

Orange Coast IBM PC User Group

README.DOC

June 2000

Newsletter

Volume 16.6

General Meetings are held from

9:00AM to noon on:

24 June 2000

29 July 2000

26 August 2000

30 September 2000

For details see inside pages of this issue, Web Page, or Information Line

Meetings of the Executive Board will be held at 7:00PM on:

26 June 2000

31 July 2000

28 August 2000

25 September 2000

All OCIPUG members are welcome.

Special Interest Group (SIG) meetings are held monthly as follows:

1st Saturday, 1:00PM - New User

1st Wednesday, 7:00PM - Internet

2nd Tuesday, 7:00PM - Hardware

2nd Wednesday, 7:00PM - Genealogy

3rd Wednesday, 7:00PM - Windows

4th Wednesday, 7:00PM - Digital Photo

ALL MEETINGS ARE HELD IN THE COSTA MESA SENIOR CENTER AT THE SOUTHEAST CORNER OF 19TH AND POMONA

OCIPUG Web Page: www.ocipug.org

OCIPUG Information line: 714-751-2939

President	Leonard Stein	714-533-4971	leonardstn@netscape.net
Vice President	Red Davidson	949-548-0413	red.d3@juno.com
Secretary	Shirley Wozniak	714-556-8878	shirleywoz@iname.com
CFO/Treasurer	Larry Pearce	714-543-5661	larry.pearce@juno.com
Director-2000	Michael Moore	714-535-0608	mmoore@inreach.com
Director-2000	Dennis Walz	714-545-1762	dawalz@worldnet.att.net
Director-2000	Sam Wozniak	714-556-8878	samwoz@pacbell.net
Director-2000	Robert Lynch	714-546-8977	gridleak@earthlink.net
Director-2001	Jess Bequette	714-549-1347	jnbequette@worldnet.att.net
Director-2001	Leonard Robertson	949-855-3030	ayamari@pacbell.net
Director-2001	Robert Walker	949-642-7681	rwalker820@email.msn.com
Director-2001	Frank Yaeger	714-971-0475	yaeger@ix.netcom.com
Past President	Wayne Ali (h)	714-972-4695	wk.ali@prodigy.net
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SIG Coordinator	Richard Hunter	714-968-6362	rthunter@bigfoot.com
Webmaster	Michael Moore	714-535-0608	mmoore@inreach.com
Nominating Committee	Preston Hill	714-893-2403	prestonlh@bigfoot.com

See mailing label for membership expiration date.

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SCHEDULES AND REPORTS OF EVENTS

General Meeting Program 24 June 2000

Robert Walker, Programs Chairman

Note: Schedule times are subject to change as meeting requirements indicate.

Random Access/Q & A	
Michael Springer	8:30-9:00
President's Message	
Leonard Stein	9:00-9:05
SIG Meeting Reports	
Richard Hunter	9:05-9:30
SIG Coordinator	
Corel Corporation	
Mr. Anil Verma	9:30-11:15
Break	11:15-11:30
Nominations	11:30-11:45
Preston Hill, Chairman	
Internet	
Michael Moore	11:45-12:00
Drawing	12:00-12:15
Adjourn	12:15

Corel Corporation WordPerfect Office 2000 Anil Verma

The right tools for your job...
(All inside WordPerfect Office 2000)

- *WordPerfect 9 - Quattro Pro 9 - Corel Presentations - Corel Central 9 - Trellix 2 - Dragon Naturally Speaking - Corel Print Office Special Edition - Paradox 9 - Net Perfect and Microsoft Visual Basic for Application Scripting Tools*
- Increased easy and efficient import and export compatibility with Microsoft Office.
- Same WordPerfect file format since version 6.1 so you can work with older files and enjoy an easy transition.
- Plus easily import WordPerfect 5.1 for DOS files.
- Supports HTML, SGML, XML, ODBC, and Java.
- Adobe's PDF writer included in WordPerfect 9

WordPerfect Office 2000 and Linux Anil Verma

WordPerfect Office 2000 is also made for Linux program operating system. Mr. Verma will demonstrate the use of Corel's WordPerfect for Linux.

Nominations Preston Hill, Chairman

Nominations of Officers and Directors for the term commencing 1 September 2000 may be made. Nominees must be willing to serve. Nominee's membership shall expire 30 June 2000 or later.

Six Directors are to be elected. A Secretary is needed.

Ballots will be in the July *Readme.Doc* that must be mailed by 5 July 2000. Ballots must be returned by 18 August 2000 in order to be counted.

Internet Michael Moore

Questions and answers, tips and tricks for making optimum use of the Internet

Special Interest Group (SIG) Topics

Richard Hunter, SIG Coordinator

(All Special Interest Group (SIG) meetings are held at the Costa Mesa Senior Center on the southeast corner of 19th and Pomona at the times noted below.)

June

Genealogy - 2nd Wednesday, 7:00PM
Richard Hunter 714-968-6362
rthunter@bigfoot.com

14 June 2000 - Call SIG leader for topic

Hardware - 2nd Tuesday, 7:00PM
Ed Leckliter 310-944-6453
eleckliter@home.com

13 June 2000 - Call SIG leader for topic
This is a real special advance for our Club to have an old favorite with a new SIG leader. Ed has a history of great SIG's. Let's take advantage of this opportunity

Windows - 3rd Wednesday, 7:00PM
Richard Hunter 714-968-6362
rthunter@bigfoot.com

21 June 2000 - Call SIG leader for topic

Digital Cameras and Scanning -
4th Wednesday, 7:00PM
Rex Sutton 949-786-5862
rexss@aol.com

28 June 2000 - Call SIG leader for topic

July

New User - 1st Saturday, 1:00PM
John Lunsford 714-995-0947
jlunsford@gentech.com

1 July 2000 - "Operating Systems: Can't Get Along Without One".
This third of a repeating four part series is a review of the why and wherefore of operating systems that covers the visible differences between Windows versions and what every user should know about them.

Internet - 1st Wednesday, 7:00PM
Michael Moore 714-535-0608
mmoore@inreach.com

5 July 2000 - Call SIG leader for topic

PRESIDENT'S MESSAGE

Leonard Stein

It's that time of the year again. Time to elect new officers and board members. Our nominating committee, under the aegis of Preston Hill, has done a great job, which you will find out this coming meeting.

We are going to have a speaker and demonstrator from Corel who will show and talk about their latest programs. I am looking forward to that as well as many of you so make sure to show up on Saturday June 24th. It will be a great show, thanks to Bob Walker.

At the last swap meet I bought several programs to give away as drawing prizes — some new, some old but all useful — as well as a video tape to help golfers improve their game. At any rate, enjoy the summer heat and keep cool.

OCIPUG Nominating Committee

REPORT

5 June 2000

Preston Hill, Chairman

Nominating Committee Members appointed by President Stein and confirmed by the Executive Board at the 1 May 2000 Special Board Meeting are:

Chairman	Preston Hill	714-893-2403	prestonlh@bigfoot.com
Member	Dick Cruce		dickcruce@blacklite.com
Member	Michael De Falco	714-898-2969	
Member	Morris Fier	949-646-8292	fier@bigfoot.com
Member	Kevin Moser	949-631-2766	

Committee members attempted to contact by telephone or email all 189 individual and family members whose membership expired on or after 1 January 2000. Those expressing willingness to serve are:

President	Robert Walker	949-642-7681	walker820@email.msn.com
Vice President	Robert Lynch	714-546-8977	gridleak@earthlink.net
Treasurer/CFO	Larry Pearce	714-543-5661	larry.pearce@juno.com
Secretary			
Director	Marshal Boslow	714-968-9410	mboslow698@aol.com
Director	Patricia Cohen	714-968-4398	patcohen@surfside.net
Director	Chris Davidson	714-832-7835	ccusgo@aol.com
Director	Morris Fier	949-646-8292	fier@bigfoot.com
Director	Seymour Spiegel	714-378-1186	
Director	Robert Strader	949-646-1475	rstrader@pacbell.net
Director	Sandi Tierney	714-648-2218	seniorsurfer@msn.com
Director	Joseph Zebrowski	714-953-7588	zebrowskijoe@juno.com

Additional nominations from the floor will be accepted at the 24 June 2000 General Meeting. SIX (6) Directors are to be elected. A Secretary is needed!

OCIPUG Elections Committee

3 June 2000

Preston Hill

President Stein appointed and the Executive Board confirmed the following members of the Elections Committee at the 22 May 2000 Board meeting, and revised the appointment and confirmation via special telephone Board meeting on 3 June 2000:

Chairman	Tony Dopazo	714-897-3912	tdopazo@ix.netcom.com
Inspector	Charlie Oostdyk	714-751-5381	charlie@cccd.edu
Inspector	Art Stolins	714-846-5961	abstolins@aol.com

Members eligible to vote are one member per family membership whose membership is current as of the 30 June 2000 record date.

Ballots will be included in the July 2000 *Readme.Doc* and mailed on 5 July 2000. Ballots are to be returned no later than 18 August 2000 in order to be counted. The new Executive Board will officially take office on 1 September 2000.

Candidates for Terms Commencing 1 September 2000

PRESIDENT - Robert Walker

I have been a member of OCIPUG since 1991, and have served as a Board Member and Programs Chairman. Most of what I know about computers and software I have learned from all the knowledgeable members and presenters at our General Meetings and SIG groups.

I am a member of the Orange Coast Lions Club and have served as president of two different Lions Clubs. I served on the board of directors of the Corona Del Mar Youth center for three years. I was a Scout Master in Costa Mesa and for the National Scout Jamboree. For many years I worked as a trainer of adults in Scouting, teaching adults to become leaders in Cub and Boy Scouts.

I live in Costa Mesa and am now serving on the Service Organization Council for the city of Costa Mesa as a liaison for OCIPUG.

The benefits of membership in OCIPUG are many. Above all are the great people who are willing to help and teach others. After more than 40 years of running my own business of a Professional Photography Studio, as well as managing a Studio, Color Lab and Employees, I have learned that you must be well organized in whatever job you are undertaking.

I know that we must have long range plans for meeting dates, programs and activities within our User Group and in our community. We need to update our Bylaws, organize a welcoming committee for new members, add more SIG groups, and work on improving our programs to keep up with the new software and hardware that are forever changing.

We need to update our equipment, purchase a projector for our programs and SIG groups, set up our TV and VCR with a video library to be used by our members and those working with the Senior Net teaching the many senior citizens how to use computers and software. We need to invite them to become members of OCIPUG.

I would like to see a membership drive to add many new members to our User Group. The larger the membership of a User Group the more willing program presenters and hardware vendors will be to demonstrate software and present programs. I would encourage volunteers to serve as Editor and Columnist for our *Readme.Doc*. We need an APCUG Representative, Hospitality Chairman, Drawing chairman, Sales and Advertising people, and a Meeting Facilitator — all things that will help to improve OCIPUG.

We need to reestablish our OCIPUG SUPPORT GROUP to make free services available to our members in need of assistance with specific hardware or software problems.

As President, I would strive to get willing and able volunteers to perform these many tasks, and would follow through to assure that all are accomplished to the betterment of OCIPUG. Please vote for me so I can do so.

VICE PRESIDENT - Robert Lynch

I have been a member of OCIPUG for almost 10 years and now serve on the Board of Directors for the club. I believe we must continue to make OCIPUG a user friendly club especially for those new to computers. We must inspire active participation from all members so everyone will benefit from our SIGs, General Meetings and associations. I look forward to supporting our new President. Thank you for the nomination.

TREASURER/CFO - Larry Pearce

By State Law, our incorporated non-profit, tax exempt organization must have a Chief Financial Officer (CFO). I have filled that position for the past four years, and am asking for your vote to again serve for the next fiscal year.

As your Treasurer, I accept all funds in the form of member dues and donations, pay the club's bills, operating expenses, prepare necessary tax returns and submit regular reports to the Board of Directors.

My office and files are open to any member, and assistance is welcome. Thank you for your support in the past, as well as for the future.

SECRETARY -

(Editor's note: Shirley Wozniak, current Secretary, had to withdraw as a candidate because of unanticipated new family commitments. A volunteer is needed.)

Candidates for Terms Commencing 1 September 2000

DIRECTOR - Marshal Boslow

I have been a member of OCIPUG for several years and date back to the SIG space at Huntington Beach. I have made use of the General Meetings and enjoyed the presenters over the years. Not being technically inclined I have learned all that I know about computing and computers through the general meetings and the various SIGs that I have attended over the years.

Continuing to have speakers of interest demonstrating new products or new updates of old products continues to be of high interest and is the major draw for members. Information provided by the SIGs needs to be continually communicated to improve attendance.

My background in Orange County for the last 30 years is that of an insurance broker in the life and fire and casualty fields as well as a registered representative of security type financial products. I currently reside in Huntington Beach.

I currently serve as a director and officer of a homeowners association and have done so for several years.

I would like to put my experience to good use by serving as your Director on the OCIPUG Executive Board. Please vote for me as Director.

DIRECTOR - Patricia "Pat" Cohen

I have been President of the Orange County California Genealogical Society (OCCGS) for four years and have been a member of OCIPUG for two years. All this while working full time at UCI in cancer research. I am willing to serve as a Director so as to become more knowledgeable about OCIPUG and its members and, thus, to serve them well.

DIRECTOR - Christina "Chris" Davidson

My name is Chris Davidson. As a member of the club I have benefited from the General Meeting presentations, as well as the various SIGs. I feel it is each members' duty to participate in the necessary functions to keep the club alive and befitting all members. In the past I worked as part of the Bylaws committee and understand the importance of the team effort to meet the needs of the club. As a Director I will do my best to work for all the members and continue the fine work of the previous Boards. Thank you for your consideration in your voting.

DIRECTOR - Seymour Spiegel

(Editor's note: Statement unavailable because Mr. Spiegel out of town.)

DIRECTOR - Morris Fier

My name is Morris Fier. I have been a member of OCIPUG for several years. I have previously served as the club secretary. Now I am looking at the position of director. My goal is to keep the club operating and I have tried to help in any way possible.

DIRECTOR - Robert Strader

I have been an active member in the club since June 1987. I am volunteering for a position of director in the next election. I have been involved with computers since about 1982. I have assembled about three computers, 286, 386 and a Pentium 75mhz. I have installed different operating systems, e.g., Windows 3.0, 3.11, 95, 98, IBM OS/2 2.0, 2.1, 3.0, 4.0. I am running for the director position to help others as I have been helped in the past.

DIRECTOR - Sandi Tierney

I am retired but, like many, seem to be busier than ever. I am creating my own Web page and helping friends. I've learned a great deal from OCIPUG members teaching at the Cost Mesa Learning Center. My experience in sales and marketing will enable me to understand better ways to increase membership and improve OCIPUG, especially for the new novice members. I will do my utmost to support the club and its members when you elect me as Director.

DIRECTOR - Joseph Zebrowski

I am retired and have been a member of OCIPUG for 10 years. During this time I was introduced to Geoworks, which I still use and like for my basic needs. However, I would like to become a more sophisticated user.

I have some ideas in this regard, that I believe will help people like me to advance their computer skills. If elected, I would like to represent the casual users so they can become more skillful. Thank you.

OCIPUG General Meeting

April 29, 2000
Richard Black

Michael Springer moderated a Random Access/Q&A session prior to the start of the official meeting. Questions were raised about networking two computers using Windows 98 SE, Office 2000 occasionally automatically reconfiguring itself, problems with Window's Find command, a CD-RW that can write 74-minute but not 80-minute disks.

President Leonard Stein opened the meeting at 9:03 A.M. No official Board meeting was held after the last meeting because of a lack of a quorum. Since there was a quorum at the current meeting the board unanimously voted to postpone the April meeting to May 1, 2000 at 7 P.M.

It was announced that we currently have \$600 in the new projector fund. Donations would be greatly appreciated.

Red Davidson introduced the SIG leaders present to have them discuss their up-coming meetings.

The first presenter for the day was Allyn Talbert of PriceNetUSA.com of Irvine. PriceNet sponsors a members-only superstore on-line: Outlet Mall. They have agreements with distributors and affiliated merchants who ship directly to the buyers. The mall saves buyers 30% - 70% off of retail and the buyer determines the shipping methods. Although it is hard to say that the Mall's prices will beat all discounters all the time, Mr. Talbert says that one can expect lower prices overall.

PriceNetUSA is a multi-level marketing company that offers members access to an on-line mall for shopping on the Web. It also sells Web sites for users (Independent Mall Operators) to sell their own or others' merchandise.

Some examples of Outlet Mall product include long distance interstate telephone service for 6.9 cents per minute (calculated in 6 second increments), an ISP for \$14.95 per month, and mobile phone use for \$25 per month.

Members can sell memberships and Mall operations. Commissions are paid weekly.

After the break Webmaster Michael Moore discussed OCIPUG's message board that is on the Web site (www.ocipug.org). The board has been set up to resemble the now closed BBS.

A discussion and demonstration of some Web sites ensued.

Sites such as www.unclaimed.org (from the national association of unclaimed properties administrators) was shown. Some members have found \$28,000 owed to them/family/friends.

There is MSN for a listing of bugs (er, issues); also suggested was bugnet.com

Freeshop.com offers 256 free catalogs; ocnow.com gives access to Orange county news including up-to-date freeway traffic. At terrasearch.microsoft.com one can view satellite photos and zoom in to possibly see one's home.

After the drawing the meeting disbanded at 11:41 A.M.

OCIPUG General Meeting

May 20, 2000
Richard Black

An informal question and answer period (Random Access) preceded the General Meeting. President Leonard Stein opened the General Meeting at 9:00 A.M. CFO Larry Pearce announced that OCIPUG has about 150 regular, active members and the club has a solid financial basis.

Richard Hunter introduced the SIG leaders who discussed their up-coming special interest group meetings.

Frank Jakubaitis, CEO of Netpack, Inc. did not make the meeting, so OCIPUG member Robert Lynch gave the first presentation for the day. He discussed ScanSoft's ImageAXS image management program.

ImageAXS helps organize digital photos and multimedia files by creating categories/portfolios of files. Each file in the database can have up to 50 (100?) fields associated with it. The fields are user-configurable and usually include such things as topic, who took

the picture, what camera was used, where it was taken, etc. Also keywords can help in a search for pictures.

The program has slide show capabilities, can convert file formats, and allows the creation of self-extracting .EXE files for sharing files/presentations. The program can also help create HTML files for Web site development.

The sample files that come with ImageAXS are in .JPG format. The program can also handle multimedia formats including WAV, AVI, MP3.

There are two version of the program in addition to the free, trial version. One version sells for \$30 to \$40, the other for \$150.

System requirements during installation include 40 to 50 MB of free space on the C: drive.

Webmaster Michael Moore then discussed OCIPUG's message board that is on OCIPUG's Web site. The board is a private board and requires one to register in order to post messages, not to read messages. It was suggested that members post recommendations for future presenters on the message board. Please include any contact information you may have (e.g. contact name, phone number, e-mail address).

Different search engines and Web sites were discussed and visited. Mike added links to some of the sites on OCIPUG's Web site.

After the drawing the meeting was closed at 11:45 A.M.

DRAWING WINNERS

General Meeting

20 May 2000

Mike Conway	Personal Lawyer
Mike Conway	Photo Suite VI
Red Davidson	Photo Suite
Preston Hill	OCIPUG T-shirt
Richard Hunter	OCIPUG T-shirt
Louis Pappas	OCIPUG T-shirt
Leonard Stein	Healthy PC
Rex Sutton	Corel Draw 5
Audrey Wolden	Connectix

EXPIRING/EXPIRED MEMBERSHIPS

as of 4 June 2000

Notify the following of any discrepancies:

Ken Paeth, 714-544-5158, email: kenpaeth@bigfoot.com

Larry Pearce, 714-543-5661, email: larry.pearce@juno.com

Only members with memberships expiring on or after 30 June 2000 are eligible to vote in the July elections. Renew your membership NOW.

31 May 2000

3155 Morris FIER
1063 John GALLIE
2632 Gregg LEONARD
2633 Joan LEONARD
2631 Len LEONARD
14 Kevin MOSER
1039 John SQUIRRELL
1495 June SQUIRRELL
3170 Chrisanne STARBIRD
3168 Jack STARBIRD
3169 Lynda STARBIRD

30 June 2000

198 Donald BURNS
24 Dick CRUCE
1681 Elvin (Al) DAUGHERTY
1422 Phyllis DAUGHERTY
2942 "Chris" DAVIDSON
2929 Dan DICKINSON
903 Steve KILMER
3357 Roman KRAMARSIC
2353 "Ed" LECKLITER
3253 Michael MOORE
3180 Kenneth PAETH
677 "Bill" PHILLIPS
1150 James POWERS
3186 Leonard ROBERTSON
1784 Nicholas SHISHKOFF
3453 Rex SUTTON
1976 Dennis WALZ
649 Bill WARREN
3341 George WILLIAMS

31 July 2000

2057 George AUSTIN
3192 Donald BIXLER
2366 Keith CAMPBELL
1742 Karl COOK
1767 Edward EALES
1499 Rocky FORD
433 John LUNSFORD
3457 Helen MARTIN
934 Ken MARTIN
2375 Dennis MATTHEWS
262 Tom MILLARD
259 Jim PETIT
3327 Andrew REFALO
251 Don REIS
3459 Jon RENNA
2092 Jerry ROUNSAVELL
1758 John SCOTT
2525 Francis SMITH
3540 Roula VITAKIS

1 August 2000

2744 Charles W. COOK
2726 Richard DE LAPP
3083 Warren FRANDSEN
2717 Bob FULKERSON
2737 Richard HUNTER
2389 Bill KREHBIEL
3232 Jeffrey METZEL
1234 Pano REZINAS
1766 Ron ROSS
1238 Jeff SINN
1529 Thomas SKUDLARSKI
3528 Laura SMITH
1761 Art STOLINS
682 Robert STRADER
3120 Larry THOMAS
2716 Patricia THOMAS
2090 Robert WALKER
1815 Barto WASH
2491 Jonathan WASH
2492 Megan WASH
1816 Ruth WASH
1005 Carl YOST

How Your Hard Disk Hides Data and How it Can Find it Again

Part Three

John M. Goodman, Ph.D.

In the first two parts of this series you learned that hard disks and their controllers have a tough job putting data on your disk in way that will ensure their ability to retrieve it on demand. The solution involves two complex technologies: data encoding, which was only briefly discussed, and head positioning, which was the focus of those articles.

You were introduced to three techniques that were, until quite recently, used in all PC hard drives (stepper motor drives, open-loop voice coil drives, and closed-loop, dedicated servo platter drives). Now you will learn about three more techniques that are fast becoming the new, standard ways of positioning hard drive heads.

Wedge Servo Drives

The fourth approach to accurately positioning the heads over the data tracks moves the servo information off of the dedicated platter and puts some of it on each of the data-bearing surfaces. Here all the platters are prerecorded at the factory with a burst of servo information at the start of every track. Now when you activate a particular head the drive circuitry looks for the servo information until it finds it and is able to center the head over the appropriate track. Only then does it switch on the circuitry that reads and writes the information on that track.

By putting the servo information on the surface that has the data, misalignment of the two becomes impossible. On the other hand, instead of a full track of servo information, there is only the brief burst of it at the start of each track. That makes it harder for the drive circuitry to find it and "lock onto" it. So it might take several revolutions before the drive was sure it was on the center of a given track and ready to read or write data there. Also, this does not prevent the heads from drifting in or out during the time it takes to traverse the track. It guarantees that the first sector on a track will be aligned perfectly, but it cannot do the same for the last sector.

Embedded Servo Drives

In the continuing quest for ever higher performance, disk drive engineers came up with the notion of an embedded servo drive. Here the signals used to align the head assembly to a particular track are recorded in many small bursts, one before each sector on the track.

Just as the wedge servo can guarantee that the heads are aligned with the first sector of each track, this approach can essentially guarantee that the heads will be aligned correctly for every sector. That is exactly what we want. So this might seem to be the perfect approach.

Indeed it is a very good approach. The only drawback it has is that it requires us to give up some fraction of the length of each track that we formerly could use for data storage in order to have room for the servo information. Also it makes the drive circuitry a bit more complex, as it must switch rapidly and often between reading servo tracks and reading and writing data. (This is complicated by the fact that the servo information consists of analog signals recorded on either side of the centerline of the track of digital data. The signal on one side signals a positioning error of one kind. The signal on the other side is different, so that it can signal positioning errors of the opposite kind. This scheme allows the system to discern not only if it is on track, but if it is off-track, which way it is off.)

Most IDE drives use embedded servo designs. Many SCSI drives do also. These drives can't go out of alignment, so one never needs to use *SpinRite* on them to realign them. It turns out, though, that *SpinRite* has another use—data recovery and data integrity assurance—that still makes it a good idea to use it on even these drives at least occasionally.

Buried Servo Drives

The last strategy I am going to discuss is an extension of the idea used in embedded servo, and it addresses the issue of efficient use of the track length. In this design the servo signals are recorded actually underneath each side of the data track. These signals extend all the way around the track. The head and associated electronics are designed to allow reading the servo information even as the head is reading or writing data. This lets one use the full track length both for servo information and for data. This is the most efficient design, and also the most complex (and hence costly).

The Navigator Doesn't Need to Know What the Driver is Doing

If you are driving to an unfamiliar location you might ask one of your passengers to navigate. That person will watch the street signs and house numbers, and tell you when to turn onto a new street or when you have arrived at your destination. That person neither knows nor wants to know each time you steer a bit to the left or right or speed up or slow down a bit. That is your job as driver and the navigator just assumes you will do it correctly.

How Your Hard Disk Hides Data and How it Can Find it Again

Part Three (continued)

John M. Goodman, Ph.D.

Similarly the drive controller can be divided into two functional parts. One puts the heads on track and keeps them there (and keeps the disk turning at a constant speed). This is like the job of the driver of a car. The other part is responsible for directing the first part each time it must change tracks, and it also tells the read or write mechanism when the currently active head is over the desired sector and can therefore be used to read or write data in that sector. That is the navigator portion.

Implication for Low-Level Formatting of Hard Drives

The only time the sector header information is written on a hard drive is when that drive is being "low-level formatted." This is the first of three steps in preparing a drive for use. The second step is partitioning, and the third step is called "high-level formatting."

The first step (low-level format) is done by a special command to the disk controller. For MFM, RLL, and ESDI drives the controller comes separately from the drive, and so this step can only be done after the two have been mated. In IDE, SCSI, and *Hardcard*-like drives the controller is built into the drive and this step can be, and usually is, done at the factory by the manufacturer. (Partitioning can be done for any type of drive by using the DOS program FDISK and high-level formatting by using the DOS program FORMAT.)

The most important distinction between drives that can be re-low-level-formatted in the field and those that cannot can be understood in the light of the information presented earlier in this article. MFM, RLL, and most ESDI drives use either an open-loop positioning mechanism or a dedicated platter servo. Thus they might plausibly need to be re-low-level formatted periodically. Most IDE and SCSI drives used wedge, embedded, or buried servo designs. They don't need to be reformatted (normally) and often they can't be.

Some early embedded servo drive designs had a serious flaw. They did not need to be re-low-level formatted, but they allowed the user to do a low-level format. Unfortunately they did not protect themselves appropriately. It is possible for the "navigator" part of the drive circuitry to inhibit the write head except when it is over the correct location within the sector, but these designs did not do that. They allowed one, therefore, to write the sector headers and sector data areas anywhere on the track. In the process they allowed their embedded servo information to be wiped out. Bad news! If you did that to your drive, your only recourse was to send it back to the factory where they could redo the initial servo writing and then low-level format it correctly. Naturally, you'd lose all your data in that process.

More modern embedded servo drives protect themselves. They do so in one or both of two ways: First, they may allow you to tell them to redo the low-level format on a track, and they'll tell you they have done it, but really all they did was write zeros into the data area of all the sectors on that track. The other protection is simply to have the "navigator" part of the drive do the proper things to inhibit the write head whenever it is sailing over a region with servo information.

Another Reason You May Not Be Able to Re-Low-Level Format a Hard Drive

Some drives could be low-level formatted safely except for one additional "gotcha." These are drives that lie about themselves to your computer. We refer to them as "sector-translating" drives. There are limits in any PC to the size of drive it can accommodate. One group of limits is built into the BIOS and restricts all accesses to a disk that use the BIOS Interrupt Service Routine for INT 13h. This routine assumes that all hard drives will not have more than 1024 cylinders, nor more than 63 sectors per track. Many modern drives have more than this number of cylinders or sectors. To make them usable on a PC they can be provided with a controller that will make accommodating lies about the drive to the PC. Such a drive and controller combination works just fine, but since it does not let you see how many heads, cylinders, and sectors per track it really has it is not safe for any program based in your PC (such as *SpinRite*) to tell it to redo its low-level format. You can sometimes do a total re-low-level format of the drive by activating some special program in the disk controller, but in that process you will wipe out all your data, unlike what happens when you use *SpinRite*.

Summary

In these articles you have learned a lot (perhaps more than you ever thought you would want to know) about how your hard disk drive and controller manage to store information on the disk and then find it and retrieve it when you want to use it again.

What a lot of detail for such simple (seeming) operations. But those details are all quite essential. If the engineers who designed our disk drives and controllers hadn't worried about them, and then found good ways to deal with them, we wouldn't be able to use magnetic disk storage of data. Aren't you glad someone else worried about those details, so you and I don't have to? All we have to do is enjoy using our PCs. Still, there are those who, like me, appreciate knowing what has been done on our behalf. I wrote this series of articles for them.

Copyright © 1992, 2000 by John M. Goodman, Ph.D., all rights reserved. Dr. Goodman is a Past President of the Orange Coast IBM PC User Group. His most recent book is "Memory Management For All of Us," Sams, 1992. ISBN 0-672-27366-7

Herb's Hangout

Herb Huey



Getting Wired Up for the Future

Looking to the future there is clearly a trend to get away from the old PC concept of a keyboard, screen, mouse and box sitting on your desk or lap. The current trend is toward gadgets that will fit into your pocket and serve multiple purposes. The Palm Pilot has freed many people from having to carry a laptop or keyboard. Services like ATM access beckons to those with Palm Pilots to pay off those small bills like the gas or lunch bill. The service is paid for from the interest that is generated from the money that is sitting in your debit account.

What is the next great leap beyond the Palm Pilot? We can expect radical changes in the way we do computing and the PC form factor will change radically. Researchers have recently discovered that the human body is capable of transmission speeds of over 100,000 bits per second. The human body itself can take the place of the familiar beige box! If you miss those cute pictures of fruit on the computer boxes you can always have a picture tattooed on your body!

We can take advantage of our natural five senses and boost their capabilities. Add a holographic sensor chip to project a screen in front of your eyes, an audio patch or ear implant to digitize what we here, an olfactory sensor to augment our sense of smell, a sensory implant to augment our taste and vocal talents and finger tip sensors for connection to remote terminal points. All these sensors will connect to your Personal Central Processor implanted in your brain. We can even augment the storage capacity of our brains with miniature holographic data cubes that can store hundreds of terabytes of data.

Once we are wired up, many common functions will take radically new forms. When someone gives you a phone call, the ring will be heard in your auditory sensor. You tap on a small communicator pin (a la Star Trek) and start talking. When you want to make a phone call, touch the communicator pin and tap out the phone number with your finger tips or just vocalize the name of the party.

Money will no longer be necessary. Enter an ATM booth, tap out your PIN and obtain your funds electronically through your finger tips. The funds will be stored in your Personal Central Processor. No more having to carry ATM cards or cash. We can take this concept a little further and eliminate debit cards and even credit cards. We do all our shopping by merely tapping on a Point of Sale terminal pad.

Computing itself will take radically new forms. We now have a virtual display, finger tip sensors for input/output, vast storage capability and augmented audio/video sensors. Even with all this additional capability, we will still have a need for additional computing capability. The best way to interface our heightened capabilities is through central computing nodes. I envision these nodes to look like lounge chairs that we merely have to sit down in to activate. While we are computing we might as well get a massage at the same time! This is the only way to surf the Internet!

Radically different software will have to be developed to handle these new capabilities. Voice recognition software will have to be an order of magnitude better than today's versions. Fingerprint identification software will have to be virtually flawless in operation. Imagine creating a database based on the data your sensors picked up. An item can be classified by its feel and smell as well as by its 3-D image. Software will be able to integrate our natural abilities with our new sensors.

You may be asking "What is Herb smoking?"

Is Herb's crystal ball warped?" Back in 1949, Popular Mechanics forecasted "Computers in the future may weigh no more than 1.5 tons." During the same time period the chairman of IBM also added that there may one day be a market for as many as five computers worldwide. We have come a long way from those early predictions. Who would have predicted even 15 years ago that I could be working on this column today from a portable laptop computer that weighs about seven pounds? How can a fully functional computer cost only \$500? It took a lot of forward thinking people to get us to today's state-of-the-art. It will take many more forward thinking people to get us to the future. I might turn out to have a lousy crystal ball but it will be exciting to see what computing will look like in the next 15 years.

SIGNING OFF

Last month the Love virus shut down the e-mail server at my place of work. I found one suspicious message that had a Visual Basic extension so I promptly trashed it. I ran McAfee Virus software after loading up the latest updates. Viruses are becoming more commonplace. Have you been keeping your virus software up to date? Most virus software have an update program for a nominal fee. You get your updates over the Internet. It is also a good time to remind everybody to maintain a regular backup program since these viruses are getting more malicious with your data. It is a good idea to put all your data files in one easily identifiable subdirectory or partition. This becomes more important as our hard disks grow. You can make frequent backups of your data and periodically make full backups of your hard disks. Give yourself some peace of mind.

Ken's Korner

Ken Fermoye

Ken's Korner, a syndicated monthly column, is available free to User Groups. For information or permission to reprint this article, contact kfermoyle@earthlink.net.

Hi, all — Four items today:

- 1) Ken's Korner coming to Mindshare;
- 2) Prizes galore at Las Vegas Media Workshop;
- 3) Three more Workshops;
- 4) Important DVD news in TidByte that follows.

1) Ken's Korner is coming to Mindshare, the Microsoft User Group support site. I've seen a preview of the pages and they look great. Many of my articles will be included on the site, plus other Ken's Korner news. It's about ready to go operational. Will let you know when it's up and running.

2) Las Vegas Media Workshop just 2 weeks away — and we will have prizes galore!! A T-shirt for all pre-registrants and first 50 to register at the door PLUS one prize for every six attendees!! Prizes will include QuiKeys (macros on steroids), Picture-It, Age of Empires, Office 98 for Mac (latest available) and lots more software. Hope to see some of you there.

If your group is within driving distance of Vegas and you have a meeting during the next 2 weeks, I would appreciate an announcement about the Workshop at the meeting. (*Editor's note: This workshop may be over by the time you read this.*)

3) The Northern California Media Workshop is set for June 20. Haven't had word on date of Southwest Regional UG Conference yet but it will be in San Diego during July or August. Just got word from Rick Altman that my Workshop is set for Thursday afternoon, September 14 at the Doubletree Hotel, Mission Valley, San Diego. The Crash Courses on Sunday (Sunday, Sept. 10) are always terrific. Check out more CorelWorld info at <http://www.altman.com/world01.htm>

4) A TidByte item follows about a new MultiRead specification just adopted by Optical Storage Technology Association that will have a major effect on CD & DVD drives in near future. It will make ReWritable DVD practical and probably reduce prices of CD-RW drives in coming months. It makes a good follow-up to my earlier piece on CD-RW — which has brought me a lot of feedback from readers.

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Ken's TidByte

Ken Fermoye

Ken's Korner and TidByte, syndicated columns by Ken Fermoye, are available free to User Groups. For information or permission to reprint this article, contact kfermoyle@earthlink.net.

MultiRead Spec Brings DVD Rewriteables Closer to Reality

Recent action by the Optical Storage Technology Association (OSTA) to extend the capabilities of its "MultiRead" optical drive specification will make rewriteable DVD drives more practical. Lack of compatibility between drives from different makers has hampered growth of the technology to date.

All CD- and DVD drives that conform to the new MultiRead2 specification will read 2.6GB DVD-RAM rewriteable media. Panasonic, a pioneer in DVD-RAM, projects that industry-wide DVD-RAM drive sales will reach 1.5 million units by the end of 2000.

"To protect consumers from compatibility issues and eliminate confusion, OSTA has developed a single standard that ensures media interchangeability of recorded media", explained Dr. Paul Liao, chief technology officer of Matsushita Electric Corporation of America (Panasonic is MECA's principal brand). After completing all necessary testing, OSTA issued MultiRead 2, which validates DVD-RAM. This specification paves the way for DVD-RAM to reach the tremendous potential the DVD Forum envisioned for it."

That means lower prices, and not just for revwriteable DVD drives. CD-RW drives probably will drop, too. I wouldn't be surprised to see CD-RW drives going for about \$150 in time for Christmas, if Panasonic's projections prove to be accurate.

DVD-RAM is the industry's first rewriteable DVD format, and it provides a number of significant advantages over other removable, rewriteable storage options. These include:

1) A DVD-RAM disc provides a read/write capacity of 5.2GB (about 8 times that of CD-R/RW) on two sides (2.6GB single-side media).

2) DVD-RAM media offers extremely inexpensive storage less than \$.01 per MB.

3) Rapid data transfer
1.385MB/second for DVD-RAM, 2.77 MB/second for DVD-ROM and 20X CD-ROM read speed.

4) High-speed access
120ms or better for DVD-RAM; 85ms or better for DVD-ROM and CD-ROM.

5) Unprecedented media interchangeability
DVD-RAM drives can read discs currently accepted by CD-ROM, CD Audio, CD-R, CD-RW and video CD drives, as well as DVD-ROM, DVD videos and DVD-R drives.

6) More than 100,000 write/overwrite cycles.

7) A technically-proven growth path
next-generation media will provide a single-side capacity of 4.7GB; ultimately, higher capacities will be available.

Panasonic began shipping its DVD-RAM drive in April 1998, and was the first company to deliver a DVD-RAM drive fully compliant with the DVD Forum specification. In January, Panasonic announced plans to market its first DVD-RAM-based video recorder, which will offer consumers "exceptional picture quality, multi-disc playback, digital recording and random access when connected to home theater components" the company claims.

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Orange Coast IBM PC User Group (OCIPUG)
Meeting of the Executive Board of Directors
695 W 19th Street, Costa Mesa, CA 92683
May 22, 2000

Minutes

Pursuant to a determination that a quorum was present, a regular meeting of the Executive Board of Directors of OCIPUG was called to order by President Leonard Stein at the Costa Mesa Senior Center, 695 W 19th Street, Costa Mesa, CA 92627 at 7:05 p.m.

OFFICERS PRESENT:

Leonard Stein, President
Red Davidson, Vice President
Shirley Wozniak, Secretary
Larry Pearce, CFO

OFFICERS ABSENT:

Wayne Ali, Past President

DIRECTORS PRESENT:

Robert Lynch **
Michael Moore *
Leonard Robertson **
Bob Walker **

DIRECTORS ABSENT:

Dennis Walz * Sam Wozniak *
Jesse Bequette * Frank Yaeger **

ALSO ATTENDING:

Mike Conway
E.L. Daugherty
Chris Davidson

Michael A. De Falco
Morris Fier
Preston Hill

Bob Schmidt
Art Stolins

Copies of the minutes of the May 1, 2000 meeting were distributed to the members of the Board of Directors to be read. A motion was made by Len Stein and seconded by Robert Lynch to approve the minutes as presented. Motion carried.

PRESIDENT'S REPORT:

Len ordered some software at the Swap Meet to be used as prizes for the drawings and Alltech Electronics has donated software for the drawings.

VICE PRESIDENT'S REPORT:

Rex Sutton has offered to sell his projector to the club. It is approximately one year old. A motion was made by Red Davidson and seconded by Larry Pearce to make an offer to Rex Sutton for his CTX Projector of \$1500.00. We can sell our present projector through the Internet. We could use the large TV set for display at the SIGs. Red Davidson will ask Steve Schiffman about setting it up.

TREASURER'S REPORT:

After a Treasurers report made at the May 20 General Meeting that we are doing well, we received more renewals and a donation toward the new projector. A more positive attitude encourages renewed activity in the club. A motion was made by Red Davidson and seconded by Mike Moore that we accept the Treasurers Report. Motion carried.

COMMITTEE REPORTS

NOMINATING COMMITTEE:

Preston Hill submitted his report to the Board. Nominations from the floor will be accepted at the June 24 General Meeting. A motion was made by Red Davidson and seconded by Len Stein that the mailing date for the *Readme.Doc*, which will contain the ballot, be extended to July 5. Motion carried. A motion was made by Larry Pearce and seconded by Red Davidson that those members of record on June 30, 2000 will be eligible to vote. A motion was made by Larry Pearce and seconded by Red Davidson that August 18, 2000 will be the ballot counting date. Motion carried.

Len Stein appointed an Election Committee, to be comprised of Steve Shipman, Bob Schultz and Art Stolins. A motion was made by Larry Pearce and seconded by Bob Walker to approve the appointments. Motion carried.

PROGRAMS COMMITTEE:

The June 24 General Meeting will include: Future programs include:
Word Perfect Office 2000 MGI
Corel DRAW 9 Adobe
Windows on Healthcare..... Microsoft
Dr. Gregory A. Fecchia D.O.

PUBLISHING COMMITTEE:

Material for the June *Readme.Doc* needs to be in to Morris Fier by June 5.
Material for the July *Readme.Doc* needs to be in to Morris Fier by June 30.

OLD BUSINESS

SURPLUS EQUIPMENT:

Mike Moore reports Disco Print Supply has examined the two printers and finds the HP Desk Jet not worth repairing and that the Laser Jet 2 has been repaired at a cost of \$55.00. A motion was made by Bob Walker and seconded by Red Davidson to reimburse Mike Moore for the repair of the Laser Jet 2 printer. Motion carried.

A motion was made by Len Stein and seconded by Bob Walker to sell the Laser Jet 2 printer to Richard Black if he is still interested in buying it. Motion carried.

The remaining surplus equipment at Preston Hill's house and Kevin Moser's should be inventoried by Preston Hill and a list of the items published in the *Readme.Doc* and possibly brought to the next General Meeting to be disposed of by sale or donation.

The copier is in the shop again.

SENIOR CENTER:

Red Davidson has supplied a new monitor cable and a new phone cable for our use in the Senior Center SIGs. He has also purchased 2 folding chairs to be used at the Swap Meet but to remain as his personal property.

NEW BUSINESS

Mike is working on changes to our Website.

ANNOUNCEMENTS

The next General Meeting will be at the Costa Mesa Senior Center, 695 W 19th Street, Costa Mesa, CA 92627 on June 24, 2000 at 9:00 AM

The next Board of Directors Meeting will be at the Costa Mesa Senior Center, 695 W 19th Street, Costa Mesa, CA 92627 on June 26, 2000 at 7:00 PM.

Ballots will enclosed in the July *Readme.Doc* and will be counted on August 18.

ADJOURNMENT

A motion was made by Jesse Bequette and seconded by Robert Lynch to adjourn the meeting. Motion carried. The meeting was adjourned at 8:45 PM.

Respectfully submitted

Shirley Wozniak, Secretary

Minutes of the Executive Board of the Directors Meeting of OCIPUG 05-22-00 not approved

ORANGE COAST IBM PC User Group (OCIPUG) ©

Mailing Address

2973 Harbor Blvd, Box 621
Costa Mesa, CA 92626-3934

Meetings Location

Costa Mesa Senior Center
Southeast Corner of 19th and Pomona

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Advertising

For information, details and rates on all advertising sales and scheduling, please contact:

Preston Hill 714-893-2403 prestonlh@bigfoot.com

Publication Guidelines

All material submitted will be published *exactly* as submitted, but may be subject to editing at the *Editor's* discretion. We reserve the right to refuse any material submitted for publication. Send all submissions as follows:

1. Send via Internet e-mail to: editor@ocipug.org, or
2. Send via Internet e-mail to: Morris Fier, fier@bigfoot.com, or
3. Mail a 3.5" disk so as to be received by the deadline by the Newsletter Coordinator at the OCIPUG mailing address above.

Publication Deadline

Material for the **June 2000** issue must be received on or before **30 June 2000** by the Newsletter Coordinator — **Morris Fier, fier@bigfoot.com**.

Membership

Benefits of OCIPUG Membership include, but by no means are limited to:

- * Subscription to OCIPUG's monthly newsletter, *Readme.Doc*, with up-to-date information on meeting schedules as well as the newest software and hardware.
- * Free monthly General Meetings with speakers from industry and academia describing advances in technology.
- * Free Special Interest Group (SIG) meetings/seminars to exchange tips and tricks and to solve problems.
- * Free technical support from knowledgeable fellow members via telephone and/or OCIPUG's electronic bulletin board system (BBS).
- * Pleasure in helping your fellow member solve their problems.
- * Camaraderie with those of similar interests.
- * Discounts from vendors on software, hardware, and other items.

Orange Coast IBM PC User Group

2973 Harbor Blvd Box 621
Costa Mesa, CA 92626-3934

Membership status: New Renewal - Member # _____ Membership type: Individual Family

Title: Mr. Mrs. Ms. Dr. Prof. Hon. () (Circle one)

First Name: _____ Last Name: _____

Street Address: _____ City: _____ State: _____ Zip: _____

Home Phone: () _____ Work Phone: () _____ Fax: () _____

E-mail address: _____

Profession/Trade: _____ Retired Current Occupation: _____

Family Member(s) Names: _____ Company: _____

Annual Dues:

Make check payable to OCIPUG
and mail to the above address
or bring to the General Meeting.

Individual	\$30.00	\$ _____
Family	\$35.00	\$ _____
*Full-time student	\$20.00	\$ _____
Donation		\$ _____

I consider my skill level to be:
 Beginner Novice Intermediate Advanced

Total Amount Paid \$ _____
*(U-grad 12 units; grad 6 units)

I learned about OCIPUG from: _____

Today's Date : _____