

**PATACS/OPCUG
Saturday, April 16 Meeting 1 PM
Nanotechnology and the Diagnosis
and Treatment of Disease
Cindi Dennis, NIST**

“There is plenty of room at the bottom” is a popular quote by Richard Feynman now regarded as seminal in the history of nanotechnology. However, what does it mean? What is nanotechnology? Where does nanotechnology play a role in modern life? Here, we’ll focus on the significant interest in nanotechnology for the diagnosis and treatment of diseases. Considering just the case of magnetic nanoparticles (MNPs), we’ll discuss how MNPs are used in imaging and assays to diagnose if someone has a disease (such as cancer and clogged arteries/arteriosclerosis). We’ll also explore the various ways, such as via magnetic nanoparticle hyperthermia and drug delivery, that MNPs can be used to treat diseases, especially cancer. We’ll conclude with a discussion of the benefits and drawbacks of using MNPs in conjunction with or as alternatives to conventional treatment methods.

Dr. Cindi Dennis is a research scientist at the National Institute of Standards and Technology in Gaithersburg, MD. She earned her B.S. from Carnegie Mellon University and her doctorate in condensed matter physics from the University of Oxford, UK. Her research interests focus on the metrology of magnetic materials (of which she is the project leader), with a particular emphasis on magnetic nanoparticles and their biomedical applications

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Learn 30

**Recipe Management Software
Presented by Leti Labell**

If you like to cook, you probably know there are millions of recipes available on the internet. But how do you find the good recipes? And how can you keep track of recipes you have found? This presentation will briefly address the most popular sources for recipes on the net, and how many of those sites have capabilities to flag recipes as “Favorites” that you can find again later. The bulk of the presentation will focus on one specific way to organize your recipes, no matter where you found them. The Paprika Recipe Manager is a program that runs on multiple platforms (PC, Mac, iPhone, iPad, Android, Kindle Fire, and Nook). You have a single recipe database that is stored in the cloud, so it is accessible from whatever platforms you use. The various features of the program will be demonstrated, including web importing, meal planning, and grocery lists.

Leti Labell is an OLLI member with a lifelong love of computers. She has an MS in computer science, and is a Certified Information Systems Security Professional (CISSP). However, even more than computers, she loves cooking, collecting cookbooks, and collecting recipes.

Leti retired in 2014 from a long career in software development and general project management in the telecommunications industry and as a contractor to the federal government.



Open Source Software of the Month

By Geof Goodrum, Potomac Area Technology and Computer Society
www.patacs.org linux (at) patacs.org

Kernel Source – v4.4.3. <http://www.kernel.org/>. Free GNU General Public License source code for all platforms by the Linux community.

Periodic Table of Elements – v1.0.12. <http://www.seanpattiprojects.org/periodic-table-of-elements>. Free GNU Lesser General Public License source code and executables for Microsoft® Windows® and GNU/Linux® by Sean Patti. Periodic Table of Elements is a quick reference tool that allows you a quick glance to get general information about an element. The program is written in C++ for the Qt framework, and is for educational purposes.

Details on Rhenium

Atomic Information

Element Name: Rhenium	Atomic Radius: 217 pm (Van der Waals)
Atomic Number: 75	Melting Point: 3186 °C
Atomic Symbol: Re	Boiling Point: 5596 °C
Atomic Weight: 186.2	Oxidation States: 7, 6, 4
Electron Configuration: [Xe]6s ² 4f ¹⁴ 5d ⁵	

Isotopes

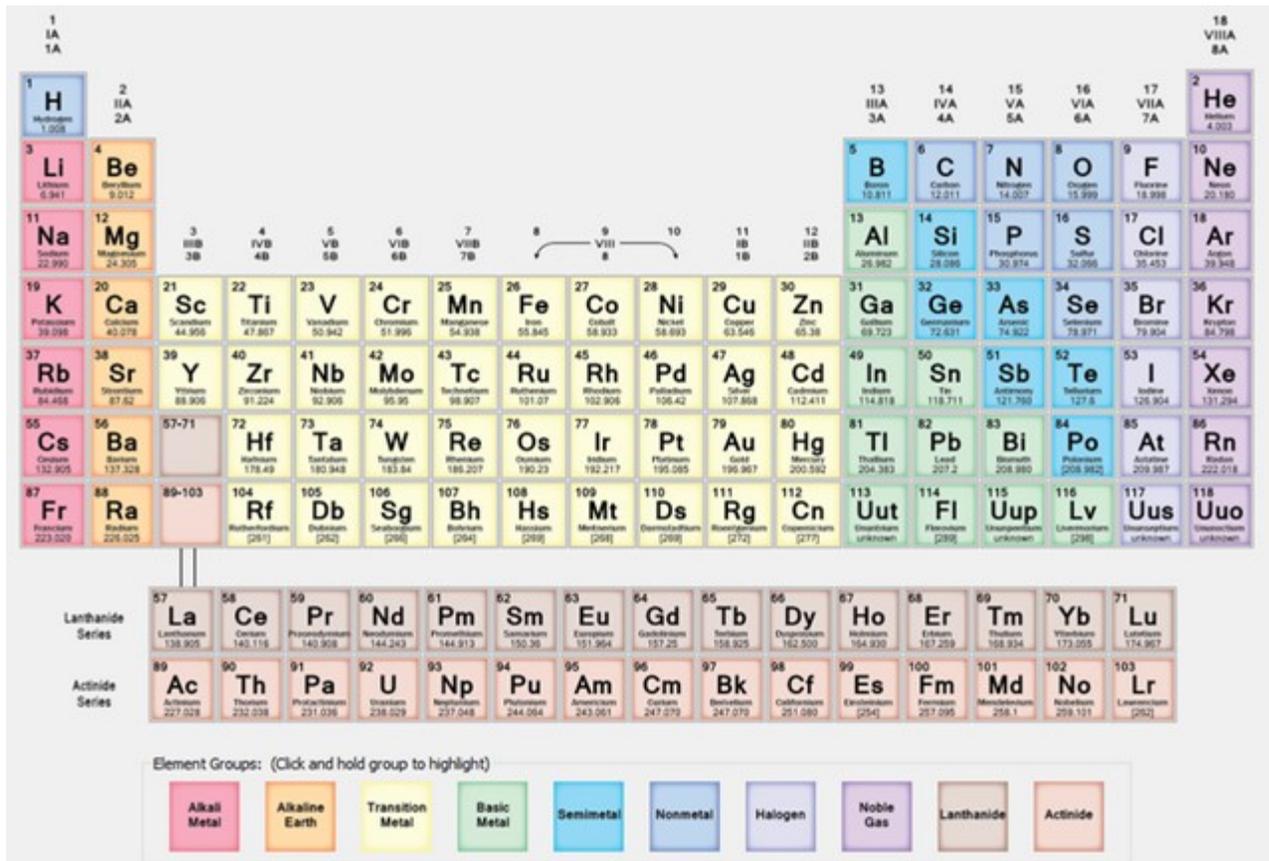
Isotope	Half Life	Isotope	Half Life
Re-182	2.67 days	Re-185	Stable
Re-182m	12.7 hours	Re-186	3.77 days
Re-183	70.0 days	Re-187	4.1E10 years
Re-184	38.0 days	Re-188	16.94 hours
Re-184m	165.0 days		

Facts

Date of Discovery: 1925
Discoverer: Walter Noddack
Name Origin: From Rhines provinces of Germany
Uses: filaments for mass spectrographs
Obtained From: gadolinite, molybdenite



Electron Shell



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Beyond the Horizon – v1. <https://www.pyweek.org/e/unifac20/>. Free License Python code for Microsoft® Windows®, Apple® OS X® and GNU/Linux® by Universe Factory 20 (Christopher Night and Mary Bichner). The Alexandria array, a set of spaceborne data cores carrying the combined cultural wisdom of a faraway civilization, has gone missing. Their trajectory brought them right to the Charybdis anomaly, from which only data can escape. Someone willing to recover the lost data would have to be willing to become data themselves....

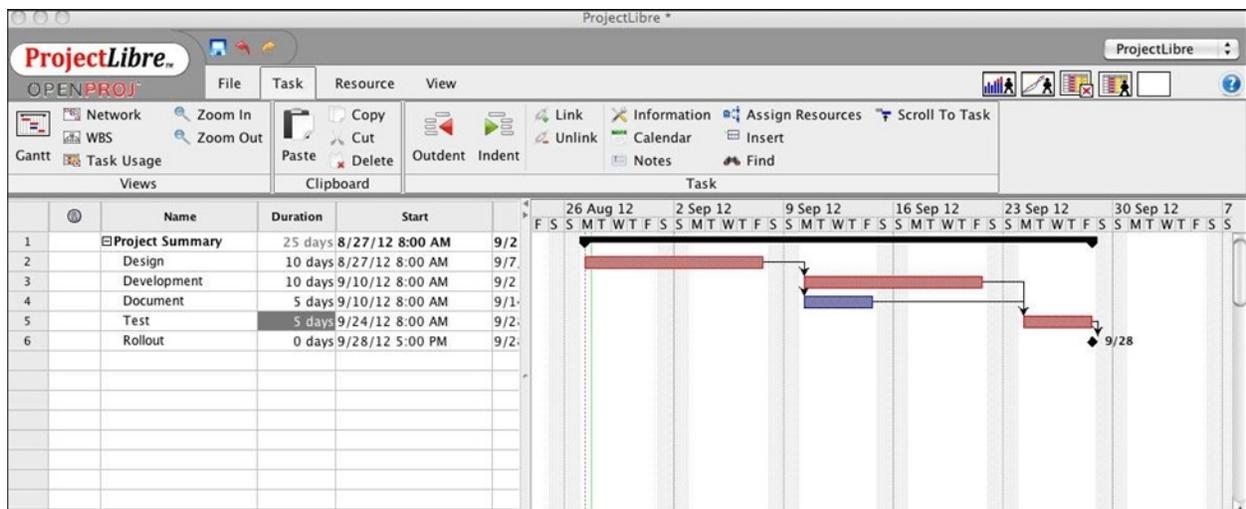
Beyond the Horizon won the PyWeek 20 (August 2015) game challenge for Teams, for which team could develop the best game in Python programming language in one week. The Windows version is available as an executable; Linux, Apple OS X and other platforms require Python 3 language support.



ProjectLibre – v1.6.2. <https://sourceforge.net/projects/projectlibre/>. Free Common Public Attribution License source code and executables for Microsoft® Windows®, Apple® OS X® and GNU/Linux® by Laurent Chretienneau and The ProjectLibre Team. ProjectLibre is the leading open source alternative to Microsoft Project, an office application to organize and manage project resources and schedule. It has been downloaded over 2,000,000 times in over 200 countries and has won InfoWorld ""Best of Open Source"" award. ProjectLibre is compatible with Microsoft Project 2003, 2007 and 2010 files. You can simply open them on Linux, Apple OS or Windows.

ProjectLibre key features:

- Compatibility with Microsoft Project
- Gantt Chart
- Network Diagram
- WBS/RBS charts
- Earned Value Costing
- Resource Histograms



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Outlook CalDAV Synchronizer – v1.19.0.

<https://sourceforge.net/projects/outlookcaldavsynchronizer/>. Free Affero GNU Public License source code and executable plug-in for Microsoft® Windows® by Gerhard Zehetbauer and Alexander Nimmervoll. This is a free Outlook Plugin, which synchronizes events, tasks and contacts between Outlook and Google, SOGo, Horde or any other CalDAV or CardDAV server. Supported Outlook versions are 2016, 2013, 2010 and 2007.

This project was initially developed as a master thesis project at the University of Applied Sciences Technikum Wien, Software Engineering Degree program. Outlook CalDav Synchronizer is Free and Open-Source Software (FOSS), but you can support the project by donating on Sourceforge or directly within the About dialog of our Plugin.

- Features include: free and open-source software (FOSS), the only free Outlook CalDav plugin (AGPL license)
- tested CalDAV servers: SOGo, Google Calendar, Horde Kronolith, OwnCloud, SabreDAV, Synology NAS, GroupOffice, one.com, Yandex, OpenX-change, Posteo, Landmarks, Kolab, Zoho Calendar, GMX, Tine 2.0

- Supporting OAuth2 for Google two-way-sync, two-way-sync
- SSL/TLS support, support for self-signed certificates
- Manual proxy configuration support for NTLM or basic auth proxies
- Autodiscovery of calendars and addressbooks
- configurable sync range
- sync multiple calendars per profile
- sync reminders, categories, recurrences with exceptions, importance, transparency
- sync organizer and attendees and own response status
- task support
- Google Tasklists support (sync via Google Task Api with Outlook task folders)
- CardDAV support to sync contacts (distribution lists planned)
- sync contact pictures, categories, notes and x509 certificates
- time-triggered sync
- change-triggered sync
- manual-triggered sync
- Category Filtering (sync CalDAV calendar to Outlook categories)
- map CalDAV server colors to Outlook category colors
- show reports of last sync runs and status
- System Tray/Icon with notifications

★ 4.9 Stars (41)
 ↓ 2,769 Downloads (This Week)
 📅 Last Update: 5 days ago

sf **Download**
 OutlookCalDavSynchronizer-1.23.0.zip

Browse All Files

Musings of an Apple Tyro

Lorrin R. Garson

First “In the Wild” Ransomware for Apple:

In early March, the first successful ransomware targeting Apple computers was reported. Hopefully by the time you read this the problem will have been sorted out. The ransomware is called “KeRanger” and infects Macs by being attached to a BitTorrent client for OS X. After “KeRanger” is installed it lies dormant for three days then starts encrypting files by connecting with servers over the anonymous Tor network. It seems “KeRanger” is also attempting to encrypt Time Machine backup as well. If you use a BitTorrent client versions 2.90 or 2.91 on your Apple computer you are strongly advised to go to

<https://www.transmissionbt.com/> to upgrade to version 2.92. Also see <http://cnet.co/1P3LNI5> for general information.

PC Sales Down but Apple Up:

Sales of PC continued to drop in 2015 but not for Apple, which experienced the opposite by increasing sales by 5.8% over 2014. As can be seen in Figure 1 (from <http://bit.ly/1TjnWdG>), Apple now occupies the 5th position in PC sales with Lenovo being number one.

Preliminary Worldwide PC Shipments for 2015

	2015 Shipments	2015 Market Share (%)	2014 Shipments	2014 Market Share (%)	2015-2014 Growth (%)
Lenovo	57,123	19.8	58,956	18.8	-3.1
HP	52,551	18.2	54,996	17.5	-4.4
Dell	39,159	13.6	40,499	12.9	-3.3
Asus	21,198	7.3	22,671	7.2	-6.5
Apple	20,741	7.2	19,598	6.2	5.8
Acer Group	20,340	7.0	24,015	7.7	-15.3
Others	77,624	26.9	92,945	29.6	19.7
Grand Total	288,735	100.0	313,681	100.0	-8.0

Figure 1

Sales of PCs dropped 8-9% in 2015 compared to 2014 (see <http://bit.ly/1ok6gn3>). In fact, sales of PCs have dropped in the past four consecutive years as the public increasingly uses smart phones.

Backup of Especially Important Data:

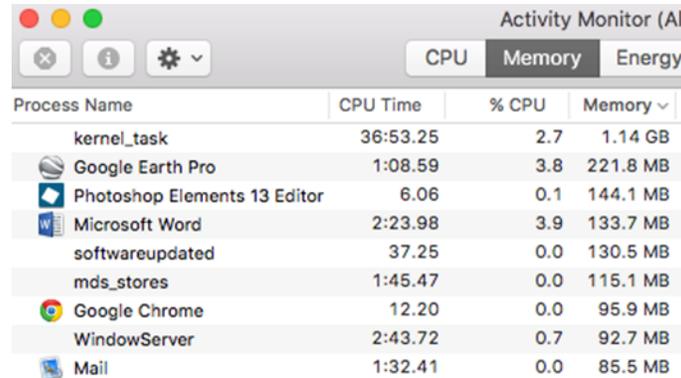
Certainly it is prudent to backup your entire computer system, but there are some data that are particularly important. I suggest these are data associated with OS X Mail, Contacts, Calendars, Reminders, and Notes. See <http://apple.co/1TRZNgv> for excellent information on how to backup these data plus other data types associated with iCloud.

Monitoring Memory Use:

If your Apple computer seems to be running slow, it would be sagacious to check memory usage to see if that’s the bottleneck. In fact, it may be good practice to check memory usage from time to time just to see what things look like under normal conditions and take notice of which programs are memory hogs. To see how memory is being used on your machine (using

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OS X El Capitan v. 10.11.3), go to the Utilities folder (directory) and double-click on “Activity Monitor.app”. Then left-click on the “Memory” tab and sort that column so that the programs using the most memory are at the top of the column. As can be seen in Figure 2 for my iMac, the kernel uses the most memory (1.14 GB) followed by Google Earth Pro, Photoshop Elements 13 Editor, Microsoft Word, etc.



Process Name	CPU Time	% CPU	Memory
kernel_task	36:53.25	2.7	1.14 GB
Google Earth Pro	1:08.59	3.8	221.8 MB
Photoshop Elements 13 Editor	6.06	0.1	144.1 MB
Microsoft Word	2:23.98	3.9	133.7 MB
softwareupdated	37.25	0.0	130.5 MB
mds_stores	1:45.47	0.0	115.1 MB
Google Chrome	12.20	0.0	95.9 MB
WindowServer	2:43.72	0.7	92.7 MB
Mail	1:32.41	0.0	85.5 MB

Figure 2

In Figure 2, the display has been truncated on the right side and the number of processes (programs) continues on for several pages. This is an abbreviated version for the purpose of illustration.

Computer Uptime:

Want to know how long your Apple computer has been up and running since last rebooted? There’s an app for that called “Uptime”, which costs \$0.99. Don’t bother. Go to the Utilities folder and start up “Terminal.app”. Key “uptime” and press return and there you have the information.

Information About All Things Apple:

Expand from <http://bit.ly/1pkIJ78> to create a list of interesting sites for Apple information. Not all of the 20 cited Web sites will be useful; pick perhaps 6-10 of the best. Also, Google “apple computer web sites” and see what fall out. And then there are other interesting Web sites...

See <http://bit.ly/1QRpvLP>.

See <http://bit.ly/1MbDfiv>.

See <http://bit.ly/1pcOGRU>.

Really Big SSD:

Everyone is aware that capacity of disk drives has greatly increased over the years. Samsung is now shipping a 15.36 TB solid state drive that fits in the palm of your hand (Figure 4). All this in a 2.5-inch enclosure. A big book, around 1,000 pages, contains about 5 MB of text. This drive would hold 3 million such books! See <http://bit.ly/1MbDGcy>.



Figure 4

Noteworthy Web Sites

See <http://alternativeto.net/> to locate software alternatives. This is a good source to find alternatives for Windows-based machines, Apple devices, Linux computers and more.

See <http://krebsonsecurity.com> for an excellent, authoritative source of what is going on in the area of security breaches and related topics. It’s a “Who’s Who” of who is being hacked and scammed.

If You Missed It

By Geof Goodrum, Potomac Area Technology
and Computer Society
April 2016 Issue, PATACS Posts
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Director1 (at) patacs.org

February 20, 2016 (Fairfax)

Paul Howard welcomed guests and members of the OLLI PC Users Group (OPCUG) and PATACS to the meeting. One of the guests heard about the meeting from the nice writeup about PATACS in the February Fairfax Times (<http://www.fairfaxtimes.com/>) Senior Section that Director and publicity chair Henry Winokur submitted. Other guests heard about our meeting through OLLI and the Fairfax County Citizens Police Academy Alumni Association (<http://www.fccpaaa.net/FCCPAAA/Welcome.html>).

Paul also thanked Steven Wertime for his assistance lining up presenters for upcoming meetings in March and May.

[This editor appreciated the member compliments on the meeting writeups. The PATACS Board of Directors plans to issue a brief online survey for members about newsletter content at a later date.]

Q&A Session The following are some of the audience Questions and Answers from the meeting.

Q: Does anyone have experience with Two Factor Authentication (2FA, https://en.m.wikipedia.org/wiki/Two-factor_authentication)?

A: Geof Goodrum uses 2FA to secure his Google account. In addition to a user name and password (something known, first factor), a mobile app (something owned, second factor) generates a unique access code that must be entered to login (<https://www.google.com/landing/2step/>). Other services have similar approaches.

Q: Is a HP LaserJet printer compatible with Microsoft Windows 10?

A: No one at the meeting had an answer [but they are supported; see <http://support.hp.com/us-en/document/c04658195>]. However, HP LaserJets were not a bad investment given how long they last. Gabe Goldberg said that he only had to replace the rollers on his printer after many years of service [same for my HP LaserJet 6MP].

Recommendation: Gabe Goldberg just switched two cell phone numbers to Consumer Cellular (<https://consumercellular.com/>), a reseller of AT&T cellular service. Gabe found the customer service to be “stellar” and the web site is great.

Comment: An audience member reported that Symantec Norton 360 antivirus/anti-malware (<http://us.norton.com/360>) had a software issue with the Mozilla Thunderbird email client and quarantined a file. A Norton software update resolved the issue. [The following link provides advice on configuring antivirus software to work with Thunderbird: http://kb.mozillazine.org/Thunderbird:_FAQs:_Anti-virus_Software]

Q: Are OLLI members eligible for “free” access to Microsoft Office 365?

A: George Mason University students and teachers are licensed, but check with the OLLI office about OLLI members. Also note that students can share access to Office 365 [see Lorrin Garson’s “Musings of an Apple Tyro” article in the March issue of Posts]. Another member suggested checking with your employer whether their licensing agreement allows software and services to be used at home. Also noted was that Microsoft provided Office 365 discounts at the PATACS meeting held at the Microsoft Store in Tysons Corner. [License terms for Microsoft products are available at <http://www.microsoft.com/en-us/useterms>.]

Learn 30: Raspberry Pi by Alan Day

Guest presenter Alan Day talked about the Raspberry Pi (<https://www.raspberrypi.org/>), a British project to create low cost, low power microcomputers for educational use. The Pi is typically used as a controller (lights, motors, robots, drones), print server, network router and access point, or as a desktop computer suitable for basic web browsing and office applications.

There are several Raspberry Pi models: A, B, B+, B2, and the Zero [the Pi 3 was released after the meeting, <https://www.raspberrypi.org/blog/raspberry-pi-3-on-sale/>]. Alan brought his Model B2 and Zero, which he controlled via wireless network connection from his tablet. The Pi Zero, which was released at Thanksgiving, costs only \$5 for a basic board (microSD cards for storage, cables and case extra). Alan warned about using the proper USB cables, as he was sold the wrong USB cable type for his Pi at the store.

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Keyboard, mouse, and peripherals connect to the Pi via USB. The primary operating system is a variant of Debian GNU/Linux called Raspbian (<https://www.raspberrypi.org/downloads>), but there is also a version of Fedora GNU/Linux available (http://fedoraproject.org/wiki/Raspberry_Pi), and Microsoft ported a version of Windows 10 for embedded applications (<https://dev.windows.com/en-us/iot>). [It's worth noting that the Raspberry Pi DOES NOT run Microsoft Windows desktop applications.]

Alan used his wife's MacBook to prepare a microSD card formatted with the FAT32 filesystem, downloaded the operating system, unzip'd and copied files to the card, and inserted the card in the Pi. Then connect the USB mouse and keyboard, connect video monitor via the miniHDMI connector and boot. Once the Pi's network is configured, you can log into it without keyboard, mouse, or monitor, as Alan demonstrated.

Alan uses the Server Auditor app (<https://itunes.apple.com/us/app/serverauditor-ssh-shell-console/id549039908?mt=8>) on his iPad to open a terminal to control his Pi's (Alan prefers to use a text console instead of a graphic interface). Alan also likes to use net analyzer to discover IP addresses on the network.

There was a discussion about Pi video output and compatibility with computer video monitors. The primary video [and audio] output is via HDMI [the Zero uses a Mini-HDMI connector], but the Pi also has composite video output [connector type varies by model]. TVs support one or both of these connections, but computer displays may not.

Alan uses the Pi to capture streaming audio, edit and tag MP3 audio clips, backup copy DVDs (using ddrescue), generate QR codes (https://en.wikipedia.org/wiki/QR_code), run a web server, and develop software for a web site.

And why did Alan choose a Raspberry Pi to do all of this? The beauty of the Pi is it has no moving parts, uses less power than light bulb, and can be left running. Alan wanted to keep his hand in with different projects. Alan started when a friend sent him a project article from Nuts & Volts magazine (<http://www.nutsvolts.com/magazine/issues>), but Alan also cited Make magazine (<http://makezine.com/>) for project ideas. Some projects

Alan mentioned included a controller for a LED light bulb that changes colors, a scanner for 3D objects that can be reproduced with a 3D printer, on-board computer for drone aircraft, wearable gadgets embedded in a jacket, and an Internet-accessible teddy bear. Alan recalled that someone programmed their Pi to flash lights in their home when their favorite team won a game.

Alan's presentation slides are available as a PDF file for download from the PATACS Recent Meetings web page (<http://www.patacs.org/recmtgspat.html>).

Presentation: Technology in Law Enforcement by PFC Kat O'Leary

Officer Kat O'Leary of the Fairfax County Police Department was our guest speaker talking about the use of technology in law enforcement. Officer O'Leary is a ten year veteran of the Mason District station, one of eight district stations in Fairfax County. In August, Officer O'Leary switched from crime investigation to crime prevention.

Briefing materials and links to more information from the Fairfax County Police Department are also posted on the PATACS Recent Meetings web page.

Officer O'Leary started her presentation with a historical review of basic technologies used in law enforcement, including use of the telegraph (1831/1844), as communication with the community is most important. Officers once used call boxes to contact the dispatch center, which progressed to radios inside the police cruiser, then small computers in the cruiser for simple communications. Mobile Data Terminals in 1983 became Mobile Communications Terminals today (https://en.wikipedia.org/wiki/Mobile_data_terminal).

The cruisers are equipped with "toughbooks," ruggedized laptops that can be removed. Cruisers have a lot of equipment, including a radio, radar system, and smaller computers that are increasingly integrated. The officers no longer need to return to the station during the shift. The officers also carry portable two-way police radios that have an emergency button, which provides the officer's location and relays the emergency call information to all other officers. The laptop in the cruiser has a similar function.

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Officer O’Leary then presented a “Following the 911 call” scenario from initial call, to the 911 Call Taker, the Call Dispatcher, and the Responding Officer, which can happen over less than 3 minutes (<http://www.fairfaxcounty.gov/911/>). This was followed by a photo tour of a dispatch center and a review of responsibilities: the Call Taker takes information from caller; the Call Dispatcher monitors officers on the street, dispatches officers to calls, and adds new information to the event as it becomes available, and has real time tracking on a map from GPS units installed in all police cars; the Responding Officer has access to location history (e.g., prior calls to the address and other relevant location information), information on the event, and the ability to map a route to the location.

Q: What if 911 caller does not know where they are?

A: The Call Taker will attempt to get as much information as possible, including any distinctive landmarks. Officer O’Leary recommended landline phones because police can locate the address more quickly based upon the number calling, and can be more reliable. Cell phone calls can be located within one block using cell tower locations, but phone GPS information is not available to 911.

Also, 911 calls are routed to the Dispatch Center based upon the caller’s phone number, not where the call is placed. It may take additional time to route information to the local Dispatch Center. Voice over Internet Protocol (VoIP) calls (e.g., Cox, Comcast) do not provide location information either, and not all carriers support Enhanced 911 for VoIP (https://en.wikipedia.org/wiki/Enhanced_9-1-1#VoIP_enhanced_911). Officer O’Leary also noted that the Fairfax County Police Department uses “Reverse 911” to send pre-recorded announcements to all landline phones in a specified area.

Q: Does Fairfax County support Smart911 (<https://www.smart911.com/>)? This voluntary service allows an individual to enter detailed information online to supplement what Call Takers see.

A: Not at this time, but the Dispatch Center has a location history for any address that contains information useful to emergency services.

Fairfax County Police helicopters (<http://www.fairfaxcounty.gov/police/helicopter/>) have Infrared imaging, and Officer O’Leary showed a video example of a helicopter crew assisting officers on the ground with locating a missing juvenile. An audience member reported that it can be unnerving to have a helicopter low overhead. Officer O’Leary noted that many other helicopters are in the airspace over Fairfax, but residents can check the web site for Police Department helicopter activity.

Fairfax County sometimes uses bait cars, which the police leave unlocked with keys inside to capture car thieves. The bait cars record audio and video of the occupants, provide GPS tracking to the Dispatch Center, and allow officers to slow down and stop the car remotely. Officer O’Leary provided an example using a YouTube video “Teens Caught in Joy Ride Sting” (<https://www.youtube.com/watch?v=FEuWA7F5JGs>) from ABC News.

What is coming in the future? The Fairfax County Police Department is increasing its use of social media (<http://www.fairfaxcounty.gov/police/socialmedia/>), including a page on a social platform for neighborhoods (<https://nextdoor.com/>). Body cameras are coming, but police cruisers already have cameras.

Fairfax County Police Department has a “Crime in our county” section that includes a mapping tool for crime reports (<http://www.fairfaxcounty.gov/policeevents/>), which is great for neighborhood watch. “Fusion Centers” collect and coordinate information from local, state, and federal law enforcement agencies (https://en.wikipedia.org/wiki/Fusion_center).

Q: What happens if someone flags down an officer?

A: The responding officer can “self-dispatch.” The officer enters information on their computer, or calls the Dispatcher and gives information verbally. The Dispatcher sets a timer on events and makes sure that the officer checks in.

Q: Are the police radio channels encrypted, or can they be monitored with a scanner?

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A: Not all channels are encrypted. Encrypted channels may be used under some circumstances. There is an iPhone app to listen to dispatch calls in real time. [There are multiple “911 scanner” apps for Apple iOS and Google Android devices. Find them on Apple iTunes and Google Play.] Gabe Goldberg encouraged Fairfax County residents to participate in Citizen Advisory Committees (<http://www.fairfaxcounty.gov/police/jobs/citizenadvisorycommittee.htm>). Every district has its own monthly meeting that anyone can attend during which you meet the District Commanders and participate in Q&A sessions. Also visit <https://fcpdnews.wordpress.com>.

Q: Are there two officers in a cruiser?

A: No, only a single officer is in a cruiser, but each is backed up by another officer. With the computer and other equipment, there is barely enough room in front for another officer.

Q: What is it like firing a gun?

A: Fairfax County now uses a .40 caliber handgun. Gabe recommended the County’s eight week free Citizens Police Academy (<http://www.fairfaxcounty.gov/police/services/citizens-police-academy.htm>), which provides wonderful insight into police department operations and provides an opportunity to fire a handgun and a shotgun, as well as car driving.



Q: What are the biggest crime problems in Fairfax County?

A: The three biggest problems that Officer O’Leary sees working crime prevention for the Mason District are vehicle tampering (people don’t lock their doors), robberies and Driving Under the Influence (DUIs).

Officer O’Leary noted that the Police Department offers home security assessments. Many small alarm and motion sensor systems are available at low cost from outlets like Home Depot and Amazon.com, as well as surveillance video systems that allow remote monitoring from a tablet or laptop. Officer O’Leary also mentioned the camera/doorbell (<https://ring.com/>) that allows the resident to answer their doorbell remotely via an app.

Q: What is Fairfax County’s alarm policy?

A: Since there are many false alarms during storms, the Police Department may restrict responses to automated alarms at those times. There is a fee for responses to false alarms.

Other answers to audience questions:

- Residents can contact their District station or local Neighborhood Watch (<http://www.fairfaxcounty.gov/oem/citizencorps/nw.htm>) to keep an eye on their house while they are away.
- Neighborhood Watch volunteers do not undergo a background investigation, but the watch coordinator recommends volunteers.
- Neighborhood Watch training is useful, answering questions as to when to call 911 versus the non-emergency number.
- Police report to the Grand Jury, which is a normal part of their duties in the legal process.
- Residents are not required to register weapons kept at their address.

Police may investigate identity theft, but it depends upon the circumstances (<http://www.fairfaxcounty.gov/police/financialcrimes/identitytheft.htm>). OLLI has a class on identity theft this term. When using gas pumps and ATMs, check for hidden cameras (to capture PIN entry) and loose card readers and report these to the station attendant or bank. If the card was used locally when the card information was stolen, report this to the local police department. However, the local police department will support investigations of crimes committed elsewhere. Identity theft reports can be filed online with Fairfax County (see link at bottom of web site above).



It Could Happen to You!

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Look in the sky! It's a bird, it's a plane...it's a drone!

Meeting review by Mike Hancock, Newsletter Committee, Golden Gate Computer Society January 2016 issue, GGCS newsletter www.ggcs.org editor (at) ggcs.org



At the November 23, GGCS General Meeting, George Krieger, drone photographer, drone video producer and drone technologist,

showed two drone-created videos: one of San Francisco seen from above and around Coit Tower; and one of Highway 1 road improvements in the Bixby Bridge/Big Sur area. Drones, or UAS's (unmanned Aerial Systems), usually have four rotors and are called quadcopters, and they have a camera similar to a GoPro, but gimbal-mounted.

The legal system is working on rules for all drones, except toys, to keep airspace safe, and permits drones to fly no higher than 400 ft. (will soon go to 500 ft.). Operators of delivery drones, of Amazon and Google speculation, will be required by the FAA to obtain a license and will have to fly no higher than 25 meters (83 feet) in the airspace over your property.

Since our airspace has over 100,000 planes and since there is the potential for millions of drones, it is clear that rules must be observed. See <https://www.FA.gov/UAS>.

New versions of drones take only six months to come to market and can broadcast signals from about 1,000 feet from the controller. 3D Robotics, a US-based company, makes roughly 80% of controllers, and DJI, a Chinese company, provides roughly 80% of drones themselves.

3D Robotics used to use open-source software, but this approach is changing; DJI is closed-source.

Drones, depending on the drone model and cost, have remarkable cameras with multi-gimbal stabilization, and dampeners.

The law today permits drones to fly only within eyesight of the operator but, with extras, they can fly up to five miles. Drones have heat sensors, GPS, accelerometers, pressure sensors, and Wi-Fi extenders, and they can take 3-D movies.

They fly in areas where the sensors can feed data back. They have been used to fly over blowing whales, which are not disturbed by their presence, to gather data. Elephants, on the other hand, are frightened, likely thinking the drones are swarms of bees.

From DJI, starter drones are the Phantoms 1 and 2; the 2 can fly 12 to 14 minutes with its stabilized GoPro and weighs under 5 lbs. All drones are battery operated. The DJI version has a camera, designed by DJI with Adobe support that takes RAW pictures.

The DJI Phantom 3 Professional has a 4K camera with Sony sensor, 94° wide angle f2.8 lens, and 3-axis gimbal stabilization. The camera can take 12MP still pictures. The main controller is the brains of the operation, collecting all data from the system, which includes GPS, inertial measurement, speed controllers, vision positioning, and auto takeoff and landing. It costs about \$1,290.

The DJI Inspire is the flagship and can fly 15 miles at 50 mph. It has a Zenmuse 4K camera with a Micro Four-thirds CMOS sensor and a 15 mm f1.7 lens. It has a retractable landing system. The controller has a live map and radar and it has battery charge tracking. Basically, this small drone can do things that a much larger drone can do. The DJI Inspire 1 Pro costs about \$4,500 in basic form. This manufacturer also sells the DJI Cosmos hand-held camera.

3D Robotics offers the Solo Quadcopter with 3-axis gimbal for an advanced GoPro camera. It employs a 1 GH2 Linux computer at the drone and at the controller. It can be automated for filming and has a touchscreen controller. The battery provides 15 mins flying time. The cost, including the GoPro camera, is about \$1,900.



Continued on Page 12



Another US manufactured drone is the Yuneec Typhoon 4K Q500, with handheld CGO gimbal steady-grip. Drones use photo-

graphy for stills, panoramas, videos, mapping, and 360° Virtual Reality with GoPros. George showed us a drone video of mapping the Carmel Mission for an event setup, and felt that mapping will be the most lucrative use of drones in three to five years. He also showed us a video of a totally circular rainbow and a para-jumpers tracked by a drone. They are now also being used for photogrammetry and for providing aerial video of events. Drones may operate no closer than five miles to airports. Much of the technology derives from military applications.

George then demonstrated a DJI multi-gimbal 15-pound drone in the meeting room. This drone had a barometric pressure sensor to set altitude. Liability insurance is required for drone operators; Aerial Pack insurance costs \$1,400/year. IDs are not yet required for drones. Control of drones is by 'packet' technology, thus if it loses signal, or if the battery gets low, it comes home.

Favorite Smartphone and Tablet Features

By Julie Mahaffey, Member, ICON Computer Users Group, MO Teacher: Beginning iPhone / Favorite Devices (Android & iPhone/iPad) classes, Mercy Seniors Service

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<http://www.iconusersgroup.org/newsletters> (at) iconusersgroup.org

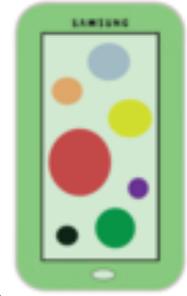
I recently asked my smartphone and tablet-using friends what their favorite features are for their devices. Following is what they shared.

1. Navigation

- Smartphone is always with you.
- Smartphones use maps stored on remote servers so the maps are always current.
- Integration with contacts on your smartphone for entering destination.
- Works for driving and walking tours.
- Useful in town as well as on trips

2. Calendar

- Calendar view can be set up as a list, year view, month view, or day view.
- Can be synced with all devices. Settings allow inclusion of holi-



3. Alarm

The clock on a smartphone can be used as an alarm, timer, stopwatch, or world clock.

4. Weather Channel App

Provides current temps, local forecasts, radar maps, storm tracking, and alerts.

5. Microphone for Speaking Text

- With dictation you can use your voice instead of typing text when sending email or text messages. Look for the microphone on the keyboard.

- Dictation understands basic text-related commands such as "all caps," "new paragraph," and "new line." When you say "period," "comma," "question mark," or "exclamation point," Dictation adds that punctuation. Insert emoticons into a text field by saying "smiley face" or "frowny face,"

6. Lists

- iPhones come with the Reminders App. With this app you can make grocery lists, packing lists, and set the app to remind you of a task on a specific day and time.

Items can be added to the lists by Siri also.

7. Pre-selected text for 2nd caller
iPhone iOS 6 users have the "Reply With" function which allows a response to be sent to the caller with a pre-written text message.

8. White Pages App

Look up name, numbers, and addresses.



Continued Page 13

9. Fingerprint Touch ID

Touch ID lets you unlock your phone and make purchases with Apple Pay simply by using your fingerprint. It uses highly sophisticated algorithms to recognize and securely match your finger print. And the improved Touch ID sensor detects your fingerprint even faster than the previous generation.

10. Lock Screen Shows Current Temperature, Time, and Date

11. Increase Font Size and Screen Size

Double tap the screen to stretch the screen for easier reading.

12. Screen Shots

Pressing the Home and Sleep/Wake button to Snap a picture of your smartphone screen. Once a screenshot is captured, it will be automatically saved to your camera roll.



BACK TO BASICS

Taking Photos with Your iPad (and iPhone)

By Jim Cerny, Columnist, Sarasota TUG, FL
January 2016 issue, Sarasota Technology Monitor-
www.thestug.org/jimcerny123 (at) gmail.com

Your iPad tablet device (and your iPhone) are excellent devices for taking photos and videos. We will discuss taking and working with photos in this article, but taking videos is similar. All iPads and iPhones have a “Camera” app to TAKE photos, and a “Photos” app to VIEW your photos.



THE CAMERA APP -- Tap this app to begin using the iPad built-in camera. Immediately you will see an image of what your iPad camera is seeing through its lens. Move your iPad to see on the screen what you want to take a photo of, wait a moment for the image to focus (you will see a small yellow-outlined rectangle on the image as it

on the image as it adjusts the focus). You may tap on the image anywhere to move this focusing rectangle to another place if you wish, then tap the large white button. You will hear a “click” and your photo is now saved on the “camera roll” on your iPad. (Before taking your photo, you can “zoom in” by touching the screen with two fingers and spread them apart.)

When you are using the camera, you can tap on the small white camera outline icon to switch between the front or rear lens of your device. The front lens (facing you) is best used during Skype or video calling. Some settings for your camera can be changed in the “Settings” app, such as turning a grid pattern on or off. The “HDR On” option (just touch to change to “HDR Off”) will allow your iPad to take three photos at almost the same time and provide one best photo using the three images. (I have noticed no significant difference whether HDR is on or off). In addition to the “photo” option, there is the “video” option (to take videos, obviously) and a “square” option for taking square (i.e. not rectangular) photos. Scroll to chose. Your most recent photo will be shown at the bottom corner of the screen and you can touch this photo to open the “Photos” app.



THE PHOTOS APP -- Touch this app to open and view your photos. You can scroll through all your photos in your iPad memory and they are already sorted by date. To delete a photo, touch it to open the photo on the screen, then touch the little blue garbage can in the bottom corner of the screen. Touch on “Delete Photo” when it appears to confirm the delete. Your photos can be used in various ways, printed (if you have a printer that works with your iPad), sent to other places, etc. You can also organize your photos into ALBUMS. You can think of an “album” as a “folder”. You can create a new album by touching the “album” icon at the bottom of the screen which opens your list of albums, then

then touch the “+” to add a new album and give it a name. At this point you will see your collection of photos and you can “select” the ones you want to “copy” into that album. A photo you have “selected” will have a blue circle with a checkmark in it on the photo. You can copy the same photo into multiple albums if you want. If you DELETE a photo from an album you are only deleting the copy you put in that album. If you DELETE a photo from your “photos” (that is, you are NOT in viewing albums) then that photo will be deleted from your device including all the albums you copied it into.

FUN TIP: To take a photo of whatever is on your iPad screen at any time, just hit the “home” and the “power” buttons at the same time. You can download any number of free and low-cost apps that will work with your photos and allow you to edit and enhance them. However, the Photos app that comes with your iPad can do some editing. Touch “Edit” at the top right of the screen when you have selected a photo to see your options – such as rotate, enhance, filters, red-eye removal, and crop.

The camera of your iPhone will work the same way. The iPhone will have a flash built-in, whereas the iPad does not.

MORE TIPS:

- It is a good idea to backup your photos somewhere else for safekeeping. You can do this when your iPad (iPhone) is connected to your computer or you could save your photos to some memory in the “cloud”.
- Take photos and experiment with them. Learn how to find them and organize them into albums.
- Learn more by using Google and YouTube – ask questions such as “How do I delete a photo from my iPad?”
- Review your photos on your device on a regular basis and DELETE the photos you no longer want. (If you can NOT delete a photo then the photo was most likely put on your device from someplace else.)
- Having your iPhone with you means that you have never forgotten your camera at home or in the car!

How to Protect Yourself in a World Full of Scammers, Phishers, and Identity Thieves

by Adam Levin Reviewed by John Pearce,
Board Member, Pikes Peak Computer

I recently read the book *Swiped: How to Protect Yourself in a World Full of Scammers, Phishers, and Identity Thieves* by Adam Levin. Levin is chairman and founder of Identity Theft 911 and chairman and co-founder of Credit.com. Overall, his credentials as a consumer advocate are pretty impressive. I read the book after seeing a reference to it in Yahoo Finance. We are all aware of ways our personally identifiable information can be used for identity theft. Yet, there are so many ways our identities can be used for fraudulent purposes that it boggles the mind. This book is a comprehensive guide from simple, easily identifiable e-mail scams through telephone scams and full blown identity theft.

The author writes three chapters just describing the problem. I think the first few paragraphs in chapter 3 are a little depressing. The second paragraph begins: “Identity theft is the worst kind of dumb luck. You can do a number of things to keep it from ruining your life but there isn’t much you can do to stop it from happening to you.” Chapter 3 also includes a list of 16 things we do without much thought that can expose our personal information. This chapter also proposes that we have the responsibility to minimize risk of exposure, be alert to potential identity theft, and have a plan to put everything back together in the case we are compromised. Part two of the book is two chapters on the basics of what you can do if you are compromised. The author introduces the strategy he calls the Three M’s: Minimize your exposure, Monitor your accounts, and Manage the damage. Part three is nine chapters on the types of identity theft. Part four is comprised of five appendices. There is a wealth of information in the appendices so don’t ignore them. I recommend reading *Swiped* to improve your knowledge of how your identity can be stolen, how you may be contributing to the theft, and how to approach the recovery process if you are unlucky enough to have your identity stolen.

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10	11	12	13 7-9pm Online Zoom Meeting	14	15	16 12:30- 3:30pm Fairfax General Meeting
17	18 7-9pm Arlington Board Meeting	19	20	21	22	23 June Newsletter Articles Due
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