25 Years DACS

DACS.doc

A Computer & Technology Newsletter

July 2016 Volume 27, Issue 7 $2.00

Next Event: July 5, 7:30 PM

Discover how genealogy software can help you explore, nourish and cultivate your family tree

President's Letter

The June General Meeting was a big success, thanks to Rick Van Akin's great presentation about the computer challenges faced by small business. Thank you, Bert, for introducing the speaker and for all your hard work, making preparations and arrangements for the event. Also to Richard Corzo who brought drinks and to Bert's wife for supplying brownies and other delicious snacks.

The next big event on the DACS calendar will be the July 5th General Meeting, when John O'Donnell will talk to us about genealogy and computers. Please read my preview article in this edition for more details.

We are still looking for a Program Chairman. We need someone with organizational skills to schedule topics for DACS general meetings. If any of you feel this would be a fit for your interests, please contact me or any board member.

Several new members have recently joined DACS: Elaine Donnelly (returning), Brigid Guertin, and Rick Van Akin! A warm welcome to them all!

What should be the goals of DACS for the next 25 years? Let's try to get more new younger members, and start new workgroups! The Board of Directors is eager to hear other ideas. Please talk to me or to any Board member.

Last month I mentioned the Web Design workshop. Another benefit of DACS membership is the Linux workshop, led by Dave Mawdsley. This group helps users install and maintain the Linux operating system, and applications for Linux. More information about Linux can be found on Dave's website at *http://www.madmod.com*. Workshops are regular events at the DACS Resource Center, in the lower level of 198 Main Street, Danbury.

We can all be thankful that we have the ability to use computers in our work and for personal communications. The world would be a very different place without them.

—Dave Green

IN THIS ISSUE

Directors' Notes

Danbury Area Computer Society (DACS)

Board Meeting Minutes

Wednesday, June 1, 2016

The meeting was called to order at 7:10pm by the DACS President, Dave Green.

In attendance were board members Richard Corzo, Dick Gingras, Bert Goff (Secretary & Treasurer), Dave Green (President), Cathy Quaranta, Jim Scheef, and Andy Woodruff. Tom Zarecki was not present. DACS member Charlie Bovaird was present as a guest. The minutes were taken by Richard Teasdale.

• The Minutes of the 5/4/2016 Board Meeting were accepted.

Reports

• The Treasurer's report for May was not ready for review on the date of the meeting, due to the meeting's taking place on the first of the month.

• Membership committee: Jim reported 2 new members, 92 current members, and 9 in-grace, for a total of 103. Recently, several expiring members have not renewed.

• Marketing committee: No report.

• Press Coverage: Dave reported that the press release for the June general meeting was distributed on May 25. The release was sent to 21 recipients via CiviCRM and to 5 recipients manually (via websites).

• Website: Richard reported that the DACS website was updated to improve the appearance of the menus on portable devices.

Membership Information

dacs.doc, ISSN 1084-6573, is published monthly by the Danbury Area Computer Society, 65 Legion Rd, New Milford, CT 06776. Annual subscription rates: $60 to regular members, $40 electronic access (included in dues).

Postmaster

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

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2015 Newsletter Contest — apcug — First Place

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Apple User Group

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HelpLine

Our former telephone HelpLine has been replaced by our web-based DACS Community Forum at *http://forum.dacs.org*. We have topic-specific forums where DACS members can post questions. Questions may be answered by Workshop leaders or other DACS members. If none of the categories fit your question, just post it to the Ask DACS forum.

Topic	Forum
.NET Programming	ASP.Net and C#VB.Net Workshop
Digital cameras/scanners/image processing	Digital Imaging Workshop
Content Management Systems	Drupal Workshop
Linux	Linux Workshop
Mac and iPhone/iPad/iPod touch	Apple Workshop
PC maintenance	PC Maintenance Workshop
Smartphones & Tablets	Mobile Devices Workshop
Virtual machine software	Virtual Computing Workshop
Desktop publishing and website design	Web Site Design Workshop
Windows	Windows Workshop

Old Business

• Programs

o June: Bert reported that he met with Rick Van Akin to review preparations for the June general meeting. The Preview article was written by Bert; the Review will be written by Richard Teasdale.

o July: Dave reported that John O'Donnell has agreed to give his talk on Genealogy in July. The Preview article published in April will be re-used (updated to mention that the presentation was rescheduled). Richard Teasdale will write the Review article.

o Richard (Corzo) has initiated contact with Gene Barlow, with a view to having him present on the subject of Acronis True Image backups.

o Jim suggested that John Patrick be invited to talk about elections (technology) in September or October. Andy will ask him about his availability.

o Bert will contact the DACS member who may be able to present about intellectual property.

• Robilotti Room vs. Auditorium for general meetings - Dave has had no reply to his e-mail sent to the hospital's coordinators on May 18. He will call them.

• Renovation of the Resource Center (RC) - Dave reported that he and Dick will meet with the Building Manager of Ives Manor on June 2. The board provided advice about the approach to be taken at the meeting.

• Jim will create a dacs.org e-mail account for Dave, to replace the currently existing forwarder.

• Ad from Alliance of Nonprofits for Insurance - Bert will ask for a quote for coverage for DACS.

New Business

• Snacks for general meetings -

o Richard (drinks) and Bert (snacks) will make the arrangements in June.

o Jim (drinks) and Cathy (snacks) will make the arrangements in July.

• Board Meeting Schedule - It was agreed that the Board would like always to meet on the day after the general meeting.

• Jim's proposal to split the Bylaws into two documents, (1) Bylaws and (2) Operating Rules, was discussed. Changes to the Bylaws would continue to require a vote by the membership. Changes to the Operating Rules would require only a vote by the Board. Jim and Andy will form a committee to work on the details.

• Charlie will provide Andy with a key to the Resource Center.

The meeting was adjourned at 7:55pm.

—Richard Teasdale

June Meeting Review

Small Business Technology Challenges

By Richard Teasdale

AT OUR JUNE MEETING, an enthusiastic DACS audience was treated to a fascinating glimpse into how even quite small enterprises are able to leverage the very latest technology. Rick Van Akin was the featured speaker, and his topic: Small Business Technology Challenges. Rick was unusually well-qualified for this subject, being himself the owner of a small business which helps others handle their technology problems and challenges. His company, Computer Troubleshooters of Greater Danbury (CTS), has the goal of making technology "just work" for its clients.

Rick began the evening with a quick run-down of his own IT career. He worked in senior technical and management positions for large corporations, in large IT shops, for 28 years. In 2007, he decided to found his own company and entered the computer support business.

Rick's strategy is to apply large-company thought processes to the requirements of small businesses, bringing all the best practices that he learned in large companies to small ones. The goal is to have IT be a utility that just works.

Small businesses want the same things as large ones but without budgets and at minimum cost. The provider has to be very clear about the benefits because money usually comes out of owners' back pockets instead of from a budget.

CTS performs all of the standard support tasks for small company clients and for home office users. However, in order to organize the effort, Rick tries to get clients onto managed service plans. These are of two types: Business Enhanced Support Technology (B.E.S.T.) plans for small businesses, and Home & Office Support Technology (H.O.S.T.) plans for home offices. These plans include monitoring of clients' environments, patch management, remote support, regular tune-ups, management of external service providers, security support, cloud backups, etc. Rick emphasized the importance of security by mentioning the example of ransomeware, which is projected to be a billion dollar problem this year.

Question from the audience: What kind of services are you using for cloud backup?

Answer: Carbonite and similar. The problems are bandwidth, and the fact that data is not encrypted on providers' servers. Rick uses a service which, for $9.99/month, encrypts the data to be stored in the service provider's data center. It works well for small data volumes but not for large.

Rick presented several case studies to illustrate the services and solutions that his company provides, and the kinds of challenges faced by his clients. He pointed out that the challenges include do-it-yourself solutions, e.g. registry cleaners and tune-up utilities, which just make things worse.

Case Study 1 - a solar installation company - has teams out on the road and about 10 people in the office. Rick's solution for them consists of a "private cloud", cellular-based tablets, and Tsheets software for scheduling and time tracking (using GPS to accurately identify locations). The company also uses NAS (network-attached storage), which Rick finds to be an excellent way to share files without server cost and headaches. Challenges: (1) the technology champion left the company and it is now hard to get people to use it; (2) Tablets used are less robust than he recommended (due to the client trying too hard to save money).

Case Study 2: Telephone service. Rick provides and supports telephone services because (1) it's now a network application, and (2) if he did not, other service providers would steal clients by offering phone service. He provides VOIP (voice over internet protocol) systems, usually not because customers want all the latest VOIP features but rather because they need to replace old telephone systems that are falling apart. VOIP phone systems are part of the network - when you plug in a VOIP system, you find out quickly whether there are any network problems. Because it is a real-time service, VOIP quality is sensitive to any situation in which excessive numbers of packet retransmissions are necessary.

Rick described some of the sophisticated things that can be done with VOIP. For example, an App on his cell phone makes the phone into an extension of the office phone system. Now he doesn't have to give out a separate cell phone #, and he can make and answer calls from anywhere as if he were in the office.

In answer to audience questions, Rick said that he no longer recommends the use of locally-run VOIP systems e.g. Asterisk, because (1) they are not quite as reliable as hosted systems, and (2) there is lots of hacking of VOIP systems. Star2Star Communications is the VOIP system he likes best. RingCentral is another good one.

In response to another question, Rick described some elements of his marketing strategy.

He no longer lists the business in yellow pages because people now use Google and Facebook to find services. Although the website is well-ranked in Google, he spends $300/month to use Google (paid) adwords. He reckons this is worth the investment because he gets roughly $1,000 of business per month in return. He has recently started testing paid Facebook ads.

His most powerful advertising channel is word-of-mouth. An audience member backed this up by describing his use of "certificate" numbers to do referrals. Rick recommended joining networking groups because of the power of referrals.

Case Study 3: - CTS has two tag lines, one of which is "Computer Troubleshooters - when there's no time for down time." Rick described a client who wants no down time - if the primary server fails, he needs another server up and running. Repairing the primary server and restoring from backups does not meet the requirement because of the time needed for recovery. The solution is a BDR (Backup & Disaster Recovery) - an onsite appliance (a small Unix server) which takes hourly snapshots of the primary server and backs up to a cloud service overnight. If the primary fails (e.g. due to a disk crash), the DR system only needs to be booted to take over. This provides a faster DR solusolution than those which even major corporate datacenters could accomplish 10 years ago.

In answer to other audience questions, Rick commented that:

- He tries to do as much as possible remotely (from his office). LogMeIn is the main tool (but it has become very expensive recently).
- He makes a point of answering the phone to clients whenever possible or calling right back - promotes customer loyalty.
- CTS has become very good at virus cleanups because clients like their settings and therefore don't want their machines rebuilt from scratch.
- He has configured Facebook to tweet a• There is a website at which individual e-mail addresses can be checked to see if they have been compromised: the website is https://haveibeenpwned.com/ (it is mentioned in a New York Times article about the hacking of several of Mark Zuckerberg's accounts.)
- HIPAA compliance is a growing concern because (for clients in medical-related

Meeting Review, *Cont. on page 5*

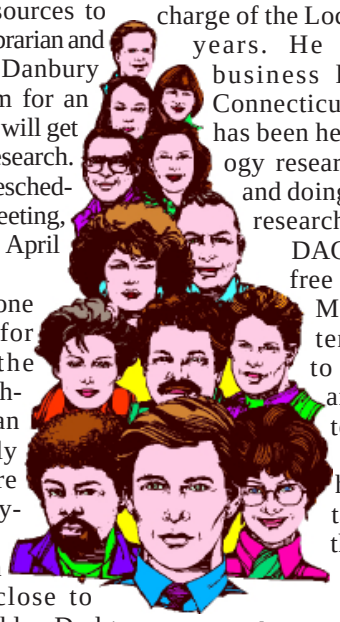
Meeting Preview

Introduction to Genealogy

By David Green

Tuesday, July 5, 2016, 7:30 PM
Danbury Hospital
Robilotti Conference Center
Presenter: John O'Donnell

CURIOUS ABOUT YOUR family history but don't know where and how to start? Need guidance about doing research and what resources to choose? Join John O'Donnell, librarian and genealogy researcher from Danbury Library, on July 5 at 7:30 pm for an introduction to genealogy. You will get a solid foundation for your research. (This presentation has been rescheduled from the April general meeting, due to the speaker's illness on April 5.)



Genealogical research is one of the most popular uses for home computers and the internet, and information technology has brought about an explosion of interest in family history in recent years. There are now too many genealogy-focused websites to count.

John O'Donnell was born and raised in Brooklyn, close to Ebbets Field, and was a Brooklyn Dodgers fan until the team moved to California. He has an undergraduate degree in history from Iona College and a masters degree in history from Brooklyn College. He has a deep interest in the history of World War Two. He attended Southern Connecticut State University for his Masters degree in Library Science. He has worked at Danbury Library as a reference librarian as well as being in charge of the Local History Room for 19 years. He is also an adjunct business librarian at Western Connecticut State University. He has been helping people do genealogy research at Danbury Library and doing his own family history research as well.

DACS General Meetings are free and open to the public. Members and prior attendees are encouraged to extend invitations to anyone interested in this topic.

General meetings are held at Danbury Hospital and in July will be in the Robilotti Conference Center, across the hall from the hospital auditorium. There is plenty of free parking in the guest parking garage adjacent to the

auditorium. (Go to www.dacs.org to find directions and parking information).

Meeting Review, *Cont. from page 4*

businesses) he is signing agreements that he won't leak the client's information.

- Doing one's own e-mail hosting (on own servers) is very hard to do right at a reasonable cost.
- Amazon Glacier is cheap but very slow (e.g. versus S3.) Amazon is a very good service provider but can be overwhelming because they have so many services available.
- He tries to convince clients who are Quickbooks users to send their files via the cloud instead of on thumb drives. Terminal Services is another option but Quickbooks Online is not a fully-featured alternative to standard Quickbooks.

The other CTS tag line is: "We take the SH out of IT!"

Rick Van Akin's presentation slides may be downloaded in a pdf from the DACS Downloads page of the DACS website.

Peripherals

USB is changing as technology advances

By Bart Koslow

USB-C? USB 3.1 generation 1 and 2?

The USB interface is changing. It is becoming more versatile, faster, smaller and easier to use. Always interested in new computer developments, I decided to check out these latest developments.

USB long ago replaced the old serial, parallel, and other computer ports. Now it is set to replace many more types of connectors and ports and add functionality.

USB 2.0 (maximum speed 480Mbps) and USB 3.0 (now called USB 3.1 gen 1) are being replaced by USB 3.1 gen 2.

USB 3.1 gen 2 doubles the data transfer speed from USB 3.1 gen 1 from 5Gbps to 10Gbps. This will cut data transfer times in half. USB 3.1 gen 2 will provide up to 100 watts of power for compatible devices. USB 2.0 provides up to 2.5 watts, which can power only small devices like cellphones and tablets. You will get faster charging speeds for all your mobile devices and laptops, and you will be able to deliver power in either direction using a USB-C cable, which means you can use a fully powered device to recharge another device.

USB-C, more properly known as USB 3.1 Type-C, is a new, smaller industry standard cable and connector type that will be used for multiple purposes. All of your devices will use this cable type. A USB-C cable will be used for power, video, data, and audio. Your computer, laptop, mobile phone, and USB hard drive will all use one type of cable.

The USB-C connector supports and will replace DisplayPort, HDMI, power, USB, and VGA cables. This includes all the multiple USB cable types now being used. Instead you will be using USB-C cables. You will no longer have to carry AC adapters. All your devices will be charged and powered using USB-C.

USB-C connectors are not only smaller. They are the same at each end and are symmetrical in cross section so you will not be required to turn them around or rotate them to connect to a USB-C slot.

You will have to buy new cables, but think of the many types of cables you will no longer need and the huge improvement in facility and speed these new standards will provide.

Bart Koslow, *is review chair, Channel Islands PCUG, CA.*
This article appeared in the April 2016 issue, The TOE. (www.cipcug.org; bartkoslow (at) verizon.net) and is reprinted by permission.

Workshops

Workshop NOTES: July 2016

Apple. Focuses on all aspects of the Mac and iPhone operating systems.

Contact: Richard Corzo (*applesig@dacs.org*).
Meets 2nd Tuesday, 7 p.m. at DACS Resource Center.
Next Meeting: July 12.

Jobs. Networking and jobs search

Contact: Charles Bovaird, 203-792-7881 (*aam@mags.net*). Go to DACS Community Forum (*http://forum.dacs.org for job listings*.

Linux. Helps in installing and maintaining the Linux operating system. Also of interest to Apple owners using OS X.
Contact: Dave Mawdsley, *linuxsig@dacs.org*

Meets 3rd Wednesday, 7:30 p.m. at the DACS Resource Center.
Next Meeting: September 21

PC Maintenance. Review of PC hardware and OpSys maintenance and use.
Contact: Charles Bovaird, 203-792-7881 (*aam@mags.net*). Go to DACS Community Forum (*http://forum.dacs.org*).

Online Business Workshop. Informal member gathering sharing ideas on creating an online source of income.
Contact: Steve Harkness (*onlinebizsig@dacs.org*)
Meets second Monday in Brookfield, or by Webinar.
Next Meeting: Check *dacs.org*.

Social Media: Master the basics of Facebook, Twitter, LinkedIn, and Instagram.
Contact: Tom Zarecki 914-548-4948; email:*TomZshow@gmail.com*.

Meets on the 4th Wednesday of the month at 6:30pm, usually at the DACS Resource Center, but check the monthly schedule.
Next Meeting: TBA

Video Production. The Video Workshop explores all aspects of video capture and production, including both inexpensive and professional choices for cameras and editing software.

Meets on the 4th Thursday of certain months, typically at 7:00 pm at the Resource Center. Check the Calendar for details.
Contact: Andy Woodruff (awoodruff@dacs.org)
Next meeting: Check dacs.org

Web Development/Design This Workshop meets every 3rd Tuesday, 7-9 pm, at the DACS resource center. Although we cover many web-related subjects, most meetings will feature WordPress ("Content Management System"). We discuss its pros and cons, learn about theme editing, CSS, plugins, security, customization and more. Next meeting: July 19.
Contact: Annette van Ommeren *(avanommeren@dacs.org*)
Next meeting: July 19

Workshops News & Events

Apple. In June we covered Apple's announcements at their World Wide Developers Conference. Apple revealed their plans for their fall updates to iOS, macOS (replacing the name OS X), watchOS, and tvOS.

The next operating system (OS) to run on the Mac, succeeding OS X El Capitan, will be called macOS Sierra. For the first time Siri will be coming to the Mac, with some features unique to Mac. You'll be able to ask Siri to locate files on your Mac. Siri will be able to assist you while you are working on other tasks on your Mac.

The Photos app will be updated on both the Mac and iOS to organize your photos into Memories, that is groups of photos taken at the same time and location. Another feature that will go across your Mac, iPhone, and iPad, is Universal Clipboard. You'll be able to copy from one device and paste to another.

Apple Pay will be coming to Safari on the Mac, using Touch ID on your iPhone, or using your Apple Watch. This will keep transactions secure as your credit card information won't need to be transferred over the network.

Your iCloud drive will be able to include your Mac Desktop and Documents folder, and make them accessible from your other Apple devices.

The next OS version for your iPhone and iPad will be iOS 10. It seems the biggest enhancement will be in the Messages app, also available on the Mac. Messages can of course do ordinary text messages, but if you're communicating with another Apple device, you'll be able to jazz up your messages. You can choose the message bubble size to make them bigger for added emphasis or smaller to say things more quietly. You can add stickers, and Messages will scan the words in your message to offer to replace them with emojis. Developers will be able to offer iMessage apps to further enhance your messaging.

Siri will be made more powerful by opening it up to apps, so you can control them using Siri. Maps will also be opened up to hooks with apps, so for instance you'll be able to make reservations in a nearby restaurant using the OpenTable app. Widgets which were previously available on the notification screen, will now be available using 3D touch on app icons.

***Workshops,**, Cont. on page 9*

July 2016

Danbury Area Computer Society

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
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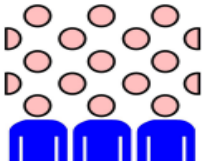
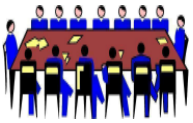
3	4 	5  **General Meeting** 7:30 PM	6  **Board of Directors** 7:30 PM	7	8	9
10	11	12  **Apple** 7:00 PM Richard Corzo *applesig@dacs.org*	13	14  **Membership Committee** 7:00 PM Jim Scheef 860-355-0034	15	16  **DACS.DOC Deadline**
17	18	19  **Web Development and Design** Annette van Ommeren 7:00 - 9:00 PM *avanommeren@dacs.org*	20  **Linux** 7:00 PM Dave Mawdsley *linuxsig@dacs.org* **Summer Break until September**	21  **Single Board Computers Workshop** 7:00 PM Jim Scheef 860-355-0034	22	23
24	25	26	27	28	29	30

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Hardware

Building or Buying a Computer in 2016

By Bart Koslow

WHETHER YOU BUY or build a new computer, there are a number of important things to know to obtain the best computer for the money you wish to spend. Is it better to build or buy a new computer? Most people will opt for buying a new desktop or laptop for the convenience of not having to build, particularly if they are not technologically or mechanically oriented. There are others who could easily build one if they had the courage. There are many websites where you can find detailed instructions on building a computer. If you are a computer club member, help and advice are always available if you have difficulty. So why not try?

I have always felt it is better to build one. Why? When I build, I get exactly what I want and do not pay for what I do not desire. I often use some drives, keyboards, monitors, cases, DVD burners, etc. from an earlier computer, saving money, but still obtaining the best computer for the money.

Name brand computers have drawbacks. You have to take what you get, even though the computer may not have all the things you would like, and you may get items you do not need. They do not come with the usual (at this time) Windows 10 operating system disk. If you have a major problem, instead of reloading Windows and retaining all of your program connections you may have to start all over again, adding all the programs, etc. that you installed after buying the computer - not a pleasant prospect.

At present, you may download a bootable copy of Windows 10 from Microsoft, which will solve this problem. Name brand computers often have little room for expansion in the event you wish to add drives, internal cards or memory. The motherboards and other hardware may be proprietary, which means you must go back to the manufacturer if you have a problem or need a replacement, and the replacement may cost you more than similar non-proprietary hardware.

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Build or buy

There are many things you should know before you proceed. I usually do not buy state of the art because of the expense and because today's state of the art is passé in six to 12 months. Instead, I look for the best price/performance ratio that will fit my pocket book without making too many compromises.

CPU

Whether you build or buy, the CPU is the most important part of any computer and is the part you should decide upon first. In the past, I have used AMD CPUs as they were cheaper for similar performance. This is no longer the case except for budget PCs, so I am now switching to Intel CPUs. I believe the added cost is justified by their better performance, making them a better value. I look for the fastest CPU at a reasonable price. There are hundreds of CPUs with similar names available in a bewildering variety. Compare CPUs. How? Just do a search for CPU speed comparison and you will find *https:/ www.cpubenchmark*.net, where you may compare the comparative speeds and costs of any CPU.

Memory

Next, you want to decide on what memory capacity, type and speed you wish. If you are buying, compare whether you are getting 4GB, 8GB, or more. When building you should be looking at the newer DDR4 memory at speeds of 2133 MHz or more. In either case, I suggest not less than 8GB. I will be adding 16GB at a minimum speed of 2133 MHz or more depending on pricing. In most cases, the amount of memory is more important than the speed. What is dual channel memory? For example, instead of buying a recommended minimum one 8GB module you buy two 4GB modules which work in tandem and supposedly run 20 percent faster. The price is the same. When you buy the memory modules, make sure you buy heat spreaders (for a few dollars) for each module if they do not come with the modules. They should be installed before you place the memory on the motherboard. Before you purchase memory, read the manual to find out which memory is supported by the motherboard. Then go to the motherboard manufacturer's website and find out which manufacturer's memory has been tested and recommended by the motherboard manufacturer. If you buy other memory, make sure you can return it or exchange it in the event it does not work properly in your motherboard.

Drives: go for solid state Most store computers come with the older spinning drives. At present, if you desire one with a Solid State Drive (SSD) you will find them only in more expensive store computers at a cost that may not suit you. I highly recommend that you include an SSD for the boot drive (the one that contains the operating system) in your next computer. SSDs are much faster, more durable, quieter, and smaller. Though they're more expensive, prices are dropping rapidly. If you buy a computer that does not come with an SSD, you can have the spinning drive replaced with an SSD or added afterward, depending on space available. In the very near future, SSDs will be the primary drive in all computers. Most SSDs still use a SATA 3 interface. SATA 3 is limited in speed and is rapidly being replaced by M.2 SSD drives, which can run SSDs at much faster speeds. There are two kinds of M.2 drives - PCI-E and SATA.

The PCI-E interface is faster, as the SATA 3.0 spec is limited to 600MB/s maximum speed, while PCI-E Generation 1 is capable of up to 1000MB/s. Generation 2 is capable of up to 2000MB/s. There is also a newer PCI-E Gen 3 technology that is becoming more common with speeds of up to 4000MB/s.

Motherboard

If building, next and very important is the motherboard. Today you should look for a motherboard that supports your CPU, and dual channel 2133 MHz or more, DDR4 memory. I prefer a full ATX motherboard rather than a mini or micro as it has more slots, both bus and memory, and often more built-in capabilities. Some motherboards also have built-in graphics. The downside is that these may use some of the CPU power. The upside is that it is cheaper than buying a separate graphics card. I prefer the separate card since you usually get better performance, and prices are very low today. The motherboard should support two to four SATA 3 drives that run at a maximum of 600 MB/s, at least two PCI-E devices (hard drives, DVD, CD drives) and at least eight USB ports half of which should be USB 3.0 or 3.1. Buy a

quality motherboard. Before you buy your motherboard, go to the manufacturer's site and make sure the CPU and memory you intend to buy is compatible with that motherboard.

Computer case

Your computer case is significant. Almost all cases support both AMD and Intel motherboards. You want an ATX case that has room for expansion. I suggest at least two 5¼-inch external bays, one or more external 3½-inch bays and three or more internal 3½-inch bays for hard drives. My Antec case has eight bays with front panel USB 2.0 connections and holds a standard size ATX motherboard. It has a large (and quiet) 120 mm fan and places for two more 80 mm fans, which I installed to keep the motherboard and CPU cool. Incidentally, air flow of the fans should be in from the bottom front of your case to out at the top rear. A nice feature of the case is the two hand removable screws that enable removing all the case covers without using a screwdriver or nut driver.

I never stand my case on the carpet if there is some air circulation from under the case or from the bottom front, which may be blocked. I place a 1-inch-by-8-inch board (or two 1-inch-by - 4-inch boards) on the carpet and stand the case upon it.

You should make sure you have a power supply with ample wattage. Otherwise, you may have problems that are due to insufficient power. I use a heavy duty 600 watt ATX power supply with a quiet 140 mm or larger fan, which complies with the newer power saving requirements.

Graphics cards

Graphics cards are becoming much cheaper. PCI-Express motherboards support dual (two) linked graphics cards, either NVidia SLI or ATI Crossfire. Make sure if you buy dual cards that they match SLI or Crossfire, and are supported by your motherboard. The dual cards are powerful and extremely fast. Good if you are a gamer, but much too rich for me. If you buy one card, it does not matter if it is an ATI or an NVidia card.

You do want a card that has both a digital DVI (or DVD) output and HDMI output. Most still have a VGA output as well. Look for at least 1 GB of DDR4 memory on the graphics card. Since I am not a gamer, I buy a low cost video card.

Items to save from the old computer

I transfer from my old computer DVD burners, a fax/modem, a mouse, a keyboard, a printer, a scanner, and a monitor. I still use the fax/modem to send and receive faxes. I install an internal card reader with a USB 3.0 connection in a 3½-inch external bay. Do not forget your Windows 10 operating system license.

Monitor

What about the monitor? I have a 23-inch Acer LCD monitor, and am very happy with it. In my book, bigger is better. There are a number of things you should be aware of when buying an LCD monitor. Do not buy an LCD monitor unless it has a digital connection either DVI or HDMI, or both, as the apparent resolution is much better using the digital connection. It will probably still have an analog VGA connection as well. All LCD monitors have a native resolution, which is usually the one advertised. Important!

Your video card must support the native resolution of the monitor for best results.

An older computer may not support a new LCD monitor in digital mode at its native resolution. In that case, you may have to add or change the graphics card.

Many manufacturers consider it OK if the LCD has eight or fewer bad pixels. If you get one or more, especially in the middle of your screen, you may not like it, or you may not like the monitor in general once you try it out. That is why I would only buy an LCD monitor locally, where I have a return privilege for any reason.

Some monitors can swivel vertically, which gives you a longer page view. Some LCD monitors come with a digital cable, but many do not. You must have the correct digital cable for the monitor, and LCD monitors do vary. Go to www.datapro.net/techinfo/dvi_info.html for a lucid guide to the Digital Video Interface and which cable to use in each situation. You will find buying cables is much cheaper online. The $6 cable is just as good as the MONSTER $141 one, so don't get ripped off.

Printers, scanners and more

You still need a printer, and I need a scanner for copying and faxing. The choices are innumerable. I like and use a black and white laser printer for the bulk of my printing. It looks better, is cheaper to run, and like the Energizer bunny just runs and runs and runs. If you buy a laser printer watch out for the ones that need drum replacements in addition to toner cartridge replacements after a certain volume of use. You will end up paying more than the original printer cost. If you require color printing there are many inkjet and color laser printers available, or you may buy an all-in-one inkjet that combines printing, copying, scanning, and faxing. I leave the choices to you.

If you have a little adventure in your soul, you can build a new computer and obtain help from fellow computer club members. If not, you know what to look for. In any event, happy computing.

Bart Koslow *is review chair, Channel Islands PCUG, CA www.cipcug.org; Bartkoslow (at) verizon.net*

This article appeared in the April 2016 issue, The Outer Edge, and is reprinted here by permission.

***Workshop Notes**, Cont. from page 6*

You'll be able to wake up your iPhone by just picking it up. Then you'll be able to interact with notifications more directly from the lock screen. Like on the Mac, Apple Pay will be available on supporting websites from the Safari browser.

No one in the group had an Apple Watch, but if you do you'll enjoy much faster opening of watch apps in the new watchOS 3.

tvOS will get some minor updates including a new dark mode, and a single sign-on for apps tied to cable channels. That way you will only need log in just once to verify your cable subscription and unlock full recent episodes to view from your 4th generation Apple TV.

Wild World Web

Internet Security

By Dick Maybach

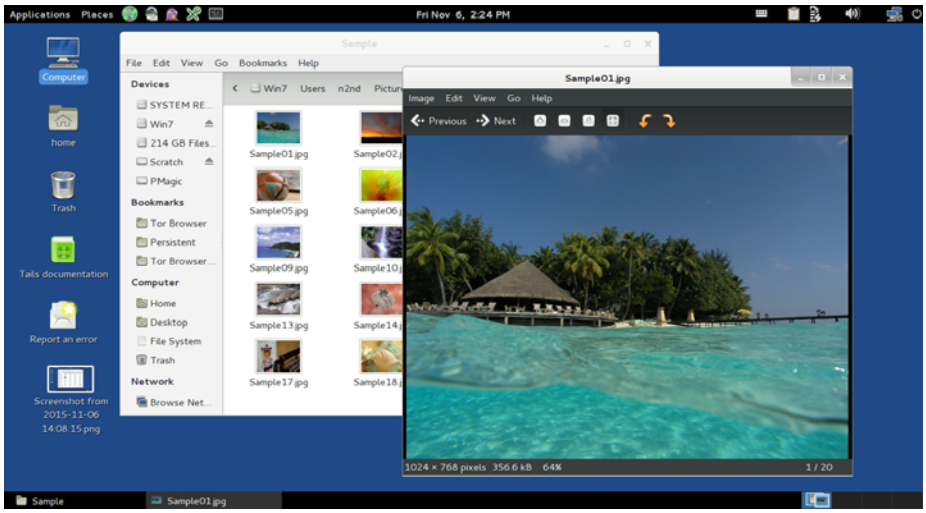
IN MY JANUARY 2016 article (available at http://www.bcug.com), I discussed Internet privacy, which is closely related to Internet security. Many of the topics fall into both categories and the choice of the article in which they appear was quite arbitrary.

A personal computer is secure until you connect it to the Internet, which is why the title of this article isn't "Computer Security;" however, without communications, a PC loses much of its value. Yours is almost certainly connected, but you can take steps that greatly reduce the risks. First recognize that the greater risk is not to your computer but to the personal information it holds. We'll consider two types of defense, preventing attacks and recovering from any that do occur.

The most important step you can take is to keep your operating system and your applications up to date. This can be automatic for your operating system, although I prefer to have the vendor tell me when updates are available and decide for myself whether to install them. You will probably have to check each application separately, but this is surely worth the trouble. While you're in a housecleaning mindset, remove all those applications you no longer use, as each one represents a potential vulnerability. Until you've completed this, updating your anti-virus software is wasted effort.

In particular, if you're still using Windows XP, disconnect that PC from the Internet now, and never reconnect it while XP is running. If you must check your e-mail or your bank balance, use a secure operating system, such as Tails, *http://tails.boum.org/*, on a live DVD or (better) on a memory stick. Tails, which I discussed last month for a slightly different use, includes a nice suite of applications, including an Internet browser, an e-mail client, an office suite, graphics designer software, media players, a screen reader for the visually impaired, and a password manager. While using Tails you can't run any XP software, but you can read and write files on your XP disk. Tails is Linux, but as the screen-shot below shows, its user interface is similar to XP's, and you should feel comfortable using it. (In the shot, Tails has opened an image on the Windows 7 disk of the netbook on which it's running.) Furthermore, since Tails resides on a live medium, you can safely use it from almost any PC, regardless of how insecure it might be. Tails is designed for high security, and it's worth considering for such tasks as Internet banking, even if your present operating system is up to date.

Once your software is updated, you should secure your Internet connection with an effective firewall, which monitors your communication stream and blocks malicious traffic. At the least, install a software firewall on your PC, which many anti-virus suites contain, but a hardware one is more effective. Most broadband modems that include routers also have firewalls, but often ISPs don't keep these updated, with the result that you may prefer to install an Ethernet router that contains a firewall with the latest firmware available from the vendor. Keeping your router and firewall software updated is as important as for your operating system and applications. If your router includes Wi-Fi, be sure you have enabled WPA encryption and changed both the Wi-Fi and the administrator passwords. Otherwise, passersby and your neighbors have free access to your computers and your Internet connection.



Next address the least secure component in your system, yourself. Establish a process to generate secure passwords and store them securely and use it everywhere, and never use the same password for different places. A good application for this is KeePassX, *http://www.keepassx.org/*, which both generates secure passwords and stores them in an encrypted file. You have no doubt heard that you should never use as a password anything that can be linked to you, such as you mother's maiden name, your college, or a pet's name. Yet your bank insists on recording your answers to "security questions" that have these very things as answers, so that they can be used in case you lose your password. If you follow this irresponsible advice, an intruder looking at your Facebook page can probably find the answers needed to compromise your account. The solution is to use secure "answers" to these silly questions. For example the name of your high school could be x9$Aw*_35{py. You'll of course have to store such obscure answers in your password program.

From my experience, most malware is installed on computers by users tricked by unscrupulous Internet sites. Be very careful when downloading software, as many sites include unwanted extras with the program you want. When making a search, I often find that the official source of an application is far down the list returned, and that the top choices often try to masquerade as the official source. Windows users have to be especially careful, both because Windows is vulnerable to malware and because being the most popular operating system makes it the most attractive target.

E-mail is another risk. The only safe way to deal with a message from someone you don't know is to delete it immediately. Don't open any attachments and don't follow any links. This is good advice even if you think you know the sender, as e-mail addresses are easily forged. Unless you are expecting it, treat

any e-mail with an attachment or a link as toxic. This is especially true of forwarded messages, since people in the habit of doing this seldom have the expertise to check them for hazards. Be especially careful of official looking e-mail claiming to be from your bank, the government, Microsoft, or similar entities and demanding immediate attention to avoid serious consequences. These folks seldom use e-mail to sound alarms. If you are concerned, contact them using the phone number or e-mail address you obtained directly from them, not the one in the e-mail.

A common risk is euphemistically known as "social engineering" or "phishing," but is just swindling using techniques that have been around for thousands of years. You can often recognize these because they are one of the following:

- an unexpected email with a link or an attachment,
- a request that you forward emails, attachments, or links to others,
- a promise too good to be true,
- an email that isn't addressed to you by name,
- a sender who isn't specified, isn't someone you know, or doesn't match the "from" address,
- one with spelling or grammar errors,
- one with a link that doesn't match where the email says the link will take you, or an attachment with an incorrect or suspicious filename or a suspicious file extension,
- one with a link or attachment to view an unexpected e-card or track an unknown package, or
- one that includes links to pictures or videos from people you don't know.

Other common techniques include e-mails or phone calls asking for sensitive information or asking that you perform some task, such as the following:

- a request for your name, account information, date of birth, Social Security number, address, and the like,
- a request that you click on a link or open a file to resolve a problem with your account or to repair a problem with your computer,
- a security alert in an email, pop-ups, or a Facebook notice warning that your computer is at risk of being infected, or
- someone (probably an acquaintance) in another country needing assistance accessing a large sum of money, or stuck without any money,
- an IRS agent claiming that you owe taxes and must pay immediately.

Anytime you are using the Internet, you should be as cautious as if you were on the street in a foreign country, because you are. It is easy to be lulled into a false sense of security because you are physically sitting in the familiarity of your own home.

You may be surprised that this far into the article, I haven't mentioned anti-virus programs. That's because prevention is far more effective than correction. Relying an anti-virus software as your only defense is like relying only on surgery and drugs to maintain your health; where a good diet, exercise, and sensible personal habits are more effective. However, as with your health, even with good preventive measures, your computer can be compromised, and a common cure for Windows malware is a good anti-virus program. Just keep in mind that these aren't cure-alls, because they can only detect, and often but not always remove, that malware they know about. They can't prevent problems resulting from unpatched software or careless users. The only sure cure is a good backup regimen, which will allow you to recover not only from malware infection, but also hardware and software failure, and user mistakes. There are many anti-malware programs from which to choose, ranging in cost from free upward, and an Internet search will show good reviews of these. Although they're not well rated, I use only the native Windows firewall and Microsoft Security Essentials. I feel that my preventive measures are effective, and I have frequent backups for recovery although I've seldom needed to resort to them. Although you should know that I usually do my Internet browsing from Linux, using Firefox with several protection add-ons enabled.

By making preparations and staying alert you can enjoy the Internet with minimal risk, and if you are attacked, you can recover with little or no loss.

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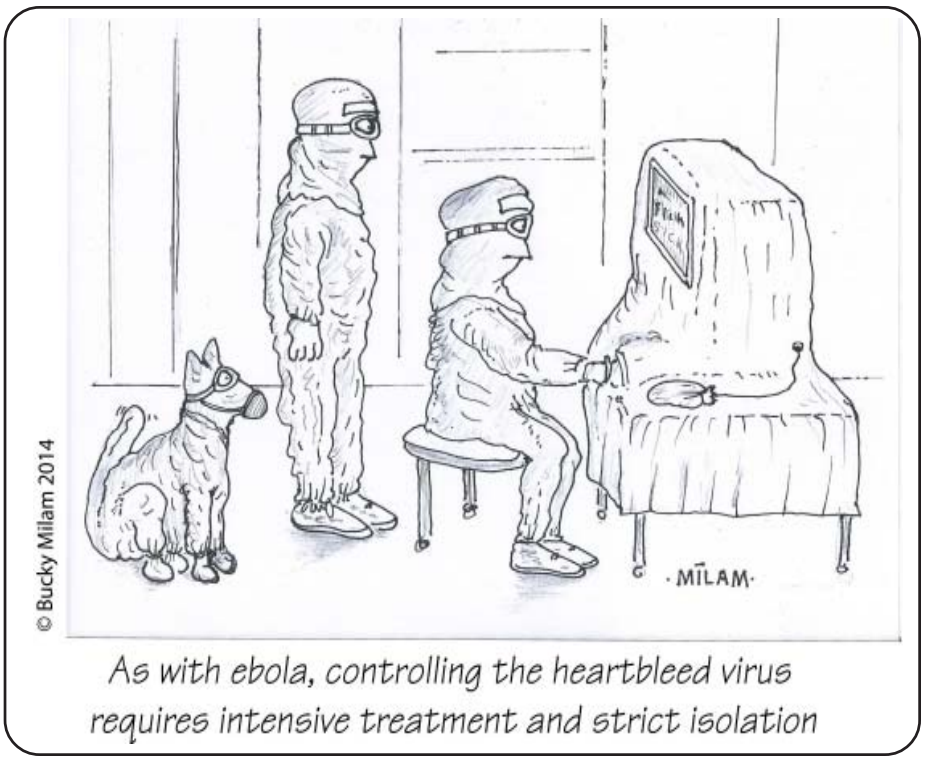
This article was published in the February 2016 issue, BUG Bytes, and is available for reprint by APCUG member user groups.



Danbury Area Computer Society
65 Legion Rd
New Milford, CT 06776

Read the Blog on dacs.org

For the past several months, Jim Scheef has been posting to a blog on the club's website. You can read these posts here. We are looking for a few volunteers to help contribute to this blog. To qualify, you must be a member in good standing and be willing to post regularly, meaning one or more posts weekly. You will receive training in how to enter and format the blog posts (a little HTML can be helpful).

Content must be related to the club's mission of learning and sharing information about computers and how we use them. There is tons of interesting and valuable information to share and one person cannot find and post it all.

If you're interested, email the webmasters.

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Future Events:

July 5
Genealogy Software

August 2
TBA

September 6
TBA

October 4
TBA