



DACS.doc

A Computer & Technology Newsletter

September 2017

Volume 28, Issue 9

\$2.00

Next Event: September 5

Astrophotography

A professional photographer
shows how time, effort and a
modest investment can unveil
a universe for the rest of us



Directors' Notes

Danbury Area Computer Society Board Meeting Minutes Wednesday, August 2, 2017

The meeting was called to order at 7:08 pm by the DACS President, Dave Green.

In attendance were Board members Richard Corzo, Dick Gingras, Bert Goff, Dave Green (President), and Andy Woodruff. Also present was guest: Mike Ross. The minutes were taken by Richard Teasdale

(Names in italics denote responsibilities for actions.)

- The Minutes of the 6/28/2017 Board Meeting were accepted.

Reports

- The June and July Treasurer's reports were received from Bert Goff.
 - o Dues receipts in June were \$280 (minus PayPal fees), better than June 2016 receipts. Total Year to date (6 months) dues receipts were slightly above the first 6 months of 2016. Expenses continued to be normal and the 6 month year to date totals were again slightly below 2016, adjusted for John Patrick's book expenses (that he covered).
 - o The Resource Center Fund continues to have a balance of \$655.
 - o Highlights of the July report were that dues were down in July but not as much as in July 2016, so in year-to-year comparison, we were again ahead of last year in dues collection.
- The Membership report was received by e-mail from Jim Scheef.
 - o 93 paid-up members (including 5 new), and 7 in-grace, for a total of 100.
 - o 35 people attended the 8/1/2017 general meeting, including 6 visitors. No in-

formation was available about how visitors heard of the meeting, e.g. via Meetup. Andy repeated that this information should be collected. The form that visitors are asked to fill out should capture it. *Dave* will follow up with Jim. Andy also pointed out that after the meeting we should routinely send follow-up greeting messages to visitors.

- o The topic of each general meeting has been added as a new column on the summary page of the Membership report spreadsheet. Dick requested that the names of speakers be also added.

• Press Coverage:

- o Dave reported that the press release for the August General Meeting was sent to at least 17 recipients. The release was sent manually due to the CiviCRM problem (see below).

• Websites: Richard reported two issues.

- o An update to CiviCRM was installed, after which it was discovered that the software was not working correctly. The problem was resolved by restoring the system from a backup but the cause remains unknown, and we are not on the current version.

- o Malware was detected on the DACS website by Sitelock (a monitoring service provided by Bluehost), which Wordfence did not find. The bad code has been removed. A second instance has not yet been resolved. It is unknown why Wordfence did not discover the malware.

Old Business

• Programs:

- o Shannon Calvert, of the Westport Astronomical Society, will speak at the September general meeting about Astrophotography.

■ Preview: *Andy*.

- Review: *Dick* will call a DACS member known to have an interest in astronomy, to ask if he will write the review.

- A number of ideas for publicizing the meeting were discussed.

- o *Richard* will contact a member of the Danbury AI Meetup group who may be able to help identify a speaker about Artificial Intelligence.

- o *Richard Teasdale* will contact Mike Kaltschnee to follow up his offer of an interactive session using TinkerCAD, to teach the audience about 3D Printing. Prospective general meeting date: October.

- Renovation of the Resource Center (RC): The donation of used carpeting from Meadow Ridge Senior Living Community in Redding is stalled. Andy's contact there has not responded to recent

Membership Information

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The editors welcome submissions from DACS members. Contact Richard Teasdale (*dacseditor@dacs.org*). Advertisers, contact Charles Bovaird at (203) 792-7881 (*aam@mags.net*)

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Apple User Group

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

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

Linux

Desktop publishing and website design

Mac and iPhone/iPad/iPod touch

Online/small business

Single board computers

Smartphones & Tablets

Social media

Video capture/processing

Windows

Forum

Linux Workshop

Web Site Design Workshop

Apple Workshop

Online Business

Single Board Computers

Mobile Devices Workshop

Social Media

Video

Windows Workshop

calls asking for information.

- Follow-up from the June 28th discussion of the future of DACS.

- o DACS should consider changing its name.

- o The usefulness of the weekly e-mails from DACS was discussed.

- o Andy will research how to get DACS events listed in the hospital's newsletter.

- o The scarcity of people willing to perform tasks necessary for the continued operation of DACS limits what can be done on many fronts. This group consists of the Board and only a handful of other active individuals.

- o Mike R: try to recruit journalism students who might be willing to write newsletter articles.

- o There does not seem to be any great advantage to changing the venue for general meetings (as suggested by Mike Kaltschnee).

- o The board agreed to follow up with Mike Kaltschnee on his suggestion of cross-promotion of events between DACS and the Hackerspace. Andy will contact him.

New Business

- Snacks for General Meetings:

- o Dave will approach Bert Goff regarding snacks for September, and will bring beverages.

- The poor quality of the internet connection at the Resource Center was discussed. Andy will contact Mayor Boughton's office to find out the status of the City of Danbury internet initiative.

The meeting was adjourned at 9:10 pm.

—Richard Teasdale

Membership has its Privileges!

Become a member and support DACS. Each member has access to the Community Forum, where they can post questions, the online newsletter in PDF form, group related news via email, SIG meetings, online forums, and any group-only related events, promotions, or activities. There is also an option to receive a mailed newsletter. For information on how to join DACS, <http://dacs.org/joining-dacs/>.

September Meeting Preview

Astrophotography

By Andrew Woodruff

Date: Tuesday, September 5, 2017, 7:30 p.m.
Location: Danbury Hospital Auditorium
Presenter: Shannon Calvert

SHANNON CALVERT SAYS he is learning about astrophotography. After more than a decade of work as a professional photographer, he branched



into astrophotography a year and a half ago. When he embarked on the new field, he figured that, with his extensive background in conventional photography, it would be a cinch to strap a camera on the back of a telescope.

It turned out to be more complicated than that! Not surprisingly, he needed to upgrade his equipment. He bought a new telescope. And then another one. And he discovered a lot of computer image processing that is part of astrophotography. After a year and half of effort, Shannon describes himself as still learning as an amateur. He will share some of his newfound knowledge with us.

Shannon had an interest in astronomy 25 years ago. At that time, his wife had promised him a new telescope as a gift; however children and work took priority. Eventually his teenage daughter joined a local astronomy club for a school project, and Shannon helped out. After his daughter had completed her project, Shannon found he was still interested in astronomy. He finally took advantage of his wife's gift offer and bought a used telescope. He chose a model that had earlier been his dream telescope and strapped a camera on the back end. That turned out to be an exercise in frustration.

He quickly discovered the more specialized requirements for astrophotography and upgraded to a more appropriate telescope. He explains that you need special glass to reduce chromatic aberration if you intend to use the telescope for photography. Shannon hopes to bring this telescope, which is a 4-1/2" refractor, to this General Meeting.

Shannon says he has been particularly surprised about how much computer work is involved in astrophotography. For example, most astrophotos require stacking many images. In terrestrial photography, Shannon says "you just take a photo and you're done", or perhaps you use Adobe's PhotoShop to enhance the photograph. However, in astrophotography, you are typically working with very faint objects. You may take hundreds or even thousands of separate frames and then combine them in software. The combination of many separate photographs leads to a much better result than say just leaving the shutter open for an

equivalent length of time. The computer processing also includes steps to map the sensor's dark current and other details, all intended to bring out an image in what might otherwise look like noise. Shannon will explain these processing steps, demonstrate the software, and show us the results.

Shannon vacationed for a week in July at the Maine Astronomy Retreat (<http://www.medomakretreatcenter.com/starparty.php>), where he created the two attached photographs. The Trifid Nebula (bottom left) is a star-forming region within our own galaxy, while the Triangulum Galaxy is over 2.5 million light years beyond



Shannon owns the telescope in the foreground

the Milky Way. The dark sky in Maine was useful for both of these photographs.

Shannon will show overhead slides of many more photographs. He generally focuses on galaxies and nebulae, rather than planets.



Trifid Nebula (M20)



Triangulum Galaxy (M33)

Shannon was looking forward to the solar eclipse on August 21. This was a partial eclipse in most of the country and a full eclipse in a 70-mile band from Oregon to South Carolina. Shannon is traveling to Nebraska to experience the full eclipse in an area with good prospects for clear skies. And, if the weather cooperates, he will share his photographs with us.

Shannon will describe how people

can get involved in astronomy and astrophotography. He is involved with Westport Astronomical Society (<https://www.was-ct.org/>) in Westport. This organization has an observatory with a soon-to-be-upgraded 12.5" Newtonian telescope and a 25" Dobsonian telescope (the largest available for public access in Connecticut). The observatory is open for public viewing every Wednes-

day night, weather permitting, and Westport Astronomical Society sponsors a lecture on the third Tuesday of each month.

When he is not learning about astrophotography, Shannon is a professional photographer and graphic designer. His firm HireImagination (<http://www.hireimagination.com>) is a full-service marketing design agency.

August Meeting Review

Introduction to Personal Digital Security and Privacy

Review by John Kinkopf

OUR GUEST SPEAKER at the August general meeting was Robert Hurlbut, an independent software security consultant, and co-host of the Application Security Podcast. Robert delivered an excellent talk that covered many aspects of the wide field of software security. An expert in the field, he managed to provide lots of useful information without becoming too technical.

Asked from the audience which anti-virus software he uses, Robert answered rather provocatively: none! Most in the computer security field don't use an anti-virus software . . . though he keeps Microsoft's Windows Defender on, included with Windows 10. Why? He explained that those in the security field live in a secure way, while anti-virus software usurps elevated privilege of one's system, more than any other application. We don't know if anti-viruses have faults in their code or security issues. And the majority of attacks these days are not the viruses of old, but things like ransomware that anti-viruses can't find, no way.

Updating Windows is essential to combat ransomware, and using Windows 10 over Windows 7 is his recommendation; definitely don't use Windows XP or earlier versions. Where a couple years ago there were 100,000 new virus patterns per year coming out; now it's 200,000 per DAY with which anti-viruses can't keep up. Thus, restrict your machine from executing things without your permission, meaning beware of clicking on things, and don't surf the internet as administrator, but rather in a user account. He also mentioned that there have been recent [but disputed] allegations against Russia-based anti-virus Kaspersky Labs.

Our connected world is a tracked world. Many TVs, home devices, and Echo or Home personal assistants listen to you.

Many smart devices are security openings. Stores you enter may try to hook up with your phone's wi-fi to find out things about you. Credit card purchases leave footprints. [Yahoo scans my Trenton Computer Festival emails to pitch me "Meet Trenton Singles" ads. They guess and list my email recipient's phone number ("No, an out-of-state friend's church"), and "related contacts" as I compose.]

Private photos that iPhones backed up to the iCloud were obtained by fooling celebrity victims into divulging passwords with phishing emails. [Websites derive revenue from letting Facebook, Twitter, and marketing analysts observe which can be blocked by the NoScript extension for Firefox.]

Showing an RFID shield, Robert told how his Fitbit activity tracker began flashing numbers and making strange noises at the DEF CON hacker convention. Though visitors are warned to turn off any Bluetooth device at hacker conventions, a Fitbit's listen remains on. He's refraining from connecting it to anything until he can test it for tampering on a laptop he can wipe.

Get rid of many routers known to have vulnerabilities. Buy your own wi-fi equipment, using your own router over those an ISP provides, so you're managing your wi-fi instead of them. Use WPA 2 for your home wi-fi encryption; DON'T use WEP.

Virtual Private Networks (VPN)

To provide a secure channel to network servers over the internet, companies commonly use Virtual Private Networks for off-site workers. Phones can also be connected by VPN. Free personal VPNs offer privacy, not anonymity -- you pay by providing info of your use that may be sold. Robert advises, nothing is free; don't use a free VPN. Use VPNs when you can, and only

reputable pay VPNs [\$60-\$120/yr]. [Websites rate VPNs.] Robert subscribes to F-secure Freedom; it logs attempts stopped to track you and how much transmitted data was protected; they've been a reputable provider for 25 years. PIA is a VPN recommended by publications as doing minimal logging of the user's IP address and usage. For banking Robert answered that he would use a VPN, but they raise banks' suspicions of your authenticity. Asked about using a VPN to bypass media play geo-restrictions, Robert followed up by email that he once used ExpressVPN, and gave these references:

<https://thevpn.guru/how-bypass-geo-restrictions-location-errors/>

<https://www.bestvpn.com/best-bbc-iplayer-vpn/>

Audience members pointed out that governments may require VPNs to provide their logfiles of users. A VPN user in the audience shared that PIA's encryption processing made his battery life prohibitively short, in his experience. OpenVPN is open source; keep its patches up-to-date. OpenVPN how to: <https://openvpn.net/index.php/opensource/documentation/howto.html>.

Browsers > Tor > Tails

Unfortunately, browsers track you. While Apple is good at security, their Safari browser lags; but, at least it excludes Flash, notorious for having security and reliability issues. [July News Flash: Adobe will pull the Flash plug-in in 2020.] Search engine DuckDuckGo.com claims not to track you . . . they say. URLs beginning with https provide improved communication security over http sites.

By relaying online communication through multiple nodes on its volunteer network around the world, free download Tor (The Onion Router) anonymizes a web surfer's identity and point of origin. Once the route for each use is established, one surfs the internet via Tor's modified Firefox browser - during which all other browsers must be closed for Tor's anonymity to be

Security, Cont. on page 8

Workshops

Workshop Notes: September 2017

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: Sept 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: Sept 20

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.

Single Board Computers Workshop. Explores small cheap computers like Raspberry Pi, Arduino, Netduino, Beaglebone, and more. Meets at 7:00 p.m. on the 3rd Thursday at the DACS Resource Center.
Contact: Jim Scheef (860-355-0034)
Next Meeting: Sept 21

Video Workshop. Explores all aspects of video capture and production, including both inexpensive and professional choices for cameras and editing software.
Meets on the 3rd 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 Web Development/Design This workshop is looking for a new moderator. Being a workshop leader is a great way to share information, learn new techniques, promote your business, and interact with like-minded people. Extensive web knowledge is not required, but a willingness to open a topic for discussion and enjoy the contributions and feedback from the attendees. Meets every 3rd Tuesday of the month, but repeating date can be changed if needed.
Contact avanommeren@dacs.org, or webmaster@dacs.org.
Next meeting: TBA—Look for updates



Danbury Hackerspace Events



Mike Kaltschnee

The Danbury Hackerspace and DACS are beginning to cross-promote our events. In coming months, we will list their events in each dacs.doc newsletter and in the calendar on our website www.dacs.org.






Following are the Danbury Hackerspace events for September:

- September 5, 7-9 pm - Danbury.AI (artificial intelligence) Meetup
- September 13, 6:30-9 pm - Danbury.IO (software developers) Meetup
- September 19, 7-9 pm - Danbury Inventor's Meetup
- every Thursday, 7-9:30 pm - Danbury Hackerspace open house

All of these events occur at Danbury Hackerspace, 158 Main Street, Danbury, CT. For details, see <https://danburyhackerspace.com/calendar>.

September 2017

Danbury Area Computer Society

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday																																																																																				
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Security, Cont. from page 5

effective. Downsides are that while preserving your web anonymity on your end, many websites recognize Tor exit nodes, and place restrictions. For example, Wikipedia restricts edits made through Tor; BBC blocks its use to access iPlayer. And Tor's practicality is limited by slowed browsing from bouncing communications around multiple anonymizing nodes in world locations of varying internet speeds. Only download Tor from the Tor Project website: <https://www.torproject.org>

Tor is used to access Tor sites on the dark web which Edge, Google, and Chrome won't. Because it's possible that data may still unmask you, the next step is to use Tor in Tails.

Tails (The Amnesic Incognito Live System) is a live operating system the user boots from a USB drive or DVD for the purpose of having no connection to anything on the PC, say a library PC, just the network. When your session is finished no data is saved, everything is anonymous, and traces are not left when you disconnect. But associating with, for example, your email or Facebook would give you away, of course. As using your home computer would identify you to your ISP. It's better to get a dedicated laptop with completely separate email and other accounts that you never use in ways to identify you. The Tails website: <https://tails.boum.org>.

Passwords

Early August News Flash: Robert Burr, responsible for the 2003 recommendation that secure passwords include upper and lower case letters, and symbols that render remembering passwords difficult, made the media rounds rescinding the suggestion, or "\3\@ /V\1\|D." His, and Robert's current thinking is to use long passphrases - passwords composed of words strung together into a nonsense phrase you can remember. [For example, "A wet duck only flies at midnight," "The blue sun melts the wet snow" - from TV's "Get Smart"]

The "Have I Been Pwned?" website is a free service to which one submits their email address. The site, maintained by Australian Troy Hunt, will reply if the account is found among the millions breached, along with when, what, and where it was found, say perhaps in Pastebin, where a lot of stuff happens. You may also sign up for its Notify Me service, to be notified in the event future account compromises are found, for which Pwned needs to save your email. Robert has met Troy; the site gets some financial support but he does this

mainly as a labor of love. Website: <https://haveibeenpwned.com>.

A Password Manager (software) helps you manage your passwords with one master password that should be chosen to be especially difficult to crack. Password Managers can also manage security questions. Security question answers you choose need not be truthful, and should not be obvious. The password manager Robert uses is Blur, often recommended in books, which also can create virtual credit cards for you. Blur hasn't shown up in any breaches or other problems, while 1Password and LastPass have had reported security fallibility.

Two-factor authentication (2FA)

An example: Upon entering my account password, YouTube requires that I submit a code sent to my email (or phone). Robert likes it; I feel my YouTube account is more secure. But he thinks that it's crazy to give off-hacked Yahoo his phone number. The website TwoFactorAuth.org lists whether or not websites support the additional security of 2FA.

Email

All emails are wide open. [Like my ballot at the Putnam County polling place!] They are transmitted from server to server, where hackers can view them along the hops. Even if you delete an email, the email services have made copies for sending redundancy. Be wary of clicking on email links and attachments. For privacy consider premium email services based outside the U.S. that encrypt. OpenPGP.org can be tried for encryption. A member of the audience reported using it in Gmail. The cable email accounts are worse regarding sharing your email information. Don't ever send forms with your social security number via email. [Send word documents only as PDF files, for with Word file hidden histories a recipient could work back all your revisions, back to the resume I started writing this review over!]

Credit Cards

Robert said your health care records are worth even more to criminals. Check your credit report annually, at the beginning of the year. A few months later check Experian and Transunion for whether anyone is opening an account in your name. Robert found someone had opened an account under a previous address. One can download them or receive them by regular mail, but don't have the reports sent by email. Consider put-

ting fraud alert and credit freezes on your credit card.

Beware of credit card skimming. July News Flash: wafer-thin "insert skimmers" stealing bank card information at ATMs are proliferating. August News Flash: tiny gas pump skimmers transmitting credit card information, as Robert mentioned, are featured on TV news. Robert mentioned that credit cards with chips are partially better, but not as good as in Europe, where a PIN is required, too. At locations credit card skimmers target, it's better to use a prepaid card or Apple Pay. But Apple Pay's one-time token uses near field communication (one needn't contact, but be in proximity) and there are devices the hacker can use to connect and obtain information.

Iconic hacker Kevin Mitnick advises having someone else buy your debit cards so videocameras don't record that it's your purchase. NSA whistleblower Edward Snowden did this, along with using Tails.

Mobile Security

Update to the latest operating system version and patches. [Ha! Google no longer supports Android versions predating 4.4.] For iOS definitely get the latest version, 10.3.3, which patches a chip vulnerability that was exploited at the Black Hat hacker conference. Passwords or passcodes protect your device. Adjust your permissions per app to, "No, no, no, no." Robert keeps his Uber car service location permission set to Never, except for the few minutes he needs to switch the permission to Always to use the app. Robert answered how to, for an Android phone, go to Application Manager, click on the app, and it should show you the permissions, at least since the 6.0.0 Marshmallow release. Anything version 5 or below, you couldn't do this. For Android you definitely want an anti-virus. Sync, back-up your data, and install a phone finder app. It is very important to turn off wi-fi and Bluetooth when you're not home or not around trusted endpoints, which is nearly everywhere. Turn them off when they are not needed.

Pineapple is a popular device at the hacker conferences. If your phone has ever been connected by wi-fi it retains that information, and connects when in range to any of them when its wi-fi is on. The Pineapple connects to your phone, without your knowing, by pretending to be one of its former wi-fi connections.

The most secure mobile phones are the basic flip phones, turned off [in an RFID shield]. Tether your mobile phone to a hotspot in lieu of wi-fi or Bluetooth. Law enforcement uses fake cellular towers to spy. [August News Flash: Android mes-

saging apps were found carrying SonicSpy trojanware to spy on audio, take control of phone cameras, and nearly all of a phone's functions.]

Security News Sources

Robert said that he keeps current by following several security news sites on Twitter. KrebsOnSecurity.com is an oft-referenced website, widely sourced when it detailed how customer accounts were

hacked, though Target's air-conditioner computers. [One can subscribe to his email newsletter.] Robert has Google searches set up to feed emails when certain terms come up such as router or VPN. One audience member subscribes to Wire's news feed, another visits <https://www.social-engineer.org>.

Books Robert Recommends The Complete Privacy and Security Desk

Reference: Volume 1: Digital - Michael Bazzell and Justin Carroll

Hiding from the Internet: Eliminating Personal Online Information - Michael Bazzell

Personal Digital Security: Protecting Yourself from Online Crime - Michael Bazzell

The Art of Invisibility - Kevin Mitnick

How to Be Safe in the Age of Big Brother and Big Data - Kevin Mitnick

Photo Apps

Picture Management - Something we all need

By Phil Sorrentino

WITH THE ADVENT of the smartphone, a camera is always only an arm's length away, because your smartphone is probably in your pocket or your handbag. And having the camera so available means we take, and hence have, many more pictures (and maybe even videos). With this increased number of pictures comes the problem of organizing or managing them so we can access them when they are needed. The picture may not seem so valuable if you can't find it when you want to show it to someone.

I think it was very innovative and forward thinking of Steve Jobs at Apple to include a camera in the original iPhone. Today, the camera is probably the second most important reason why you have a smartphone (the first being the fact that the smartphone can make phone calls). The cameras, built into smartphones, have really improved in the short time that smartphones have been in use. Originally the cameras might have only been a mega pixel or so in picture size (the original iPhone had a 2-mega pixel camera); now the cameras have as many pixels as some professional cameras (the iPhone 7 has a 12-mega pixel camera). And, though the quality of the pictures from the earlier smartphones may have been only acceptable, the quality of the pictures from many of today's cameras is only surpassed by pictures from very expensive professional cameras.

So, with all these pictures, we naturally look for help to organize them, and fortunately help comes in the form of digital picture management software. Photoshop Elements is a possible solution with a price tag of around \$80.

Picasa has been a very popular, free, picture editor and management software

application. Unfortunately, Picasa which was available from Google since July 2004, was discontinued February 2016. Google is recommending its cloud-based "Google Photos" be used in place of Picasa.

"Google Photos" is not the same as "Photos" that you will find on a Windows 10 computer in the "All Apps" list. The Windows 10 Photos App is a photo viewer that provides minimal picture



lution that counts against your 15GB quota". The "High Quality" selection produces "Great visual quality at reduced file size", as stated on the website. (This 15GB of storage appears to be separate from your "Google Drive", if you have one, because there is a setting to "Show Google Drive photos and videos in your Photos library".)

The photos.google.com website states "the photos are automatically organized and searchable", and "the photos can be organized by people, places, or things". The website tutorial also indicates that you can "Easily edit and share" your photos. So, it seems like once your photos are uploaded to the cloud, they can be organized by your needs, and any photo can easily be accessed.

Another free photo management application is Photo Gallery, which was

available from Microsoft but unfortunately had its support ended January 10, 2017. If you have a copy of Photo Gallery you will see that it can organize your pictures, but it also has a few neat features. One of these features is "Panorama". Photo Gallery allows you to create panoramas from (overlapping) pictures that were sequentially taken of a wide scene. The picture interfaces are stitched together, resulting in a wide panorama of the original scene. If the lighting was consistent and the overlap was easy for the software to find the edges, with a little cropping the results were quite good. Panorama stitching is not that unusual a feature, but Photo Gallery also has a feature called "Photo Fuse". This feature allows you to correct many unwanted things in a picture. To use this, you have to take multiple pictures of a scene that has some unwanted movements, like people moving in the background, or children turning their heads at inconvenient times. Once you have a number of images (maybe 5 or 6) of basically the same scene, you're ready to use Photo Fuse. Photo Fuse lets you choose which picture will be used for a given selectable rectangular area. If there is a person in the background in picture 1 but not in picture 4, then you can use picture 4 for the rectangle that shows the unwanted person. Similarly, you can customize many rectangles with sections from other pictures. When you are finished, all the unwanted people or unwanted movements may be eliminated. This type of feature is typically only found in some very expensive software packages. It reminds me of "Layers" in Photoshop Elements, but "Photo Fuse" is not nearly as powerful. Photo Gallery may still be available from the Microsoft Download site, but without support from Microsoft it may not be something you want to be dependent on. But if you have a copy, Photo Gallery certainly has a lot of really great features, and is fairly easy to use.

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Back to Basics

All that Glitters is not Chrome

By Greg Skalka

I LOVE MY CHROMEBOOK! It's a very handy thing to have when you want some information off the Internet quickly. I don't have a smart phone, so the Chromebook is what I go to when I want to know the locations, hours or phone number of a business, what traffic or weather conditions are like or the answer to any other search question. I keep my Acer Chromebook 11 on our kitchen table so it is available for instant use. It is small and light, yet has an 11.6" screen and a full keyboard, so I find it much more useful (and usable) than a tablet.

When I bought my Chromebook over a year ago, I thought I understood the limitations it had in needing to be connected to the Internet for most uses, and its limited storage and processing power. It has exceeded my initial expectations and I find I often use it nearly as much as my Windows 7 laptop. I love that it boots in about ten seconds, has a very long battery life and is very portable, so I find I'm taking it more and more in situations where I'd otherwise take my 14" laptop. In spite of its advantages, I do still continue to find new annoying shortcomings in the Chrome OS, and difficulties figuring out how to perform a particular task or change a setting. Though I've come up with work-arounds for some of its limitations, my Chromebook still has enough tarnish spots in its capabilities that I doubt it will ever be a complete substitute for my laptop.

I own a lot of computing devices. I probably have more than most people, though I'm sure there are some out there that have more. I admit I am hanging on to some devices that have not been used in many years (that is another story), but there are in my household almost a dozen that I myself have used at least once in the last year. Most run Windows (two laptops, three desktops and a PDA). I don't feel I'm closed-minded, though, as I do have an Android tablet, an iPad mini (iOS) and two Chrome OS devices (Chromebook and Chromebit). I've nothing against Linux, but you don't normally find it in stores on new devices, and I've not yet found a compelling reason to install it on one of my existing devices.

From this, you would probably assume (correctly) that I use Windows most of the time. You could say I was "raised" on Windows, so I tend to judge, for good or bad, all other computing user interfaces with Windows as a reference. As an electrical engineer, I spend most of my work days working on documents, spreadsheets and designs, using software running on Windows PCs, with the traditional keyboard and mouse user interface. I've grown accustomed to the features, capabilities and limitations of Windows on reasonably powerful Intel-based computers, typically with lots of memory and storage. In spite of the (often unfortunate) changes to the Windows user interface over many years and versions, I usually find it easier to adapt to the next thing Microsoft throws at me than something coming from a seemingly completely different mindset, like iOS or Android.

I was able to figure out how to get around on the web pretty easily on the Chromebook. The OS is based heavily on the Chrome browser, which I use most of the time at work. Though I could get a Bluetooth mouse to use with my Chromebook, the touchpad has unique features that allow me to do almost everything easily. I don't notice any real difference in the Chromebook's ability to serve web pages as compared to my i5-processor-equipped Win7 laptop with IE; processing power is not a big factor in traversing the web.

A main point of contention for me in all non-Windows devices I've used is the file manager. I'm so used to the Windows File Manager that everything else seems alien. The Files app in Chrome is fairly similar, but I only recently found the way to see how much space is available on a drive (it is under "Settings" when looking at that drive). I still don't know if iOS even has a file manager; I have photos on my iPad that I have yet to figure out how to copy off.

My Chromebook uses at least half of its 16G of SSD memory for the OS and apps, and it says even the remaining memory is subject to use by the system. I bought a 128GB USB3 Flash drive to use with the Chromebook, which seems to work great.

It would have been more useful if the Chromebook's SD memory slot were the type that keeps the memory card totally inside the body of the Chromebook; unfortunately, the SD card sticks out and is at risk for damage or breaking off.

In addition to saving and editing files in Google Docs on the Chromebook, Microsoft Office files can often be edited in "Office Compatibility Mode". This works even when working offline (no Internet connection), and allows me to take my Chromebook to meetings to take notes, or write newsletter articles on it while riding in the car. It appears to be compatible only with the most recent Microsoft Office file formats. I've had good luck with Word documents, and can edit PowerPoint slides, but I had issues the one time I tried editing an Excel spreadsheet. If I plan on taking notes or editing files offline somewhere, I always test opening the file I'm planning to edit before I leave home.

One unnerving feature of the office compatibility mode is its lack of a "save" feature in the menu. The first time I opened a Word file to edit, I made a few test changes and then closed the document. Fortunately, the changes were present when I opened it again, but I still didn't fully trust it. I finally noticed that it saves each keystroke of change back to the file as it goes; as I would press a key to add a letter, the access light on the external USB Flash drive would flash. While this saving method ensures you don't lose changes, it does wear out the Flash drive's solid-state memory faster in writing to the drive so many times.

Chrome OS is compatible with an extensive list of file types, including most office, media and image files. It can open .pdf files as well as handle compressed files like .zip and .rar. I did recently find out that Windows Media Video (.wmv) files cannot be opened by a Chrome OS device. I had created a photo slide show for my dad's 80th birthday, with the result being a .wmv video. While I did find one app that vaguely mentioned allowing .wmv files to be viewed, most of the search results for this problem suggested converting the video to a supported file type. In the end, I used my Win7 laptop to play the file.

Even files that are supported by Chrome can have problems if a lot of hardware horsepower is needed. I have an auto dashcam that records video in HD as .mp4 files. I can connect the dashcam through USB to my Win7 laptop, which can easily play the video files stored on its memory card. There might be a few slight glitches, but playback appears pretty smooth. If I connect the dashcam to my Chromebook, it can play the video files, but it takes a long time

to process before they initially start playing, and the playback is very jerky.

The Chrome OS has its own web store, but since it does not have a large following, there are not that many offerings as compared to the Android app store. There are a couple of VPN apps, but the VPN service I subscribe to, Private Internet Access, does not appear to support the Chrome OS at this time. I was surprised to see that TeamViewer was available as a Chrome app. I've looked through the apps offered a number of times, but have yet to find one I wanted to install at the time.

Chrome OS is also not supported that well by third-party hardware vendors. The Patriot Aero external Wi-Fi hard drive I tried to demonstrate earlier this year has apps to support its use with Android and iOS

devices, but they don't have one for the Chrome OS. I have some Western Digital My Passport USB3 external hard drives, which can be set up to use password protection and data encryption. My Chromebook can see and use the drives that are not protected, but cannot use a drive that has protection / encryption enabled, as the program on the drive that is used to enable and disable protection is not compatible with Chrome. The universal in Universal Serial Bus only applies if there is no additional software required.

Printing is another problem issue for Chromebooks, as printers would need drivers. I've not seen any printers that advertise supporting Chrome OS devices. Google claims printing can be done using Google Cloud Print. I've read some about it, but have

not yet been able to figure it out. It is made more confusing by Google having a Chrome browser and a Chrome OS. So far, I've settled for taking my files to a Windows PC to print.

Chromebooks offer a lot of promise for speedy and simple computing, but they don't always fully deliver on everything a user might want to do. I love my Chromebook and will continue to use it, but it appears it can't do everything I need. I guess I won't be giving up my Windows computers anytime soon.

GREG SKALKA is president, Under the Computer Hood UG, CA (www.uchug.org; [president\(at\)uchug.org](mailto:president(at)uchug.org)).

This article appeared in the January 2017 issue, Drive Light, and is reprinted by permission.

Image, Cont. from page 9

There still are a few free Photo Editing and Management applications available. A quick check finds Zoner Photo Studio Free, StudioLine Photo Basic Free 3, Jet Photo Studio 5, XNView MP, Faststone Image Viewer, and DigiKam, but I haven't tried any of them yet. A quick look at the features makes me wonder if there will be a replacement for Photo Gallery. If you are willing to spend a few dollars, there are a few possibilities that may be a good replacement. Photoshop Elements, Magix Photo Manager, and Acdsee come to mind.

Keep in mind that Picture Management software typically does not re-arrange or move your picture files or folders. Picture Management software just acts as a lens viewing all the pictures in the picture folders that you let it use, usually with an "Include folders" setting. So, in my opinion, the only way to really manage your photos is to create a hierarchical arrangement of folders using File Explorer and then manage that set of folders yourself, again using File Explorer. And then let your Photo Management software use all of those folders. Depending on the size of your picture collection, this may take a big effort and a firm commitment to create, organize and maintain the folders. But whatever method or software you decide on, do it quickly, because your picture collection is probably increasing, even as we speak.

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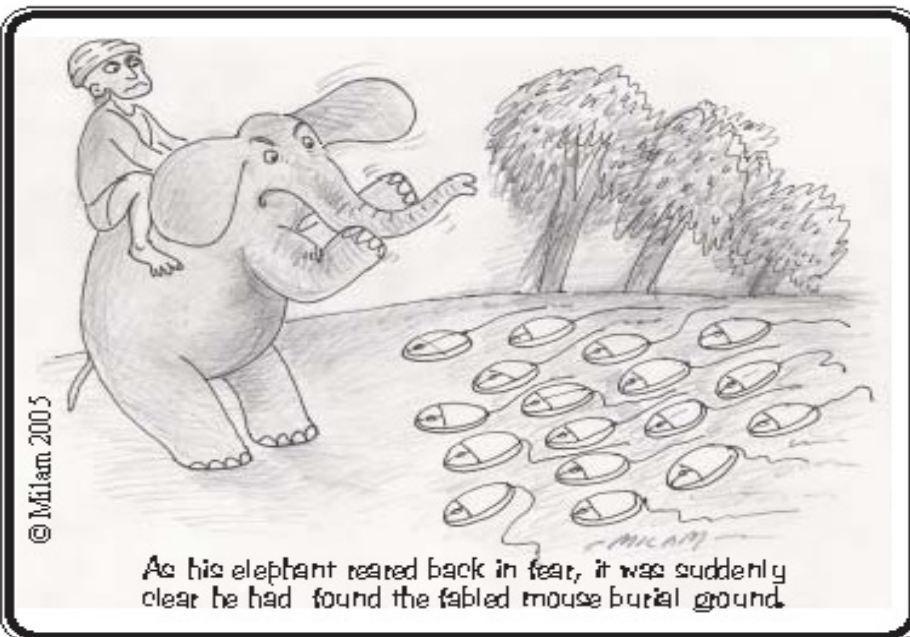
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Read the Blog on dacs.org

As an ongoing project, Jim Scheef has been posting to a blog on the club's website. You can read these posts at <https://dacs.org/category/news/>. 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).

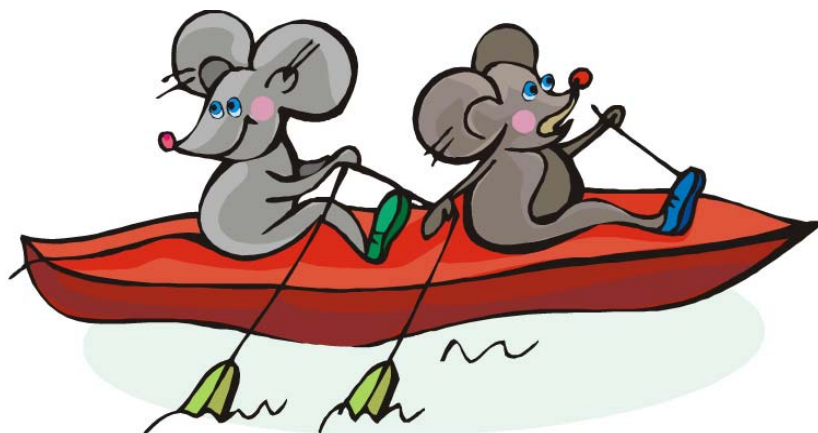
Content must be related to the club's mission of learning and sharing information about computers and how we use them. There is tons of interesting and valuable information to share and one person cannot find and post it all.

If you're interested, email the webmasters.



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November 7

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Mike Kaltschnee

December 5

TBA