

You don't need artificial intelligence to manage your PC, just SmartComputing.

At our next meeting on September 7, Amber Coffin and Jen Clausen will show how user groups and their members can benefit from the publications and Web services of Sandhills Publishing, including their flagship product, SmartComputing.



Inside

Future Shock: Mike Kaltschnee
Computers and Creativity: Richard Ten Dyke
Global Positioning System: Joe Schmitt
Tracking Spam: John Brewer

Plus: More Presidential Ramblings,
SIG News, Meeting Reviews,
Random Access, and Upcoming
Events.

President's File



PRESIDENTIAL
RAMBLINGS
VERSION 2.3

The choices
are yours
to make

SOMEBODY SAID "Decisions are made by those who show up." Good decisions require more than snap judgment. In case you haven't noticed, there is an election coming up soon. While all the news centers on the Presidential election, the President has little direct effect on our digital rights. The people who decide what is legal to do on your computer—yes, your computer, the one in your house—are the people we elect to Congress. Your digital rights, not to mention your civil liberties, are decided by our Congress people in the laws that they pass right under our noses. So let's look at some of their products from the last few years so we can decide whether those currently in office—or maybe the challenger—should be worthy of our votes.

The Digital Millennium Copyright Act (DMCA) affects nearly everything we do on our computers today. How can a law on copyrights have such broad effect? Because software is licensed; and almost all software has some mechanism to prevent copying. Under the DMCA anything that circumvents copy protection is illegal. Court cases have shown that even studying the flaws in copy protection can be considered criminal. Do you have a Magic Marker in your desk drawer? If so, you can be charged with criminal possession of a tool to circumvent copy protection because

applying a ring of marker ink to the rim of a copy protected music CD defeats the copy protection. And you thought your only criminal behavior was driving 65 in a 55mph zone!

If you make a few upgrades to your PC and the changes trigger the Windows Activation software that is part of the retail and OEM versions of Windows XP, you can reactivate once. After that, you must call Microsoft and beg them to believe that you are not busily cloning your Windows CD and installing it on multiple PCs. Or you can restore a backup copy of the file that records such things on your PC and your Windows installation will be happy again without calling Microsoft at all. Search on Google or Yahoo for the details. Oops! I may have just broken the DMCA by telling you that. Shame on me. This Windows "feature" has the potential to be so annoying as to reduce employee productivity, so large corporate sites have been freed of this inconvenience all along. No one, least of all our Congress people, seems to care about **your** productivity. There was a bill to restore your rights of "fair use" but it died without a vote.

I wrote long and hard about the ironically misnamed USA Patriot Act. Several bills have been introduced to amend the more insidious parts of the Patriot Act, but they, too, have died in Congress. As you consider how you will cast your votes in November, here are a few places with information to ponder:

- The Electronic Privacy Information Center (www.epic.org)
- The Anti-DMCA site (anti-dmca.org)
- Digital Consumer.org (www.digitalconsumer.org)
- Electronic Frontier Foundation (www.eff.org)
- Freedom to Tinker (www.freedom-to-tinker.com)
- The "Trusted Computing" FAQ (www.cl.cam.ac.uk/~rja14/tepa-faq.html)

Read some and these sites will lead you to more. I guess that's why they call it surfing. Then ask your Congress people where they stand on these issues. Look at their voting record. We'll talk about this some more.

It's coming! It's coming!
Windows XP Service
Pack 2 is almost here.

As I write this, Microsoft is in the final stages before they release Windows XP

Ramblings, continued on page 4

Membership Information

dacs.doc, ISSN 1084-6573, is published monthly by the Danbury Area Computer Society, 4 Gregory Street, Danbury, CT 06810-4430. Annual subscription rates: \$25 to regular members, \$20 to students (included in dues).

Postmaster

Send address changes to Danbury Area Computer Society, Inc., 4 Gregory Street, Danbury, CT 06810-4430.

Editorial Committee

Managing Editor:	Allan Ostergren
Associate Editor:	Ted Rowland
Production Editor:	Marc Cohen
Technical Editor:	Bruce Preston
Public Relations:	Marlene Gaberel
Editor-at-large	Mike Kaltschne

Contributors

Charles Bovaird	Larry Buoy
Richard Corzo	Marlene Gaberel
Jim Scheef	Frank Powers
Richard Ten Dyke	

DACS, its officers and directors assume no liability for damages arising out of the publication or non-publication of any article, advertisement, or other item in this newsletter.

The editors welcome submissions from DACS members. Contact Allan Ostergren at 860-210-0047 (dacseditor@dacs.org). Advertisers, contact Charles Bovaird at (203) 792-7881 (aam@mags.net)

Nonprofit groups may request permission to reprint articles from *dacs.doc* or <http://dacs.org> by sending e-mail to reprints@dacs.org. Reprinted articles shall credit the copyright holder and a copy of the final publication shall be mailed to:

Danbury Area Computer Society, Inc.
4 Gregory Street
Danbury CT 06811-4403
Attn. Reprints

Links to articles reprinted on the web can be sent to: reprints@dacs.org

Technical Support

dacs.doc is prepared using an AMSYS Pentium 733 and HP LaserJet 4 Plus printer. Software packages used to publish *dacs.doc* include: Microsoft Windows 98, Office XP, TrueType fonts, Adobe PageMaker 7.0, CorelDRAW 8.0, Calendar Creator+ for Windows *dacs.doc* file transfer security provided by AVP. Internet access provided by *Mags.net*

Applications & Hardware to enhance *dacs.doc* are welcome.



Don Neary
APCUG Liaison
203-746-5538

IN THIS ISSUE

PRESIDENTIAL RAMBLINGS	2
DIRECTORS' NOTES	3
HELP LINE	3
PREVIEW - SMART COMPUTING	4
NEW MEMBERS	4
FUTURE IMPERFECT	5
REVIEW - SECURE COMPUTING	6
SIG NEWS & NOTES	8
CALENDAR	9
COMPUTERS AND CREATIVITY	10
GLOBAL POSITIONING - I	12
TRACKING SPAM	13
RANDOM ACCESS	14

Officers

PRESIDENT: Jim Scheef (860) 355-0034 (dacsprez@dacs.org)

VPs: Gene Minasi • Marlène Gaberel • Jeff Setaro

SECRETARY: Larry Buoy • **TREASURER:** Charles Bovaird

Directors

dacsboard@dacs.org

Charles Bovaird	(203) 792-7881	cbovaird@dacs.org
Howard Berger	(860) 355-9837	hberger@dacs.org
Marc Cohen	(203) 775-1102	mcohen@dacs.org
Anna Collens	(203) 746-5922	acollens@dacs.org
Marlène Gaberel	(203) 426-4846	mgaberel@dacs.org
John Gallichotte	(203) 426-0394	jgallichotte@dacs.org
Bill Keane	(203) 438-8032	bkeane@dacs.org
Frank Powers	(203) 791-1140	fpowers@dacs.org
Bruce Preston	(203) 438-4263	bpreston@dacs.org
Jim Scheef	(860) 355-0034	dacsprez@dacs.org
Jeff Setaro	(203) 748-6748	jasetaro@dacs.org

Committees

NEWSLETTER: Allan Ostergren: (860) 210-0047 (dacseditor@dacs.org)

PROGRAM / WEB MASTER: Jeff Setaro (203) 748-6748

APCUG LIAISON: Don Neary (203) 746-5538

RESOURCE CENTER: (203) 748-4330 **WEB SITE:** <http://www.dacs.org>

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

Program	Name	Phone #	
Alpha Four	Dick Gingras	(203) 775-1102	(d e)
APL	Charles Bovaird	(203) 792-7881	(e)
AutoCAD	Peter Hylenski	(203) 797-1042	(e)
C/UNIX/ObjC	Kenneth Lerman	(203) 426-4430	(d e)
Clipper	Dick Gingras	(203) 426-0484	(e)
COBOL	Charles Godfrey	(203) 775-3543	(e)
Dbase/DOS	Alan Boba	(203) 264-1753	(e)
DOS	John Gallichotte	(203) 426-0394	(d e)
Electronics	Andrew Woodruff	(203) 798-2000	(d e)
Focus	Jim Scheef	(860) 355-0034	(e)
Hardware	John Gallichotte	(203) 426-0394	(d e)
Interface-Instrumentation	Andrew Woodruff	(203) 798-2000	(d e)
Macintosh OS	Matthew Greger	(203) 748-2919	(d e)
Microsoft Access	Dick Gingras	(203) 426-0484	(e)
Multimedia	Ed Fitzgerald	(203) 222-9253	(d e)
Newdeal	Marc Cohen	(203) 775-1102	(d e)
Paradox	Alan Boba	(203) 264-1753	(e)
PASCAL	Duane Moser	(203) 797-2716	(d)
PhotoShop/Dreamweaver	Anna Collens	(203) 746-5922	(e)
Q&A ver 3/4	Anthony Telesha	(203) 748-4478	(d e)
QuickBooks	Bill Sears	(203) 743-3367	(e)
Statistics/Data Analysis	Charles Bovaird	(203) 792-7881	(d e)
SQL Server	Chuck Fizer	(203) 798-9996	(d)
Viruses	Jeff Setaro	(203) 748-6748	(d)
Visual Basic	Chuck Fizer	(203) 798-9996	(d)
HTML/Java	James Costello	(203) 426-0097	(e)
Windows	Nick Strother	(203) 743-5667	(e)

Directors' Notes

A REGULAR MEETING of your Board of Directors was held at the Resource Center on August 9, 2004. Present were Messrs. Berger, Bovaird, Cohen, Gallichotte, Keane, Preston, Scheef and Setaro. Also present was Larry Buoy.

President Jim Scheef presided and Secretary Larry Buoy kept the record. Minutes of the last meeting of the Board held on July 12, 2004 were approved.

Treasurer Charlie Bovaird reported current cash assets of \$16,957.01, consisting of total bank and postal accounts of in the amount of \$16,848.84 plus postage on hand of \$108.17. Subtracting a liability of prepaid dues in the amount of \$5,762.00 left a net of \$11,195.01. He also reported current membership of 381 and that approximately 80% of the members are residents of Danbury and its surrounding towns.

The Board confirmed presenters at future General Meetings: Amber Coffin of Smart Computing Magazine for September; Bill Sweeney, Program Director, Internet Technology and Operations, IBM Corporation, in October; and John Patrick on the future of the Internet in December. Mike Kaltschnee has offered to present a program on blogging for January, but it was suggested that he might be persuaded to reschedule to November. Howie Berger offered to solicit another speaker from WesConn for either November or February, and Jeff Setaro offered to solicit the FBI for another program.

Jim Scheef announced that he had asked Gene Minasi to reserve the hospital auditorium for the normal dates of 2004 meetings. He also reported he had forwarded two responses from the "DACS Wants You" ad in the newsletter, both for Associate Editor to Allan Ostergren.

Jim asked about rescheduling the next meeting to the first Monday of the month (September 6) rather than the Monday following the General Meeting (September 13). After a short discussion, it was agreed to meet on September 13, as scheduled.

Charlie Bovaird informed the meeting that the flea market of the Candlewood Amateur Radio Association (CARA) would be held at Newtown's Edmond Town Hall on Sunday, September 12, and that DACS had been invited to display publicity on its general table. It was the consensus that, in exchange, an ad for CAARA's flea market be placed in the September issue of the newsletter.

—LARRY BUOY
SECRETARY

Ramblings, continued from page 2

Service Pack 2. SP2 will change almost every security setting in Windows XP. If you are responsible for managing a company network, then you have been reading—and hopefully testing—SP2 to learn what it breaks in your part of the world. If networking is a critical part of your daily computing, then you need to fully understand the impact of SP2 before it is installed on your machine. For the last few months all the trade magazines have had articles reviewing the beta versions of SP2 and the news has been good or bad depending on your viewpoint. The bottom line is that SP2 is a big-time major change to XP and has far reaching impact. Many people are saying it should be treated like a new version of Windows!

On the other hand, if you're a typical home user with a cable or DSL connection to the Internet, SP2 will probably be a "good thing". The enhanced security will be a welcome addition to Windows. However, regardless of how you use XP, I would not want to be the first kid on the block to install SP2. When it shows up in Windows Update, I suggest that you wait at least a week or two and monitor the news on your favorite computer magazine web site. If the news is full of stories about problems, then hold off and wait until Microsoft issues a revised version. If the news is good

and the pundits are all saying what a great job Microsoft has done, then go ahead and install SP2.

If you use a dial-up (traditional modem) connection to the Internet, then you will need to order the service pack on a CD from Microsoft. In the past Microsoft has issued these CDs for the cost of "shipping and handling." But the last security update CD was free for the asking, so we'll see. Installing from the CD is a good idea for everyone, but will save dial-up users a lot of frustration with a very long download.

In the meantime, should Windows offer SP2 in the "New Updates are available" message that appears at the bottom right of the screen every so often, my recommendation for the moment is "just say no!"

Hey, let's network!

The information I mentioned in my column last month about the member services index failed to be included in last month's DACS.DOC. I've asked that it run for the next several months. The idea is to build a list of services provided by DACS members so when you need something (like I need some excavating), you can go to a fellow DACS member. Send me your information and we'll build a list on the DACS web site.

—JIM SCHEEF
dacsprez@dacs.org

New Members

from 7/13/2004 to 8/25/2004

Sondra Grossi

THIS IS YOUR LAST NEWSLETTER

If the membership date on your mailing label reads

EXP 05/2004

or earlier

You need to renew your DACS membership

NOW

Camera Club Wants YOU!

DACS members are cordially invited to visit and/or join the Candlewood Camera Club. The club meets on the 2nd Tuesday of every month (from September to June) for a competition, and the 4th Tuesday for a workshop. For more information, visit the club's website at www.candlewoodcameraclub.com, or contact club secretary Jan Severa at jansevera@sbcglobal.net or by calling 203-730-0148.

Next Meeting

Where Computer Geek Meets Plain English

By Marlene Gaberel

DACS PROVIDES very useful computer insight all year round. There are instances, however when a user wants to elaborate more in depth on a computer subject without having to take unfair advantage of the DACS volunteers who very generously provide computer help to other members. There may be other instances when a user wants to learn about a topic at a more basic level, and DACS meetings may on occasion be somewhat above one's head.

The September meeting will be about *Smart Computing*, a monthly computer magazine intended to help users of "all skill levels improve their PC-related productivity." The magazine offers "dozens

of features, columns, reviews, and tips & tricks to help you become a more efficient computer user." Each monthly issue has sections on PC operation, tech support, product reviews, general computing, PC projects and troubleshooting. The magazine allows readers to "stay abreast on the latest products and trends, solve troubleshooting problems, perform PC tasks, utilize software programs, enhance online time and learn tips and tricks" In addition to the magazine, the company offers to its subscribers a website, www.smartcomputing.com, which makes available a large amount of information from all of its publications. The resources available to readers are



archive tools such as Search Engine, Dictionary, Question & Answer Board, Chat Rooms, Daily Tips & Terms, Product Reviews, Online Access to *PC Novice*, *PC Today*, *CE Tips*, and *CPU*. *Smart Computing* may be a good complement to your DACS membership. It is worth checking it out and then decide if this is for you.

The September DACS meeting will take place on September 7, 2004 at Danbury Hospital Auditorium. The meeting will start at 7.00 p.m. with the question and answer session, following by brief club announcements. The main presentation by Amber Coffin and Jen Clausen, who will present on behalf of Sandhills Publishing, publisher of *Smart Computing* will start at 8.00 p.m. The meeting is free and open to the public.



Marlene Gaberel is a DACS board member and VP for Public Relations. You can e-mail her at marlene_gaberel@yahoo.com.

Future Imperfect

I'm Living the Future, and I'm Not Impressed

by Mike Kaltschnee

WHEN I WAS A KID I read a lot of science fiction. Most of it spoke of a future which shaped my dreams growing up, and helped create a love for technology that is with me today. Somewhere along the line technology has gone in the wrong direction... Where are the flying cars? The talking toasters? Personal robots?

Instead, I live in a world of Windows computers that fail for no apparent reason, require weeks or months of training to do slightly advanced tasks, and still can't understand a doggone word I'm saying. We put a man on the moon in the sixties, but I still can't tell my computer to shut down. Don't get me started on the "blue screen of death." We've endured it for far too many years.

I'm annoyed because I recently spent hours trying, and failing, to remove a hideous evil from my mother's computer. Something so horrible that I wish ill upon the friends, family and descendents of the creators of spyware, spam, and viruses. I have had to remove more than 600 different things that decided to infect her computer, and I will probably have to reinstall the operating system to completely clean it. Why?

I have to call Microsoft to task on this one. This is not a new problem; in fact, it's been their problem all along. Windows was not designed to be secure, safe, or able to defend itself from foreign invaders. They've known about the problem with viruses for years, and yet still charge me money for updates that have provided incremental stability without additional security. Yes, Microsoft is now trying to solve this problem, but it's far too late. If you haven't, immediately go to www.microsoft.com/protect to learn

more, get patched, and get some additional software to help fight back.

I don't know about you, but I spend a lot of time doing basic maintenance on my computer, such as scanning for viruses and spyware, installing the latest patches and trying to keep up with the news on what to watch out for. When I read my e-mail for work or home I still have to scan my spam folder, searching for a misplaced, yet important e-mail that was misread by my spam filter. These are hours and days, maybe even weeks per year that

I've lost. And I'm not alone.

I'm also upset because, due to my love of technology, I'm regarded as an "expert." Like many of you, I do my best to keep up on all of the things that interest me, but I'm not an expert at every possible aspect of computing. In the old days it was easy—you just had to help friends and family put in some additional RAM (back when there were 2 or 3 types, not 25 types of DIMMs or SODIMMS), hook up a printer, or install a program or two. Now it's the urgent call to help them remove spyware or a virus that has slowed their machine to a crawl or deleted all of their data. I can fix a lot of stuff, but sometimes I spend hours fixing or fighting to recover a system.

Alright, so maybe I'm a bit upset about being unpaid technical support for Microsoft, part of an army of people that take pity on their friends and family, helping them get out trouble when Microsoft should be the one fixing the mess they created. This is not working, and it's making me wonder why this has gone on for this long. Why hasn't the Macintosh started stealing market share from Windows? You can count the number of Mac viruses on one hand. Spyware is virtually unknown. Are we that afraid of spending a little extra

money for a better solution? I own both, so I'm guilty too. We need to let Microsoft know that this has to stop. Maybe Linux and the Mac really do make us more productive.

Why doesn't Windows include a free virus and spyware program? A decent and easy to use backup program (and I don't mean copy your user folder to CD-RW) to help us recover when we our systems get hijacked? How about a basic word processor, spreadsheet and e-mail program? Why not?

OK, enough ranting. I was originally talking about all of the productivity we were supposed to have when we finally got supercomputers on our desks. Where is it? I can't type a document any faster on a modern computer (or use voice recognition that really works) than on this HP Jornada from 1998 I'm using to type this story on the train (I like it for writing because it has an awesome keyboard and 11 hours of battery life). Sure, some things are faster, but we haven't seen the true rewards of computing that were predicted.

I can go on the Internet and order plane tickets, searching for the best price and selecting my own itinerary. Am I really saving any time or money? I used to call my travel agent, tell them what I wanted to do, and they would do the research. I might have paid a bit more, but I would have invested 10 minutes, not an hour or so, and the tickets were refundable or exchangeable. Are we really saving anything or are the lost jobs really expensive?

Alright, I can go on Amazon, search a gazillion books, and have it shipped to me overnight, saving the hour or two it would take to go to the bookstore (remember them?). I can compare prices on thousands of products from merchants all over the globe, find incredible bargains on eBay, or even video chat with family in Hong Kong for free. I'm still working 40 hour weeks. Why?

Don't get me wrong, I'm not some Luddite living in a cave. I use the Internet every day, and even owned a "dot com." I'm just wondering where all of those hours we were supposed to have saved have gone. We were supposed to work less, not more. If you find them, send me an e-mail and let me know where they are. I miss them.

You'll pry the Internet from Mike's cold, dead hands but you can e-mail him at: mikek@demorgan.com.



Meeting Review

Safe Computing is Serious Business

By Marlène Gaberel

ON AUGUST 3, 2004 DACS members and their guests had another good reminder coming from DACS virus expert, Jeff Setaro, on being careful when accessing the Internet.

A few years ago the advice used to be simple: do not share any disk from a source in which you are not absolutely confident. If in doubt, check the disk with an anti-virus. With the Internet and the constant, instantaneous, exchange of files, it is a much more complex and potentially dangerous environment—one which requires serious anti-virus protection. Jeff went over his list of favorite anti-virus programs, which has not much changed over the years he has been giving presentations. The same companies that he used to trust then are still very much on the forefront of protecting your computers and are still very much reliable.

The list of Jeff's recommended anti-virus firms is in the table below and available from the DACS web site. I have used F-Prot, recommended by Jeff for the longest time; the price is reasonable and the software is easy to update. On the subject of malware and spyware, Jeff advised the audience to use the following defenses routinely: download patches for Internet Explorer and run utilities such as Ad-Aware from Lavasoft or Spybot Search & Destroy from safenetworking.org.

Jeff gave a few examples of hoaxes. A common one is an e-mail that requests you to send a warning to all in your e-mail list or to remove a genuine file from your computer.

Jeff also discussed the "zombie problem". "Zombies" are networks of compromised computers that can be used for relaying spam, conducting distributed denial of service attacks, or as web servers for objectionable material.

The primary solution to these problems is to practice Safe Hex:

- Install and use quality anti-virus software and a personal firewall.



- Keep your system updated. Visit the Windows Update and Office Update sites periodically, roughly once a month and install the available patches and/or service packs.

- Use care when reading e-mail with attachments.

- Never, ever open e-mail attachments from someone you don't know

- Do not open e-mail attachments forwarded to

you, even if they're from someone you know

- Do not open unsolicited or unexpected e-mail attachments until you've confirmed the sender

- Make backups of important files and folders

- Use strong passwords

- Use care when downloading and installing programs

- Disable file and printer sharing in your computer, particularly when accessing the Internet using cable modems, digital subscriber lines (DSL), or other high-speed connections.

- Do not select the option on web browsers for storing or retaining user name and password.

- Do not disclose personal, financial or credit card information to little-known or suspect web sites.

- Delete spam and chain e-mails; do not forward these and do not use the unsubscribe feature.

- Log off the online session and turn off your computer when it is not in use.

- Do not use a computer or a device that cannot be fully trusted.

- Do not use public or Internet café computers to access online financial services accounts or perform financial transactions.

- Ensure your browser supports strong encryption (at least 128-bit). Most browsers now provide this by default.

- Install and use PGP (<http://www.pgp.com>) to encrypt confidential files and to digitally sign e-mail messages.

- Broadband users: install and use a hardware firewall/router.

In case of disaster, step away from the computer. Think of what to do next. A write protected bootable start up disk or a bootable CD should be available just in case. If I have a problem with my computer, as now with my CD which does not work, I leave it alone for a day and make a list of options of what might be wrong and what I can do to resolve it. In the latest problem, after going through all the options, I concluded that my CD driver needs to be replaced.

For Windows XP users, Jeff recommended using: ERD Commander from Winternals Software (www.winternals.com) or PE Builder from Nu2 Productions (www.nu2.nu) to create a bootable CD-ROM that can mount NTFS partitions.

The discussion wound down on the subject of spyware. It was widely agreed that Ad-Aware from Lavasoft (www.lavasoft.de) was the software of choice to use against spyware. Jeff even advised to stick to the free version, as long as it is updated regularly. SpyBot Search & Destroy (www.safenetworking.org) was deemed a distant second among participants of the meeting. When using Ad-Aware of Lavasoft, Jeff explained that the tracking cookies listed at the end of checking for spyware are the results of what web sites were visited and are then reported to other web pages. The sites owned by similar companies track the path of visitors.

The meeting ended only after a long discussion on spam and the constant battle that Internet users face with their e-mails being bombarded with spam.

Jeff mentioned, SecuritySpace.com, a web site that can be used to check the security of your computer or network by scanning for open TCP/IP ports and reporting what it finds. I went to the web site, but did not get a chance to register to give it a try.

Many of the resources from the meeting are available from the DACS web site.

Marlène Gaberel is a DACS board member and VP for Public Relations. You can e-mail her at: marlene_gaberel@yahoo.com.

Secure Computing in the Internet Age

Tools & Resources

Anti-Virus Software	Anti-Trojan Software
<p>F-Prot Anti-Virus www.f-prot.com F-Secure Anti-Virus www.f-secure.com Kaspersky AntiVirus www.kaspersky.com Nod32 Anti-Virus System www.nod32.com Norman Virus Control www.norman.com Sophos AntiVirus www.sophos.com</p>	<p>BOClean www.nsclean.com Tauscan www.agnitum.com The Cleaner 4.1 Pro www.moosoft.com TDS-3 www.diamondcs.com.au TrojanHunter www.misec.net</p>
Personal Firewalls	Broadband Routers
<p>F-Secure Internet Security 2004 www.f-secure.com Kerio Personal Firewall www.kerio.com Outpost Firewall www.agnitum.com Sygate Personal Firewall soho.sygate.com ZoneAlarm www.zonelabs.com</p>	<p>D-Link Express EtherNetwork Router DI-804HV Linksys EtherFast Router BEFSX41 Netgear ProSafe Router FR114P SMC Barricade Plus Router SMC7004VBR SonicWall SOHO3 WatchGuard SOHO 6 ZyXel Prestige 334</p>
Additional Resources	Port Scanning Services
<p>alt.comp.virus Anti-Virus pages www.claymania.com/nav-map.html CERT Coordination Center www.cert.org Internet Security Alliance www.isalliance.org Internet Storm Center isc.sans.org Microsoft Security and Privacy www.microsoft.com/security United States Computer Emergency Readiness Team www.us-cert.gov</p>	<p>PC Flank www.pcflank.com SecuritySpace.com www.securityspace.com Sygate Online Services scan.sygate.com</p>

Western Connecticut Hamfest

Sponsored by the

Candlewood Amateur Radio Association

Sunday, September 12, 2004

8:30 a.m. to 12:30 p.m.

Edmond Town Hall, Route 6, Newtown, CT

Admission \$5.00

Indoor Tables \$12.50(Includes 1 admission)

Children under 10 free

Tailgating \$8.00(Includes 1 admission)

Ham Radio Equipment

Door Prizes

Free Parking

Rain or Shine

ARRL Sanctioned

Computers

Refreshments

Handicapped Access

Special Interest Groups

SIG NOTES: SEPTEMBER 2004

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 14

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

Contact: Bill Keane (*wbk@mags.net*) 203-438-8032.
Meets 2nd Wednesday, 7:30 p.m., at the DACS Resource Center.
Next meeting: SEP 8

dotNET. Programs for Web site/server.

Contact: Chuck Fizer (*cfizer@snet.net*).
Meets 1st Wednesday, 4-6 p.m., at the DACS Resource Center.
Next Meeting: SEP 1

Digital Imaging. All about digital cameras, retouching and printing.

Contact: Ken Graff at 203 775-6667 (*graffic@bigfoot.com*).
Meets last Wednesday, 7 p.m. at the DACS Resource Center.
Next Meeting: SEP 29

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 16

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

Contact: Bill Keane (*wbk@mags.net*) 203-438-8032
Meets 3rd Wednesday, 7:30 pm at the DACS Resource Center.
Next Meeting: SEP 15

MACINTOSH. Focuses on all aspects of the Mac operating system.

Contact: Richard Corzo (*macsig@dacs.org*)
Meets 1st Thursday at DACS Resource Center at 7 p.m.
Next Meeting: SEP 2

MICROCONTROLLER. Investigates microcontroller applications from theory to hands-on implementation and member projects.

Contact: John Gallichotte, 203 426-0394, (*tlclotus@ieee.org*).
Meets on 4th Tuesday, 7:00 p.m., at the DACS Resource Center.
Next Meeting: SEP 28

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

Contact: Jim Scheef (*jscheef@teleAUGksys.com*)
Meets 2nd Thursday, 7 p.m., at the DACS Resource Center.
Next meeting: SEP 9

VISUAL BASIC. Develops Windows apps with Visual Basic.

Contact: Chuck Fizer, 203 798-9996 (*cfizer@snet.net*) or Jim Scheef, 860 355-8001 (*JScheef@TeleAUGksys.com*).
Meets 1st Wednesday, 7p.m., at the DACS Resource Center.
Next Meeting: SEP 1

WALL STREET. Examines Windows stock AUGket software.

Contact: Phil Dilloway, 203 367-1202 (*dilloway@ntplx.net*).
Meets on last Monday, 7p.m., at the DACS Resource Center.
Next Meeting: SEP 27

WEB DESIGN. Explores popular applications for designing and creating Web sites.

Contact: Anna Collens, 203-746-5922 (*acvo@annagraphics.com*).
Meets 3rd Tuesday, 7-9 p.m. at the DACS Resource Center.
Next Meeting: Sep 21

SIG News & Other Events

dotNET. We started with a talk from Greg Austin on his work with Microsoft Application Blocks. This block makes coding for data access somewhat easier. Using a data access application block, Greg is able to encapsulate parameters for use of a data adapter. With one method call he is able to retrieve data when the data server and connection string to it are specified.

After this interesting demo, Chuck began discussion of some work he is doing with EzTracks, an application which runs with JavaScript. He brought up a user interface to manage customer account and advertising information and demonstrated how the several controls in it operate. One design issue resolved was to prevent a data item from being changed by another user while the first user is busy modifying it. Chuck illustrated his solution with a display of stored procedures to prevent user collisions of this sort. Another design issue resolved was to prevent the entry of new records for the same user who is already in the database. Chuck used a feature of automatic checking of the database at the time of entry to avoid duplicate entries for the same user. He explained and illustrated how a developer must design automation to cope with user procedures for office management no matter how peculiar these user procedures may be.

Macintosh. We continued our networking theme this month but switched to wireless networks. I demonstrated three ways to protect a wireless network with the Netgear wireless access point I brought in to the Resource Center. The first line of defense is to not broadcast the SSID which identifies the wireless network to the devices that wish to participate. This forces any potential device to know the SSID and manually configure it. This is not a strong protection as it's possible for someone to use a network sniffer if wireless traffic is in progress over the wireless network.

The next layer we peeled off was the WEP (Wired Equivalent Privacy) encryption that comes in 64 or 128-bit flavors. It requires the entry of an encryption key or pass phrase that generates the equivalent key. The pass phrase method can sometimes fail if devices from different manufacturers are used. Although a useful deterrent, WEP can still be cracked by a determined intruder, so the newest devices have a more secure encryption algorithm called WPA (Wi-Fi Protected Access).

The last layer of protection we removed was MAC address filtering. Each network device in the world is assigned a unique MAC (Media Access Control) or hardware address. (Note the different spelling of MAC which bears no relation to the Mac or Macintosh computer.) Some wireless routers or access points like the Netgear allow only devices on a permitted MAC address list to join the network. This is probably the most secure layer of protection, although it's possible for someone to spoof a MAC address if they happen to know one that's permitted on a particular wireless network.

Interestingly enough, we still had some trouble joining a PowerBook laptop with an Airport card to the Netgear wireless network after removing the three layers of protection. In general it is possible to join Macs and PCs on the same wireless network, as wireless networking devices generally adhere to either the 802.11b (Airport) or newer/faster 802.11g (Airport Extreme) standards.

In the next meeting on September 2 we will start getting into the subject of security with the demonstration of an outbound software firewall for the Mac called Little Snitch.

VB. This session began with a talk by Claude on coding strategy he used for VBA in MS Excel to design an application.

SIG NOTES, Continued on page 15

September 2004

Danbury Area Computer Society

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday																																																																																											
<div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid black; padding: 5px;"> <p style="text-align: center; margin: 0;">Aug 2004</p> <table style="width: 100%; border-collapse: collapse; text-align: center;"> <tr><td>S</td><td>M</td><td>T</td><td>W</td><td>T</td><td>F</td><td>S</td></tr> <tr><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td></tr> <tr><td>8</td><td>9</td><td>10</td><td>11</td><td>12</td><td>13</td><td>14</td></tr> <tr><td>15</td><td>16</td><td>17</td><td>18</td><td>19</td><td>20</td><td>21</td></tr> <tr><td>22</td><td>23</td><td>24</td><td>25</td><td>26</td><td>27</td><td>28</td></tr> <tr><td>29</td><td>30</td><td>31</td><td></td><td></td><td></td><td></td></tr> </table> </div> <div style="border: 1px solid black; padding: 5px;"> <p style="text-align: center; margin: 0;">Oct 2004</p> <table style="width: 100%; border-collapse: collapse; text-align: center;"> <tr><td>S</td><td>M</td><td>T</td><td>W</td><td>T</td><td>F</td><td>S</td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td>1 2</td></tr> <tr><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td></tr> <tr><td>10</td><td>11</td><td>12</td><td>13</td><td>14</td><td>15</td><td>16</td></tr> <tr><td>17</td><td>18</td><td>19</td><td>20</td><td>21</td><td>22</td><td>23</td></tr> <tr><td>24</td><td>25</td><td>26</td><td>27</td><td>28</td><td>29</td><td>30</td></tr> <tr><td>31</td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </table> </div> </div>		S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31					S	M	T	W	T	F	S							1 2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31							<p style="font-size: 2em; color: red;">1</p>  <p style="font-size: 0.8em;">4 PM Internet Prog. 7 PM Visual Basic Chuck Fizer 203 798-9996</p>	<p style="font-size: 2em; color: red;">2</p>  <p style="font-size: 0.8em;">Macintosh 7:00 PM Richard Corzo maccsig@dacs.org</p>			
S	M	T	W	T	F	S																																																																																											
1	2	3	4	5	6	7																																																																																											
8	9	10	11	12	13	14																																																																																											
15	16	17	18	19	20	21																																																																																											
22	23	24	25	26	27	28																																																																																											
29	30	31																																																																																															
S	M	T	W	T	F	S																																																																																											
						1 2																																																																																											
3	4	5	6	7	8	9																																																																																											
10	11	12	13	14	15	16																																																																																											
17	18	19	20	21	22	23																																																																																											
24	25	26	27	28	29	30																																																																																											
31																																																																																																	
<p style="font-size: 2em; color: red;">5</p>	<p style="font-size: 2em; color: red;">6</p>  <p style="font-size: 0.8em;">Labor Day</p>	<p style="font-size: 2em; color: red;">7</p>  <p style="font-size: 0.8em;">7:00 P.M. GENERAL MTG</p>	<p style="font-size: 2em; color: red;">8</p>  <p style="font-size: 0.8em;">7:30 PM Advanced OS Bill Keane 203 438-8032</p>	<p style="font-size: 2em; color: red;">9</p>  <p style="font-size: 0.8em;">7:00 PM SERVER Jim Scheef 860 355-0034</p>	<p style="font-size: 2em; color: red;">10</p>	<p style="font-size: 2em; color: red;">11</p>																																																																																											
<p style="font-size: 2em; color: red;">12</p>	<p style="font-size: 2em; color: red;">13</p>  <p style="font-size: 0.8em;">7:00 PM Board of Directors</p>	<p style="font-size: 2em; color: red;">14</p>  <p style="font-size: 0.8em;">7:00 PM Access Bruce Preston 203 431-2920</p>	<p style="font-size: 2em; color: red;">15</p>  <p style="font-size: 0.8em;">7:30 PM LINUX Bill Keane 203 438-8032</p>	<p style="font-size: 2em; color: red;">16</p>  <p style="font-size: 0.8em;">7:30 PM INVESTMENT Paul Gehrett 203 426-8436</p>	<p style="font-size: 2em; color: red;">17</p>	<p style="font-size: 2em; color: red;">18</p>  <p style="font-size: 0.8em;">DACS.DOC DEADLINE</p>																																																																																											
<p style="font-size: 2em; color: red;">19</p>	<p style="font-size: 2em; color: red;">20</p>	<p style="font-size: 2em; color: red;">21</p>  <p style="font-size: 0.8em;">Web Design Anna Collens 203 746-5922</p>	<p style="font-size: 2em; color: red;">22</p>	<p style="font-size: 2em; color: red;">23</p>	<p style="font-size: 2em; color: red;">24</p>	<p style="font-size: 2em; color: red;">25</p>																																																																																											
<p style="font-size: 2em; color: red;">26</p>	<p style="font-size: 2em; color: red;">27</p>  <p style="font-size: 0.8em;">7:00 PM WALL STREET Phil Dilloway 203 367-1202</p>	<p style="font-size: 2em; color: red;">28</p>  <p style="font-size: 0.8em;">7:00 PM Microcontroller J. Gallichotte 203 367-1202</p>	<p style="font-size: 2em; color: red;">29</p>  <p style="font-size: 0.8em;">7:00 PM Digital Imaging Ken Graff 203 775-6667</p>	<p style="font-size: 2em; color: red;">30</p>																																																																																													

Computers and Creativity

by Richard P. Ten Dyke

STARTING IN THIS ISSUE, I will be offering a series of articles on the subject of Computers and Creativity. It is a concept that simultaneously embraces the concepts of “different” and “better.”

The topic needs a short introduction. For us to be able to discuss the broad questions, we need to share some common experiences. So I am inviting you to share a journey through some problems that call out for nontraditional solutions.

These problems will give birth to observations and ideas that address the topic. The problems are trivial and easy to state, but the lessons are scalable. The problems will frame issues, and the value will be in the lessons learned and not the solutions to the specific problems. Each section will explore a different problem and each will add a little to our understanding of the creative process.

In 1964, I asked Manny Piore, Chief Scientist of IBM “what is creativity?” His quick answer: “That which a machine can not do.” He went on to say that people can be creative, machines can not. With this perspective we might just drop the subject right now. Yes, there are many things which a computer can not do, but also many things that it can. More interesting to us is that boundary that divides what is possible from what is not. Whether Dr. Piore was more right or wrong you will get to decide, but first we will have to start with fundamentals.

Computer programs, such as Photoshop, Garage Band, and Maya, and even Word, are powerful creative tools in the hands of the right people. One might think that this article would talk about how such tools help people become more creative, because they certainly do. But we know that already, and that is not what we are here for. We want to look at how the computer can be considered more than “just a tool” in the whole creative process.

Here is the first problem

Part 1: Designing a Ballistic Missile
Our journey starts in 1956 at the Ramo-

Wooldridge Corporation, in Los Angeles. I had learned about computers from articles in Fortune Magazine during the early 50’s. (Colleges would not have computer science departments for several more years.) One article mentioned that Ramo Wooldridge Corporation in Los Angeles had one and was looking for applications. So I asked for



a job and was hired.

I was assigned to the Guided Missile Research Division. We would be using computers to build Intercontinental Ballistic Missiles — ICBMs. Forget, please, that today these things are also known as weapons of mass destruction.

The computer was a room-sized vacuum tube, ERA 1103A Scientific Computer, with electrostatic storage tubes, steel magnetic tape, and a paper-tape reader from Electronic Research Associates of St. Paul, Minnesota, and a card reader-punch from Compagnie des Machines Bull in France. I think it was one of three such systems in the United States, and predated the arrival of the IBM 704 by about a year.

After learning about ballistic missiles, I was given an assignment to establish the feasibility of building a missile that would carry a payload of “x” pounds a distance of “y” miles. It would use solid propellant and would probably require three stages, that is, three rockets in tandem. My task was to design one with the least possible liftoff weight.

I was just out of college, you understand. The first goal was to design one that would go the distance. Luckily, I was allowed to use a computer program that would build a missile based on my inputs and simulate a rocket flight on a spherical, rotating earth with atmospheric drag. All I had to do was select the key parameters.

Finding the design that would go the distance took only a few trials.

Finding the least weight, was more challenging. One key was to find the correct balance of fuel for each of the three stages. Other questions included the diameter of the rocket, which would affect both its total weight and the aerodynamic drag. Also, the efficiency rocket engines depend on nozzle design and atmospheric pressure, which in turn is determined by the actual trajectory. All of these would interact to affect the weight.

The task was to find proper values for nine interacting variables that determined the distance and weight of the missile. In the afternoon I would prepare small changes to the input parameters for each of the nine variables. The computer would simulate several flights every night. The next morning I would review the simulation results, and make note of how much each of the changes affected the weight and the distance. Then I would select a new design by changing in one direction those parameters which reduced the weight with the least impact on the distance, and change in the opposite direction those that most affected distance with the least change in weight. It was a process of constant rebalancing, with the goal to reduce the weight and keep the distance. After a few weeks, nothing would reduce the weight any further. Using this method, we cut about 25 per cent out of the weight of the original design.

The principle lesson here is to describe why the problem was solvable, and how the computer assisted in the solution. A well-structured optimization problem consists of three elements:

- (1) A measurable performance objective;
- (2) A set of variables that can be used to affect performance; and
- (3) A means of calculating performance as a function of the variables.

For our missile problem:

- (1) The objective was the least weight for a ballistic missile of given range and payload.
- (2) The variables were the amount of fuel in each of the three stages, the diameter of each stage, and the expansion ratio of the engine nozzle.
- (3) The means to evaluate was a computer simulation of the design and flight of a ballistic missile on a spherical, rotating earth with atmosphere.

The problem was easy to solve using the flight simulator. Each mission took about ten minutes of computer time, and I was using the computer about ninety minutes almost every night.

It has been 48 years since the missile design. Now there is a computer on almost everybody's desk. The whole job, which took me several weeks, would take just a few minutes today. So why bring up such old ideas now? The answer lies in the fact that the computer of today is still similar in concept and design to the ones of fifty years ago, only faster with more storage. The fundamental computer design ideas haven't changed. The basic nature of problems haven't changed either. We can still learn from these examples.

Key to solving the missile problem was the flight simulator. It provided rapid (over night) feedback on the value of each design. It was a groundbreaking achievement for its time. I didn't write it; it was given to me, written in binary machine language without the use of any programming aids like compilers or assemblers. In fact, it took several others with various Ph. D.'s to do it: specialists in trajectories, thermodynamics, aerodynamics, weight and structures, systems design, and a computer programmer who pulled it all together. I recall telling my wife, on the way home from work one evening "I don't have a masters degree, but I have six Ph.D.'s working for me tonight." That moment was an epiphany. I realized then how computers could be used to magnify human intellect.

But was our solution creative?

No. The decision to build the flight simulator was creative, but my use of it was not. Even if my part of the operation was programmed so that the computer could run until the problem was solved, we could not say that the computer performed a creative act. Instead, it was an optimization. We followed a smooth and continuous path from the original solution to the optimum solution. However, we did employ three basic elements of creative problem solving—an objective, a means of generating trial solutions, and a means of measuring the quality of those solutions against the objective. This is the basic formula for everything that follows. The differences are in the details.

So what is the distinction between optimization and creativity? Creative solutions are characterized by discontinuity. The missile design process was continuous. For example, we could take a tiny amount of

fuel out of one stage and put it in a different stage, then fly the missile again. If the missile went farther, we could continue to do more, and if it fell short, we could reverse the process. When adjusting fuel would not make a difference, we could assume that we had found the right balance. When finished, we *did* recognize that *finally* we might have found a "local optimum" but considering the nature of the problem, we dismissed that possibility.

When you have found a local optimum, you can look at "nearest neighbor" solutions and find that none of the neighbors is as good as the one you have selected. That doesn't prove that there is not some better solution in a totally different neighborhood. For many problems excellent solutions may be very different from one another in significant ways.

When you only explore your own neighborhood, you keep coming back to where you started. Somehow, you must find a way to cross the gulch that separates one solution from a better solution. In other words, our process must be able to jump over a discontinuity.

Discontinuities can be big or little. A big one is to discover how a different statement of the problem opens up a whole new set of possible solutions. Smaller discontinuities can also be challenging when there is not a connected path from where you are to where you want to be.

The next problems we will look at contain discontinuities and local optima, so we will need nontraditional ways of finding solutions. The first example of such a problem is to create a magic square.

When I was ten years old, my big brother showed me the magic square, a 3-by-3 array of the numbers from 1 to 9, so that the rows, columns, and diagonals all added up to the same number: 15. He gave me a method for creating such a square, so that I could take it to school and dazzle my friends.

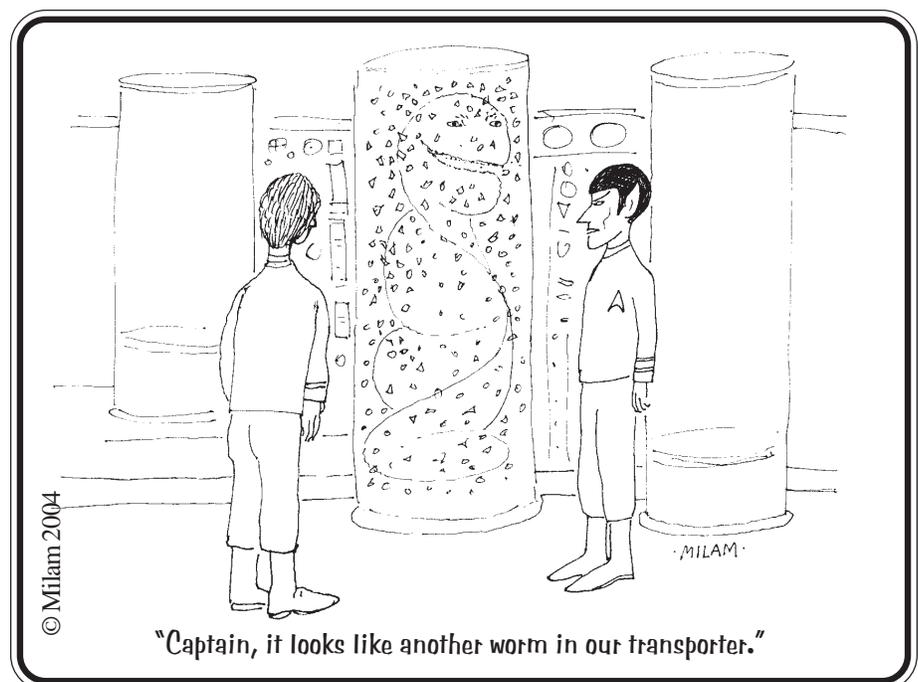
8	1	6
3	5	7
4	9	2

Having mastered this exercise, my brother challenged me to come up with a magic square that was 4 x 4 rather than 3 x 3. I tried, but I couldn't, even though I knew it exists.

To conclude this section, I'm going to give you a challenge. Develop a computer method that will find a magic squares of any dimension, starting at 4 x 4 and moving to larger dimensions from there. Use the same principles shown in the missile design problem. If you solve the problem, you will discover that it is both difficult and easy at the same time, and you will also discover some useful insights about the creative process, whether by computer or human being.

RICHARD TEN DYKE, a member of the Danbury Area Computer Society, has previously contributed to this newsletter on the topic of Digital Photography. He is retired from IBM and can be reached at tendyke@bedfordny.com. All opinions are his own, and he welcomes comments.

© 2004 Richard P. Ten Dyke



Navigation Tools

Global Positioning System — Where Exactly Are You?

By Joe Schmitt

THIS IS THE FIRST of a three article series on the Global Positioning System. The first discusses what the system is and how it works. The two subsequent articles will delve into receivers and uses to civilians.

For centuries, man has relied on the most rudimentary of tools to navigate. Things like a compass or sextant, and later a timepiece, were the best he had. In the past, the most difficult task of a ship's captain was to maintain the location and heading of a ship pounded by winds and currents. As time went on, those tools were perfected and improved. Though they worked well, they were not perfect. It was a time consuming process to mark position; early airplane pilots often navigated using existing landmarks and roads because the speed of their craft made traditional methods cumbersome.

A system called Loran (Long Range Navigation) was developed in the 1940's that utilized radio pulses which were projected on board a ship using a cathode ray tube, similar to your computer monitor. Though accurate to a degree, this system was expensive and offered only a limited area of use.

The global positioning system is a revolution in the way we navigate today. The global positioning system is a set of satellites that just like Loran that use radio signals to determine position. Popularly known as GPS, the system uses a "constellation" of 24 satellites in high orbit to determine position in latitude and longitude. In addition to position, the system also can determine altitude and speed.

GPS was first implemented in the early 1970s as a way for the military to improve its ability to navigate and position vehicles. This system eventually evolved to include civilian as well as military uses. In the early days of GPS the signal was intentionally diffused to deteriorate the accuracy of civilian receivers. This use of

selective availability as the Department of Defense (DOD) calls it, rendered civilian receivers accurate only within a hundred yards or so. Imagine having the unit telling you make a turn on the next road after you've passed it. In 2000, President Clinton took a serious look at the system and its potential to the civilian population. Selective availability was disabled on May 2, 2000 making the system accurate to within thirty feet or so.



So how does all this work? Well, as mentioned previously, there are 24 satellites orbiting the earth that broadcast radio signals. To better understand the system, a simple idea of two-dimensional navigation must be explained. Suppose you are in a field with one of those sign posts that point to a bunch of different places with distances. The top arrow of the sign says Montgomery, Alabama – 139 miles. The next arrow down says Savannah, Georgia – 217 miles. The third arrow points to Nashville, Tennessee – 231 miles. Now sit down at your favorite map and draw a circle around Montgomery with a radius of 139 miles. Next draw a circle around Savannah and Nashville with the radius the distance on our imaginary sign post. Where those three circles all intersect is roughly Atlanta, Georgia. Easy enough to understand, huh?

GPS works with the same principal. The receiver determines its location by its distance from the satellites. Hold it one minute! But those aren't satellites stationary? Well the satellites move on a predictable path and within a consistent time frame. Inside each GPS receiver, is a programmed almanac of the position of each satellite based on time. Each satellite broadcasts a signal which moves at the speed of light. By measuring how long the signal takes to reach the receiver, distance from the satellite is determined. Using three or more satellites the receiver can then triangulate its position very much

the same way we did with our imaginary signpost.

These kinds of accurate calculations with radio signals require precise timing, so on each satellite is an atomic clock which is monitored and corrected by ground stations. Using the accuracy of the atomic clock, a code pattern is broadcast from the satellite at a starting point. The receiver knows what time the signal left the satellite based on the portion of the code it is currently receiving. Measuring the time it took for the signal to reach the receiver by comparing the segment of code received with the time in the receiver, the distance to the satellite is determined. The distances from three or more satellites are compared and the position is formulated. That position is then displayed on your receiver as a set of coordinates, or graphically on an electronic map.

Using this pattern the receiver checks and adjusts its internal quartz clock to match that of the atomic clock. So, in addition to knowing where you are, you also know the precise time. Imagine having an atomic clock in your pocket! The receiver also can determine speed by measuring its change in position over time. This is a three dimensional arrangement and so altitude is also calculated.

This is all great and wonderful, but there are some issues. Gravitational pulls from the sun and moon affect the orbits of the satellites. Changing atmospheric conditions also can affect how well the signal travels from the satellite to the receiver. To combat this, the DOD has several ground stations that constantly monitor the signals and make adjustments in the satellites as necessary. In addition, there are two geo-stationary satellites which are in a fixed position in the sky on both sides of the earth. These systems are called WAAS, or Wide Angle Augmentation System. This system's sole purpose is to correct for the issues that affect the accuracy of the broadcast code.

Now with a simple receiver, John Q Public can use a multibillion dollar DOD system. At this time it is estimated that there are approximately 200 civilian users for each military user of the system!

Next month, I'll discuss the different types of receivers available to you as a consumer and some neat things that can be done with them. In the meantime, check out these interesting sites:

Official page for GPS management

Gps.losangeles.af.mil

NASA page on GPS

Gpshome.scc.nasa.gov

GPS, Continued on page 15

How Does One Track The Origin of Spam?

By John Brewer

SPAMMERS ARE ingenuous people. They hide the origin of the spam and are masters of obfuscation. Recently, litigation has been filed under federal law. It is interesting to investigate how the spammers were identified. A recent article in the New York Times turns on the light regarding this method of tracking.

“The government’s first criminal case under a new law outlawing some types of spam e-mails was based on low-tech investigative methods: Authorities followed the money. Investigators said Thursday they tracked defendants by purchasing a weight-loss product for \$59.95 and waited to see who collected the money.”

“The cyber scam artists who exploit the Internet for commercial gain should take notice,” said Jeffrey G. Collins, the U.S. attorney in Detroit. Federal law now makes it a felony to use falsehood and deception to hide the origin of the spam messages hawking your fraudulent wares.”

Court papers described a nearly inscrutable puzzle of corporate identities, bank accounts and electronic storefronts used to send hundreds of thousands of e-mail sales pitches for fraudulent weight-loss products. The FTC said angry consumers forwarded more than 490,000 e-mails from the operation from January until April — more than from any other spam outfit worldwide during the same period. Beales called it a dubious distinction.”

CNet News reported that “according to court documents, the four men are accused of generating hundreds of thousands of different e-mails that hid their identities and advertised a weight loss patch. The e-mails were sent out under a variety of company names, including AIT Herbal, Avatar Nutrition and Phoenix Avatar, identified collectively as the Avatar Companies. The e-mails were allegedly

sent to millions of e-mail accounts over the course of several years.”

However, the CNet article also reported that the federal law has not eliminated spam and that the volume of spam has actually increased since the implementation of the law. “Despite the existence of Can-Spam, companies that monitor the volume of junk e-mail believe that the legislation has done little to discourage the distribution of spam. E-mail service company MessageLabs reported that more than 67 percent of all

e-mail sent in April 2004 was considered spam, up from 59.9 percent in February and 52.8 percent in March, when volume temporarily dipped. The Feds bringing the heat against these spammers and their clients is a great victory for everyone who’s been victimized by spam,” said Mark Sunner, chief technology officer for New York-based MessageLabs. “At the same time, with spam volumes increasing 30 percent since the Can-Spam law went into effect, there is a whole new contingent of spammers in operation. These contemporary spammers are now dressing up their messages so they appear to be legitimate. In spite of effective lawsuits, complaints and arrests, spammers are still finding ways to beat the system.”

The Federal Trade Commission announced in an April 29 news release that “that the deceptive claims violate the FTC Act and that the spoofing and failure to provide an opt-out capability violate provisions of the recently enacted CAN-SPAM Act. At the FTC’s request, U.S. District Court Judge James F. Holderman entered a Temporary Restraining Order requiring an end to illegal spamming and deceptive product claims and freezing the defendants’ assets.

In addition, the FTC announced a second action against an Australian company,

Global Web Promotions Pty Ltd., an Australian company that the FTC alleges is responsible for massive amounts of spam in the United States.” Global Web not only advertised a diet patch similar to the one in Phoenix Avatar, it also claimed its human growth hormone products “HGH” and “Natural HGH” could “maintain [a user’s] appearance and current biological age for the next 10 to 20 years.” Experts cited by the FTC dispute the claims, and the FTC alleged the claims are false. The products do not contain growth hormone of any sort, according to papers filed with the court. The products are shipped to consumers from within the United States. The diet patch was sold for \$80.90 and the HGH products cost \$74.95.

“In both cases, the FTC introduced as evidence thousands of examples of the defendants spoofing a wide array of victims, including AOL, Microsoft Network, and other companies and individuals. Spoofing involves forging headers on e-mail to make it appear that they came from an innocent third party. Undeliverable e-mail is returned to the innocent victim, often flooding their servers and interfering with normal operations. This process not only is prohibited by the CAN-SPAM Act, it also has worked real hardship on innocent businesses.”

“The FTC charged Global Web Promotions Pty Ltd., Michael John Anthony Van Essen, and Lance Thomas Atkinson with violations of the FTC Act and the CAN-SPAM Act. The FTC has filed a motion requesting that the Court issue a Temporary Restraining Order barring further illegal spam and stopping illegal sales and shipment of products. The Global Web Promotions Pty case was brought with the assistance of the Australian Competition and Consumer Commission and the New Zealand Commerce Commission.”

Finally, it looks like some spammers may be headed for the slammer. No one will be disappointed and maybe prosecution of slammers will give future spammers pause to think about their activity ... or will they just become more clever in their pursuit of the dark side?

JOHN BREWER practices law in Oklahoma City, is a member of the Governor’s and Legislative Task Force for E-Commerce, and enjoys issues relating to eBusiness and cyberspace. He is a member of the Oklahoma City PC Users Group.

[This article was provided by the Editorial Committee of the Association of Personal Computer User Groups (APCUG), an international organization of which this group is a member.]



Random Access

August 2004

Bruce Preston, Moderator

MEMBERS WHO ARE UNABLE TO ATTEND THE GENERAL MEETING may submit questions to “askdacs@dacs.org” 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. Is there a conspiracy among notebook manufacturers that they not alert users to the fragility of the LCD screen. A friend was putting in a USB device and pushed against the screen and it cracked.

A. It is probably in the booklet that nobody reads. It usually just warns against even touching the screen, so if you shouldn't touch it, surely you shouldn't push against it. By the way, the accidental damage policy available on some machines usually will cover only one screen replacement.

Q. Could someone comment upon cost-effective backup? Backup to hard disk, burn a DVD, burn CDs, etc.?

A. All have their pros and cons. An external hard disk is fast. DVDs have high capacity - maybe 4GB or so per media. CDs are very cost effective considering that if you watch the ads you can often get a spindle of 100 for free after rebate.

Q. I've read that those cheap CDs don't work. Comment?

A. When CD burners first came out you had to be careful that the CD could support the speed rating of the burner - it was quite common to have CDs rated at only 4X. Now it really doesn't matter - they are often rated at 52X.

Q. There have been newspaper articles that say that CDs deteriorate. Do they?

A. They might. But many of the articles point out that they have been subjected to accelerated (simulated) aging. If a CD is properly cared for (i.e. put it in a case, and never put it down such that the bottom touches anything as the data is read from the bottom) it should last several years. By that time you should have made several additional archival copies. By the way—don't use regular felt-tip pens as they can cause problems. I've seen CDs that were written upon

then put back into the drive. The ink hadn't dried so when the CD spun up the ink streaked out radially forming a very nice but illegible pattern on the top of the CD. It also splattered ink inside the drive. There are special felt tip pens available specifically made for writing on CDs. Several commonly available brands are Staedtler www.cleansweep.supply.com/pages/skugroup27563.html, TDK <http://www.tdk.com/acc/accmm.html>, Memorex, and Inland. A “Sharpie” is not recommended.

Q. Has anyone had problems purchasing an item when using a 'free' e-mail account?

A. Many sites refuse to honor a request from a free e-mail account such as Yahoo! or HoTMaiL as there is no way to really track down who the owner of the account is, and thus the percentage of fraudulent purchases is considerably higher.

Q. I have a wireless local network consisting of two Windows XP Pro laptop machines and a Windows 98SE laptop machine. The 98 machine has a shared printer attached. One XP machine can print, the other can not. What gives?

A. According to a Microsoft Knowledge Base article: Q307162, “This behavior can occur if the portable computer has cached domain credentials and Windows XP cannot verify that the computer is in a secure domain environment. Windows 98 and Windows Me cannot provide a secure domain environment for Windows XP”. Translation” the XP machine that has belonged to a domain (i.e. at some time logs onto a domain controller and is subservient to it with regards to security permissions etc.) refuses to send the document since it can't be sure that the 98 machine is secure. Since it isn't 'secure' it won't deliver the document for printing.

Microsoft does not provide a work around.

Q. I have tried to submit a question to askdacs@dacs.org and the messages were bounced back. Do you know why?

A. The spam filter will complain if the message appears to be spam—what it things is spam may be triggered by several things. For example, if it is very full of HTML, if it has IP address references that do not resolve to a domain name, and if it has a very large distribution list are three common causes. Other common causes that we are pretty sure wouldn't have been in a technical question would be if certain keywords were found—most commonly those referencing the enlargement of body parts or purchase of prescription drugs. A search on Google made the suggestion of using the NET USE command to redirect a printer port to a printer on the other machine. The other machine would have to be running an LPR service.

Q. I'm holding off on using the internet to do banking functions. Does anyone have any experience with this?

A. Several people reported that they had never had any problems. However, all mentioned that it is imperative that you be running your browser with high-encryption. All web pages should have https URLs indicating that they are secure pages, and you must have the 'key' or 'locked padlock' active on your browser. If you do have any financial accounts at your bank, or a service such as PayPal, beware of the 'phishing' phenomenon - a relatively new scam where hackers attempt to lure you into revealing account details by simulating an e-mail from your financial service. The e-mail contains a link to a forged site that asks you to fill in account details 'for confirmation of your account status.' Some ways to recognize a phish message: “Dear CitiBank Customer” instead of “Dear <your name here>”, references to “your account” rather than specifying your account number. One way to see if a link is good or not is to put in a

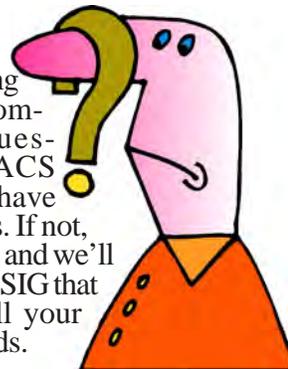
deliberately wrong password. The phisher will accept it not knowing that it is wrong, where the valid site will reject the logon.

Q. Dell Dimension with Windows XP, Earthlink 2004 e-mail service. About a week ago all inbound and outbound e-mail stopped, yet I can see or send e-mail using the web-based service. Since I only have dial-up I have to call Earthlink, talk them through to some point, then hang up, do what they suggested, and then call back. They have talked me through many times, I've re-installed, etc. but it doesn't work. I have a firewall, but not a broadband connection since it is dial-up.

A. If you are not getting error messages then it isn't likely the firewall. Your firewall should complain, or the e-mail client program should

complain. If you have a huge e-mail attachment waiting to be delivered, it could block access to the account, but you would see this on the server when you use the browser-based e-mail client. See if there is a large attachment in your inbox using the browser-based client. It was pointed out that Earthlink has a very good 'live help' capability that is online - you open a chat window and explain your problem, they type back an answer. By doing this you can do the steps suggested by tech support in 'real time' while connected via your dial-up service.

BRUCE PRESTON is president of West Mountain Systems, a consultancy in Ridgefield, CT specializing in database applications. A DACS director, Bruce also leads the Access SIG. Members may send tech queries to Bruce at askdacs@dacs.org.



Are you hung up with computer questions?. DACS SIGS may have the answers. If not, let us know, and we'll try to a new SIG that helps fulfill your special needs.

Post Your Biz on dacs.org

We would like to post a directory of our members' business services on the DACS web site.

These would preferably be computer related, hardware and software solutions, Web design, etc., but can include Accounting, Travel, Advertising, Public Relations, or any other business service that you might be able to provide to all our members.

At some future date we may include the directory in our newsletter.

To get your listing, post your name, business, phone, e-mail and Web address to dacsprez@dacs.org.

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.

GPS, Continued from page 12

U.S. Navy GPS Timing Operations
Tycho.usno.navy.mil/gps.html

Block II specifications:

http://www.spaceandtech.com/spacedata/constellations/navstar-gps-block2_conspects.shtml

JOE SCHMITT is with the Tampa Bay Computer Society, Florida.

[This article was provided by the Editorial Committee of the Association of Personal Computer User Groups (APCUG), an international organization of which this group is a member.]

SIG NOTES, Continued from page 8

A core concern was to generate and apply architectural principles of indexing and modularity to convert pictorial data layouts to tabular layouts usable in a database environment such as that of MS Access. In applications of small scope, a developer must prize a pictorial layout and not replace it. He must construct a strongly customized application in which a customer has a vested interest in that pictorial layout as a data source for ongoing usage as a basic procedure of the shop floor. Design options for the developer are strictly limited. Claude guided the discussion with an explanatory handout including diagrams.

Chuck added some illuminating points concerning customization needed to deal with embedded operations in a customer environment. Users there are keenly interested in an application that works to their perceived interest. Maintenance of code awaits some unforeseen mishap in operations of an application. There is little or no concern in the user for an automated help system.

After the discussion shifted to some other database issues, Chuck demonstrated some of his recent work in construction of Web pages. He is concerned to concentrate programmed actions in the browser so as to minimize turnarounds between client and server. He explained use of DHTML in preference to HTML to expose the visibility property which is useful to hide from the user some needed program actions. Chuck urged all present to become acquainted with a powerful string evaluator. The concept is 'Regular Expressions' and he cited a reference from O'Reilly publications.

We had a lively, well-attended session which ended with a cacophony of stimulating discussions among the attendees present for a full evening of spirited debate.

One- to four-color printing
Direct from disk high speed
black & white and color copying
now available

For All Your Printing, Graphics, and Copying Needs



3 Commerce Drive
Danbury, CT 06810
(203)792-5045
Fax (203)792-5064
mail@rapid-repro.com

Voice for Joanie

Help give the
gift of speech
Call Shirley Fredlund
at 203 770-6203
and become a
Voice for Joanie
volunteer.

Future Events

September 7 • Amber Coffin - Smart Computing Magazine
October 5 • Bill Sweeney • IBM Prototype Internet Applications
November 2 • TBA

AMSYS.NET®

...making your Net-Work!

Consulting Services 

Network Solutions 

Application Hosting 

Internet Solutions 

AMSYS has been recognized as a leader in computer consulting, computer technology, computer services, Internet services and computer networking in the New York and Connecticut market for more than 14 years. AMSYS offers a one-stop source for complete MIS outsourcing, computer application hosting and support services to the small and medium size business owner.

AMSYS makes your Net-Work!... so that you can run your business!

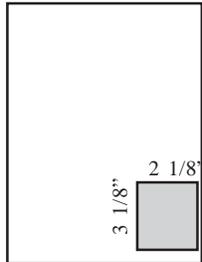
AMSYS, Inc.
900 Ethan Allen Highway
Ridgefield, CT 06877
Phone: 203-431-1500

AMSYS

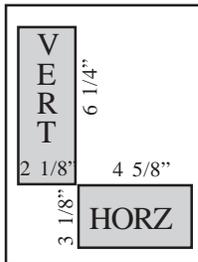
dacs.doc

THE NEWSLETTER OF THE DANBURY AREA COMPUTER SOCIETY, INC.

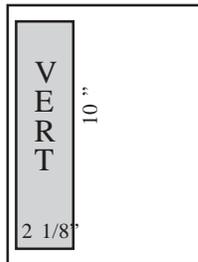
Rate Card



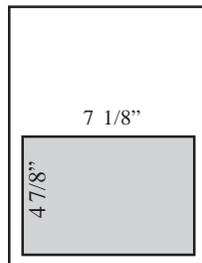
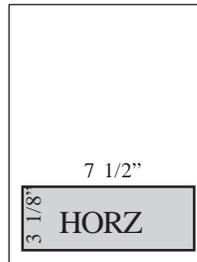
1/9 PG
1 Insertion **\$26**
6 Insertions **\$130***



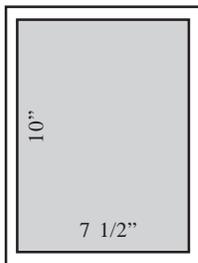
2/9 PG
1 Insertion **\$50**
6 Insertions **\$250***



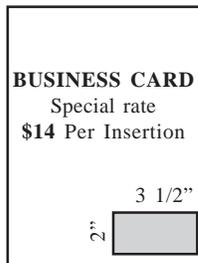
1/3 PG
1 Insertion **\$72**
6 Insertions **\$360***



1/2 PG
1 Insertion **\$100**
6 Insertions **\$500***



FULL PG
1 Insertion **\$170**
6 Insertions **\$850***



BUSINESS CARD
Special rate
\$14 Per Insertion

* 6 INSERTIONS AT 5 TIMES THE SINGLE INSERTION RATE

GUARANTEED US MAIL=450+
OTHER DISTRIBUTION=100+
PDF FULL-COLOR VERSION DISTRIBUTED
ON WEB SITE WWW.DACS.ORG

DEADLINE FOR COPY IS 15th OF THE MONTH. NEWSLETTER NORMALLY ARRIVES IN MAIL BY 1st OF EACH MONTH. ALL PAYMENTS IN ADVANCE WITH COPY TO:

CHARLES BOVAIRD, TREASURER
DANBURY AREA COMPUTER SOCIETY
4 GREGORY STREET
DANBURY CT 06810-4430
TEL: 203-792-7881
E-mail aam@mags.net

Order Form

ADS CAN BE SUBMITTED AS CAMERA READY ART, OR VIA E-MAIL AS A PDF, JPG OR TIF FILE. *Editors will set up ads submitted as plain text without additional charge.*

COMPANY _____
ADDRESS _____

CONTACT _____
PHONE _____
FAX _____
E-MAIL _____

SIZE 1/9 2/9V 2/9H 1/3V 1/3H
HALF PAGE FULLPAGE BUSINESS CARD

ISSUE DATE _____

SIZE _____ (V H) SINGLE 6 INSERTIONS
TOTAL \$ _____

Comments _____

Sketch ad in this box



Danbury Area Computer Society is a non-profit corporation organized under section (501)(C)(3) of the US Tax Code. Its purpose is to promote education, knowledge sharing, networking and communication between users of personal computers. DACS is an all volunteer organization, with no employees. The major source of income is member dues. Members can volunteer to become instructors, lecturers, DACS officers and board members, committee members, or SIG leaders.

We sponsor or participate in community support projects by collecting, repairing, and redistributing used computer equipment and software to community service providers such as schools, libraries, and patient/client support groups. DACS members provide pickup, refurbishing, installation, and training assistance as needed. Firms or individuals with equipment to donate should leave a message on the DACS Infoline (203-748-4330). or send an email to recycling@dacs.org.

The Voice for Joanie program was created in 1992 through the initiative of DACS member, Shirley Fredlund. This program provides computer-assisted speech for victims of amyotrophic lateral sclerosis ("Lou Gehrig's Disease"). DACS members have contributed volunteer time and technical assistance since the program began. Voice for Joanie and DACS have earned national computer industry recognition and financial assistance for this vital collaboration.

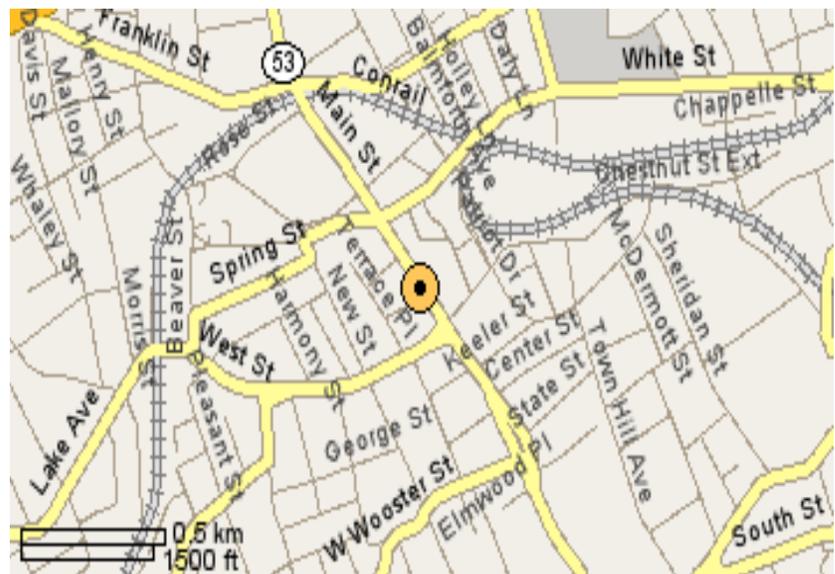
Our general meetings are held on the first Tuesday of each month in the Danbury Hospital Auditorium at 7 p.m. These meetings are open to the public. The main presentation is scheduled from 8-9:30, preceded by casual networking, announcements and Random Access, an informal question and answer session. A free product raffle is often held at the conclusion of the main presentation.

In addition to the general meeting, DACS sponsors many special interest groups (SIGs) where members can learn and share information about a specific topic. Each SIG plans its own meeting schedule and program topics.

Our newsletter, *dacs.doc* is published monthly for our members, and mailed to arrive before the general meeting. It features articles written by members and others on timely topics including product and software reviews, issues and trends in personal computing and "how-to" articles on sound, video, digital photography, etc. In addition, each issues includes the calendar of meetings, announcements on SIGs and other DACS events. *dacs.doc* has won numerous prizes over the years for its design and content.

Through its activities, DACS offers numerous opportunities to network both professionals and computer hobbyists. Our Special Interest Groups are an excellent way for members to both learn and share application or hardware knowledge. Any DACS member can form a special interest group on any topic where there is interest. Most SIGs meet in our Resource Center in downtown Danbury.

If you have concerns, requests, or suggestions regarding DACS or its programs, please contact dacsprez@dacs.org. DACS officers and board members' phone numbers are listed on page 3 of *dacs.doc*.



The DACS Resource Center is in Ives Manor, Lower Level, 198 Main Street, Danbury, CT 06810 (203-748-4330).



DANBURY AREA
COMPUTER SOCIETY, Inc.
Individual Membership Application

Personal Information

Name _____ Home Phone (____) _____
Address _____ Work Phone (____) _____
City _____ State _____ Zip _____ Fax: (____) _____
Company _____ E-Mail: _____ @ _____

Billing Information

1 Year () \$25.00 3 Years () \$68.00 Automatic Annual Renewal () \$22.50
Please bill my: MasterCard () Visa () AMEX () Check Enclosed ()

Card # _____ Exp. Date ____/____/____

* Under the automatic renewal program, DACS will bill your annual membership dues to the credit card of your choice each year. You may cancel the automatic renewal option at any time by calling the membership department at (203) 792-7881.

Make checks payable to DACS, Inc.

Please return this form to: Charles Bovaird, Treasurer
4 Gregory Street
Danbury, CT 06810-4430

Tell Us About Yourself

Please take a moment to answer the following questions. Answer all that apply.

Hours a week you use computers _____

Hardware: PC___ MAC___ desktop___ laptop___ palm___ other_____

OPSYS: Windows___ MAC___ LINUX___ other_____

Communications: Dialup___ HI-Speed___ WiFi___ LAN___ other_____

Applications: Office___ Financial___ other_____

Digital: Music___ Photo___ CAM___ TV___ other_____

Business: Corporate Employee___ private employee___ professional___ business owner___

Office use only: Paid _____ Check # _____ Membership # _____

Meeting Location

Danbury Hospital
24 Hospital Avenue
Danbury, CT

Traveling West on I-84, Take Exit 6. Turn right at exit ramp light at North Street. Turn right on Hayestown Avenue. Turn right on Tamarack Avenue. Follow Tamarack Avenue uphill to traffic light. Turn left at this light onto Hospital Avenue. Follow Hospital Avenue to appropriate visitor parking lot on right.

Traveling East on I-84: Take Exit 5. After stop sign, go straight ahead to intersection of Main Street and North Street. Go straight through onto North Street. Turn right off North Street to Maple Avenue. Go on Maple Avenue to Osborne Street. Turn left on Osborne Street. Turn left onto Hospital Avenue. Follow Hospital Avenue to appropriate visitor parking lot on right.



West Mountain Systems, Inc.

Bruce J. Preston
President

120 Old West Mountain Rd., Ridgefield, CT 06877-3603
203.431.2920 / fax: 203.431.4543

Creative & personal design for individuals & small businesses

Anna Graphics

Web Site Design • Graphics • Digital Pre-Press

Tel: 203•746•5922 ac@annagraphics.com

Kenneth Graff

Digital imaging - fine art printing
Photography - Graffiti Illusions

34 LedgeWood Drive
203-775-6667 Brookfield Connecticut 06804 graffie@bigfoot.com

Telemark Systems Inc.

860-355-8001

Windows NT/2000/2003/Linux Networking
Server Installation and Upgrades
Custom Software Design and Development

Jim Scheef jscheef@telemarksys.com
www.telemarksys.com

Arthur E. Crane
Principal
(860) 350-8848

Capstone Services
HUMAN RESOURCE ADVISORS

18 Wanzer Hill Road • Sherman, Connecticut 06784
Phone: 860-350-8848 • Fax: 860-350-8898

Allan Ostergren
president

2 Crooked Furrows Lane
Sherman, CT 06784
Tel: (860) 210-0047
ostergren@worldnet.att.net