

**PATACS/OPCUG
 Saturday, December 10 Meeting 1 PM**

**Demonstration of the Amazon Echo &
 Some Apple Stuff
 Presented by Lorrin Garson**



The Amazon Echo is a “home voice assistant” with a 9.25-inch cylindrical speaker and a seven-piece microphone array. The device responds to the “wake word” “Alexa” followed by voicing a wide variety of commands to provide information about the weather, play music, listen to a radio, buy goods and service from Amazon.com, control a variety linked home devices, and more. Arguably Amazon Echo is the dominant voice controlled information resource device at this time. Competition includes Google Home, Samsung Scoop, Apple’s Siri, and Microsoft’s Cortana. Such contrivances are based on remarkable advances in voice recognition and artificial intelligence. Demonstrations of the Amazon Echo and Apple’s Siri will be provided.

Meetings & Learn 30.....	page 1
Presidential Bits.....	page 2
PC Clinic in the Annex	page 3
Open Source Software of the Month,..	page 4
PATACS Annual Financial Report....	page 10
Musings of an Apple Tyro.....	page 11
Running Processes In Windows	page 13
PATACS Information	page 15



Lorrin Garson had a long career in technical publishing of chemical information. His presentations to our computer groups are famous for their thorough research and clarity in explaining topics such as cryptography, encryption of personal data, cloud storage and the origins of personal computers.

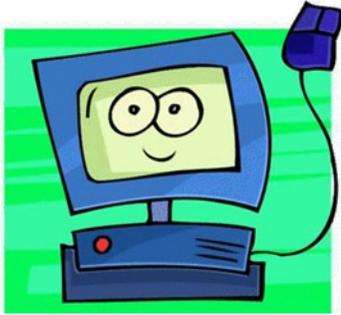
**Learn in 30:
 Technology to Overcome Low Vision
 Presented by Phillip Linz**

This presentation will discuss the challenges of low vision, suggestions for countering its onset, and describing technologies for assisting individuals dealing with its impacts to improve their lives.

Phillip Linz is the owner of Atlantic Low Vision, a small business devoted to helping those with vision loss regain their independence.



We are all very grateful to Paul Howard for generously sharing his time and skills. Ed.



Presidential Bits

by Paul Howard

At the Arlington November 'Help Desk' session, the gang recognized Jim Rhodes' 17 years of service as our group's president with a gift card from Amazon. We all appreciate Jim's efforts in leading us through challenging times, as many computer clubs have failed to survive changes in technology and lack of volunteer resources.

This fourth Wednesday troubleshooting session was a great success. Geof helped Barry wipe a hard drive with Parted Magic, a Linux-based resource of drive utilities, readying the machine for donation with all personal data removed. Mel and others helped members with several laptops, including a netbook that resisted starting up, and another 'bargain' acquisition being prepared for a new role as a spare computer. Another team of Jim, Steven and Gabe worked on training activities, preparing for future first Wednesday program presentations in Carlin Hall. Nick worked helping Jorn with some nuances of Windows 10 on another laptop. Roger overcame the misapplied efforts of some guy named Howard, who managed to remove the wrong drive from his desktop system, mistaking the boot drive for the failing data drive. <Just shoot me.> Data ultimately was successfully transferred to the new drive. Next comes a video card transplant, to overcome the failing card-mounted fan that keeps the GPU cool – or, as in this case, struggles to.

Our November meeting in Fairfax was a stand-out, with two great speakers. Check our '[Recent Meetings](#)' page for material from both Ray Parker and

Cherie Lejeune, including a link to APCUG's video channel of Ray's presentation. (Ray's presentation about Hard Disk Sentinel helped point to the potential of drive failure noted above.)

These meetings are just two examples of the value of PATACS' membership. At each meeting, folks are introduced to something new to try, a way to save time with new software or app for a device, or the realization that others have encountered similar 'fun' to what you're experiencing, and may be able to help you push that impediment aside and find a better way. Our newsletters are gems, with articles by our members and authors from other clubs around the nation – virtually guaranteeing multiple solutions for issues and new experiences for our small annual dues bill.



Carlin Hall
Community Center
Arlington Meeting
Location

Are you taking advantage of 'attending' our Fairfax meetings via Zoom when not in town or have too tight a schedule to make the trip to Tallwood? All you need is an internet connection, the Zoom app appropriate for your device, and your Windows PC, Mac, iDevice or Android phone or tablet. We're always looking for members to make presentations at our meetings – won't you tell us about something you're doing with your tech toys?

Please consider making a tax-deductible contribution to the club, as you review your year-end giving plan. Contributions may be sent to the membership chair – see: <http://patacs.org/membershipat.html>

And, remember to use the links from our home page when making purchases from Amazon – the Society earns commissions on those sales.

PC Clinic in the Annex

Get hands-on help with your computer problems from PATACS experts. Bring in your computer, and we'll help you lose the 'blues' - system slow-downs, unwanted programs, virus and malware. We can help install new RAM, optical drives, hard disks, and software. **Be sure to read the Clinic Rules.**

Guidelines (Revised 01/2016)

Clinic Services Limited to Dues-Paid Members of OPCUG & PATACS, Only!!

1. Please call the PATACS AnswerLine (703-370-7649) and advise what kind of problem you'll be seeking help with. Also, please send email with that information to pc_clinic(at)patacs.org.

2. Hours from 12:30 to 3:30 PM. Services are free, on a "users helping users" basis, and available only for user group members of PATACS and OPCUG. Any donations received from appreciative parties will be directed by their request to the clubs' door prize funds, donations to the group treasury, or, for OPCUG members, to Friends of OLLI for the benefit of OPCUG.

3. PATACS and other user group experts will help attendees resolve problems with their computer systems. Software and hardware assistance will be available for Windows PC and Linux computers

4. PATACS & OPCUG disclaim all responsibility for any problems or data loss that may arise resulting from hardware or software assistance rendered. PATACS recommends that a backup of all personal data files be performed prior to bringing the system to the clinic, if possible. Repairs will not be performed without the attendee's consent.

5. Attendees seeking assistance must bring in all hardware, software, and documentation necessary for proper diagnosis / repair or upgrade. Generally, in cases involving the CPU and associated hardware / software, this will entail bringing in the system unit, power cords, cables, software, upgrade hardware, and hardware/software documentation. We have available flat panel monitors, keyboards, and mice. If your problem is

related to your video display, you should bring your monitor and associated cables, so we may eliminate those as a source of the trouble.

6. Attendees seeking Operating System installations should call the PATACS AnswerLine (703-370-7649) and reserve time in advance. All other assistance is on a first-come, first-served time availability basis. Late arrivals will be informed at the door whether sufficient time remains to assist them; inquire at the clinic before bringing equipment into the building.

7. PATACS can non-destructively repartition hard drives on Windows systems for installation of additional Operating Systems. Again, please call to arrange - these can be lengthy!

8. Freely distributable GNU/Linux distributions will be installed free of charge on systems having CD-ROM drives. Attendees who want other Operating Systems installed must bring original copies of the software on appropriate media with them.

9. PATACS will provide the necessary hardware and software tools for most common repairs and upgrades. Please call the PATACS AnswerLine (703-370-7649) in advance if your system repair or upgrade will require specialized tools.

I ♥

MEETINGS

Future Meeting Topics:

January 21st

Tom Gutnick - Audio for Everybody; Learn in 30: Leti Labell - Apps for Language Learning

February 18th

TBA; Learn in 30: Roger Fujii - Two Factor Authentication

March 18th

Andy Frassetto - US Geologic Hazards; NSF Earthscope Program; Learn in 30: Mike Pafford - Computer on a Stick

If You Missed It

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

If you can't make a meeting in person, remember that members can participate in meetings remotely (and at no additional charge beyond Internet connection service) via Zoom teleconferencing. See <http://zoom.us/> for Apple® macOS™ and iOS, GNU/Linux®, Google Android™ and Microsoft® Windows® clients. The Zoom meeting link is provided in e-mailed meeting announcements.

Remember: you must be physically present at the end of the meeting to be eligible for door prizes.

October 15, 2016 (Fairfax)

The Fairfax meeting featured the Annual Meeting and the bi-annual Election of Officers as required by the PATACS Bylaws. Steven Wertime, as appointed Election Commissioner, reviewed the Bylaws (http://www.patacs.org/orgdocs/by-laws_patacs_2012_v7_120502.pdf) related to elections and presided over the Election of Officers.

Of fifty-three ballots cast, fifty-two ballots elected the slate of Paul Howard for President, Ron Schmidt for First Vice President, Mel Mikosinski for Second Vice President, Henry Winokur for Treasurer, and Bill Walsh for Secretary. The new Officer's begin their two year term at the next Board of Directors meeting.

We greeted one guest from the Osher Lifelong Learning Institute (OLLI, <http://olli.gmu.edu/>) who attended our meeting for the first time.

Paul Howard summarized some of the upcoming presentations at PATACS Fairfax, including November and December agendas. Gabe Goldberg and Lorrin Garson offered information on talks about genetic medicine and Apple products, respectively.

Newsletter Editor Kathy Perrin thanked Leti Labell and Gabe Goldberg for their article submissions, and encouraged others to submit articles to editor (at) patacs.org.

Leti Labell spoke as Chairperson for the *ad hoc* Newsletter Committee, which will be presenting its report at the next Board meeting. 51% of the membership responded to the newsletter survey, which is HUGE. Forty-one members submitted their names to the survey drawing for six-months of PATACS membership. Congratulations to George Weeks, who won the drawing!

Remember that you can earn a six month extension to your PATACS membership by recruiting a new member (that includes gifting a membership). See "Special Membership Promotion" in this issue or <http://www.patacs.org/membershipat.html>. So far, only four members have taken advantage of this offer.

Q&A Session

There was a discussion about Hewlett-Packard's firmware update for inkjet printers that prevent use of third-party ink cartridges (<http://www.pcworld.com/article/3122137/hardware/firmware-update-for-hp-printers-bans-third-party-ink.html>). Gabe Goldberg noted the risks of automated updates. It is important to read the user agreement; using non-HP ink could void the printer warranty. [Ed. HP's response is at <http://www8.hp.com/us/en/hp-news/blog/Small-Business-Printing/best-possible-printing-experience.html>.]

Q: How do I help a friend who forgot their password on a Windows computer?

A: Tom Gutnick said that a Windows password synced with a Microsoft account can be reset through the web. [Ed. For this and other options, see <http://www.howtogeek.com/96805/how-to-reset-your-windows-password-without-an-install-cd/>. Also see Rescatux in this month's Open Source Software.]

Q: Does anyone have experience with a BIOS-related battery issue on a Lenovo laptop?

A: Nick Wenri suggested that the battery under the keyboard must be replaced. [Ed. Lenovo has a laptop battery troubleshooting guide at <https://support.lenovo.com/us/en/documents/migr-51038>. Also check this site for the BIOS updates specific to the model.]

Continued Page 5

Learn in 30: Online Backup Services by Leti Labell

OLLI and PATACS member Leti Labell gave a talk about online services that backup personal computer files. Leti has a Master of Science degree in Computer Science and a Certified Information Systems Security Professional (CISSP). Leti retired in 2014 from a career in software development and project management and as a contractor to the Federal Government.

A PDF of Leti's presentation is on the PATACS Recent Meetings web page, <http://patacs.org/recmtgspat.html>.

Offsite data storage means the entire contents of a computer's hard drive are regularly backed up to a remote computer. This approach uses the Internet "cloud," but is different from cloud storage services (e.g., Dropbox, Apple iCloud, Microsoft OneDrive).

Services that provide online backup, storage and recovery are hosted by a third-party provider that charges a fee.

There are some free services, but you may get what you pay for. Your computer may be worth a lot of money, but what's stored on it is really what is valuable.

Leti discussed the advantages of an online backup service. Backups are made automatically over network. There is additional security since data is not backed up at your house (i.e., would your local backups survive a house fire or flood?). The backup service will help you recover your files.

Leti discussed features to consider when comparing services. Some services support backups to a local external hard drive as well as remote servers. Also consider the service's use of data encryption to keep your data private. Some services backup multiple versions of data (i.e., different revisions of files over time).

Services may offer access to your data from different devices (e.g., via web browser, smartphone). Some services do not backup the operating system files, which would make it more complicated to perform a complete system restore.

PC Magazine provides a backup service comparison chart at <http://www.pcmag.com/article2/0,2817,2288745,00.asp> listing basic service price points. In reply to a question about pricing per computer, Leti said that pricing models vary by service, but there are discounts for more than one computer and it is one of many factors to evaluate. Leti uses the Carbonite service (<https://www.carbonite.com/en/>), which costs \$60 per year plus additional services. Leti uses the Carbonite mobile app frequently to access files and photos backed up from her computer. Leti also uses a local backup (Mirror Image) drive option in Carbonite to backup everything on her computer's main drive. Leti demonstrated the Carbonite InfoCenter user interface, settings and status. The Online Backup and Mirror Image settings are toggles. Carbonite performs a continuous backup, not at specific times, and only backs up files that changed or are new. However, files larger than 4 GB must be explicitly selected for backup. Leti used Carbonite technical support, which has email and chat options, but it is her least favorite part of the Carbonite service.

Q: How long does the service keep deleted files?

A: That should be in the service agreement. The online service keeps files for awhile, even after files are deleted from the local computer.

Q: Does the backup duplicate files stored on cloud services (e.g., Apple iCloud)?

A: Leti's service only backs up files on the local computer.

Q: Is the backup file structure the same as on the local drive?

A: It is for Carbonite. Gabe Goldberg strongly recommended verifying that every file that's important to you is backed up (peculiar directories, etc.) and can be restored. Gabe has experience restoring files on an iPad, and stated that Apple iCloud performs a full backup.

Presentation: Wearable Technologies-Applications, Human Factors and Privacy by Dr. Vivian Motti

Our guest speaker for the main presentation was Dr. Vivian Motti, Assistant Professor at the George Mason University (GMU) Department of Information Sciences and Technology.

Continued Page 6

Dr. Motti has a Bachelor of Science degree in Bio-medical Informatics, a Master of Science and Doctorate in Human Computer Interaction. She has been at GMU since January working on Human Computer Interaction. More information about Dr. Motti's work is on her web pages at <http://ist.gmu.edu/people/detail/vivian-motti/> and <https://sites.google.com/site/vivianmotti/welcome>.

Dr. Motti is involved in two ongoing projects involving wearable computing. The Mason LIFE Program (<https://masonlife.gmu.edu/>) researches assistive technology to help people. The National Science Foundation (NSF) funds the Amulet project (<https://amulet-project.org/>) for designing and developing wearable devices for healthcare purposes.

Dr. Motti defined wearable technologies, which includes many form factors and applications, as computers worn as garments, clothes, and accessories that bring technology closer to users' lives. Wearable technologies support, facilitate, help and enhance daily activities, augment human senses, raise users' awareness, and empower them.

There are a large number of wearable sensors available to monitor such things as heart rate, blood oxygen concentration (oximeter), blood pressure, radiation and ultraviolet exposure. For example, SunSprite (<https://www.sunsprite.com/>) is a commercially available device to monitor light exposure, related to mood and seasonal depression. Sensors provide continuous data collection, making a large amount of data possible and continuously accessible. The amount of data available is a challenge to the medical community; new tools are needed to synthesize the data.

Dr. Motti also listed the many form factors and placements available for wearable sensors, with a wrist bracelet being most popular for understanding behaviors and trends in the long-term. Other examples included contact lenses, an anklet with GPS location, headphones for heart rate monitoring, and glasses (e.g., Google Glass, https://en.wikipedia.org/wiki/Google_glass). An owl is now available (<https://www.owlletcare.com/>) to monitor baby health and help prevent Sudden Infant Death Syndrome (SIDS, <http://www.cdc.gov/SIDS/index.htm>).



Dr. Motti talked about a design process focused on the user, identifying and considering the user perspective. Current research areas focus on physical aspects, human factors, quality factors (e.g., privacy and reliability). To that end, Dr. Motti discussed results from user surveys considering environmental factors such as readability and user experience such as accessibility and the learning curve. The WristSense workshops (<https://sites.google.com/site/wristsenseshop2016/>) provide design recommendations.

When asked if speech recognition for voice comments would be easier to use than device sensors, Dr. Motti commented that the technology might work for short comments, but has problems with accents and timing of feedback.

Privacy?

There are also concerns about privacy, including effects wearable devices have on health insurance premiums, opportunities for fraud, location disclosure, right to forget (i.e., social media is forever), and surreptitious video recording (e.g., Google Glass gives no indication to others when recording audio/video). What are the social implications? Behavior change is something to focus more attention on in the future. Humana now offers a Cue app to encourage healthy habits (<https://www.humana.com/mobile-apps/cue>).

A couple of other areas Dr. Motti touched upon were accuracy issues with devices (<https://jamanetwork.com/journals/jama/fullarticle/2108876>, <https://www.technologyreview.com/s/538416/the-struggle-for-accurate-measurements-on-your-wrist/>) and trends in miniaturizing devices.

In summary, wearable technologies have promising potential across diverse fields.

And for those who are interested, Dr. Motti uses a Garmin Vívó (<https://explore.garmin.com/en-US/vivo-fitness/>).

Open Source Software of the Month

By Geof Goodrum, Potomac Area Technology and Computer Society

www.patacs.org linux (at) patacs.org



0 A.D. – Alpha 21 “Ulysses”. <https://play0ad.com/>. Free

GNU General Public License source code

and executables for Microsoft® Windows®, Apple® macOS™ and GNU/Linux® by Wildfire Games. 0 A.D. (pronounced “zero ey-dee”) is a free real-time strategy (RTS) game of ancient warfare. Lead a civilization set in the imaginary year of 0 A.D., develop a thriving city, raise a mighty army and contend with rivals for hegemony of the world. History is yours for the taking!

Check out some of the most exciting features in 0 A.D.:

- Cross-platform: 0 A.D. is set to run on Windows, Linux and OS X.
- Unique civilizations: In 0 A.D. each civilization is unique in its appearance and gameplay, including units, structures, and technology trees.
- Citizen soldiers: Some infantry and cavalry units can not only fight, but also gather resources and construct buildings, making them substantially more versatile than in typical RTS games.
- Combat experience matters: The more time your citizen soldiers spend fighting your enemies, the higher they go up the ranks. With each rank, they become stronger, but they also get worse at civilian tasks.
- Technology tradeoffs: Some technologies are arranged in pairs, and within each pair, you can only research one technology at most in each game. This choice is irreversible, so choose carefully!
- Unit formations: Arrange your units in historical battle formations from the Phalanx to the Testudo and gain bonuses, such as increased armor. However, beware the costs that may come with them, such as lower speed!



Real world map realism: Random maps are based upon real geography of the ancient world with realistic plants, animals and terrain.

- Authentic historical details: Designs of units, buildings and technologies all reflect the hallmarks of each civilization. We even give them names in the original ancient Greek, Latin, Punic, Celtic, etc.

- Planned lifelike naval warfare: Ships will be on a much larger and more lifelike scale than seen in other games. They will move more realistically and even be able to ram other ships.

- Translation and locale support: Play 0 A.D. in over a dozen languages.

- Powerful map editor: Draw landscapes with a palette of hundreds of terrains, build majestic cities and set the position of the sun in the Atlas Editor, your tool to design intricately detailed maps in 0 A.D.

Excellent mod-ability: From new computer opponent behaviors to extra civilizations, easily create your own modifications (mods) of 0 A.D. by editing game files, all freely available in standard, open formats.

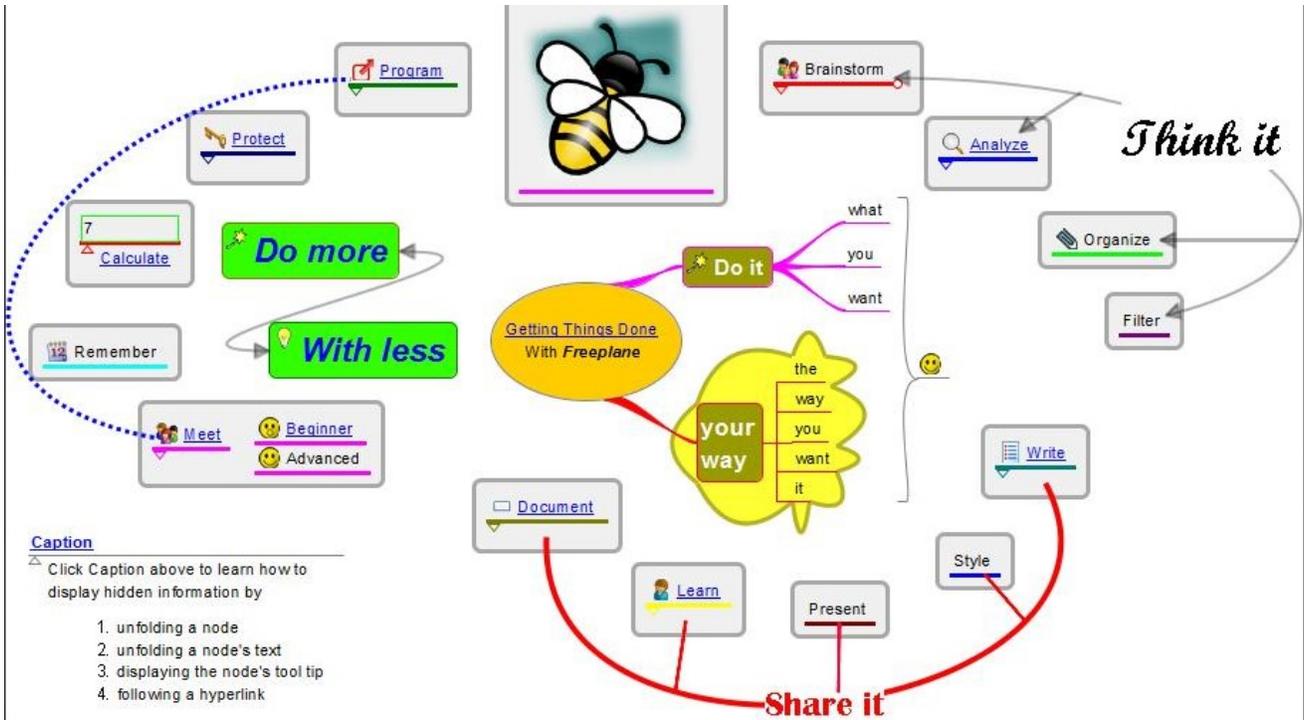
Free mind mapping and knowledge management software



Freeplane – v1.5.17. <http://www.freeplane.org/>.

Free GNU General Public License source code and executables for Microsoft® Windows®, Apple® macOS™ and GNU/Linux® by Volker Borchers, Dimitry Polivaev and Felix Natter. Freeplane is an application to record and organize notes and ideas, and can be used to create and analyze mind maps. Freeplane functions include:

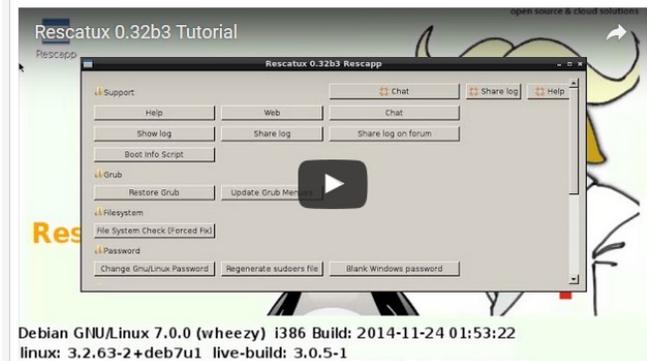
- Note taking with freely positionable, unconnected nodes (post-it’s);
- Ordering ideas (nodes) into a hierarchy connected by lines (edges);
- Classifying nodes with metadata (attributes) and style types (system styles, user defined styles, level styles);
- Grouping nodes with visual containers (clouds) and accolade (summary node);
- Connecting nodes with dynamic links, free



- lines (connectors) and labels;
- Automatically styling nodes (with a bubble, color, edge type, etc.) according to hierarchical level and content (conditional styles, automatic edge color, level styles);
- Structuring nodes in terms of content (text, scientific formula, calculation, icon, image and hyperlink) and presentation area (core, details, notes, attributes, images and tooltip);
- Changing views by hiding content (folding branches, filtering, roll-up of details and hiding extensions in tooltip), finding, scrolling and navigating;
- Tasking with calendar and reminders;
- Password protecting of whole map and of individual nodes with DES encryption;
- Ease of use with inline and dialog editors, object oriented main menu, context menus, multi-language support, spell checker, properties panel, drag & drop functionality, hotkeys, options for batch execution, publishing, sharing and selectable preferences;
- Approximate Search (similarity search) that allows to find search terms in a text, even if there is no exact match (e.g. setup = set up or flie = file).
- Support for LaTeX formulae underneath/in nodes

- Easy extension of functionality with add-ons and home made scripts;
- Integration with Docear academic literature suite;
- Extensive support through Wiki and Forum; and tutorial and documentation in the form of a mind map.

Rescatux – v0.40 beta 11. <http://www.supergrubdisk.org/rescatux/>. Free GNU General Public License Bootable ISO media by Adrian Gibanel Lopez. Rescatux is a bootable CD/USB image that can repair and recover Microsoft Windows and GNU/Linux operating systems that fail to boot, repair damaged filesystems, and reset forgotten Windows passwords. Rescatux includes menu driven wizards for the most common recovery



Continued Page 7

KEEP ME UPDATED

Get project updates, sponsored content from our select partners, and more.

By clicking on "Follow" below, you are agreeing to the [Terms of Use](#) and the [Privacy Policy](#).

.-ery tasks. Additional tools are included for recovery of deleted photo files and disk partitioning.

Stellarium – v0.15.0. <http://stellarium.org/>. Free GNU General Public License source code and executables for Microsoft® Windows®, Apple® macOS™ and GNU/Linux® by Fabien Chéreau, Alexander Wolf, Georg Zotti, Marcos Cardinot, Guillaume Chéreau, Bogdan Marinov, Timothy Reaves, and Florian Schaukowitzsch. Stellarium is a desktop planetarium that renders the skies in real-time using OpenGL, which means the skies will look exactly like what you see with your eyes, binoculars, or a small telescope. Stellarium is very simple to use, which is one of its biggest advantages.

Features include:

- sky
- default catalogue of over 600,000 stars
- extra catalogues with more than 210 million stars
- asterisms and illustrations of the constellations
- constellations for 20+ different cultures
- images of nebulae (full Messier catalogue)
- realistic Milky Way
- very realistic atmosphere, sunrise and sunset
- the planets and their satellites
- telescope control
- Visualization
- equatorial and azimuthal grids

- star twinkling
- shooting stars
- eclipse simulation
- supernovae simulation
- skinnable landscapes, now with spheric panorama projection
- interface
- a powerful zoom
- time control
- multilingual interface
- fisheye projection for planetarium domes
- spheric mirror projection for your own low-cost dome
- all new graphical interface and extensive keyboard control
- telescope control
- visualisation
- equatorial and azimuthal grids
- star twinkling
- shooting stars
- eclipse simulation
- supernovae simulation
- skinnable landscapes, now with spheric panorama projection
- customizability
- plugin system adding artificial satellites, ocular simulation, telescope configuration and more
- ability to add new solar system objects from online resources...add your own deep sky objects, landscapes, constellation images, scripts...

stellarium latest version is 0.15.0

Linux (source) OS X 10.8+; 64 bit Windows 32 bit Windows 64 bit Ubuntu latest stable release Beta 0.90.0 User Guide 0.15.0-1

PATACS Annual Financial Report, for Fiscal Year 2016

By Paul Howard, Treasurer - FY2016

PATACS's fiscal year concluded on September 30th. The Society is in excellent financial condition. Results from Operations reflect a modest loss of \$89.46 from operations.

Donations are vital to the fiscal soundness of the Society. Member generosity accounted for 28 percent of our income. These donations received were \$35 more than in FY 2015. Amazon commissions via our website links were \$508.44, \$46.16 less than last year.

Pizza SIG donors include: Fujii, Garson, Goldberg, Howard, Labell, Mabudian, Mikosinski, Schmidt, Throneburg, Walsh, and Wenri.

Member donations were received this year from: Becker, Goldfarb, Graham, Howard, K. Johnson, B. Jones, Leggett, Lowe, Mabudian, Mikosinski, Pafford, Persell, Schmidt, Stafford, Throneburg, Vandivere, and Vestrich.

PATACS is financially sound because of prudent planning and fiscal restraint. Membership stands at 99. Our "rainy day fund" was established many years ago. We are reviewing alternatives, since interest yields on insured deposits are disappointing, but will continue until the Fed changes its low interest rate policies.

Newsletter printing and preparation are a major expense, under review by the board for the best alternative to meet the needs of our membership.

Webinar Services reflects the full cost of Zoom Room Connect Service, which allows connection of the LifeSize videoconferencing equipment in Fairfax to transmit to members unable to attend in person. OPCUG is expected to reimburse \$249.50 of this expense in FY2017.

Website Hosting expenses reflects a reduced rate for 10 years of hosting services, thru 10/27/25.

Our reconciled account balances within our Quick-En accounting system at the close of the fiscal year (September 30th) were: Operating Checking Account \$4809.38; Interest Checking - \$11,680.81; CD account: \$1115.68.

This Annual Treasurer's Financial Report for Fiscal Year 2016 was approved by the Board of Directors of PATACS on 11/21/2016. The balances and the Cash Flow Report below are certified as correct.

Henry Winokur, Treasurer
Paul Howard, President

The "organizational documents" area of our web site contains additional information about the user group's financial operations, including prior years' Financial Reports for comparison purposes

PATACS Cash Flow Report FY '16: 10/1/15 - 9/30/16

Revenues	
Pizza SIG Cash Donations	711.00
Donations by Check	615.00
Total Donations	\$1,326.00
Membership Dues	2790.00
Interest Income	77.79
Amazon Commissions	<u>508.44</u>
Sum of Other Revenues	\$3,376.23
Total Revenues	<u>\$4702.23</u>
Expenses	
Insurance - Liability & Personal Prop.	475.00
Legal - VA Corporation Fee	25.00
APCUG Dues, Acctg Supplies, Postage	142.99
Donation - Friends of OLLI	<u>250.00</u>
Total Administrative	\$892.99
Membership / PR - Printing	\$60.51
Meeting Equipment Repair	13.73
Meeting Hall Expenses	15.16
Webinar Services Expenses	598.90
Meeting Equipment	<u>61.73</u>
Total Meetings & Other Svcs	\$689.52
Newsletter Postage	556.00
Newsletter Printing	<u>1796.19</u>
Total Newsletter	\$2,352.19
Web Site - Domain / Hosting	\$796.48
Total Expenses	<u>\$4791.69</u>
Results from Operations (Loss)	<u>(\$89.46)</u>

Prepared 10/28/2016

Musings of an Apple Tyro

December 2016

Lorrin R. Garson

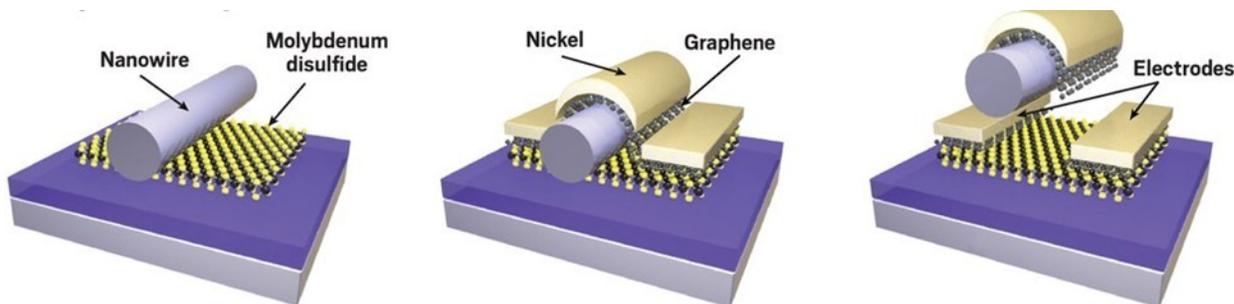
Vulnerability of Internet of Things Devices:

The malware, called “Mirai,” spreads to vulnerable devices by continuously scanning the Internet for IoT systems unprotected by factory default usernames and passwords. The table below contains examples of susceptible devices open to attack. With any IoT device you should take pains to change the factory default username/password. Go to <http://krebsonsecurity.com> and search for “Who Makes the IoT” to find details of this threat, published October 16, 2016. You will also find several other articles about IoT devices and security.

A New Kind of Transistor:

Virtually everyone knows that transistors are at the heart of our CPUs. Today’s transistor was born on December 23, 1947 at Bell Labs—the brain child of John Bardeen, Walter Brattain and William Shockley, who received the Nobel Prize in physics in 1956 for this work. A new type of transistor has been developed that uses two-dimensional molybdenum disulfide (MoS₂) rather than silicon. As shown in Figure 1 below, a silicon nanowire about 80 nm in diameter is placed on top of a flake of MoS₂ to serve as a mask, then a layer of graphene and nickel are placed over the flake and wire. The nanowire is removed leaving an exposed MoS₂ channel to serve as the active area of the transistor. It’s much too early to know if this will lead to a new type of transistor replacing silicon; it’s like 1947 again. This work was reported in *Chemical & Engineering News*, October 3, 2016, p. 7. The original research was published in *Nano Letters*, August 31, 2016; see

Username/Password	Manufacturer
admin/123456	ACTi IP Camera
root/anko	ANKO Products DVR
root/pass	Axis IP Camera, et. al
root/vizxv	Dahua Camera
root/888888	Dahua DVR
root/666666	Dahua DVR
root/7ujMko0vizxv	Dahua IP Camera
root/7ujMko0admin	Dahua IP Camera
666666/666666	Dahua IP Camera
root/dreambox	Dreambox TV receiver
root/zlxx	EV ZLX Two-way Speaker?
root/juantech	Guangzhou Juan Optical
root/xc3511	H.264 - Chinese DVR
root/hi3518	HiSilicon IP Camera
root/klv123	HiSilicon IP Camera
root/klv1234	HiSilicon IP Camera
root/jvbzd	HiSilicon IP Camera
root/admin	IPX-DDK Network Camera
root/system	IQinVision Cameras, et. al
admin/meinsm	Mobotix Network Camera
root/54321	Packet8 VOIP Phone, et. al
root/00000000	Panasonic Printer
root/realtek	RealTek Routers
admin/1111111	Samsung IP Camera
root/xmhdipc	Shenzhen Anran Security Camera
admin/smcadmin	SMC Routers
root/ikwb	Toshiba Network Camera
ubnt/ubnt	Ubiquiti AirOS Router
supervisor/supervisor	VideolQ
root/<none>	Vivotek IP Camera
admin/1111	Xerox printers, et. al
root/Zte521	ZTE Router



<http://bit.ly/2dW34hL> for an abstract.

Continued Page 12

First Wi-Fi now Li-Fi:

Old seadogs will recognize the picture below as an Aldis Lamp which has been used for many years on ships for nearby communication. We will probably soon be seeing light from LED light fixtures being used for communication in a somewhat analogous manner. Li-Fi uses light rather than radio waves as does Wi-Fi. Apple embedded code called LiFiCapability in its iOS 9.1 operating system, which is used by iPhones and iPads. Li-Fi has a theoretical throughput capacity of up to 224 gigabits per second. A company called Luciom has developed a dongle that plugs into a USB port that can transmit data via an infrared LED and receive data through a photodiode that converts light to an electrical signal. See <http://bit.ly/2eiFEyA> for a video. A company called pureLiFi has developed a number of Li-Fi products (see <http://purelifi.com/>). For more information, see *The Economist*, September 24, 2016, pp. 76-77. See <http://bit.ly/2e77q1z> for an interesting video about Li-Fi and the iPhone; also see <http://bit.ly/2eh8Swz>. and <http://dailym.ai/2eDXyyR>.

Abandon Windows 10 for Linux?

It is quite unusual that the Senior Editor of *PCWorld* would suggest switching from Windows 10 to Linux! And his reasons are?

Windows 10's taking away your choices.

Linux is more polished than ever.

Open-source software is, too [more polished].

Linux is free.

Linux runs great on old PCs.

Linux is easy to try.

See <http://bit.ly/2djhmCH> for details.

When Time Machine Backup Doesn't Work:

Time Machine software on Apple computers is an elegant and simple way to do backups. I thought it was idiot proof, but discovered it was only near idiot proof. Every Sunday I exchange backup disks on our three Apple computers. Two of them are in my office—a laptop and desktop machine. I exchanged backup drives on both machines then started backup and received the same error message on both machines "Backup Disk Not Available". What? On both machines, the backup drive was displayed on the desktop... it's there. So I dismounted and remounted the drives with the same result. I rebooted the computers. Same error message. I inspected the contents of the disk drives and all seemed well. I used Disk



Utility to check for disk errors. Nothing wrong. After about 20 minutes I realized I had put the laptop backup drive on the desktop machine and vice versa. Time Machine protected me from really messing things up! The error message should have been "You mounted a backup drive from another computer". Time Machine isn't completely idiot proof and once again I'm munching on humble pie.



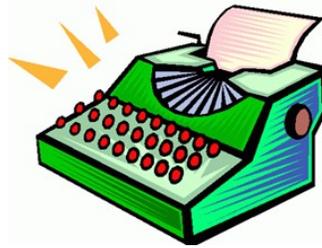
Continued Page 13

And a Bit of Computer Related Trivia:

For more see <http://bit.ly/25KwLpj>, <http://bit.ly/1VKzLf7> and <http://bit.ly/1TTNImh>.

The first electronic computer ENIAC weighed more than 27 tons and took up 1800 square feet. The Pi 2 (~\$35) is estimated to be about 236,000 times faster than the ENIAC.

TYPEWRITER is the longest word that you can write using the letters only on one row of the keyboard of your computer.



There are more than 5,000 new computer viruses are released every month.

The password for the computer controls of nuclear tipped missiles of the U.S was 00000000 for eight years. [Comment—wonder if it was changed to 11111111?]



HP, Microsoft and Apple have one very interesting thing in common—they were all started in a garage.

The house where Bill Gates lived was designed using a Macintosh computer.



The first ever hard disk drive was made in 1979, and could hold only 5MB of data.

The first 1 GB hard disk drive was announced in 1980, which weighed about 550 pounds, had a price tag of \$40,000.

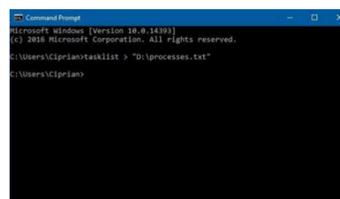
How To Print The List Of Running Processes In Windows

By Ciprian Adrian Rusen Published on Digital Citizen | 11/21/2016 <http://www.digitalcitizen.life/how-print-list-running-processes-windows-7windows-8>

Reprinted with permission, see end of article for licensing. About the author: Ciprian loves technology and has worked in IT for more than a decade. He is the co-founder of Digital Citizen and its chief editor. Alongside his work as an editor, he is also an author. He has written and published 7 books, most of them about Microsoft products and technologies. Recognized for his technical expertise and involvement in the community with the title of Microsoft MVP - Windows Consumer Expert. One of our readers asked us: “How do you print the list of running processes from the Task Manager?”. The answer is... you can’t do this from the Task Manager, not even in Windows 10. In order to print such a list, you need to use the Command Prompt or PowerShell and run some commands to generate the list of running process and then you can print it just like you would print a document. Let’s see how it all works: NOTE: This guide works in Windows 10, Windows 8.1 and Windows 7.

How to print the list of running processes from the Command Prompt

Start the Command Prompt and use the following command: `tasklist > “path to file”`. The `tasklist` command displays a list of applications and services for all tasks running on your Windows computer. The parameter used specifies the text file where this list is saved. I wanted to save the list in a file named `processes.txt`, on my D drive, so I typed: `tasklist > “D:\processes.txt”`. When choosing the path where you want to save the file, make sure it is a place where your user account has access.



Continued Page 14

If you need some help with opening the Command Prompt, read this guide: [7 Ways To Launch The Command Prompt In Windows](#).

When you open the output file in Notepad, you see it formatted as shown in the screenshot below. The data is placed in a table with the following columns: Image Name, PID (Process ID), Session Name, Session# (# stands for Number) and Mem Usage (Memory Usage).

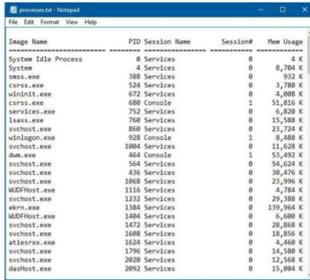


Image Name	PID	Session Name	Session#	Mem Usage
System Idle Process	0	Services	0	4 K
System	4	Services	0	8,784 K
smss.exe	388	Services	0	932 K
csrss.exe	524	Services	0	3,788 K
wininit.exe	672	Services	0	4,088 K
csrss.exe	688	Console	1	51,816 K
services.exe	752	Services	0	8,828 K
lsass.exe	768	Services	0	15,588 K
svchost.exe	808	Services	0	23,724 K
winlogon.exe	928	Console	1	8,488 K
svchost.exe	1084	Services	0	11,628 K
dm.exe	464	Console	1	53,492 K
svchost.exe	564	Services	0	54,624 K
svchost.exe	1068	Services	0	20,476 K
svchost.exe	1068	Services	0	23,996 K
MSIHOST.exe	1116	Services	0	4,784 K
svchost.exe	1232	Services	0	29,188 K
smss.exe	1384	Services	0	139,968 K
MSIHOST.exe	1488	Services	0	6,088 K
svchost.exe	1472	Services	0	28,868 K
svchost.exe	1488	Services	0	18,896 K
atilesrvx.exe	1424	Services	0	4,468 K
svchost.exe	1796	Services	0	14,588 K
svchost.exe	2020	Services	0	12,568 K
MSIHOST.exe	2092	Services	0	35,488 K

Obviously this command has parameters you can use to format its output. Complete documentation can be found on Microsoft's TechNet website here: [Tasklist](#). Don't hesitate to read it and experiment on your own.

How to print the list of running processes from PowerShell

PowerShell is a more complex command-line tool that allows for more customization of its output. The basic command to use is: `get-process` or `gps` (its short version).

To send its output to a text file, you need to write `get-process | out-file "path to file"` or `gps | out-file "path to file"`. I wanted to save the list in a file named `process.txt`, on my D drive, so I typed: `get-process | out-file "D:\process.txt"`. You can see this command as well as its short-version alternative, type in the PowerShell window below. When choosing the path to where you want to save the file, make sure that it is a place where your user account has access.

If you need help starting PowerShell, don't hesitate to read this article: [What is PowerShell & What can you do with it?](#)

The output text file is formatted as shown below and it includes the following columns:

□ Handles - The number of handles that the process has opened.

□ NPM(K) - The amount of non-paged memory that the process is using, in kilobytes.

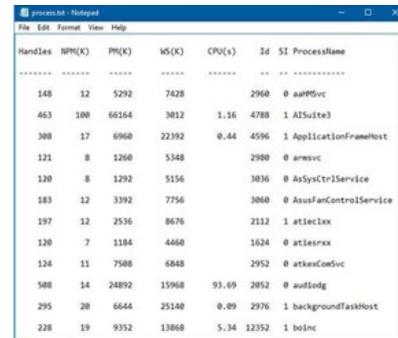
□ PM(K) - The amount of pageable memory that the process is using, in kilobytes.

□ WS(K) - The size of the working set of the process, in kilobytes. The working set consists of the pages of memory that were recently referenced by the process.

□ CPU(s) - The amount of processor time that the process has used on all processors, in seconds.

□ Id - The process ID (PID) of the process that is running.

□ SI - unfortunately we couldn't find any documentation for this column and the data it shares.



Handles	NPM(K)	PM(K)	WS(K)	CPU(s)	Id	SI	ProcessName
148	12	5292	7428		2960	0	smss.exe
463	100	66164	3012	1.16	4788	1	ATISuite3
308	17	6960	22392	0.44	4596	1	ApplicationFrameHost
121	8	1260	5348		2980	0	smss.exe
120	8	1292	5156		3036	0	AtsSystemService
183	12	3392	7756		3080	0	AsusFanControlService
197	12	2536	8676		2112	1	atilesrvx.exe
120	7	1184	4460		1624	0	atilesrvx.exe
124	11	7508	6848		2952	0	atilesrvx.exe
508	14	24892	15968	93.69	2052	0	audiodg
295	20	6644	25140	0.09	2976	1	backgroundTaskHost
228	19	9352	13860	5.34	12352	1	bolc.exe

□ ProcessName - The name of the process that is running.

As you can see, the output is more complex than when using the Command Prompt. Also, there are plenty more options to customize the output. I recommend that you read the following documentation: [Get-Process](#) (Get a list of processes running on a machine), [Out-File](#) (Send output to a file) and [Out-Printer](#) (Send output to a printer).

Conclusion

We hope that you found this tutorial useful.



Copyright c 2016

Monthly Circulation: 100

PATACS Information**PATACS, Inc. 201 S. Kensington St. Arlington VA 22204-1141****Club Information call: 703-370-7649****Web Site: www.patacs.org**

President, Registered Agent, Internet Services...Paul Howard, 703-860-9246, [president\(at\)patacs.org](mailto:president(at)patacs.org)
1st Vice President:.....Ron Schmidt, 301-577-7899, [director11\(at\)patacs.org](mailto:director11(at)patacs.org)
2nd Vice President, Membership Chair:.....Mel Mikosinski, 703-978-9158, [director4\(at\)patacs.org](mailto:director4(at)patacs.org)
Secretary, Meeting Setup:.....Bill Walsh, 703-241-8141, [director14\(at\)patacs.org](mailto:director14(at)patacs.org)
Treasurer:..... Henry Winokur, [treasurer\(at\)patacs.org](mailto:treasurer(at)patacs.org)
Director, APCUG Liaison:..... Gabe Goldberg, [director10\(at\)patacs.org](mailto:director10(at)patacs.org)
Vendor Liaison:.....Volunteer Needed
Director, Linux Support:..... Geof Goodrum, 703-370-7649, [director1\(at\)patacs.org](mailto:director1(at)patacs.org)
Directors: (contact info here - <http://patacs.org/boardpat.html>) Roger Fujii, Gabe Goldberg, Mel Goldfarb, Geof Goodrum, Leti Labell, Kathy Perrin, Jim Rhodes, Charles Throneburg, Nick Weri, Steven Wertime
Windows Support:..... Jim Brueggeman, 703-450-1384, [windows\(at\)patacs.org](mailto:windows(at)patacs.org)
Newsletter Editors:..... GeofGoodrum & Kathy Perrin, [editor\(at\)patacs.org](mailto:editor(at)patacs.org)
Columnist:.....Lorin Garson, [newslettercolumnist\(at\)patacs.org](mailto:newslettercolumnist(at)patacs.org)
Publicity:..... Volunteer Needed

Posts is an official publication of the Potomac Area Technology and Computer Society (PATACS), a Virginia membership corporation. PATACS is a tax exempt organization under section 501(c)(3) of the Internal Revenue Code. Contributions are gratefully received and tax deductible. **Posts** provides news, commentary and product information to PATACS members. Products or brand names mentioned may be trademarks or registered trademarks of their respective owners. The contents of articles herein are the responsibility of the authors and do not necessarily represent PATACS, the Board of Directors, nor its members. The authors provide photographs and screen images. Public domain clip art are from openclipart.org and www.wpclipart.com.

E-mail article submissions and reprint requests to [editor\(at\)patacs.org](mailto:editor(at)patacs.org)

Membership Policy: Membership dues are \$30.00 (U.S.Funds) per year, with a \$15 surcharge for international mail. Membership in PATACS includes membership in all SIGs, access to the software libraries, and subscription to the Posts published 12 times per year in print by US Mail and PDF download by Internet. Applications may be obtained at any club meeting, by downloading from <http://www.patacs.org/membershipat.html>, by calling one of the officers or board members, or by writing to the club. A sample newsletter, membership application and related information may be obtained by enclosing \$2 (for US addresses only) and mailing your request to the membership address. Please do not send cash by mail. Payment and applications may also be submitted at any meeting, or mail to: PATACS Membership, 4628 Valerie CT, Annandale VA 22003-3940.

Advertisement Policy: Ads are accepted from members for non-commercial purposes at no charge. Copy should be sent to the Editor in the same format as article submissions. Ads are accepted from commercial advertisers at the rate of \$40 per full page, per appearance, with discounts for multiple insertions. Smaller ads are priced accordingly. Payment for ads must be made in advance of appearance. Advertisers must supply a permanent address and telephone number to the editor.

Reprint Policy: Permission to reprint articles from the PATACS Posts is given to school, personal computer club, and nonprofit organization publications, provided that: (a) PATACS Inc. receives a copy of the publication; (b) credit is given to the PATACS Posts as the source; (c) the original author is given full credit; and (d) the article author has not expressly copyrighted the article. Recognition is one means of compensating our valued contributors.

PATACS, Inc.
 201 S. Kensington St.
 Arlington VA 22204-1141

First Class

AFFIX
 FIRST
 CLASS
 POSTAGE

TEMP-RETURN SERVICE REQUESTED



December 2016 PATACS Event Calendar

Call (703) 370-7649 for meeting announcements

Scan the QR code at left or enter <http://www.patacs.org> to visit our web site

Free Admission Bring a Friend!

Sun	Mon	Tue	Wed	Thur	Fri	Sat
				1	2	3
4	5	6	7 7-9 pm Arlington Tech- nology and PC Help Desk	8	9	10 12:30- 3:30pm Fairfax General Meeting
11	12	13	14 7-9pm Online Zoom Meeting	15	16	17
18	19 7pm Arlington Board Meeting	20	21	22	23	24
25	26	27	28 7-9 pm Arlington Tech nology and PC Help Desk	29	30	31

Arlington: Carlin Hall Community Center
 5711 4th Street South

Fairfax: Osher Lifelong Learning Institute
 4210 Roberts Road