



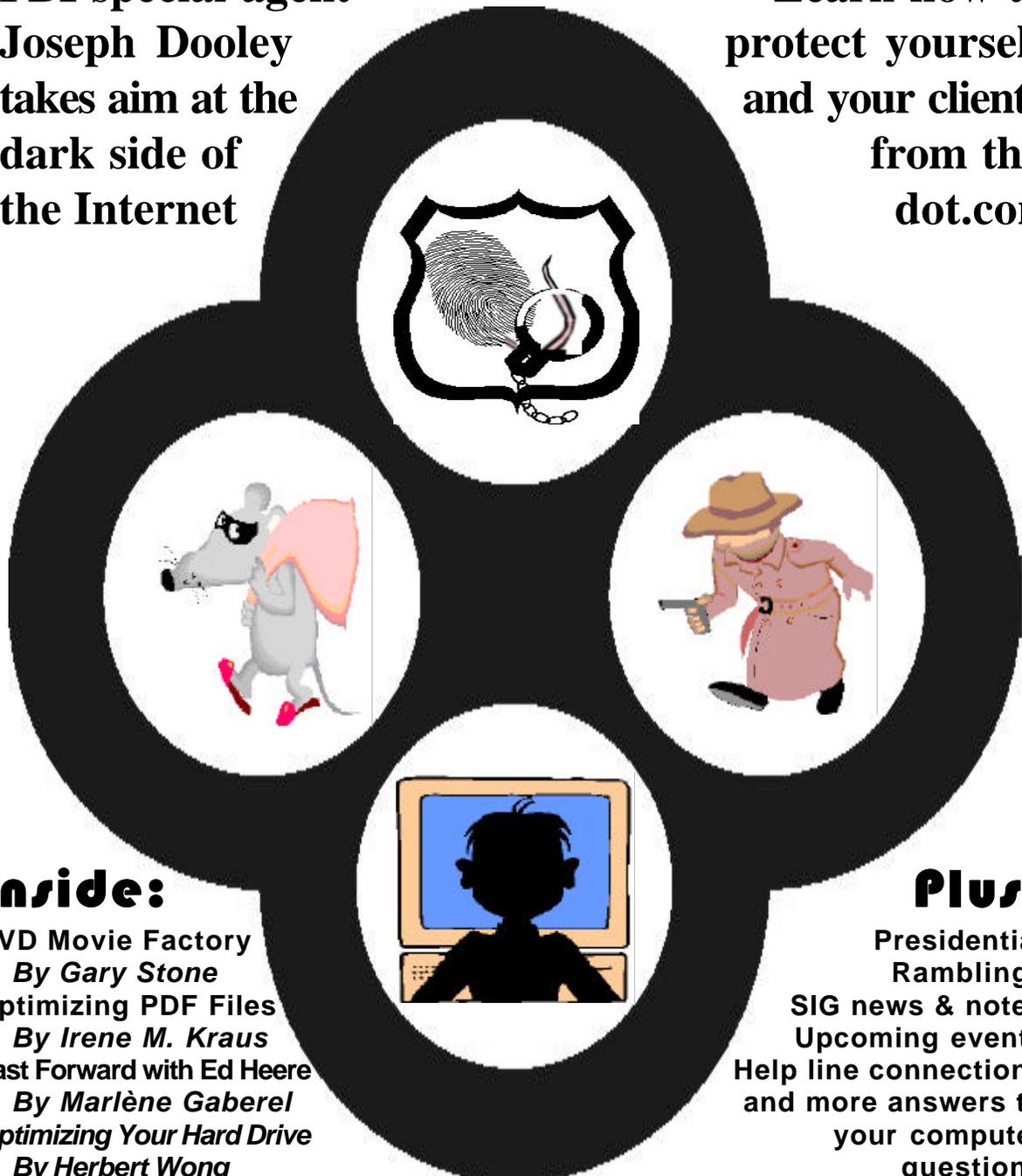
September 2002

Volume 13, Issue 9

Next Meeting: Targeting Cybercrime

FBI special agent
Joseph Dooley
takes aim at the
dark side of
the Internet

Learn how to
protect yourself
and your clients
from the
dot.con



Inside:

DVD Movie Factory

By Gary Stone

Optimizing PDF Files

By Irene M. Kraus

Fast Forward with Ed Heere

By Marlène Gaberel

Optimizing Your Hard Drive

By Herbert Wong

Plus:

Presidential

Ramblings

SIG news & notes

Upcoming events

Help line connections

and more answers to

your computer

questions

President's File



PRESIDENTIAL
RAMBLINGS
ISSUE 0.4

EVERY summer for the past ten years or so my family has gathered in a cottage in southwestern Michigan. This started with the mid-western "core" of the family and over the years expanded to include everyone from my parents, my two brothers, assorted children and now my granddaughters. In recent years we outgrew one cottage when one in-law and girlfriends from two different generations helped swell our ranks.

The fact that we all get along as well as we do is the real miracle because at some levels my brothers and I are so different you would be amazed we come from a common gene pool. I am the oldest and have always been the most technically savvy. My next brother was always the most conservative, collected coins when young and is now an investment banker. My youngest brother, too young to be a hippy in the sixties/seventies, was the free thinker who is now a concerned parent of twin teenagers. Our tastes in computers are, of course, influenced by these differences.

Those who have been following these columns know that I lost count of the number of computers in the house many years ago. Two years ago I decided to make life easier by moving three or four machines (the exact number varies) to the basement in what I call the "server farm". A telemarketer once asked if I used a modem. I told her that my home-office looks like the control room of the Death Star. She then said "well then I guess you have a CD-ROM drive."

If my middle brother uses a computer at work, he hides the fact very well. At home they have an old Macintosh—one with a sealed case so no one can fiddle with the insides. For connectivity it has an expired AOL account. His kids somehow managed to get thru school with only minor scarring from this lack of technology.

Over the years my youngest brother has owned several computers starting with an XT clone many years ago. He just bought his third or fourth computer, a 2 point something gigahertz Pentium 4 with a nice flat screen monitor and a scanner. Unfortunately, he does not understand this one any better than the XT. He wants to scan pictures, and view and edit pictures from his new digital camera, but he expects everything to be perfectly intuitive and to "just work". Golly, what a concept! When I suggest he read the manuals, he quite rightly asks, "What manuals?" Since they exist only on the computer, they might as well not exist. So then I suggest a visit to a nice large book store. His response is a groan and, of course, he is not alone.

You know, what he needs is a user group like DACS! (And you were sure I'd never tie this in.) A few meetings at the Graphics SIG and he would be scanning and editing in short order. Look in the new issue of PC Magazine and you'll find John C. Dvorak's column on this very topic. If you don't subscribe, you can read his column online at <http://www.pcmag.com/article2/0,4149,427969,00.asp>.

This was the first of Ed Heere's "Industry" talks that I have had the pleasure of attending. I agreed with just about everything he said. (Although I think the media coverage of security problems in Microsoft products has greatly exaggerated the problem when compared to security problems in competing products—but that is a topic for another column.) Ed's assessment of "value" in today's computer products is right on. Since I'm not a gamer, I've never found a need for blazing 3-D graphics performance. This Word document looks just fine in 2 dimensions on a (relatively) flat CRT screen. And, while I wish these words would appear on the screen faster (with less effort on my part), I'm quite happy that nothing is jumping around on the screen right now. On the other hand, I do have one machine that serves as my DVD player. In that machine I do want fast video, but displaying video is not the same as rendering an explosion in a computer game.

President's file Continued on page 15

Membership Information

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Don Neary
APCUG Liaison
203-746-5538

IN THIS ISSUE

| | |
|---------------------------|----|
| PRESIDENTIAL RAMBLINGS | 2 |
| DIRECTORS' NOTES | 3 |
| HELP LINE | 3 |
| CYBERCRIME PREVENTION | 4 |
| HARD DRIVE OPTIMIZATION | 6 |
| SIG NEWS & NOTES | 8 |
| CALENDAR | 9 |
| OPTIMIZING PDF | 10 |
| MEETING REVIEW - ED HEERE | 11 |
| ULEAD DVD MOVIE FACTORY | 12 |
| RANDOM ACCESS | 14 |
| NEW MEMBERS | 14 |

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HelpLine

Volunteers have offered to field member questions by phone. Please limit calls to the hours indicated below. Days means 9 a.m. to 5 p.m.; evening means 6 to 9:30 p.m. Please be considerate of the volunteer you are calling. HelpLine is a free service. If you are asked to pay for help or are solicited for sales, please contact the dacs.doc editor; the person requesting payment will be deleted from the listing. Can we add your name to the volunteer listing?

d = day **e** = evening

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Directors' Notes

A Regular Meeting of the Board of ADACS was held at the RC on August 12, 2002. Present were Messrs. Bovaird, Buoy, Cohen, Neary, Ostergren, Pearson, Preston, Scheef and Setaro. President Jim Scheef presided; Secretary Larry Buoy kept the record. Minutes of the previous meeting, held July 8, 2002, were approved.

Treasurer Charlie Bovaird reported bank accounts of \$18,615.01 and postage on hand of \$87.49, a total of \$18,702.49, less prepaid dues of \$8,114.00, for a net of \$10,558.50. This final figure reflected an expenditure of \$3,699.00 for the new projector purchased as previously authorized. He also reported current membership of 464.

After reviewing results of the current advertisements for General Meetings, it was agreed to continue same for an additional six months, with insertion of a single ad on the day preceding General Meetings.

With respect to proposed amendments to the DACS Bylaws, Bruce Preston and Larry Buoy reported no real progress but expressed intent to prepare desirable changes for consideration at the Annual Meeting of the membership.

Comments were made as to the improved resolution the recently purchased projector. Jeff Setaro informed the Board that presentations for the remaining General Meetings for 2002 had been arranged, but a conflict had developed in the use of the Hospital's auditorium for October. Jeff is to attempt to arrange for the use of the Radisson Inn facilities for October.

Further consideration was given to providing benefit incentives to DACS membership, including discounts at local merchants or online sources of computer-related products or services and the concomitant identification of membership. Jim Scheef advised that a new senior group was being formed in Ridgefield, which he would like to become affiliated with DACS, and asked for assistance in presenting our case at that group's organizational meeting to be held on August 16.

The need for a Linux computer at the Resource Center was broached, and Larry Buoy volunteered the donation of an unused unit if it will meet the minimum configuration needed. Next considered was an online events calendar by TechVenue that could be linked to the DACS Web Site and kept current. After discussion, it was deemed to be of limited value for the cost.

—Larry Buoy

Meeting Preview

Targeting Cybercrime

Protecting you and your business from the dot.com

By Marlène Gaberel

A VERY INTERESTING discussion is in store for DACS members on September 3, 2002, at 7 p.m. at the



Danbury Hospital Auditorium. The topic of the main presentation will be Cyber Crime Prevention. FBI's Supervisory Special Agent Joseph Dooley will talk about "The Dark Side of The Internet."

Mr. Dooley, a CPA specializing on fraud and white collar crime, will talk about how to protect our computers and our customers from the "dot.com" and the "con-men" and other criminals that take advantage of computers to defraud the community. Mr. Dooley will tell us what techniques criminals are using; with that knowledge we can learn how to protect ourselves from becoming a victim.

Special Agent Dooley is based in New Haven. He was the lead investigator in the case of Martin Frankel, who for eight years in the 1990's operated a phony trading floor from his Greenwich Connecticut home and defrauded a half-dozen insurance companies of more than \$218 million. Using computer analysis, Dooley was able to trace Frankel's activities, that in-

cluded a scheme to obtain control of the assets of several companies, drain off those assets through a "fraudulent" brokerage firm and then transfer and launder them through a dummy charity.

Agent Dooley is a speaker on "White Crime Collar, Cyber Crime and Forensic Accounting" matters before civic, profession and law enforcement groups in the U.S. and Eastern Europe. He is also a lecturer at the International Law Enforcement Academies in Budapest and Bangkok.

Mark September 3rd as an important date not to miss; the speaker will give us all the information necessary to prevent us from becoming the next cyber crime victim. DACS' general meetings start at 7 pm with a question and answer session, followed by brief club announcements. The main presentation starts at 8 p.m.

Cybercrime a growing threat

ALTHOUGH INFORMATION technology has suffered a decline in the recent recession, computer crime remains a growth industry. That is the message from a survey by the Computer Security Institute, which confirms that "the threat from computer crime and other information security breaches continues unabated and that the financial toll is mounting."

Highlights of CSI's "2002 Computer Crime and Security Survey" include:

- Ninety percent of respondents (primarily large corporations and government agencies) detected computer security breaches within the last twelve months.

- Eighty percent acknowledged financial losses due to computer breaches.

- Forty-four percent (223 respondents) were willing and/or able to quantify their financial losses. These 223 respondents reported \$455,848,000 in financial losses.

- As in previous years, the most serious financial losses occurred through theft of proprietary information (26 respondents reported \$170,827,000) and financial fraud (25 respondents reported \$115,753,000).

- For the fifth year in a row, more respondents (74%) cited their Internet connection as a frequent point of attack than cited their internal systems as a frequent point of attack (33%).

- Thirty-four percent reported the intrusions to law enforcement. (In 1996, only 16% acknowledged reporting intrusions to law enforcement.)

Respondents detected a wide range of attacks and abuses:

- Forty percent detected system penetration from the outside.

- Forty percent detected denial of service attacks.

- Seventy-eight percent detected employee abuse of Internet access privileges (for example, downloading pornography or pirated software, or inappropriate use of e-mail systems).

- Eighty-five percent detected computer viruses.

Respondents were asked about electronic commerce over the Internet:

- Ninety-eight percent of respondents have WWW sites.

- Fifty-two percent conduct electronic commerce on their sites.

- Thirty-eight percent suffered unauthorized access or misuse on their Web sites within the last twelve months. Twenty-one percent said that they didn't know if there had been unauthorized access or misuse.

- Twenty-five percent of those acknowledging attacks reported from two to five incidents. Thirty-nine percent reported ten or more incidents.

- Seventy percent of those attacked reported vandalism (only 64% in 2000).

- Fifty-five percent reported denial of service (only 60% in 2000).

- Twelve percent reported theft of transaction information.

- Six percent reported financial fraud (only 3% in 2000).

Are you computer savvy? Great!

Know others who are not? Refer them to SeniorNet - an effective and affordable way for people age 50 and over to learn basic computing skills. They can start with our beginner's course, Introduction to Personal Computers. Once basic Windows and mouse skills are acquired, they can continue with intermediate computing and introductory courses in The Internet, Quicken, Genealogy, and Graphics and Scanning.

The Danbury SeniorNet Learning Center, located in the Senior Center, 80 Main St., is an all-volunteer organization. (Many of our volunteers are DACS members). Have your friends "come on down" Sat., Sept. 14 for an Open House (9:30 to 10:00 a.m.) and Course Registration (10:00 to 12:00 noon). Classes begin the week of Sept.23.

For more information, please sign on and surf our website at: www.danbury.org/seniornet or call the Senior Center at: (203) 797-4686.

SeniorNet Fall 2002 Courses

Introduction to Internet - Tues., 9:00 a.m.

Introduction to Personal Computers - Wed., 1:00 p.m.

Introduction to Graphics & Scanning - Wed., 6:30 p.m.

Intermediate Computing - Thurs., 2:30 p.m.

Introduction to Quicken - Thurs., 6:30 p.m.

Introduction to Genealogy - Sat., 9:30 a.m.

Hardware

Hard Disk Drive Optimization

by Herb Wong, NOCCC

HARD DISK DRIVES have evolved into highly reliable and extremely inexpensive mass storage devices. A few simple ideas may help improve your daily computing experiences.

Size Matters

Computer science has a standard set of definitions for quantities. A thousand bytes is 1,000 bytes (ten to the third power). A kilobyte is 1,024 bytes (two to the tenth power). A million bytes is 1,000,000 (ten to the sixth power; 1,000 times 1,000) and megabyte is 1,048,576 bytes (two to the twentieth power; 1,024 times 1,024). Finally, a billion bytes is 1,000,000,000 (ten to the ninth power; 1,000 times 1,000 times 1,000), at least in the United States, and a gigabyte is 1,073,741,824 bytes (two to the thirtieth power; 1,024 times 1,024 times 1,024).

Computer marketing sells you short. Advertising redefines many standard computer science terms. A kilobyte becomes 1,000 bytes, a megabyte becomes 1,000,000 bytes, and a gigabyte becomes 1,000,000,000 bytes.

In other words, 1,000 equals 1,024, 1,000,000 equals 1,048,576, and 1,000,000 equals 1,073,741,824. Of course, this works in the favor of the manufacturer and short-changes you. An advertised “twenty gigabyte” drive should be almost one and a half billion bytes larger.

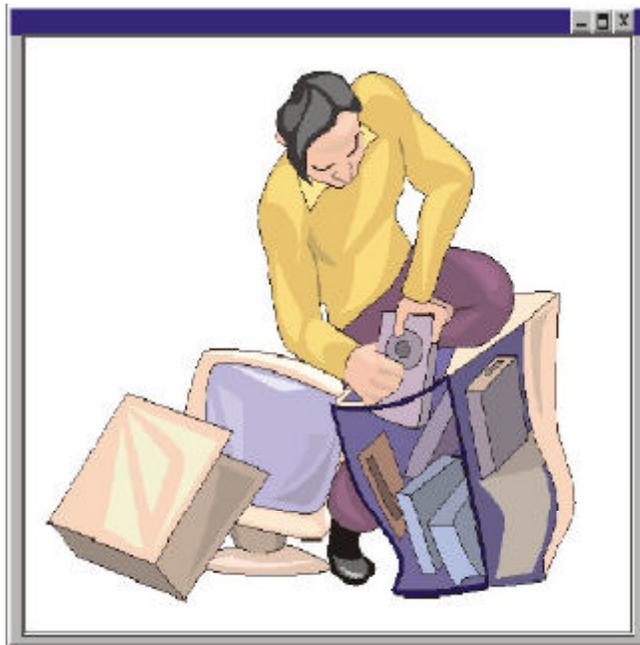
To be clear and accurate, distinguish between one thousand bytes and one kilobyte, one million bytes and one megabyte; and one billion bytes and one gigabyte whenever possible.

Partitions

The foundation of a hard disk drive’s file system is a partition. The framework is the formatting of logical drives (C:, D:, E:, etc.). There are two types of partitions under Windows, primary and extended.

A primary partition can contain the boot drive (which can load the operating system at startup) after formatting (with the FORMAT utility). An extended parti-

tion can contain one or more logical drives that cannot be boot drives. The partitions and logical drives are created using the FDISK utility. The logical drives must be formatted with the FORMAT utility before they can contain data.



Under older versions of Windows, a physical hard disk drive can contain a single primary partition, a single extended partition, or both a primary partition and an extended partition. Technically, those are the only things that Windows can recognize. The rest of the world is decades more advanced.

Under older versions of Windows (and DOS), logical drive letters are assigned (at least initially during OS installation) to hard disk drives according to a few simple rules. The physical hard drives are inspected in sequence (port 0’s master, port 0’s slave, then port 1’s master, port 1’s slave, etc.) and logical drive letters are first assigned to each primary partition that is found.

Next, the first physical hard drive is inspected again and logical drive letters are assigned to any logical drive contained in an extended partition (if it exists). Each of the remaining physical hard disk drives is inspected in sequence (port

0’s master, port 0’s slave, then port 1’s master, port 1’s slave, etc.).

I suggest labeling logical drives with a naming convention to facilitate having a collection of drives in a computer or network. I abbreviate the manufacturer’s name, drive capacity, number of the drive (first, second, third, etc.), and logical drive number (a primary partition’s logical drive number is given 0 and an extended partition’s logical drive starts at 1).

Suppose a computer contains a Seagate 80 gigabyte drive and a Maxtor 40 gigabyte drive. Both contain a single primary partition and an extended partition with two logical drives. The drive letters C: through H: would go to: SEA80GB#1P0, MX40GB#1P0, SEA80GB#1P1, SEA80GB#1P2, MX40GB#1P1, and MX40GB#1P2, respectively.

Suppose the same computer contains a Seagate 80 gigabyte drive and a Maxtor 40 gigabyte drive. Now the Seagate contains a single primary partition and an extended partition with two logical drives; and the Maxtor contains only an extended partition with three logical drives. The drive letters C: through H: would go to: SEA80GB#1P0, SEA80GB#1P1, SEA80GB#1P2, MX40GB#1P0, MX40GB#1P1, and MX40GB#1P2, respectively.

This (or similar) naming convention helps to easily identify where data resides. There has been many an occasion where the label told me that I was in the wrong folder on the wrong drive.

Change Drive Letter And Path

The first thing that I do after installing Windows is to change the drive letter of all the CD/DVD-ROM (read only memory) and CD-R/RW drives. I change the first CD-ROM to drive R:, the DVD to drive V: (or to drive R: if there is no CD-ROM), and the CD-R/RW to drive W:. Now I can stick in an optical disc into every machine and know what drive letter it is.

If you don’t change the drive letters as above, bad things can happen. If you add another hard disk drive, that hard disk drive’s letters will appear after the CD-ROM’s.

ScanDisk

Microsoft’s ScanDisk is a lightweight utility that is best known for automatically running after an improper exit from Windows. Most common causes are pressing

the hardware reset button due to a frozen system, a "blue screen of death" crash, or worse.

A sector is the basic storage unit of 512 bytes. A cluster is a series of logical sectors whose total size is predetermined by the operating system's file system. For example, FAT32 (ideally) uses 4-kilobyte clusters on partitions that are less than 8-gigabytes, 8-kilobyte clusters on partitions that are less than 16-gigabytes, 16-kilobyte clusters on partitions that are less than 32-gigabytes, and 32-kilobyte clusters on partitions that are greater than 32-gigabytes. The hard disk drive may not physically store data in this manner, but may perform translations as needed.

Windows uses a FAT (file allocation table) as a filename directory. Every file has an entry in the FAT that contains a pointer to the first cluster of the file itself. If the current cluster is not large enough to contain the whole file, a pointer within the cluster will point to the next cluster in the chain. It is possible for a file to be composed of millions of clusters.

ScanDisk's primary functionality is to test the chain of clusters that comprise each file. A file that contains a pointer to a cluster owned by another file is a cross-linked file. An allocated cluster that is not contained in a valid file is a lost cluster. A FAT entry may be invalid if it does not point to a file.

Run ScanDisk after occasions when Windows was not able to complete a "Shutdown" instruction by itself.

Defragmentation

Files are created and deleted in the normal course of operation. Some files were persistent and some were temporary (for use during the current session or for some short operation).

Imagine a wall with many random groups of bricks (deleted file clusters) removed. As a new large batch of bricks (the clusters in a single new file) comes in, they fill in the random openings as possible. These new bricks now appear in groups on various different rows.

In a hard disk drive, bricks are clusters and the many rows of bricks are tracks. The read/write heads take a long time (for computers) to step from track to track. A file read/write operation is fastest if the file is in consecutive clusters and in adjacent tracks. If the clusters in a single file are scattered randomly about the disk, reading/writing will take a large amount of time since stepping is so slow.

By periodically running the defragmentation utility, the gaps in the

fragmented files are removed. Disk performance can be noticeably improved. Do not reset or turn off the power to the computer until you have terminated the defragmentation. Nasty things can happen if you disrupt a defragmentation.

Microsoft claims to enhance load times on some of their operating systems by moving boot files to the outer tracks of the disk (since they have the fastest data transfer rate). In addition, they claim that some files (such as .DLL) are intentionally split up so that important sections of the file are moved to the outer tracks for speed. All of this rearranging of files is "done in the background." This explains some of the mysterious and otherwise inexplicable hard disk drive activity that occurs on some computers.

Many people maintain a small logical drive as a place to hold file before burning them to a CD-R/RW. The files are subsequently deleted. Rumor has it that some file systems do not efficiently clean up after such system. It is claimed that the logical drive must be formatted (or defragmented) again to be sure that the drive is truly defragmented.

Two Heads Are Better Than One

A system that has two physical hard disk drives can be slightly optimized by changing a few system defaults. Under Windows, the boot drive (drive C:) is the default drive for temporary files (ex. - C:\temp) and system memory-page swap-files (ex. - pagefile.sys). Writing these files can be significantly faster if these defaults are changed to another physical hard disk drive.

The explanation is quite simple. As the first physical hard disk drive's read/write heads are locating specific files, the second physical hard disk drive's read/write heads can quickly and efficiently move to other files without the interference that would result if only a single drive was serving the same purpose.

Cable select

The low cost of hard disk drives allows even basic systems to have two devices. Since there is not a Microsoft operating system that fills everyone's needs, many people want to run two different operating systems on one computer.

The lowest hardware cost technique is to use two existing drives and select the boot operation system through a minor change in the BIOS. This circumvents the need to purchase additional software or drive bays with removable drive chassis.

Follow these procedures. Remove every hard disk drive, except for the target hard disk drive. Set the jumpers on the hard disk drive to master. Create the primary and extended partitions as desired. Install your operating system of choice on the primary partition and format the logical drives as needed. Test this configuration to your satisfaction.

Repeat this procedure for the second target drive. You can install any operating system you choose on the second drive.

Change the jumpers on both hard disk drives to the cable select setting. The jumper settings are printed on most newer hard disk drives. Install both of these hard disk drives on the same ribbon cable on the primary port (usually labeled "port 0") of the motherboard.

You can now change the hard disk drive to boot from by selecting the appropriate drive from the BIOS (CMOS setup). In the AwardBIOS Setup Utility, select the "Boot" menu. Under the "IDE Hard Disk" item, select the desired hard disk drive as the onscreen instructions indicate. For example, I have a Seagate drive indicated by "[ST380021A]" next to the "IDE Hard Disk" text. The secondary drive might be indicated by something like "[MX548075A]." To boot from this device, change the setting to "IDE Hard Disk [MX548075A]."

Using the cable select feature of the ATA hard disk drive to change boot devices may not be the fastest way to change between operating systems. However, if you want a very inexpensive hardware solution, it does not get any better than this.

I left out some minor installation details. If you have further questions and do not think that you can get this to work, then you probably cannot. Any questions about using this cable select technique will be answered with instructions to read this article. There are too many variables involved in this type of system configuration to attempt to provide useful answers. However, any further information about this little documented feature will be used to update this page.

Performance

A hard disk drive transfers data faster from the outer tracks than the inner tracks. The outer tracks are longer and contain more data. As a result, for each revolution, outer tracks transfer more data. The outer tracks are filled first.

Sooner or later, you'll fill up your hard disk drive. It seems to have gotten slower and slower. It has! The inner tracks on a

HDD, Continued on Page 15

Special Interest Groups

SIG NOTES: September 2002

ACCESS. Designs and implements solutions using Microsoft Access database management software.

Contact: Bruce Preston, 203 431-2920 (*bpreston@mags.net*). Meets on 2nd Tuesday, 7p.m., at the DACS Resource Center.

Next meeting: Sep 10

ADVANCED OPERATING SYSTEMS. Explores and develops OS/2, Linux, and NT operating systems. For meeting notes and notices, follow link to Don's site on *dacs.org*.

Contact: Don Pearson, 914 669-9622 (*pearson@attglobal.net*). Meets on Wednesday of the week following the General Meeting, 7:30 p.m., at Don Pearson's office, North Salem, NY.

Next meeting: Sep 11

GRAPHICS. Create/print high-quality graphics and images.

Contact: Ken Graff at 203 775-6667 (*graffic@ntplx.net*). Meets on last Wednesday, 7p.m., at Best Photo Imaging, Brookfield.

Next Meeting: Sep 25

INTERNET PROGRAMMING. Programs for Web site/server.

Contact: Chuck Fizer (*cfizer@snet.net*). Meets on 1st Wednesday, 4-6 p.m., at the DACS Resource Center. Members' suggestions are welcome.

Next Meeting: Sep 4

INVESTMENT STRATEGIES. Discusses various investment strategies to maximize profits and limit risk.

Contact: Paul Gehrett, 203 426-8436, (*pgehr4402@aol.com*). Meets 3rd Thursday, 7:30 p.m., Edmond Town Hall, Newtown.

Next Meeting: Sep 19

LINUX. Helps in installing and maintaining the Linux operating system. Sep also be of interest to Apple owners using OS X.

Contact: Bill Keane (*bkeane.nai@rcn.com*) 203-438-8032 Meets 3rd Wednesday, 7:30 pm at the DACS Resource Center.

Next Meeting: Sep 18

SERVER. Explores Back Office server and client applications, including Win NT Servers and MS Outlook.

Contact: Jim Scheef (*jscheef@telemarksys.com*)

Meets 2nd Thursday, 7 p.m., at the DACS Resource Center.

Next meeting: Sep 12

SMALL BUSINESS. All aspects of small business management.

Contact: Matthew Greger, 203 748-2919, (*matthewg@thebusinesshelper.com*).

Meets on last Wednesday, 1-3 p.m.

Next Meeting: Sep 25

VISUAL BASIC. Develops Windows apps with Visual Basic.

Contact: Chuck Fizer, 203 798-9996 (*cfizer@snet.net*) or Jim Scheef, 860 355-8001 (*JScheef@Telemarksys.com*).

Meets on 1st Wednesday, 7p.m., at the DACS Resource Center.

Next Meeting: Sep 4

VOICE FOR JOANIE. Provides and supports people with Lou Gehrig's disease with special PC computer equipment.

Contact: Shirley Fredlund, 203 770-6203 (*voiceforjoanie@juno.com*).

Next Meeting: Look for announcements.

WALL STREET. Examines Windows stock market software.

Contact: Phil Dilloway, 203 367-1202 (*dilloway@ntplx.net*). Meets on last Monday, 7p.m., at the DACS Resource Center.

Next Meeting: Sep 30

SIG News & Other Events

Graphics. The graphics sig will be back from vacation the last Wednesday of September at the New Best Photo location in Danbury Next to Friendly's restaurant. New members welcome. Bring a file with you that has been giving you problems and we will work on it. Call Ken Graff for more info.

IP and VB. The IP-SIG at 4pm - 6pm had a moderate numbers of attendees after a 2 month summer hiatus. We started with a random access session which became a generalized discussion on the stake Microsoft has in the .Net technology and the paucity of printed information on the .Net classes. We then proceeded on with the first of two demos - Net data access and the interrogation of Nulls. Contrary to initial expectations, we could not immediately resolve the testing for a Null satisfactorily, in a either VB.Net program or the equivalent C# application. Later, reviewing the test activity, we learned that objects contain an .Equals(value to test) operator that returns either a True/False. In the case for Null, the test is `object.Equals(DBNull.Value)`. This returns True if the object is Null or False otherwise. The second demo involved a Web Service. We demonstrated a .asmx application. .asmx file extensions are used to connote a Web Service functionality while an .aspx extension implies a active server page functionality. In effect, the extension is used by the Internet Information Server to determine which internal of its .dlls will service the requesting URL. The demonstration, although simple in content, dramatically presented a request for and the response from the server for a Web Service. We were able to single-step through the client and server code and see how the Web Service function works.

At the next IP-SIG, we intend to enlarge on Web Services applications. Initially our focus will be on the server response, serving up XML data streams and business logic functions supplying results to questions. This will take the form of responding to appropriate client URLs which are encoded with questions or data specifications. The next IP-SIG will be on Wednesday September 4th starting at 4pm.

Server and Networking. The August meeting ran overtime, but we were successful in configuring DNS on Linux, at least as a slave domain to the Resource Center server. BIND (Berkley Internet Name Domain) is the program that takes a URL like *www.dacs.org* and looks up the corresponding IP address. Configuring BIND to perform this seemingly simple task proved trickier than I had anticipated. Like most Linux (or UNIX) programs, the configuration is contained in a set of text files. The trick is what's in those text files once you find out where they are hidden. If you are familiar with Linux, you will have many chuckles watching me learn to use KDE, vi, and other Linux programs to get the job done. If you're more familiar with Windows, come and learn Linux networking along with the rest of us.

In September we will tackle more text files when we set up Samba—the key to making Linux play well with Windows computers. The goal of this project is to build a Linux machine that can provide all the functions commonly found on a Windows NT server. The next meeting will be September 12 at 7pm in the DACS Resource Center.

Small Business. Welcome back everyone! Our first meeting will be September 25, 2002 at Ives Manor at 1-3 pm. Our topic is YOU! Come prepared to do a 15 minute presentation on your business or business idea. Give your 5 minute elevator speech; show us some of your promotional ideas (brochure, web site, post cards etc.); tell the group what works for you (how do you get business); tell us how you plan on marketing your business.

September 2002

Danbury Area Computer Society

| Sunday | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| 1 | 2  Labor Day | 3  7:00 P.M. GENERAL MTG | 4 4-6 PM INTERNET PROGRAM. Chuck Fizer 203 798-9996 7:00 PM VISUAL BASIC Chuck Fizer | 5 | 6 | 7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8 | 9  7:00 PM BOARD OF DIRECTORS | 10  7:00 PM Access Druce Preston 203 431-2920 | 11  7:30 PM ADVANCED OS Don Pearson 914 669-9622 | 12  7:00 PM SERVER SIG Jim Scheef 860 355-0034 | 13 | 14  DACS.DOC SIG NEWS DEADLINE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 15 | 16 | 17 | 18  7:30 PM LINUX Bill Keane 203 438-8032 | 19  7:30 PM INVESTMENT Paul Gehrett 203 426-8436 | 20 | 21 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 22 | 23 | 24 | 25 1-3 PM SMALL BUSINESS Matthew Greger 203 748-2919 7:00 PM GRAPHICS Ken Graff 203 775-8887 | 26 | 27 | 28 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 29 | 30  7:00 PM WALL STREET Phil Dilloway 203 367-1202 | <table border="1"> <thead> <tr> <th colspan="7">Aug 2002</th> <th colspan="7">Oct 2002</th> </tr> <tr> <th>S</th><th>M</th><th>T</th><th>W</th><th>T</th><th>F</th><th>S</th> <th>S</th><th>M</th><th>T</th><th>W</th><th>T</th><th>F</th><th>S</th> </tr> </thead> <tbody> <tr> <td></td><td></td><td></td><td></td><td>1</td><td>2</td><td>3</td> <td></td><td></td><td></td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td> </tr> <tr> <td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td><td>10</td> <td>6</td><td>7</td><td>8</td><td>9</td><td>10</td><td>11</td><td>12</td> </tr> <tr> <td>11</td><td>12</td><td>13</td><td>14</td><td>15</td><td>16</td><td>17</td> <td>13</td><td>14</td><td>15</td><td>16</td><td>17</td><td>18</td><td>19</td> </tr> <tr> <td>18</td><td>19</td><td>20</td><td>21</td><td>22</td><td>23</td><td>24</td> <td>20</td><td>21</td><td>22</td><td>23</td><td>24</td><td>25</td><td>26</td> </tr> <tr> <td>25</td><td>26</td><td>27</td><td>28</td><td>29</td><td>30</td><td>31</td> <td>27</td><td>28</td><td>29</td><td>30</td><td>31</td><td></td><td></td> </tr> </tbody> </table> | | | | | Aug 2002 | | | | | | | Oct 2002 | | | | | | | S | M | T | W | T | F | S | S | M | T | W | T | F | S | | | | | 1 | 2 | 3 | | | | 1 | 2 | 3 | 4 | 5 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 27 | 28 | 29 | 30 | 31 | | |
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Web Publishing

Creating an Optimized PDF File

By Irene M. Kraus, President & Newsletter Editor for CEBUG

BEGINNING WITH VERSION 3 of Distiller over 4 years ago, to present, I've been creating PDFs with a wide variety of applications. I was asked to share some of my tips in how to create not only a great looking PDF document, but also one that has a small filesize.

The latest version of Adobe's Acrobat (v5) is available for all versions of Windows and Mac systems. [www.adobe.com] Although I use a Windows XP based system, most of what I have to say applies to all users.

Postscript Printer Device

Install a postscript printer driver for your system if you don't have one installed yet. Every version of Windows since 95 has a generic postscript driver available. There is also a free version included on the CD of nearly every Adobe product. Adobe's website has a free download for the latest version; simply download the one appropriate for your operating system. This is usually newer than the one included on system CDs, so this is the one I would recommend obtaining. After you've installed it, make sure you have the output set to go to file if you don't actually have a postscript printer.

Desktop Publishing and word processing programs designed for both Mac and Windows systems are WYSIWYG. This means they do their best to show you on screen what the document you are working on will look like when printed. If the program you're using won't let you specify that postscript printer as the output device, make it the default printer before opening whatever program you plan to use. Make the WYSIWYG properties of your system work for you!

Font Choices

One of the beauties of PDF documents is that they can include fonts within them, so whoever receives it can see and print it exactly as you've intended. This will increase the filesize though. As much as possible, stick to core fonts used within

all systems so they won't need to be included in PDF. For Mac users, and those with Adobe Type Manager (ATM) installed on Windows, stick to Times & Helvetica. Windows users without ATM get nearly the same results by sticking to the True Type fonts of Arial & Times New Roman.

The exception to this general rule of thumb is Windows XP users. All of the fonts included within XP are in the new OpenType format. These fonts are equally supported under both Mac, and Windows XP systems.

Font Issues

There are several known font problems & issues which can affect your ability to create a PDF document. I'll try to cover the most common

in a brief manner here. For more on specific fonts, and other less common issues, I'd suggest reading the free FAQ files for Acrobat found on Adobe's forums. These are updated frequently.

One issue involves specific Type 1 (postscript) fonts used under XP. Until XP, Windows users had to have a version of Adobe's Type Manager (ATM) installed to obtain support for these fonts. Unfortunately, some Type 1 typefaces will not work as they should under XP unless the Deluxe version of ATM is installed. (See Adobe's FAQs for font list.)

The next known issue is a little more complicated. All fonts, True Type or Type 1, include a setting which indicates if the font designer was willing to allow the font to be embedded. Unfortunately, thousands of TrueType fonts were released and or included with software set not to allow embedding either by mistake, or because the company chose not to allow it. Corel Corp. is the only company I know of that offered 'fixed' versions for their users. (For those who had purchased the 2000 version of WordPerfect Suite.)

Complicating this mess even further is that it is rather difficult for most users to tell which way the fonts they use are set. The easiest way, I think, involves

Adobe's PDF Writer included in the Acrobat package. Switch to your Printer folder, and open the Properties for PDF Writer. Click on the Font Embedding tab. (XP users will need to click on Printing Preferences, and then Font Embedding.) Scroll thru the list under the 'Never Embed' section to see what is listed. In Acrobat v5, fonts set not to allow embedding will appear in a red typeface. (Those appearing in blue are considered 'core' fonts as mention previously.) Either install the Type 1 version of that font, or switch to a different typeface.

The last most common problem I'm going to cover involves corrupted fonts on Windows systems. Any typeface can become corrupted, or perhaps it was never installed properly to begin with. Detecting these kinds of problems can be difficult. Font Agent, a font optimization tool created by Insider Software [www.insidersoftware.com] can become a lifesaver. It can check True Type, Type 1, and OpenType fonts either installed, or not and reports what it finds. The demo version (unregistered) stops there, but the full version will assist you in correcting whatever problems are found.

Reduce Color Palette

Some programs will automatically include a basic palette of 4 to 16 colors, even if you've never used any of them in your PDF document. The more colors in your palette, the larger the file size will be. Check your program's documentation to see what you can do to reduce the included color palette. Use settings for 'spot' colors, or find an option in your print menu to include only colors actually used.

Graphic Formats

A PDF document is a special type of postscript, so using graphic formats close to that is the wisest choice. EPS (encapsulated postscript) is considered the standard for all vector (raster) based graphics. There is some debate over which bitmap format is the best, so I'll share what I know. By default, bitmaps are usually converted to JPG images during PDF creation. However, the JPG format is a 'lossy' format. When creating documents, I prefer to use the TIF format so there won't be any loss of data until the final step. Further, as I'm usually using PageMaker to create the document, I can control how much compression is used for the JPG images as the PDF is created. In general, compression of 10 to 25 percent usually doesn't detract from image quality.



One thing all users should remember to do is to optimize the bitmap before placing it inside your document. Check the documentation for whatever digital editor program you use for how to reduce the color palette, and resolution. In general, I aim for a color palette of under 256 colors, and around 96dpi. However, how much you reduce it is a matter of personal preference.

Other tips for PageMaker users

Use the Place command in the File menu to import all graphics. This forces the use of PageMaker's import filters. Due to large image size, especially for publications to be printed, linking to the file rather than including it within the document is common. Just make sure those files are present prior to creating the PDF.

Use PDF Writer or Distiller?

Distiller clearly creates better PDF files, averaging anything from 25% to 50% smaller. Some programs have trouble using it as a print device, so here's my work-around for that situation. Create a postscript file by 'printing' to the postscript printer you installed. (Make sure output will go to file!) Change filename, if needed, to have the PS extension. Open Distiller, and have it work on the results.

If PDF Writer must be used, do the following: Open the PDF in Acrobat and use the Save As command under File. Make sure the 'Optimize PDF' setting is enabled. Compare the results to the one created by PDF Writer, and you should see a significant drop in file size.

Optimize for Screen or Print?

Unless you're creating a PDF to be printed on a high-end device (printing more than 1200dpi or better), use screen optimization. It will reduce file size. Enough information is included that, if printed, the results should be quite satisfactory.

Summary

Some of these tips may seem obvious to anyone with experience in creating PDF documents. They would, I hope, be of value to someone creating their first one. If anyone has another suggestion they'd like to share on this topic, send it along!

IRENE M. KRAUS is a writer, graphic and web page designer, and heads Computer Erie Bay User Group (CEBUG) based in Erie County, Ohio. Write to her at [info@design-comp.com]. Samples of past work can be found at www.design-comp.com.

Meeting Review

Fast Forward with Ed Heere

By Marlène Gaberel

AT THE AUGUST general meeting, DACS welcomed Ed Heere, founder and owner of Amsys Computer as its speaker. Ed, a past board member, has a very broad and comprehensive inside knowledge of the industry of computers. He generously shared that information with members and visitors, some of it with tongue-in-cheek comments.

One of the first topics was how miniaturized computers had become, especially in the laptop area. To Ed, laptop computers, while still higher in price than desktops, pack in tons of features, with mega capacity. The result is a computer so small that it can almost get lost in one's briefcase. On the desktop side, prices are becoming more competitive by the week but with more capability than ever. This is good news for consumers in the market for a new computer.

As far as brand names, Ed recommended Dell, HP/Compaq (a combined company now that the law suit has been won) and IBM, which has good years and bad years due to continuous in-house battles taking place, according to Ed.

With all the price wars going on, something has to give, and according to Ed, the "human factor has been removed;" service is no longer in the picture. Forget about calling toll free numbers to get help when your computer does not do what it is supposed to. For every little computer problem one may encounter, there is a price attached to trying to fix it.

Ed talked about the operating systems available. As for the Windows, XP home is ok, but Pro is better, 2000 is solid. 98 is being phased out and Me was a big catastrophe as per Ed. For the servers, there is now more Linux than Unix. Ed says that Linux will eventually be a major player in the desktop world.

While on the topic of operating systems, Ed briefly mentioned that lots of damage can be inflicted to computers by games. I tend to agree to a certain extent, but it shows that Ed is a parent of girls and not of boys!

On the subject of Internet connectivity, modems as we know them are basically dead and being replaced at a fast pace by broadband, be it cable, DSL or satellite. As users and companies move to broadband access, firewalls and routers that protect "always on" computers are

very important. The hardware types of firewall are more efficient. On that topic, Ed mentioned routers that let a user plug in extra computers onto the line. This is technically being discouraged by providers but not stringently enforced. Ed also mentioned Net Switcher that lets users switch between cable, DSL or ISDN at will, should one service become unavailable.

Monitors also have greatly decreased in price. Flat panel displays have a better view than regular monitors, but work only at the native resolution. They are more energy-efficient, have a sharper and brighter image, and have less heat emission, with a positive effect not only on the environment but on your eyes, plus the fact that they are much easier to fit on a desk.

Ed continued then on the advantages of using a GPS in your car. The technology makes a car more expensive but Ed seems hooked on its rewards. The way I can picture it, GPS is like having mapquest in your car. Ed moved on to how he uses the web routinely, when the question arose of "How did we live before the Internet was commonly accessible?" He gave us a laundry list of why and how he uses the Internet that is too long to remember, but I recognized about half of the items he described that are also done in my household.

At one point, Ed got sidetracked with a multitude of specific questions and had to rush to finish up on his planned presentation. He closed by predicting, as he removed from his pockets keys, credit cards, garage door opener, passport, tape, CDs, MP3 and different other items, that within five years, for a cost of less than \$500.00 all those items would be in a hand held device with all information being available remotely. Only the owner of the device would be able to use the information, especially convenient if the device is stolen or left behind. Surely, with all articles on one device, there's lots of stuff that could be removed from purses, pockets and briefcases.

During his presentation, Ed covered many more areas that were all interesting. He gave DACS members a run down of the industry and a glimpse into the future of the computer technology.

MARLÈNE GABEREL is a DACS board member and VP of Public Relations. She can be reached at: marlene_gaberel@yahoo.com.

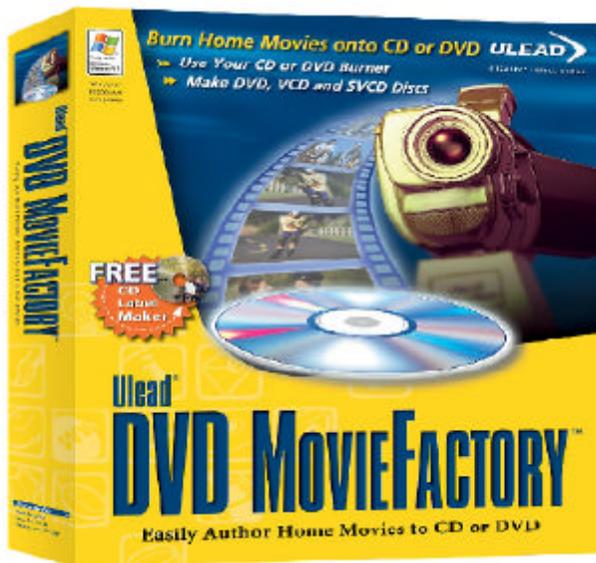
Product Review

Ulead DVD Movie Factory

by Gary Stone, MCP CNE
Digital Video Producer

FOR ANYONE NEEDING to make a video DVD, this program can do the job. I've been taping video on VCR for years and want to reduce my stack of tapes, which take a lot of space, down to a

manageable collection. What better way than to do that than to put them onto little CDs? This program can even make VCDs, which are like DVDs and play in most DVD players, but they also play in personal computers with the regular Windows Media Player. DVDs hold around 4.7 Gigs of data, so you can fit more than 7 times the information contained on a typical 650 Mb CD. For video, this seems to be the way to go, but at \$5 to \$7 per blank DVD disc, it's also more expensive.



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Installation

The installation menu of Ulead DVD Movie Factory also allows you to install Ulead Photo Express 4, which can be accessed from the main program menu and permits you to capture stills from a video source, find, categorize and manipulate pictures and print CD labels. Photo Express is a separate program from Movie Factory, and must be uninstalled on its own. Photo Express installs 1,988 bitmap

files, most with long filenames, and takes 99.5 megs of disk space. There is also a Utilities option which lets you install things like DirectX 8.0, Windows Media Player 7, Quicktime 5 and Acrobat Reader.

Holy Convolution Batman

I was curious as to what DVD Movie Factory would add to my system, so before installation I counted my video compression codecs, and there were 32 of them. Not your typical PC. I run a great many video programs such as MGI VideoWave, Lumiere Video Studio, Adobe Premiere, Edit DV, Real Producer, Media Cleaner just to name a few. The PC can convert to and from AVI, MPG, Quicktime, Real, DV and a few others, so I knew it was pretty complicated to begin with. The installation didn't add anything to that list so I guess every codec

needed was already there. The program didn't run when I clicked on it; instead, my PC crashed, repeatedly. I blamed this on the very convoluted Win 98 system on which it was installed, and proceeded to install it on my second hard drive which has a very minimal installation of Windows 98. So into the BIOS I went and made the D: drive the second boot device, the floppy being the first. After installing on the mostly bare Windows OS, the program did start up ok.

Check for Patches

I was happy to get it up and running, but suffered another setback when I asked it to

record some video. It couldn't find any video capture device. I knew it was there because VFW Vidcap could see it just fine. The next step was to check for an update on the Ulead website and sure enough, there was a patch available to download. While I was there, I saw a link to new drivers for my video capture card and downloaded those as well. With these new patches and drivers, the program found my capture device and I had video, so I installed them on the first drive to see what would happen but still no go. At least I had the program running on the D: drive so back into the BIOS I went.

32 Clicks

Restarting the PC and telling the program to capture some video froze the PC. Only reinstalling the capture drivers would make it work. After 32 clicks of the mouse, the drivers were reinstalled and everything worked fine, but I found this needed to be done every time the PC was restarted. Upon examination, the driver file details hadn't changed at all, before or after this step, so I'm not sure why that procedure makes it work.

Capturing Video

The Capture menu has all of the things you would need to adjust to get the video the way you want it. Capture plug-in selection, audio format, video format, source, display and codec, which allows you to set the compression options. Audio volume, however, must be set through your volume controls. This program uses the record volume master for its audio source and not the playback setting, something they explain on their website. Clips recorded are placed into a timeline on the lower part of the screen. You can also import clips from the hard drive into this timeline. The whole timeline is saved as a



project each time you exit the program. Capturing video works very well and is direct to disc, so there is not much waiting after capture. The resulting AVI file is put into the My Documents/Video Capture folder which makes it easy to find. Ulead says the program can handle 4-Gig files, but my PC crashed every time I captured four Gigs. Another 32 clicks. Movie Factory refused to edit captures larger than two Gigs. By limiting my captures to less than 2048 Mb, it worked perfectly. This meant about five minutes for uncompressed segments of the movie, which ended up with 20 segments

Editing the Video

The Edit menu allows you to do some basic editing functions, like splitting the clip in two, or trimming the start and end points of a clip. From here you can also Batch Convert several clips into a new format, such as 720 x 480 DVD, 352 x 240 VCD, various AVI or MPG 1 and 2 formats as well as WMV streaming files. There is also a Make Movie option for you to convert and/or combine all of the clips into a single file. It's not necessary to have the DVD or VCD movie all in one file, because the menu page allows you to jump to any segment desired. Conversion is very easy and is non-destructive to the original. Ulead Media Studio is also very good at this, being able to read and convert files with offbeat characteristics like 4 khz audio.

Writing to the DVD

The last page is the Export menu, which lets you actually turn the masterpiece you've created into a DVD, VCD, SVCD, DV, web page, email or greeting card. Having the disc-burning software built-in is very convenient and really makes this a complete package. It can make a disc from ISO images, as long as they are Ulead ISO images. The program needed over eight Gigs to do this job so I made sure I had nine free. I got an error message, saying that it could not write to a file. My PC follows the computer axiom which states that 'Data will expand to consume available disc space,' so even at 45 gigs, having room for stuff is always a problem. After closing the program, I discovered Disk Cleanup had started, so I let that do what it could but I really had nothing for it on that drive, so I began fixing filenames to make them 8.3 names. Little things like the "I" on *thispage.html* can take up room for a whole new file on the file allocation table of a drive, and most programs these days have plenty of files

with long descriptive names to them, so I zipped bunches of them up. I continued to get this error each time I tried to burn, even after I had freed up 18 Gigs. Disk Cleanup was not starting, so I tried another burning program and got an error message that revealed that the movie, James Bond, was too big to fit on the DVD. After more trimming, the burn worked, but some of the segments had the sound out of sync. Good thing the DVD was rewriteable. Exploring the Internet Q&A message boards showed that this sync problem was very real, and even though the patch was supposed to address this, it was not entirely fixed. Part of it is due to the fact that during the DVD editing and/or converting process, the sound is separated into its own file apart from the video, which is normal for DVD, but makes it harder to edit the two together. One solution might be to do all the editing while the clips are still in AVI format and have their audio and video interleaved together. Another factor is that this program installs the Ligos LSX-MPEG player-decoder filter from 1999 which is build 74. This OS had sync problems even playing stock MPG files, clips that played perfectly on my other drive, which uses a 2000 build 79 version of that Ligos filter

Demo Available

Program requirements include a capture card, a disk burner, a hard disk transfer rate of 3.6 MB/sec or better, Pentium III 500 or above, Win 98, 2000, ME or XP, 64 MB of RAM, 70 MB of HD space, an 800x600 display, sound card and mouse. The program

is available to download from *Ulead.com* for \$44.95, and they have a 30-day trial version there, too. Try-before-you-buy is a good way to find out if it will work for you. The features and capabilities of this software make it attractive for those wishing to author their own video DVDs. If you would like to see samples of some digital video files I have made, stop by *www.cyberonic.net/~webvideo* and have a look.

GARY STONE is a member of DACS, a CNE and MCP, is a freelance technical support consultant, participates in various SIGs and likes to dabble in all types of digital video projects. You can reach him at *webpagevideo@yahoo.com*, or through an email link at *www.cyberonic.net/~webvideo*.

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Do the DACS General Meetings leave you thirsting for more? Find all that plus food for thought at the meeting after the meeting—the DACS PIG SIG.

Random Access

August 2002

Bruce Preston, Moderator

MEMBERS WHO ARE UNABLE TO ATTEND THE GENERAL MEETING may submit questions to "askdacs@aol.com" by the day prior to the meeting. We will attempt to get an answer for you. Please provide enough detail, as we will not be able to ask for additional information.

Q. I have a DELL machine with an OEM U.S. Robotics X2 v.90 internal modem. I get good connections with my current equipment, but would really like to go to v.92. U.S. Robotics does not provide upgrade firmware for OEM modems—can anyone tell me where to get an upgrade? If not, what should I get? I also really want a modem with a controller rather than a WinModem, and would prefer an internal modem. I do not require voice capabilities.

A. First, you are right in that a WinModem does not have a controller, so it will not run under all O/Ss or, for where it does run, without requiring the processor to perform a lot of communications work. Any v.92 external modem will have a controller. If you require an internal modem, the best ones are still U.S. Robotics.

Q. My PC gets slower as the day goes on. How do I determine what is causing it to slow down, and how do I fix it? If I restart the machine, it works fine. I am running Windows 2000.

A. What you describe is a classic case of memory leakage. An application obtains memory from the system (RAM) and then forgets to release it back to the system when it is finished. As a result, the system eventually runs out of RAM and has to make use of virtual memory on the disk, causing a performance problem. On Windows 2000 you can go to the performance monitor (Ctrl-Alt-Del) page before you start an application, and record the amount of available RAM. Then start and run one of your applications as normal. Then close the application and examine the available memory again—if it hasn't returned to where it was, you found the application with the memory leak. Follow-up questioning showed that you typically run PhotoShop, Notes, and Acrobat—all are complex programs, and all have had patch releases to repair memory leaks. Go

to their respective sites and download the latest patches.

Q. Whenever I print, even a plain document, I get a "Page Fault" error message. It provides an 'Ignore' button, and if I click it, it prints the page properly, but ejects a blank page as well. The printer is an HP Inkjet 700. I am using Windows Me.

A. Go to the HP website and make sure that you have the latest driver for the combination of printer and operating system. The printer drivers for Windows Me were very different from those of Windows 95 and Windows 98, and early drivers had problems. If you print a test page from the Printer / Properties page, it will list the version number of the printer drivers.

Q. I am rebuilding a machine for a friend, and want to do a clean install of Windows 98 on it, using the Windows 98 CD that came with the machine. However, when I boot with the bare hard drive which has no OS, I can't see the CD-ROM that holds the Windows 98 CD. It sounds

like a chicken and egg problem. How do I get to the CD?

A. Find another Windows 98 machine and create an "Emergency Recovery Diskette"—you will find it in the Control Panel as a page on Add/Remove Programs. This will create a bootable floppy which will contain the OAK CD driver, which is a very nice little generic CD ROM driver. With that you will be able to see the CD drive, and proceed from there.

BRUCE PRESTON is president of West Mountain Systems, a consultancy in Ridgefield, CT, specializing in database applications. A DACS director and moderator of the Random Access segment at the monthly general meetings, Bruce also leads the Access SIG. Members may send tech queries to Bruce at askdacs@aol.com.

New Members

7/21 thru 8/20

- 1) Allen Kopfstein
- 2) Sue Casey
- 3) Richard Musser
- 4) Pat Keenan

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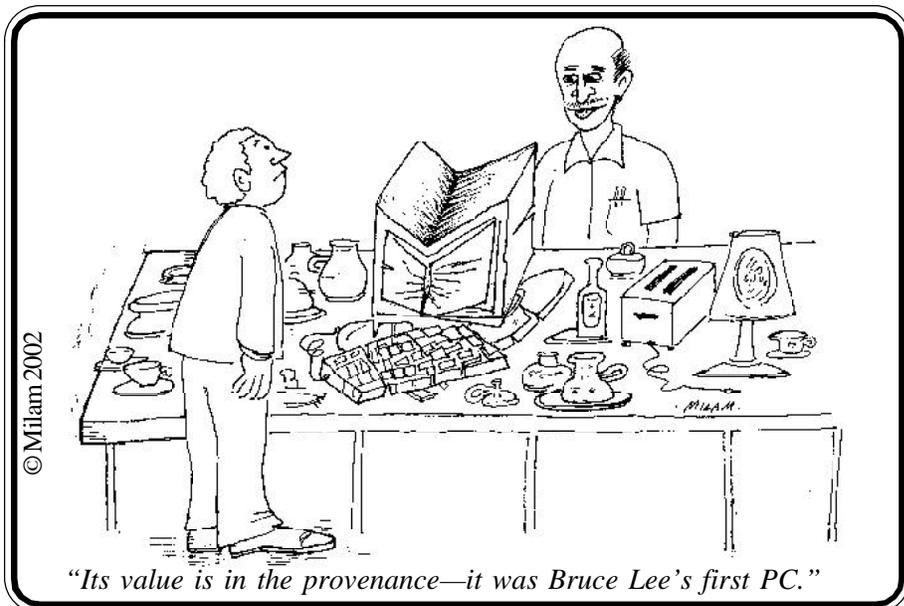
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President's file *Continued from page 2*

During Ed's talk it occurred to me that hardware reviews in magazines that purport to cover the "most popular" machines will be weighted to whatever large corporations are buying at the time. This will be influenced by such things as each company's budget at that moment, the economy, what the computer company—Dell, Compaq/HP, or IBM—is pushing at that moment, and—most important—the opinion of the person placing the order. In any case, the configurations written up in the magazines are seldom the best "value" for the home buyer. I think this is particularly true for notebook computers (I still want to call them laptops) where the "gee whiz" factor lives on. While there has been no real innovation or even enlightened design in desktop computers, laptops offer the designer an opportunity to shine. My taste runs to a light weight with a screen large enough for me to read. Since I carry my laptop around a good deal, it needs to be durable. And of course I want good but not necessarily fabulous performance at a favorable price. My current laptop is a Winbook X1 (www.winbook.com). This machine is never included in the magazine reviews because it is not "popular" enough. It is suitably thin, has a 13" screen, combo DVD-CD/RW drive, weighs about six pounds with the power brick, and has an aluminum case. This was the only machine I could find at the time with a metal case for less than two grand—but you won't find it in the reviews.

Hope you're having a great summer — ski season will be here soon!

—JIM SCHEEF

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HDD. *Continued from page 7*

hard disk drive may transfer data about half as fast as the outer tracks!

One way to minimize this effect is to create several logical drives (on a physical disk) and use the second one (ex. – drive D:). Now you can put all of the other junk files on the inner tracks of drive E:, F:, G:, etc. Drive D: remains towards the outer tracks and your important data is faster.

When you buy a hard disk drive, look for the sustained transfer rate (data transfer rate). Of any single specification, this one will give you the best indication of a hard disk drives performance. Average access time is also important for random access applications (such as databases).

Safety First

Do not mix the data that you create and cherish with installed program files! Create several logical drives and store the valuable things on a separate drive. Now it is easy to identify all of your important data. It is anything on drive D:!

Going one-step further, I create a subdirectory (folder) called C:\Herbert Wong, Jr. (you might call your folder something else) that contains other folders of the supremely important data (.\\telephone numbers, .\\finances, etc.). Another folder (D:\ASUSP3V4X-SystemInstallationFiles) might contain every driver and document file needed to reinstall that computer.

Now I know where to find everything easily. I can easily determine if it will fit on a CD-R. And, on those many occasions over the years, when Windows self destructs, I can confidently format and reinstall on drive C: without fear of losing anything of much importance.

Relocate your MY DOCUMENTS and Favorites folders to another drive (ex. – E:\MY DOCUMENTS). Then you will not even lose those files during an emergency.

The best way to back up a hard disk drive is to use another hard disk drive as the storage medium. The price of tape backup drives and blank tapes is much too great to be effective in a home environment. CD-R/RW and DVD-R/RW drives and media are also too expensive.

Conclusion

Hard disk drives are larger, less expensive, and more reliable than ever before. With a little planning and a lot of maintenance, a new hard disk drive will well for years.

HERBERT WONG is Hardware SIG leader at North Orange County (CA) Computer Club, and obviously knows what he is writing about. You can contact him at NOCCCArticles@SingularityTechnology.com.

**FREE
CLASSIFIEDS**

DACS members may publish noncommercial, computer-related classified ads in *dacs.doc* at no charge. Ads may be placed electronically by fax or by modem, or hard-copy may be submitted at our monthly general meeting. Fax your ads to Charlie Bovaird at 203 792-7881.

Leave hard-copy classifieds with Charlie, Marc, or whoever is tending the members' table at the meeting.

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For more info, eMail Matthew Greger at
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Future Events

September 3 • FBI, Cybercrime Prevention

October 1 • PowerQuest Corp. - DriveImage 2002. (Tentative)

November 5 • Microsoft Corp. - TBA

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