AST Premium 286
LaserMaster CAP card

HP LaserJet II
Ventura Publisher 2.0

Printing by PrintMasters #88 in Huntington Beach. (714-891-5006)

README.DOC is published monthly. A subscription is included with all paid memberships in the Orange Coast IBM PC Users Group.

Address all inquiries, editorial copy, advertising and address changes to: *README.DOC*, P. O. Box 6100-211, Costa Mesa, CA 92628

ADVERTISING POLICY

Members are allowed to place an advertisement for personal items in the *README.DOC* newsletter at no cost. There will be a limit to the amount of advertising placed in the newsletter. All submissions will be placed on a first come, first served basis.

Commercial advertisements, from members and others, are also welcome. For information concerning advertising rates and requirements, contact:

Steven Dela (714) 775-8373 or write to Advertising Manager, OCIPUG, P. O. Box 6100-211, Costa Mesa, CA 92628.

PURPOSE STATEMENT

The purpose of the ORANGE COAST IBM PC USER GROUP is to provide a forum for members to share information and experiences that will help other members obtain maximum benefit and enjoyment from the use of their IBM PC and compatible personal computers.

TRADEMARKS

The mention of the names of various products in this publication without indication of Trademark or Registered Trade Mark status does not imply that these products are not so protected by law.

SEPTEMBER GENERAL MEETING

"Life After DOS" - Part 1

OS/2 MCA EISA

IBM

MICROSOFT

BORLAND INT.

AST RESEARCH

Our September program will explore OS/2, MCA, EISA, bus master products, and a demonstration of database software taking advantage of this new technology.

If you have had trouble understanding why anyone would want to change the current standards, you won't want to miss this presentation by representatives of IBM, Microsoft, AST Research, and Borland International.

IBM is telling us that the standard AT bus, introduced 5 years ago last month, is not good enough for the future directions of microcomputing. After all this time, the AT bus has been designated as ISA, for Industry Standard Architecture.

The operating system for the 1990's is supposed to be OS/2. This new standard will extend DOS's ability to support larger programs, provide multi-tasking, integrate communications and data base activities, and prevent a more friendly user interface. OS/2 also makes provision to run DOS programs for continued compatibility. Margaret Johnson, Systems Engineer for Microsoft Corporation, will describe OS/2 in more detail.

A good way to demonstrate OS/2 is to show how applications run in that environment. Fred Felman, from Borland International, will demonstrate the OS/2 version of Paradox.

In order to take advantage of OS/2, IBM developed a new bus architecture, called MCA, for

Micro Channel Architecture. This has been characterized as providing a superhighway for data transfer instead of a one-way street. MCA is the basis for IBM's line of PS/2 computers. A representative of IBM will be here to show us why MCA is here to stay.

Several clone manufacturers have decided not to pay the royalties imposed by IBM, and some have joined the development of another bus standard, called EISA, for Extended Industry Standard Architecture.

EISA will allow you to use your existing 16-bit add-in boards, whereas MCA requires a new series of boards. (EISA does not work with 8088 8-bit systems.) Intel recently released a chip set to permit the development of EISA systems. No doubt we will be seeing prototypes based on the EISA standard at Comdex in November. Mike Krieger, Senior Manager of Advanced Systems for AST Research, will explain the advantages of the EISA bus.

This is the first in a series of program topics to prepare you for the second decade of personal computers. Next month you will have a chance to see the celebrated NexT computer. Early next year we will explore UNIX as an alternative to OS/2, as well as introduce the new generation of i486 and RISC based computers. Sometime in 1990, to make our survey complete, we will show DOS running on a (heaven forbid!) MAC II. ■

President's Message

Take Note

First, some housekeeping. In order to avoid the mad rush to the front of the auditorium during breaks and after the General Membership meetings, it would be appreciated if those who have things to be distributed to our members would be kind enough to place them on the table in the foyer of the auditorium. We have a lot of expensive equipment (some of which is not ours) in the front of the auditorium and we have a duty to protect it from accidental destruction.

Second, more housekeeping. At the General Membership meetings we normally reserve several seats in the first three rows of the auditorium, designated specifically for speakers, staff officers, directors, equipment operators, guests, and people with visual or hearing impairments. Please assist us by observing these restrictions on seating, during the General Meeting.

Third, a little more housekeeping. The Board of Directors will conduct Board meetings on the Monday evening immediately following the General Membership meeting. Additionally, the deadline for the submission of articles to README.DOC will now be the Saturday following our General Meeting. The SIG meetings will be conducted on days of the week starting with the first of the month, in order to minimize the confusion created by not knowing whether a meeting falls on the last Monday or the fourth Monday of each month.

Now for the good stuff.

We will be presenting an XT system to the Veterans Administration Rehabilitation people at the September 30th General Meeting. This is a system that we put together from spare parts which many of you donated. It has a monochrome monitor, a ten megabyte hard drive, 640K of RAM and two floppy drives, thanks to the generosity of our members. It is this kind of sharing that really makes our club a worthwhile organization. What this donation means is that several people, who have lost the use of their existing skills, will have the opportunity to learn a new marketable skill, which could provide them with a means of earning a living in the future. I don't think I need to describe the advantages of such a program. Thanks to everyone who assisted.

We are in need of some photographers for the September 30th General Membership meeting. We will be taking a group photograph at LeBard Stadium at 11:30 AM (weather permitting) and need all the help we can get. Please call me if you can provide assistance with this project.

Our offices at the SIG space are just about completed. Shortly, we will have a cabinet-making and cleanup party. Those who are interested in helping may hand a business card to one of the officers at the next General Meeting stating the hours you are available on the back, so that we can put some work parties together. Those who can't provide a business card, may send a note with information on who you are and how we can get in touch with you.

Now for the REALLY good stuff.

Joe Poshek and John McEnary did a presentation of MIDI and Music Technology at our February meeting. As you may recall, they played their own compositions using Yamaha equipment and showed us how to create music with a computer. We now have an opportunity to enjoy some more of their efforts. They are putting on a concert at the Robert Moore Theatre on September 30th at 7:30 PM. Tickets are \$5.50 in advance and \$7.00 at the door. You may call 714/432-5527 for tickets and information. They have also been kind enough to donate three audio tapes of their music for our September raffle.

We had a great Hardware SIG meeting last month. I thought I was going to get a chance to use our new raffle tickets, but the good folks at DTG came over and gave EVERYONE at the meeting a copy of their SLEUTH diagnostic program. That's what I call a great raffle. If you call them and tell them you are a member of OCIPUG they will provide you with a copy of their program for \$50.00 and the next upgrade for \$35.00. Very handy tool to have around when you are trying to figure out what is on the inside of the "box."

Based upon advice from one of you whom I consider a truly good friend, I have decided that in the interest of fairness to all concerned, I shall forego the President's message for the coming Election issue of README.DOC. This is an effort to avoid even the slightest appearance of politics entering into this fine Journal.

continued on page 3

Member Spotlight

President's Message cont.

It is my sincere hope that this will set a precedent for future officers, so that the use of club assets as vehicles for the advancement of individual causes, can be avoided.

To those of you who have assisted during this past year, I thank you from the bottom of my heart. As I reflect back over this term, I am reminded of some very touching and moving events, which will stay with me for the rest of my life.

Our collective efforts made it possible for us to be where we are, and I thank each of you for the opportunity to have been there with you. They say that what you get in life is relative to what you give. Actually, you get a lot more than you give, particularly when the giving is done out of love and concern and without expectation or anticipation of personal gain.

As "life goes on" and the cycle continues, some of you will find that where you were once on the receiving end of good advice, you will now be on the giving end. If you thought receiving was rewarding, wait until you experience the joy of sharing and seeing the light bulb turn on for someone else. There aren't words to describe the feeling. Thank you all so much for the opportunity to **SHARE IT WITH OTHERS.**

PAUL CURTIS, President

ROBIN CLARK

Jean Stevens

When two new Board members were recently appointed ROBIN CLARK (#27) was one of them. It could not have been a better choice. She has been a member of OCIPUG since 1985, and as a dedicated person, she does not take this new responsibility lightly.

Born in California, her family soon moved east to Connecticut. They bought an old racing schooner, and as a family project, spent the next ten years rebuilding it. Once the project was completed, they began their leisurely one year journey from Connecticut to Florida via the Inland Waterways. To make sure the kids did not fall behind in their schoolwork however, her Mom held classes for them every day aboard the schooner.

After their year long journey was over, her family sold the schooner and moved back to California permanently. Robin now lives in Irvine. She has a Linguistics Degree from UCI and speaks four languages, French, Spanish, German, and Latin, (although she admits to being a bit rusty at this time.)

Robin's first experience with computers was nine years ago when she starting using an Apple computer and joined an Apple User Group. However, she soon realized that the Apple did not have the capabilities she had hoped for, so she switched to an IBM clone and joined OCIPUG in 1985. She now has a 386 clone with a VGA Display monitor, and uses WORDSTAR and PROCOMM. But it's not all work and no play for Robin. She has a consuming passion for computer games as well, her favorite being,

"Hitchhikers Guide to the Galaxy."

Robin has been a programmer for seven years. She is presently employed by the software house, State Of The Art, as an Applications Programmer for accounting and manufacturing software. As she puts it, computers are not only her work but also her hobby. Speaking of hobbies, it's been about a year now, since Robin qualified for her Private Pilot's license. Whenever time and money permit, she rents a Citabria from Orange County Airport and heads for the big open sky. She may take a short trip to Catalina for lunch, or go up to Tehachapi to watch the gliders. And if you happen to see a small plane doing loops and spins out over the ocean, take a closer look. It could very well be Robin at the controls, under the guidance of her Aerobatics Instructor. In her saner moments, she enjoys reading and photography.

OCIPUG has meant a lot to Robin. She realizes it's a place to go for education and information and has tried to do her part in giving something back. In the past she has volunteered her time by writing software reviews for the Newsletter, back in the days when Tom Sutro WAS the newsletter, and has also assisted Bonnie with the software library. At present she is trying to get the Unix/Xenix SIG off the ground. Anyone interested in this SIG can contact her.

Most of you have probably congratulated Robin by now on her appointment as a Director. If not, why not do it at the next meeting, so as to give this very nice and capable person your vote of confidence.

General Meeting Report

August meeting featured display technology, applications, and peripherals

Linda F. Leydekkers

Pres. Paul Curtis, was under the weather, so Vice Pres. Tom Sutro, made the announcements concerning upcoming meetings. Please refer to the Special Interest Group (SIG) Guide for this information. Tom turned the meeting over to Ben LeGare for random access questions while the special equipment, provided for this meeting by A-VIDD Electronics, was being set up for the demonstration.

Dave Lorenzini, OCIPUG Director, introduced the first speaker, John Goodman. John is a long standing member of OCIPUG who generously shares his time and knowledge with our membership. This time John undertook the task of explaining Display Standards, in a quick and thorough thirty minutes. No small undertaking, but John's long experience in front of the podium and well prepared presentation materials, once again proved extremely instructive. I can't say we all understood this complex topic completely at the conclusion, but certainly we were enlightened, which met the intended goal.

"Your computer generates messages and sends those messages to the display hardware in your computer," John began. "For most of our computers that is a plug-in card. For some computers it is circuitry that is built on to the mother board. Either way it is an identifiable separate part of the computer circuitry, and that part sends a different type of signal over the cable to the monitor, and the monitor presents it on the screen. So if you don't have any of those parts, and particularly if they are not able to successfully talk to each

other, you aren't going to see anything on the screen."

John went on to explain some of the jargon used in this field. Raster is the type of display used on most monitors. Raster display paints an image using one dot (pixel) at a time. John gave a simulation of the way the dots scan across and down the screen. Resolution is the number of dots across/horizontally, times the number of dots down/vertically, displayed on the screen. Character mode/APA (all points addressable-IBM's term) uses a character cell 8X8 (or 64 dots) to display one character.

Impressive demo of SHOW PARTNER F/X

Dots can be turned off and on at different frequencies to indicate color. From here the evolution of the different types of displays were explained (i.e. monochrome, CGA, EGA, VGA, etc.). To go through this in depth here would take far more space than available for this column. However, it is important to match the display card in your computer to the monitor you have connected to it. A multi-synchronous monitor is favored because it has the ability to emulate different ranges sent by the display card.

Chip Meyer, Account Manager at Computerland, was kind enough to answer the call from Brightbill-Roberts for someone to demonstrate their product, SHOW PARTNER F/X, to our club. Special projection equipment was provided by Computerland for this demonstration. Literature and demo disks were available to the membership as well. SHOW

PARTNER F/X is a DOS based presentation graphics program that is flexible and easy to use. The program supports the leading IBM and Hercules graphics standards and fully takes advantage of EGA or VGA capabilities. Presentations containing 16 and 256 color screens and effects can be utilized, and if your system includes expanded memory (EMS), F/X takes advantage of that as well. A Microsoft mouse or 100% compatible is required for Object Editor and is an option in all other modules: Script Editor, TexPaint, GraFix Editor, Font Editor, Object Editor, and Slide Editor.

Chip Meyer gave a very enlightening and impressive demonstration of the product and was available for questions from the audience afterwards. Brightbill-Roberts has a strong technical support staff and a bulletin board (315) 742-1058. For those of you with an interest in this area, I can tell you, this is a very impressive product.

Bonnie Ulanovsky gave a short review of the library disks available at this meeting and Dave Carroll made the SIG announcements. Be sure to look in the SIG section of this newsletter for date, time, and locations.

Dave Lorenzini presented AUTODESK ANIMATOR. Demo disks were available for the membership to take home and review. Dave gave an insight into the development of animation on the PC and how it has evolved. I particularly liked the little fish eating the big one, which got chuckles from the audience, but the dancing Little Red Ridinghood along with

other examples really showed the capabilities of the program.

Jim Greer, of A-VIDD Electronics, fascinated the audience with STILL IMAGE VIDEO. Our own member, Thurman Wade, is the proud owner of a still image Cannon camera. Sony also produces a fine still image camera. Instead of shooting on film this camera shoots on a two inch floppy disk that will hold up to fifty images. The camera is designed to allow anyone to grab and display images very easily utilizing the still image rather than the motion picture. This image can be imported for use on a PC, and has also been used by TV newscasters. The Sony still image has been sent over phone lines to display world events in record time and clarity, in places where video cameras were banned by local governments. This image can also be printed on a color printer for hard copy distribution.

Using the still image and a special player deck, a video presentation can be presented via your PC. These images can also be manipulated and animation added for commercial use. The cost of this system is still in a range that is prohibitive to the average budget. Jim Greer set a value in the area of \$7000 for just the camera. He was very adept at answering questions, some of which were extremely technical and beyond the range of understanding for some of us, but to those involved with this technology there seemed to be an eager question and answer period that followed. Video images can be imported into the PC as well as exported back to video media at this time. New developments are discussed in a newsletter and demonstrations can be arranged in the showroom at A-VIDD Electronics.

Many thanks to all our speakers for this enlightening meeting. If you need more information on any

of the topics covered we would like to invite you to attend any of the Special Interest Groups (SIG's) that meet during the month. Check the schedule in this newsletter or call the club voice phone or BBS for more information.

OCTOBER ELECTIONS NOTICE

This is a reminder that the October General Meeting will include the election of Officers and Directors for 1990. The Nomination Committee, chaired by Tom Sutro, has been polling members about their interest of holding office. Of course, this is not the only way to be nominated. The September General Meeting will provide time to open nominations to all members for the four Officer and four Director positions available. If you have thought about serving OCIPUG in an official capacity, call Tom for more information, or be prepared to accept a nomination from the floor at the meeting. Also, just prior to the election vote in October, there is a last minute opportunity to be nominated.

This will also serve notice to prospective candidates about the October README.DOC election

insert. As we have done in the past, you will have an opportunity to display your photo and a brief statement for the office which you are campaigning. To be fair to all those concerned, we have established size and word limits.

Pictures of all the candidates nominated at the September meeting will be taken by a member of our staff. Be sure to listen at the meeting for a time and place to meet right after the General Meeting. The candidate statement will be limited to the following word lengths: For Presidential Candidates, 125 words maximum; For other Officer Candidates and Directors, 75 words maximum. We will count words, there will be NO editing by the README.DOC staff, so be forewarned.

The deadline for your candidate statement will be 6PM, October 7th. Statements must be in the Editors possession by that time. There will be NO exceptions. Those without photos or statements will be listed by name only as a candidate for office.

If you have any questions about election procedures, please feel free to call Tom Sutro. We hope to make this years elections a pleasant and enjoyable event.



968-7307

ANYWHERE IN ORANGE COUNTY

including

ANAHEIM	NEWPORT BEACH	MISSION VIEJO
CYPRESS	BUENA PARK	WESTMINSTER
IRVINE	HUNTINGTON BCH	SANTA ANA
LAGUNA	GARDEN GROVE	FOUNT. VALLEY

Last time we explored the relatively new concept known as encapsulation and saw how the internal privacy it delivers to sub-programs allows them to freely utilize the resources of the system without concern for data labeling collisions with other parts of the system which lie outside the scope or bounds of the sub-program. These aspects of the encapsulation of a sub-program's data are drawing us closer to the idea of a sub-program as an independent "object" since the sub-program's internal privacy inherently allows us to be less concerned and affected by things which go on within the bounds of the sub-program, just as it's able to more ignore the environment which lies external to it.

Armed with this background, let's now turn our attention to another new phenomenon in the development of our industry, the so-called API, or Application Program Interface. Much as modern sub-programs are empowered to hide their data behind veils of encapsulation, modern day API's provide a facade behind which huge and complex chunks of a system's functionality are hidden from external view.

When a program is created in a high level language under DOS, the programmer typically relies heavily upon service functions which are **INTRINSIC** to the lan-

guage. For example, to send text to the display screen under Basic, Pascal, or C, the Print, Write, and Printf commands are utilized respectively. In each case these functional services are regarded as part of the native high-level language; they're language intrinsics. However, when such a program must access a service which is provided by DOS, but which is not available through the language's standard intrinsic functions, it becomes necessary to reach outside of the confines of the language. DOS must be contacted directly. All modern PC languages provide methods for accessing such functional services which are **EXTRINSIC** to the hosting language.

When such contact is made with the system's BIOS or operating system we come into contact with an external API. API's are everywhere. They literally surround us. All IBM compatible personal computers are built upon a standard hardware services API known as the BIOS. DOS offers its functionality to the programs which run underneath it through the mechanism of its own API. In doing so DOS calls heavily upon the "lower-level" BIOS API. Furthermore, Microsoft Windows' famous and tricky message-passing multitasking API relies heavily upon the services offered by both the DOS and BIOS API's.

The powerful concept here is, once again, encapsulation. But this time there's even more than simple data being hidden. True service functionality is called forth from an API without any need on our part to understand or worry about how the job is being performed. An API allows a complex system to offer a sophisticated spectrum of services with full autonomy.

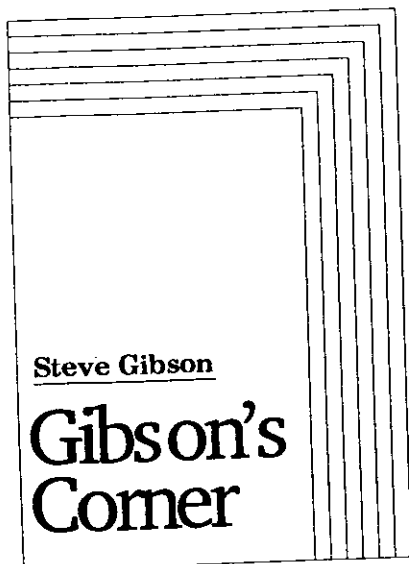
An API lives and dies by its documentation. It is literally defined by this documentation which details each service made available by the API, the task it

performs, the information it needs from it caller, and the information it returns when it's complete. The controversy which Microsoft endured over its deliberately incomplete DOS API documentation demonstrates the world turning power which significant API's can command. When the industry realized that there were things which Microsoft's own DOS utility commands could do which the DOS API documentation clearly didn't allow (like early program residency) we immediately dug down to intercept and reverse-engineer the API dialogue which was transpiring between Microsoft's applications and DOS to further flesh out our own definition of DOS's API.

But the fact that an API's documentation is utterly defining is of key significance. The user of an API is not burdened with the need to know anything about the how's and wherefore's of the way the API's services will be performed. He or she simply asks for a service and, on a good day, receives it.

So it's clear now how an API is able to reduce a system even as complex as an entire operating system to a simple, single object. Such an object contains loads of private data and internal sub-programs, and exposes only as much of itself as we require or really want to know. The pervasive idea is that we, as program developers, already have more than enough to worry ourselves about, so the more we're able to depend upon preexisting and pervasive services the better.

Copyright © Steven M. Gibson
1988, Irvine, CA 92715



SIG Corner

SHAREWARE SIG

Lia Varner

On Saturday, August 12, 1989 at the regular meeting in our new SIG Space, David Carroll, a graphics artist, presented a demonstration on four different Shareware Graphics available from OCIPUG. Fifteen years ago, when he began working with what is now called CAD (computer aided designed), the standard was EGA and 256K on a card, not RAM. He reminded us that even though he uses spellcheckers on his letters, his spelling hasn't improved--likewise, using graphics software will not make you into an artist.

As a general rule, software with "paint" in the name is bit-mapped. It is usually easier to use and also cheaper than the other type of software used in graphics, which is vectored (zooms) and is more complex. Does your hardware support use of graphics: screen only--not concerned with printers, color printers or special drivers? Does your CGA support color, black and white, a Hercules card? Be sure to check your printer for support.

FINGER PAINT, V2.00 from Poisson Technology is easy to install. It is a pretty good package for black & white and has a good aspect ratio (the difference between screen and printer). It lacks color support if you want to use a color screen but is good for use with a word processing package. It has a movie feature, (multiple frames) which is rare in paint packages. You can choose from the function keys or the menu across the top if you don't have a mouse. Text can be entered but it is NOT a word processor.

The usual way to begin a project is with the general outline. In his clown demo, he began with the hair outline, added the nose, eyes, mouth, chin, neck and shoulders. Then he defined an area and began dithering (applying checkerboard design to area) then the highlights. Finally, he removed the outline. Now, you magnify a given area, like the eye, and work pixel by pixel. His clown demo took about six hours to create. Working with these graphics does take time and patience.

FLOWDRAW, V2.4 from George Freund has 2 disks. The tutorial has 2 demos--the first takes from 15 to 20 minutes, and the second uses all files and walks you through an actual flow chart. Draw with the cursor keys--pressing the SHIFT key draws a line. Text is in ASCII mode, fonts are small, normal, and big, and you have actual individual pixel manipulation.

CHARTS UNLIMITED by Stan Webber is similar to FLOWDRAW but David feels the interface is a little better. This program has a LOTUS 123 feel to the menu. You scroll around on a large worksheet format of over 4 million pixels or dots and the VIEW feature shrinks a chart to 1/8, and displays on right half of the screen. It has a symbol library available; flow chart programs, writing software, floor plans, electrical schematics, both ASCII and bit map, organizational charts, or you can create and add your own symbols. You can insert rows and columns in small defined areas (not the whole spreadsheet). The documentation is well organized. You do not have as much pixel manipulation as in FLOWDRAW but these reviews by

David can help in your decision according to your specific needs. The \$3.00 per disk, charged by OCIPUG is low enough so that you can try several different programs, make your decision, then pay the nominal fee to register with the programmer of your choice.

PC-KEY-DRAW V3.51, 3 disks by Edward Kidera was the final review. It has 290 pages of documentation and is a VECTOR type. It was the most complex package shown. Because it can do a lot more than the other 3 shown today, the registration fee is higher and the learning curve is much longer. Also some paint package attributes are available for more technical drawings. You are beginning to get into CAD; rotate, zoom, video reverse, mirror images, etc.

GENERIC.CAD, DESIGN.CAD and TURBO.CAD packages are available for less than \$500. AUTO.CAD is a \$3,000 package. The add-on programs available are priced accordingly.

Thank you, David, for this very interesting and informative session.



Technical Corner

FRAGMENTED FILES

Harv Haight PE

If your floppy or hard disk were read-only, you'd never have a problem with file fragmentation. Fragmentation occurs when files are written to and erased from either type disk.

The NU program from the NORTON UTILITIES maps how the magnetic patterns which are files, are arranged; a scan of most disks in active use for a time shows many gaps in the displayed array. A gap results when a file is erased. The magnetic pattern of the file is not changed (except with COMPAQ computers); instead an entry is removed from the File Allocation Table (the FAT). The space left on the disk is available for a new file to write over the existing pattern on the disk. DOS does not require that files which exceed one cluster occupy immediately adjacent clusters; that part of the new file which doesn't fit into the one cluster is written to the next available cluster, as shown in the FAT.

After a succession of erase/writes, many files become non-contiguous, or are broken into scattered portions. A floppy drive rotates at 300 RPM, and a hard drive at 3600 RPM, regardless of what is read from or written to the disk; what must move more is the pickup-arm system, a mechanism which is relatively slow and which can wear or become misaligned.

File fragmentation depends upon the size of the diskette or hard disk, upon the version of MS- or PC-DOS, and upon the size of the program. When a disk is low-level or logically formatted, the available surfaces are divided into sectors, magnetic flux levels

equalized, and unstable or unfit sectors are reported. The standard DOS sector size is 512 bytes; each sector is a wedge of a circular magnetic track. A cluster is the minimum available size for any file, and can be 512 bytes, 1024 bytes, 2048 bytes, 4096 bytes, or 8192 bytes long (1, 2, 4, 8, or 16 sectors). Cluster size is 1 sector for a quad-density 1.2-Megabyte AT diskette, and 2 sectors for a 2D2S 360-Kilobyte XT diskette.

With a 12-bit FAT, DOS 2.X won't recognize a hard drive greater than 20 Megabytes and cluster size for a 20 Megabyte drive is 8192 bytes (16 sectors); with a 16-bit FAT, DOS 3.X allows up to 32 Megabytes per logic drive, with a cluster size of 2048 (4 sectors). With such large clusters for DOS 2.X, fragmentation is less of a problem, but at the cost of tremendous loss of available hard disk memory with many small files.

When extensive fragmentation is present in an old diskette, it would make no sense to duplicate the diskette by the DOS "DISKCOPY" command; all the fragmentation would still be there on the copied disk. Instead, the DOS command "COPY A:.* B:," or the command "XCOPY A:.* B:" should be used, since each file would be written in full upon contiguous clusters. In a similar manner, the use of a tape backup in the "image" mode would include all of the fragmentation of the backed up disk; a "file-by-file" mode would be needed for an unfragmented tape backup.

This leads to the traditional method of removing fragmentation - backing up the hard disk and reformatting it (logic format, plus low-level if the original low-level

was quite a while ago) - then restoring it. This method has been supplanted largely by dynamic techniques offered by several software manufacturers, but even the most optimistic of these suggest first running a good backup.

The process of fragmentation occurs gradually. Periodic removals by traditional or dynamic methods ties up use of the computer and operator time, so that a recent program published in PC-Magazine by Bob Flanders and Michael Holmes, and entered on the OCIPUG RBBS under the title "CHKFRAF.ARC," would be useful even to the non-power user.

The file of immediate interest is "CHKFRAG.EXE," which takes up 17501 bytes of hard drive space. It has lots of bells and whistles, and an additional batch command can invoke your commercial de-fragmentation utility, but the simple command HKFRAG [d:][%], where [d:] is the diskette or hard drive in question, and [%d] calls out an answer in approximate percentage of the disk fragmented, gives a good estimate of how bad things are. The suggestion is made that from 11% to 75% of fragmentation needs attention, and that above 75% is near-disaster. The program can require up to 100 Kilobytes of RAM to check a large hard drive, and will be ineffective if lost clusters or cross-linked files are present (use the DOS "CHKDSK" command first, with /F). The RBBS entry includes brief documentation and the original C-language source code, which was compiled with Microsoft C, Version 5.



Behind The Scenes

Reprinted from the Pasadena IBM Users Group Newsletter and the Pasadena Star News.

MAGIC

When I was a kid, I watched my cousin light one of those big old fashioned wooden matches, blow it out and turn it into a rose. I was captivated with Cousin Lanny, the amateur magician. He was able to do all the mysterious, baffling, fascinating things we're all attracted to as children.

At about 13, I inherited Lanny's light greer. magician's box. It was rectangular, chipped and scratched, with brass handles and hinges. It opened the long way and had two long brass tracks to hold the top opened.

Inside were slots for rows of coins and packets of cards. Wooden dividers kept the stack of cups upright. The false thumb and spool of black thread were nested together. Nothing, however, looked like it was in the right spot. There were some blue and yellow silks peeking out from under some short red canisters, brightly decorated with zigs and zags, the lines of magic. Stuck next to some stray cards was a wooden egg. Laying on the outside edge was the magic wand, looking just like it should.

Most of all there was a smell. It wasn't a bad smell. Actually, it was barely noticeable. But there was a smell. It offered a glimmer, just the barest hint of the excitement. Of magic.

When I was older and able to attend the informal Saturday gathering at the magic store in Manhattan, I began noticing the same smell. I tried paying attention to see if there was one thing, one something that broadcast itself into the store. After a while I stopped focusing on where the

smell came from and continued savoring the excitement it carried.

I couldn't be sure but felt it must simply be something I brought along with me. Not a hallucination, but a feeling, that excitement that went along with those things elusive, baffling and incomprehensible.

You must know I enjoy using computers. I appreciate a computer that's well designed. I delight in finding the one piece of software that will really do all it claims. The one that can genuinely and precisely take care of my needs. Mostly, I love the magic of computers.

Every time I walk into Egghead or Software Central, I feel the same excitement. The same smell. As I look at the formidable array of software packages, each proclaiming to be the magic bullet, the product that can cast a spell on your machine, I know, I just know this one will speed-up, liven-up, bail-me-out, help-me-out and take care of business. It'll make my computer cavort and oscillate, dance and pontificate. In no time my CPU will begin growing memory, kilobyte by kilobyte, just through the magic of this software.

THE BELTRON BELCHER

Jerry Pournelle writes in Byte magazine. He does a great job. He's one of the few people writing a computer column who knows how to write, probably because he was a writer before becoming hooked on computers.

He has a habit of naming his computers. Seems silly to me. I mean, a computer is a vehicle for

making our regular 9 to 5 jobs easier, nothing more. Sure.

My AT-clone is from Beltron (aka MICA). THE BELTRON BELCHER. The company is one of 3000 in Pasadena hawking cheap, lightening quick machines. Listen to this: A large and small floppy, 30 mg fast Seagate, switchable 6/12, 1 Meg on the system, i/o card, Hercules mono clone, massive keyboard and a mono monitor for \$599.99 plus tax. The trip to Taiwan to pick it up is the real killer.

How's it working and what would I recommend? There are three levels, maybe four, of risk. Play it safe and get an IBM-AT. It will surely fail but it's backed by IBM for 90 days. Be a real hero and buy one of their PS models. You know you've spent a lot and you know it's IBM (or COMPAQ). All the parts are from IBM (and IBM probably buys from Beltron).

Try the next safest and do a Dell or a Multi-Tech, aka Accer. Solid machine, rated speed is fast and it's backed by a one-year TRW service contract. Substitute AST-286, Advanced Logic or PC-Limited. All still safe.

Or do a Beltron, get a great price, watch him build it for you, worry a lot until you're sure and then sit back and grin.

They're all the same, folks. There's one Taiwanese manufacturer on Flower Street, downtown Los Angeles cranking the system boards out in his garage. Supplies the nation. The research I've done with lots of help from the brilliant people at the Pasadena IBM User's Group leads me to the same conclusion: they're all the same except the labels. And for about

\$2000 bucks you can fly one at what seems like the speed of light — at least today cause tomorrow we'll be at 6/20 pushing the quasars aside.

SECRETS

Listening to Uncle Ollie trying to charm his way through the congressional committees has sure been interesting. Aside from the political issues, some intriguing situations were brought to light.

Here's Ollie watching Fawn sitting in front of the computer, cranking out memorandums, faithfully backing up early and often.

"There's talk about the FBI and Meese stopping by to examine our records," said Fawn, worrying about how she'll be able to stuff all these floppies in her boots and blouse.

"Not to worry," Ollie said charmingly, "all we need to do is hit this (D)elete button and it's gone."

A look of concern came over her face. "You mean it's gone? Forever?" She asked.

"Yep," he said, "it's lots easier than using a shredder and we can reuse the disks at the users' group."

"But I heard something about a Neter Porton program at Egghead that..." she started to say but was interrupted. "Porton's on payroll with Secord and Hakim," the Colonel said knowingly, "we don't need to worry about him. Anyway, he's an old CIA man from way back."

"Oki-dokie," she said, creating a Prokey macro that started pounding the (D)elete key into the ground.

When I have time, I poke around disks other people have sent me to see if there's anything still floating around. It's a fun exercise in restoring old deleted files.

You all must realize that files are deleted from a disk by changing the first letter of the file name so it's not listed when you ask for a Directory (DIR). It is written over by other files when there's no room left on the disk.

The only safe way to delete a sensitive, confidential file (client notes, your accounts payable/receivable, your customer mailing list) is to put the disks in a preheated oven at 375 degrees for no more than 25 minutes. A light coating a Pam decreases the time by about 5 minutes. Salt to taste.



GARDEN OF EDEN

IBIZ 10 89

Computers and Software

CORPORATE
& SCHOOL
P.O.'s Welcome

Business & Educational
Software since 1982

Printer Ribbons—All Colors—Lowest Prices—Cables, Diskettes and Accessories

PACKARD BELL FAX \$699⁹⁵

FAX · PHONE · COPIER · ANS. MACHINE
Auto Dial/Redial, 110 Number Memory, 5 Page Auto Feeder,
Auto Answer, 16 Gray Shades, LED Display, MORE.....
Mfg by NEC List Price \$1695

Spin Rite	49.95
PageMaker 3.0	489.95
Lotus Rel. 3	319.95
PathMinder	59.95
Okidata ML 380 (24 Pin home/office)	379.95
Okidata ML 390 (24 Pin LQ)	489.95
Hewlett Packard Desk Jet Plus	679.95
256k (120 ns) Chip Set	49.95

SIGNAL 286/16

· 100% IBM & NOVELL Compatible ·
· 12 MHz · 30 Meg Hard Drive · Electronic Data
Security Lock · Perfect For: Word Processing ·
· Bookkeeping · Data Storage · Spread Sheets ·
Networking · DeskTop Publishing ·

\$689⁹⁵

10 Mhz TURBO XT
640k, P, S, G, Clock
Monitor Incl'd
360k Floppy, 165 W
Hard Drive Optional

\$1299⁹⁵

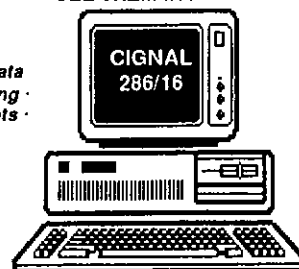
12 Mhz AT System
1 MEG of RAM
220W, 1.2 Floppy
P, S, G, Monitor
Hard Drive Incl'd

COLOR Systems add \$169⁹⁵

EGA Systems add \$399⁹⁵

VGA Systems add \$489⁹⁵

SEE THEM IN ACTION



12 Months warranty Parts & Labor
30 DAY MONEY BACK
GUARANTEE

Lower Prices Than · PRICE CLUB · EGGHEAD · SOFT WAREHOUSE



If you can find a lower price
GARDEN OF EDEN
WILL BEAT IT
Full details in our store

714-841-4994



Fax: 848 1399
Se Habla Ingles!



16485 Magnolia St.
Westminster, 92683

1 BLOCK No. OF 405 FWY

9 AM - 6PM MON-FRI..... 9 TO 5 SAT



Egghead, IBM and Signal 286/16, SoftWarehouse & Price Club are Reg. TM's

From The Board

PROPOSED BY-LAW CHANGES

From time to time, as this organization continues to grow, it becomes necessary to make some changes in our By-Laws. When the club's By-Laws were originally approved July 27, 1985 the membership was very small (under 50 members). Now that our membership numbers near 1000 members it is felt that some changes need to be made.

Initially, there was little concern as to the exact date when Officers and Directors changed offices following the election each October. Now, there is so much going on that a definite time needs to be specified. It is felt that the incoming Officers and Directors should have a period of time to "get up to speed" in their new positions and prepare for the various assignments that pertain to those positions.

It is also felt that the outgoing Officers and Directors, who have been working in conjunction with various suppliers and other User Groups throughout the country, should still be in office during COMDEX, which is traditionally held in November. For these and other reasons it is recommended that the change of office should take place on Dec. 1st of the year elected. (See recommended change to Article V, Section 2.)

Second, the terminology in the current By-Laws regarding disbursement of OCIPUG funds is hard to determine, such as, what is the definition of large or unusual disbursements. It is felt that a more understandable definition would be of benefit in future actions. Since the club tends to

change in size from time to time, what might be considered a large amount for a small club might be a small amount for a large club, and therefore is difficult to set an actual dollar amount.

It would not be expedient for the leadership of the club to be delayed in the purchasing of needed equipment by having to wait until a General Meeting was held for approval of funds. At the same time, we want to make sure there is adequate accountability to the members. Therefore, it is recommended by the Board of Directors that any expenditure which exceeds 25% of the OCIPUG funds on deposit, must be approved by a majority of the membership attending a regular General Meeting. (See proposed change to ARTICLE VI, Section 3.)

The final proposed change is merely to make sure that the membership is informed without delay as to the results of the elections for Officers and Directors. (See proposed change to Article VII, Section 3.)

CONSIDERATIONS FOR BY-LAW CHANGES

(items to be deleted are in **bold**; items to be added are underlined)

ARTICLE V OFFICERS

Section 2. Term of office

The term of office for each Officer shall be one year and shall commence December 1st of the year elected. All newly elected Officers and Directors shall assume office at this time.

ARTICLE VI EXECUTIVE BOARD

Section 3. Conducting Business

b. The Executive Board will decide on the disbursement of OCIPUG funds. **Large or unusual disbursements or any items of indebtedness will be submitted to the membership for vote at a regular OCIPUG meeting.**

(proposed change in sentence two)

Expenditures or indebtedness that exceed 25% of the OCIPUG funds on deposit (excluding the Scholarship funds) shall be submitted to the membership for vote at a regular meeting.

(proposed addition to Article VII, Section 3)

Section 3.

b. (line two) The membership shall be informed of the election results in the newsletter scheduled for distribution prior to the November OCIPUG Regular meeting as well as on the BBS within 24 hours after the Election results are finalized.

These proposed changes shall be voted on by the General membership at the October General Meeting. There will be an opportunity for members to ask questions before a vote is taken. There are several other changes that will be proposed in the coming months.

Respectfully Submitted,

Stan Sabin,
Chairman, Rules Committee



We welcome the following New Members this month:

<i>Clay Glenn</i>	<i>Juanita Lockwood</i>	<i>Donna Oliveira</i>
<i>Lionel Goldring</i>	<i>Celia Lovin</i>	<i>John Ramsey</i>
<i>Alvin Hart</i>	<i>Miguel Machado</i>	<i>Manry Rothstein</i>
<i>Richard Herman</i>	<i>Toni Massoth</i>	<i>Thomas Skudlarski</i>
<i>Don Hulen</i>	<i>Peg Morell</i>	<i>Mike Thomas</i>
<i>Bob Jameson</i>	<i>Ronald Muzzy</i>	<i>Tom Welch</i>
<i>Sally Kuck</i>	<i>Wendy Ochi</i>	

The following memberships expire in September:

Max Adrian
Louis Alaia

<i>Bruce Alvarez</i>	<i>Walt Drew</i>	<i>Richard Hunt</i>	<i>Jane Mason</i>	<i>John Sarkaria</i>
<i>Bob Ashby</i>	<i>Lionel Dyck</i>	<i>Paul Johnson</i>	<i>Douglas McCracken</i>	<i>Rick Schultheis</i>
<i>Jerry Bell</i>	<i>Lyle Frevort</i>	<i>Ralph King</i>	<i>Monica Miranda</i>	<i>Gary Seliner</i>
<i>Dale Benson</i>	<i>John Glascock</i>	<i>Kevin Knoepp</i>	<i>Lou Munoz</i>	<i>Clyde Slay</i>
<i>Annette Blais</i>	<i>David Gorham</i>	<i>Jon Lang</i>	<i>Duane Osborn</i>	<i>Rodger Slininger</i>
<i>Tom Brannon</i>	<i>Jeanie Graham</i>	<i>Larry Larsen</i>	<i>Bob Raider</i>	<i>Diane Stelley</i>
<i>Carl Cabaniss</i>	<i>Marsha Gregory</i>	<i>Jean Lazar</i>	<i>Kathy Rainville</i>	<i>Chester Stickney</i>
<i>Diane Calicchio</i>	<i>Steve Hammett</i>	<i>Paul Lessier</i>	<i>Daryl Reed</i>	<i>Katherine Thomson</i>
<i>Tony Cassidy</i>	<i>Chris Hansen</i>	<i>Henry Levinson</i>	<i>William Reinardt</i>	<i>Tom Toner</i>
<i>Jean Collins</i>	<i>Frank Harris-Smith</i>	<i>Paul Lindsay</i>	<i>Vernon Rice</i>	<i>Lenr Travis</i>
<i>John JC Coon</i>	<i>Dick Held</i>	<i>John Lo</i>	<i>Jim Richardson</i>	<i>Jeff Weiner</i>
<i>Linda Coultry</i>	<i>Richard Herman</i>	<i>Peggy Macadudin</i>	<i>Don Rose</i>	<i>Steve Welch</i>
<i>Doug Dehaven</i>	<i>Jim Hilgenberg</i>	<i>Bill Mancina</i>	<i>Phil Ross</i>	<i>David Wells</i>
<i>Chip Dever</i>	<i>Bob Huffstetter</i>	<i>George Mason</i>	<i>Ted Ryan</i>	<i>Terri Lee Whittaker</i>

The following memberships expire in October:

Robert Anderson
Mark Artesani
Cyrus Ashari
John Bennett

<i>Ronald Blalack</i>	<i>John Donovan</i>	<i>Robert Hawkins</i>	<i>Betsy Nelson</i>	<i>Michael Sagebarth</i>
<i>Kathleen Blank</i>	<i>David Douglas</i>	<i>Jim Hornack</i>	<i>Patrick Nicolas</i>	<i>David Salcido</i>
<i>James Brady</i>	<i>Kevin Eagle</i>	<i>Jack Howe</i>	<i>Albert Ohlig</i>	<i>Steve Schiffman</i>
<i>Edwin Breitenbach</i>	<i>Sophie Edberg</i>	<i>John Johnson</i>	<i>Lew Oriard</i>	<i>Kay Schutz</i>
<i>Jerry Brown</i>	<i>Leon Files</i>	<i>Wayne Johnson</i>	<i>Anne Perrah</i>	<i>Raymond Shaw</i>
<i>Doreen Burchett</i>	<i>Dorothy Foster</i>	<i>Nick Joy</i>	<i>Karin Petersen</i>	<i>Mitch Shulman</i>
<i>Jay Burchett</i>	<i>Bob Foust</i>	<i>Barbara Kincaid</i>	<i>James Pieratt</i>	<i>Robert Siegenthaler</i>
<i>Carl Carlson</i>	<i>Mark Fulton</i>	<i>Mike Kruss</i>	<i>Kenneth Pollock</i>	<i>Bill Singleton</i>
<i>Jack Carnahan</i>	<i>Iler Ganz</i>	<i>Gordon Lewin</i>	<i>Mark Porterfield</i>	<i>Peter Siogala</i>
<i>James Chester</i>	<i>Patricia Ganz</i>	<i>Jim Mansfield</i>	<i>Joseph Provost</i>	<i>Gilbert Smith</i>
<i>Dewey Coursey</i>	<i>Richard Geasey</i>	<i>Bill Mc Grath</i>	<i>Allan Roberts</i>	<i>Jill Stevens</i>
<i>William Craig</i>	<i>Mary Gonser</i>	<i>Carl Miller</i>	<i>Gaye Roth</i>	<i>Carl Sufall</i>
<i>Thomas Cripps</i>	<i>Garrel Gregg</i>	<i>Ralph Morgan</i>	<i>Donald Royslance</i>	<i>William Williams</i>
<i>Burton Davidson</i>	<i>Philip Grossman</i>	<i>Robert Morris</i>	<i>John Ryan</i>	<i>Dave Wyatt</i>

OCIPUG FINANCIAL REPORT

Jerry De Ainza, Treasurer

OCIPUG August, 1989 Changes in Cash:

	<u>Unrestricted</u> Funds	<u>Tim Smith</u> Fund
CASH BALANCE, July 31, 1989	\$ 10,774.71	\$ 4,151.52
CASH RECEIPTS:		
Advertising	101.50	
Interest income	38.67	2.52
Library shareware sales	244.00	
Membership dues - New	657.00	
Membership dues - Renewal	2,079.00	
Total cash receipts	3,120.17	2.52
CASH DISBURSEMENTS:		
Meeting - Board of directors	60.23	
Meeting - General	151.00	
Meeting - SIGS	720.00	
Postage - Newsletter	200.00	
Postage - Membership	25.00	
Printing - Newsletter	769.86	
Printing - Other	175.00	
Promotion	45.00	
Supplies	392.36	
Telephone	45.53	
Total cash disbursements	2,583.98	0.00
NET CHANGE IN CASH BALANCE	536.19	2.52
CASH BALANCE, August 31, 1989	\$ 11,310.90	4,154.04

1988-89 OCIPUG Board of Directors

OFFICERS

President	Paul Curtis	774-1827
Vice President	Tom Sutro	850-0474
Secretary	Richard Sabin	968-3539
Treasurer	Jerry De Ainza	854-9557
Past President	Stan Sabin	968-7307

DIRECTORS

Steve Burnside	1990	758-8957
David Carroll	1989	775-3130
Neil Carman	1989	964-1901
Robin Clark	1990	786-7880
Steve Dela	1989	775-8373
Dave Lorenzini	1989	751-9262
Richard Villa	1990	213-439-8110
Bonnie Ulanovsky	1990	646-5230

NEWSLETTER STAFF

Publisher	Steven Dela	775-8373
Editor	Jean Stevens	644-1017
Production	Steve Burnside	758-8957
Technical Editor	Vacant	
SIG Guide Editor	Richard Villa	213-439-8110

People and Numbers to Know

Programs	Dave Lorenzini	751-9262
Membership	Neil Carman	964-1901
SIG Coordinator	Dave Carroll	775-3130
Librarian	Bonnie Ulanovsky	646-5230
Bulletin Board	Richard Sabin	968-3539

Remote Electronic Bulletin Boards

Orange Coast IBM-PC User Group:	
Public Line (1200/2400)	843-0388
Members only (1200/2400)	962-6216
WellSpring (1200/2400/9600)	856-7996
Software Exchange (1200/2400)	552-3515
The End Of The Line (1200/2400)	645-6581
AST Research (1200/2400)	852-1872
Ninja's Palace (300/1200/2400)	557-5038

OCIPUG Information & Message Line 714-843-2048

Future OCIPUG General Meeting Dates 1989 - 1990

Our General Meetings are held on the last Saturday of each month except when there is a conflict with a major holiday (asterisked months in list below).

September 30

January 27

May 19

October 28

February 24

June 30

November 18

March 31

July 28

December 16

April 28

August 25

OCIPUG Business Sponsorship Program

Advanced Computer Products

Santa Ana (714) 558-8813

Prodigy™ Services Company

Irvine (714) 852-4438

AST Research, Inc.

Irvine (714) 863-1333

Quick Technology Corporation

Irvine (714) 660-4948

Garden of Eden Computers

Westminster (714) 841-4994

Toshiba America, Inc.

Tustin (714) 730-5000

PCR Personal Computer Rentals

Huntington Beach (714) 843-9262

Western Digital Corporation

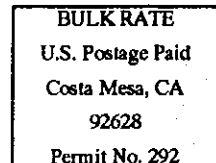
Irvine (714) 863-0102

The Orange Coast IBM PC User Group thanks these companies for their sponsorship. Their support enables us to better serve our members.

If you or your company would like more information on this program please call Steven Dela at 714-775-8373.

Orange Coast IBM PC User Group
Post Office Box 6100-211
Costa Mesa, California 92628

Postmaster: Form 3547 Requested
Return and Forwarding Postage Guaranteed



R. 9-23-89

DATED MATERIAL — DO NOT DELAY