

## If You Missed It Arlington Meetings

by Jim Rhodes

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The September 3<sup>rd</sup> Carlin Hall General Meeting featured a presentation by member Jorn Dakin on NET NEUTRALITY. It also provided a showcase for PATACS new audio/visual equipment. Jorn started his presentation with several short YouTube™ videos explaining the concept of NET NEUTRALITY followed by his perspective of the issues involved. This was followed by a lively discussion on the origins and “pros and cons” of NET NEUTRALITY—primarily by members Gabe Goldberg, Roger Fujii, and Steve Wertime.

The new audio/visual (A/V) equipment was again demonstrated at the September 24<sup>th</sup> Technology and PC Help Desk meeting in Carlin Hall. The projector and sound system worked well using the HDMI connection to a laptop. It had a problem connecting to an Android™ phone that may have resulted from the mini to standard HDMI cable. It was that cable’s first use so further testing is necessary. The A/V equipment was then used to demonstrate the recording of September 20<sup>th</sup>’s Fairfax Meeting Zoom Presentation/Webinar.

A question arose on encrypting files for uploading to cloud storage and a lively discussion

ensued. The website for one of the most popular open source encryption products, TrueCrypt® (<http://truecrypt.sourceforge.net/TrueCrypt>) recently announced “Warning: Using TrueCrypt is not secure as it may contain unfixed security issues”. (Note: eSecurity Planet recently announced “TrueCrypt will stay alive, thanks to devotees who are forking the encryption program’s code. ‘Cleaned up’ code will get a new name.”). Other techniques suggested for encrypting files before uploading included using ZIP’s encryption feature while archiving and using SafeHouse, a product similar to TrueCrypt. Also recommended was SpiderOak (<https://spideroak.com/>), a cloud storage site, that encrypts files on-the-fly as uploaded.

A hardware issue with a non-responsive USB external hard drive was solved. The drive, a 1TB GoFlex used for backups, was about 2 years old but only used a dozen times or so. It logically “disconnected” during a backup operation and then could not be recognized by Windows/Windows Disk Management software. GoFlex externals feature a removable base with built-in SATA and power connections. The 5 inch drive is pretty much tightly sealed in a plastic housing. The drive’s data and power SATA connection is deeply recessed in the plastic housing. For some reason, the drive’s connectors

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seemed to have recessed beyond the depth of the base connectors reach, which kept it from making a good contact. Once the external housing was removed from the drive it worked.

### **Fairfax Meeting**

by Geof Goodrum

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On September 20<sup>th</sup>, Rolston James, Wellness and Fitness Trainer for the Reston, Virginia YMCA (<http://www.ymcadc.org/branch.cfm?bid=09>), graciously joined us for a second time as Learn 30 presenter to talk about basic “self maintenance.” Mr. James said that 75% of Americans have problems with their back muscles, and lower back problems often start in legs and posture. Knee problems sometimes occur when the kneecap is pulled out of alignment. The key point being that muscles work together, and problems in one area can manifest in another area of the body.

Several attendees joined Mr. James in performing simple muscle stretches that can be performed at a desk or in a chair, as well as with a simple and inexpensive Yoga strap. Mr. James also described how two tennis balls in a sock pressed gently behind the neck can give relief to neck muscles (make sure your computer monitor is in front of you at eye level, not to the side, and pay attention to the way you sit). Another simple device that Mr James demonstrated was the “Total Body Massage Stick”, available in stores (e.g., Target store item 082-02-1084 at \$19.99), that is a flexible rod with rollers that is drawn along forearm and leg muscles to provide relief (avoid bony areas).

Gary Arlen of Arlen Communications LLC (<http://www.arlencom.com/>) presented “Confronting the Internet of Things.” Mr. Arlen calls himself a “skepthusiast” with over thirty years perspective on new media, researching and writing about new technologies and applications.

Mr Arlen said the Internet of Things (IoT) is about “transforming everyday physical objects

into an info ecosystem,” where all things are connected. The building blocks of IoT are sensors, and these are getting smaller. Examples include gas meters that can be read over a wireless connection and electric meters that adjust to power demands. Network-connected home products such as thermostats and lighting controls are already available. There was also audience discussion on “the dark side of IoT,” namely security vulnerabilities (a recent article on the topic is at [http://www.theregister.co.uk/2014/09/11/iot\\_security\\_study\\_beecham/](http://www.theregister.co.uk/2014/09/11/iot_security_study_beecham/)).

Mr. Arlen referenced financial projections that estimate IoT to be worth \$7.1B to \$300B by 2020, as well as growth in the number of developers for IoT applications. Mr. Arlen’s skepticism showed as he said such forecasts are always wrong, but he didn’t know when or at what levels.

Mr. Arlen’s briefing will be available on PATACS recent meetings page (<http://www.patacs.org/recmtgspat.html>). Included are web links and additional reading references. One recommended book is “Enchanted Objects: Design, Human Desire, and the Internet of Things” by David Rose (ISBN-13: 978-1476725635).

Guest speaker Gary Arlen, Gabe Goldberg, Paul Howard, Geof Goodrum, and guests followed up the meeting with sandwiches and conversation at Bernie’s Delicatessen and Gourmet Market (<http://berniesonline.com/>) near the meeting site in Fairfax. Please consider joining us for social gatherings like this in the future.

### **Donations Enhance Arlington Meetings**

by Paul Howard

Treasurer, Potomac Area Technology and Computer Society  
Director2(at)patacs.org

Using donated funds, we’ve just purchased a suite of equipment to enhance our meetings in Arlington, using it successfully at our October 1<sup>st</sup> meeting. Our new lineup includes an Optoma video projector with 1920x1080 resolution and HDMI interface, an Audio Technica UHF wireless

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microphone system, headworn mic, and a Rolls MiniMixer to connect laptops and microphones to the AudioEngines loudspeakers previously donated to the club by Steven Wertime. We hope you'll join us at an Arlington meeting soon to enjoy this new gear. Manuals for these acquisitions have been uploaded to the Organizational Documents page of the website at: <http://patacs.org/orgdocspat.html>

In September of 2013, PATACS received the largest donation in its history, as the NOVACOMM computer club, which ceased operations several years earlier, turned over their remaining funds to PATACS. We welcomed about a dozen former members of that group to our meetings in Arlington and Fairfax, and membership in our organization.

PATACS will be setting aside the remainder of this donation, and donations from our members contributed with dues payments, in a special fund to be used for the enhancement of our programs and member services.

## Webinars of Fairfax Meetings

by Paul Howard

Treasurer, Potomac Area Technology and Computer Society  
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Beginning with our September 20<sup>th</sup> meeting, we plan to use cloud meeting service Zoom to make our joint OPCUG / PATACS meetings available to members of the clubs that are unable to attend the meetings in person. Using the professional LifeSize videoconferencing equipment in OLLI's TA1 classroom, and linking it with the Zoom service allowed three members in Maryland, Pennsylvania, and Gainesville, Virginia to successfully watch live presentations by personal trainer Rolston James and technology consultant Gary Arlen transmitted over the Internet.

Since late in 2008, we've experimented with a variety of webinar technologies, including a number of sessions in Arlington with the help of PATACS member Mike Pafford. We've also enjoyed webinar presentations in Arlington and

Fairfax from members of APCUG's Speaker's Bureau using Skype, but the number of participants that could reliably connect was limited. Our 2<sup>nd</sup> Wednesdays Webinar SIG has been a test bed for learning about using a variety of services for expanding meetings to remotely located members. Our current subscription to Zoom will allow up to twenty-two PATACs and OPCUG members to participate in the Fairfax meetings.

Zoom's cloud meeting services can be used with Windows PCs, Macs, and Android and iOS devices. You're encouraged to download the appropriate Zoom software for your device from <http://www.zoom.us/>. Their website contains multiple training videos on how to use the service, which is free for individuals using one to one connections. Questions about PATAC's use of this technology for the Fairfax meetings may be addressed to: [webinarhosts\(at\)patacs.org](mailto:webinarhosts@patacs.org)

## Shopping on Amazon.com? Don't Forget PATACS!

If you shop online at Amazon.com, don't forget to start each session by clicking the Amazon link on the PATACS home page, then continue shopping on Amazon as usual. Doing so earns PATACS a 4 to 6.5% commission on your purchase at no additional cost to you.

Thank you for supporting your user group!

## Help Wanted: Meeting Speakers

At press time, no topics are identified for the November meetings. Look for the latest meeting information on the PATACS web site and in announcement e-mails.

Finding presenters for our meeting programs is difficult—your help in the effort to enhance the value we all receive from PATACS membership would be greatly appreciated!

Please consider speaking to your friends at an Arlington or Fairfax meeting. We'd love to feature your take on a smart phone or tablet app. A presentation on these or other topics of

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interest to you would undoubtedly be welcomed by your PATACS colleagues. We have space in our schedule for 15, 30, 60 and 75 minute discussions—what are you waiting for?

We also have ready-made paragraphs you could use in e-mail communications to help us find speakers. Contact: [director2\(at\)patacs.org](mailto:director2@patacs.org)

## Linux and Open Source News

by Geof Goodrum

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### From Heartbleed to Shellshock

With two high-impact security vulnerabilities in the news, 2014 hasn't been the best year for Open Source software.

The OpenSSL Project disclosed the OpenSSL "Heartbleed" vulnerability ([http://www.openssl.org/news/secadv\\_20140407.txt](http://www.openssl.org/news/secadv_20140407.txt)) in April was exposed by an optional feature introduced in v1.0.1. Multiple server, desktop, embedded and mobile applications and operating systems use OpenSSL to verify identity and secure (encrypt) connections with each other. If the optional heartbeat feature is enabled (which it is by default), malicious hackers could read a 64KB chunk of memory that would likely include sensitive information. The OpenSSL project released a fix in v1.0.1g before the bug was announced, but this left websites and product vendors worldwide scrambling in a race to install the fix before malicious hackers could take advantage of it. Given the widespread use of OpenSSL, this was a particular challenge for businesses that had to evaluate a wide array of products and applications, download and test vendor patches, and deploy them in operations.

Heartbleed led to additional corporate sponsorship (<http://www.linuxfoundation.org/news-media/announcements/2014/04/amazon-web-services-cisco-dell-facebook-fujitsu-google-ibm-intel>) of a Core Infrastructure Initiative to

assist Open Source projects like OpenSSL that provide fundamental software.

However, many developers criticized OpenSSL software as a problem waiting to happen and are working on replacements. Google is developing a fork of OpenSSL called "BoringSSL" (<https://boringssl.googlesource.com/boringssl/>) tailored for its Chrome web browser and Android applications. Similarly, the OpenBSD Foundation forked OpenSSL code for the LibreSSL Project (<http://www.libressl.org/>). As the LibreSSL home page is still rather barren, a better source for information is <https://en.wikipedia.org/wiki/LibreSSL>. Interestingly, LibreSSL will not support the US Government's Federal Information Processing Standard (FIPS) mode and cryptographic algorithms thought to be broken by the US National Security Agency (<http://opensslrampage.org/post/83555615721/the-future-or-lack-thereof-of-libressls-fips-object>). If LibreSSL isn't certified to support FIPS 140-2 ([https://en.wikipedia.org/wiki/FIPS\\_140-2](https://en.wikipedia.org/wiki/FIPS_140-2)), the US Government cannot use it, so commercial vendor adoption of LibreSSL over OpenSSL in their products is unlikely.

As the dust settled on Heartbleed, then came the late September disclosure of a serious vulnerability dubbed "Shellshock" ([https://en.wikipedia.org/wiki/Shellshock\\_\(software\\_bug\)](https://en.wikipedia.org/wiki/Shellshock_(software_bug))) in the commonly used Bourne Again Shell (bash). A bug in handling command line text allows malicious hackers to run system commands and get unauthorized access to the system. Again, numerous operating systems and products use bash. Though most modern systems use ash, dash, or another limited function shell that is not vulnerable, there are enough servers running web applications that depend on bash to make Shellshock a severe impact. While again a fix was available upon disclosure, additional vulnerabilities in bash were discovered after the initial fix. Network scanning for the vulnerability and actual attacks on vulnerable systems began within hours of the disclosure, so many systems were compromised before the fix could be

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applied. The Internet Storm Center, which monitors IT security threats, elevated status from Green to Yellow (<https://isc.sans.edu/forums/diary/Why+We+Have+Moved+to+InfoCon+Yellow/18715>).

Commenting on The Register article “Firms BASH Bash bug with new round of Shellshock patches” ([http://www.theregister.co.uk/2014/09/28/bash\\_shellshock\\_bug\\_patches\\_released\\_by\\_red\\_hat/](http://www.theregister.co.uk/2014/09/28/bash_shellshock_bug_patches_released_by_red_hat/)) Flocke Kroes wrote (in part):

*Bash collected handy features because they were useful on the command line. Years ago, sh was often a link to bash so those features would be available to all the scripts in the operating system, and would be available when one command starts another with the ‘system’ C library function. All those handy features created a large attack surface, which was dealt with in multiple ways:*

*The ‘system’ library function became unfashionable. Programmers should use something like ‘execve’ instead, which does not invoke ‘sh’. The link from sh to bash changed to point at a cut down shell like ash. Bash could continue to grow handy features, but ash remained small and easier to audit for security issues. Part of the reason bash had a major flaw for decades was that people were looking at ash and its derivatives instead. Security researchers did not expect bash to be used where security was required.*

The positive side to these events is the additional attention on finding and fixing security issues in important Open Source software projects, as well as the quick and open response from the projects to provide fixes and notify users.

### Android L Preview

Google, Inc is preparing the next release of its Android operating system, referenced as “LMP”, which some speculate stands for Lemon Meringue Pie in keeping with previous dessert-named releases. Availability is expected in early November 2014 to Google Nexus and Google Play devices. Availability on other devices depends upon the vendor and mobile service provider.

A developer preview is already available for download at <http://developer.android.com/preview/index.html>, with caveats that preview releases are not feature complete, may have significant bugs, and current applications may not be compatible.

New features in the LMP release include:

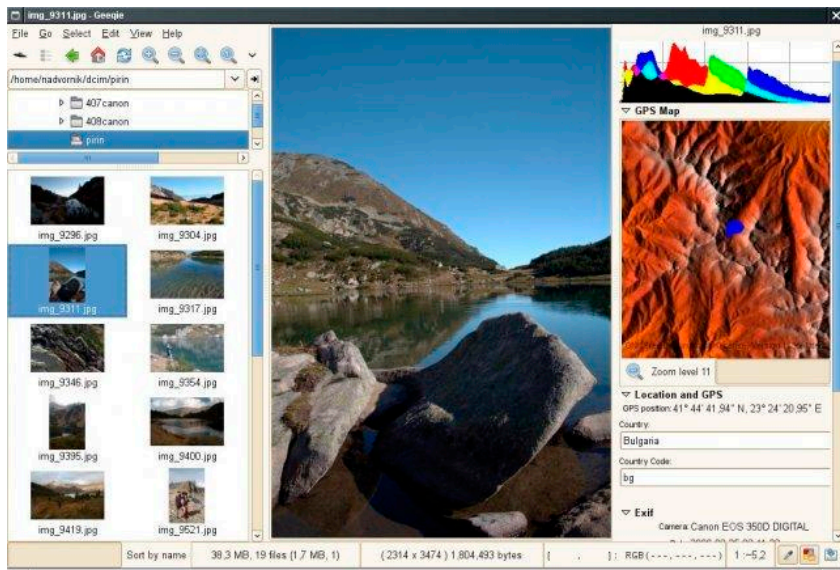
- Material Design User Interface (a brief concept overview video is online at <https://www.youtube.com/watch?v=Q8TXgCzxEnw>)
- Improved notification handling and presentation
- Improved application performance using Android Runtime (ART) compile on installation
- Improved power management and battery life (Project Volta)
- Storage encryption by default (previously an option on device setup)

### Featured Open Source Software of the Month: November 2014

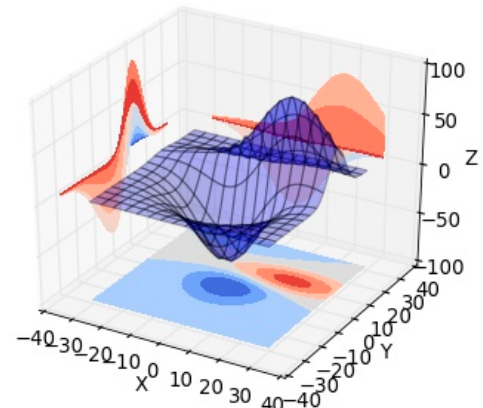
The software described below can be downloaded at the links provided or copied onto a USB flash drive at the PATACS Fairfax meeting. However, please check the online package management tool included with your GNU/Linux distribution first, as installation is often just a click away.

**Geeqie** – v1.1. <http://sourceforge.net/projects/geeqie/>. Free GNU General Public License source code and executables for Apple® OS X® and GNU/Linux® by Laurent Monin, Oscar Miras Ortiz, Petr Ostadal, and Vladimir Nadvornik. Geeqie is a lightweight Gtk+ based image viewer for Unix-like operating systems. Features include: EXIF, IPTC and XMP metadata browsing and editing; interoperability, easy integration with other software; geeqie works on files and directories, there is no need to import images; fast preview for many raw image formats; tools for image comparison, sorting and managing photo collections.

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Left: Geegie image viewer photo geolocation



Right: Matplotlib 3D contour graph

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**matplotlib** – v1.4.0. <http://matplotlib.org/>. Free Python Software Foundation License Python script for Microsoft® Windows®, Apple® OS X®, and GNU/Linux® by John Hunter et al. matplotlib is a Python plotting library that produces publication quality figures in a variety of hardcopy formats and interactive environments across platforms. matplotlib can be used in python scripts, the python and ipython shell (a la MATLAB® or Mathematica®), web application servers, and six graphical user interface toolkits. matplotlib tries to make easy things easy and hard things possible. You can generate plots, histograms, power spectra, bar charts, errorcharts, scatterplots, etc, with just a few lines of code.

**Mopidy** – v0.19.4. <http://www.mopidy.com/>. Free Apache 2.0 License Python script for Apple® OS X® and GNU/Linux® by Stein Magnus Jodal et al. Mopidy is an extensible music server written in Python that plays music from local disk, radio streams, Spotify, SoundCloud, Google Play Music, and more. You edit the playlist from any phone, tablet, or computer using a range of MPD and web clients.

**OS X Portable Apps** – <http://osxportableapps.sourceforge.net/>. Various licenses for Apple® OS X® by various authors. OS X portable applications

are packaged so you can carry them around on USB thumb drive, iPod, portable hard drive, memory card, other portable device (or also on your internal hard disk), taking your preferences with you. Applications include Abiword word processor, Celtx screenwriting and production breakdown writing, OpenOffice.org office suite, Firefox, Safari, and Camino web browsers, Inkscape and GIMP graphics editors, Audacity sound editor, Thunderbird e-mail client, iCal and Sunbird calendar managers, Nvu web authoring, VLC video player, and iChat, Newspeak and Xchat chat clients.

**PokerTH** – v1.1.1. <http://www.pokerth.net/>. Free GNU General Public License source code and executables for Google® Android™, Microsoft® Windows®, Apple® OS X®, and GNU/Linux® by Felix Hammer, Florian Thauer, et al. PokerTH is a poker card game simulator that is faithful to Texas Hold'em rules and its betting system. PokerTH allows up to ten players; either human or computer controlled. PokerTH players can also play online against others (for glory, not money), with official rankings online at <http://www.poker-heroes.com/>.

**Kernel Source** – v3.17. <http://www.kernel.org/>. Free GNU General Public License source code for all platforms by the Linux community.



Two table themes for PokerTH

## Local Fire Departments and Citizens May Save Lives with These Apps

by Ira Wilsker

WEBSITES:

<http://www.pulsepoint.org/download/>  
<https://play.google.com/store/apps/details?id=mobi.firedepartment>  
<https://itunes.apple.com/us/app/pulsepoint/id500772134?mt=8>  
<https://play.google.com/store/apps/details?id=org.pulsepoint.aeds.android>  
<https://itunes.apple.com/us/app/pulsepoint-aed/id867150971?mt=8>  
<http://www.pulsepoint.org>  
<http://www.pulsepoint.org/2014/08/30/pulsepoint-app-helps-save-life-of-cardiac-arrest-victim/>  
<http://www.pulsepoint.org/implementation/>  
<http://video.foxbusiness.com/v/3752129890001/pulsepoint-app-helps-save-life-of-cardiac-arrest-victim>  
<http://www.pulsepoint.org/2014/08/20/court-bailiff-saves-a-life-with-cpr/>

<http://www.menshealth.com/best-life/be-more-bystander>

[https://www.youtube.com/results?search\\_query=pulsepoint](https://www.youtube.com/results?search_query=pulsepoint)

<http://www.pulsepoint.org/2014/08/23/collier-county-sheriffs-office-looks-to-integrate-cpr-app-with-911-system/>

<http://www.pulsepoint.org/pulsepoint-respond/>

On May 9, in Clackamas, Oregon, an off duty firefighter with Tualatin Valley Fire & Rescue, Scott Brawner, was working out in his health club when he received alerts on his iPhone. He had previously installed the PulsePoint app on his iPhone that alerted him to a nearby man, Drew Basse, who was having a Sudden Cardiac Arrest (SCA) in the parking lot of the gym. A security guard in the parking lot made the initial call to 911, which transmitted the emergency alert to the PulsePoint app. The app immediately displayed the victim's information on a detailed map which pinpointed his precise location, and

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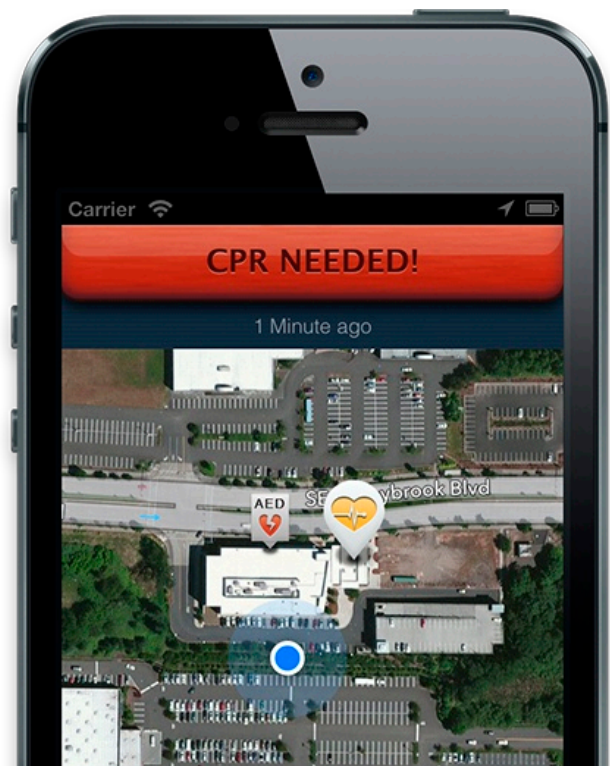
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alerted Scott Brawner. Within a minute, Scott Brawner was in a position to save Drew Basse's life. Brawner immediately commenced CPR, continuing until the paramedics arrived about five minutes later. According to published media reports, the only reason why Basse survived was the prompt application of CPR by Brawner. Scott Brawner is quoted as saying, "I've had a lot of people live throughout my career, but I've never had that one-on-one connection with somebody. I'm really happy how well that app worked. It allowed me to find him so fast ... It's pretty remarkable. ... If I had taken a minute longer to get to him, he would have not survived."

According to a posting on the PulsePoint website ([pulsepoint.org/pulsepoint-respond](http://pulsepoint.org/pulsepoint-respond)), Sudden Cardiac Arrest (SCA) kills 325,000 Americans every year, which is about 1000 deaths per day, or about one death every two minutes. The national survival rate for SCA is less than 8%, which leaves substantial room for improvement; only about a third of the Sudden Cardiac Arrest victims get CPR from bystanders, another statistic that can be greatly improved upon. CPR is a proven method of sustaining life by maintaining circulation to the heart and brain until the paramedics can arrive. Individuals can often provide the potentially lifesaving CPR much faster than paramedics can respond; it takes less than 8 minutes for brain damage or death to occur, a life sustaining time that can be extended with the judicious use of CPR by citizens until help arrives. According to the American Heart Association, the chance of survival doubles or triples if a bystander immediately commences CPR, a fact not lost on the creators of these apps intended to improve the odds of survival of our families and friends.

The concept for these free apps was created by Richard Price, former chief of the San Ramon (California) Valley Fire Department. Price's idea was to enable the millions of CPR trained individuals to be made instantly aware when there was a nearby need for immediate help. The app was developed as a partnership created in

2009 between the San Ramon Valley Fire Protection District and the College of Informatics at Northern Kentucky University. The PulsePoint Foundation, a 501(c)3 non-profit organization, was formed in 2011 with the stated purpose "to share its life saving potential ... empowering everyday citizens to provide lifesaving assistance to victims of Sudden Cardiac Arrest." At present, the software engineering for the apps is provided by a volunteer staff from Workday, Inc. Following his recent experience, Scott Brawner explained, "The app isn't for firefighters, doctors and nurses. It's for people with smart phones who are willing to provide some CPR to a stranger within a quarter mile or so of their location." In the short time since its release, the PulsePoint app has been adopted by over 600 communities in 18 states.



PulsePoint, and its companion app PulsePoint AED are free apps available for both the Android and iPhone smart phones. According to descriptions provided by the publisher, the intent of PulsePoint was to empower individuals in participating communities to provide immediate life saving assistance to victims of

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cardiac arrest. Users of the app who may voluntarily indicate that they are CPR trained, may be notified in the event of a nearby emergency where CPR may be needed. In addition to providing the user with a detailed map showing the location of the victim in need, the PulsePoint app, as well as a sister app PulsePoint-AED, may also show the detailed location, including photos, of the closest AEDs (Automated External Defibrillators), which may be very useful in saving lives. For those who may need a refresher, both apps also include an “AED How-to” screen showing the simple steps of the proper use of an AED device, and “CPR How-to” screens which explain the CPR process.

In addition to providing potentially lifesaving information, the PulsePoint app also displays real time information from participating 911 centers, including incidents, and the response status of dispatched units; these results can also be displayed in real time on a detailed map. Some users have used the app to satisfy curiosity about the destination of a nearby EMS or fire unit. Some drivers using the app have also found it useful to determine if there is an accident ahead on the highway, necessitating a reroute in order to avoid the traffic congestion and delays in the area of the incident. Some of the participating fire departments also stream their radio traffic over the app, making the smart phone a modern version of the old fire scanner radio.

The companion free app, PulsePoint AED, was explicitly designed to, “Help build the most comprehensive registry of AEDs for use during emergencies.” Also available for Android and iPhone smart phones, this app is intended to notify citizen and professional first responders of the closest available Automated External Defibrillator (AED) whenever needed. It has been proven that AEDs save lives when utilized in the precious first minutes after a cardiac arrest. One problem with the listings is that there are perhaps many thousands of accessible AEDs that have not been entered into the app’s database of AED locations.

The confirmed locations of the AED devices listed are from crowd sourced inputs. Users of the PulsePoint AED app are encouraged to take a photo, and upload the location information through the app. Once the locations are verified by local authorities, the location is added to those available on the app. As I type this, none of the many AED devices on the Lamar University and Lamar Institute of Technology campuses are listed, and none are shown for the downtown Beaumont area, despite my firsthand knowledge that these AED devices are clearly visible in several locations, including some local churches, office buildings, government buildings, and other facilities. While I will personally upload some of the AED locations that I see on a regular basis, it would be a fantastic community service project for some local groups such as Scouts and Explorers, fraternities and sororities, church groups, and others to participate in. This is one simple project that can literally be a life saver, thus a very worthy undertaking. According to PulsePoint, “You and PulsePoint AED can help strengthen the chain of survival for cardiac arrest victims.”

A quick review of the updated listing of fire departments on the PulsePoint app displays departments in California, Nevada, Colorado, Ohio, Oregon, North Dakota, North Carolina, Virginia, South Dakota, Washington (State), Arizona, and Tennessee that participate in this PulsePoint system; what is woefully missing are departments in Texas and Louisiana, especially in this region. While the apps for the smart phones are totally free, there is a cost to the city that wishes to utilize these services; philosophically, our community leaders need to weigh the costs of the system in terms of lives potentially saved, and then the cost may be a bargain. For a city the size of Beaumont, the annual license fee would be \$5,000, which could easily be underwritten by local philanthropic businesses and individuals. For a city the size of Houston or Dallas, the license fee would be \$25,000, which again could be easily donated by local businesses or

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organizations. This could be a wonderful opportunity for local organizations and businesses, as well as philanthropists, to participate in a project that could truly save lives, including their own and the lives of family members. The steps to implement the PulsePoint system are available at [pulsepoint.org/implementation](http://pulsepoint.org/implementation).

There is no doubt that we as a society can do a great deal to save the lives of our loved ones in the event of a cardiac arrest, and these apps are but one effective tool that can be used to that end. If we were all to use these free apps, and our communities were to implement such a system, along with continued involvement in CPR training and the judicious placement of AEDs, we may be able to reduce that ghastly 325,000 number of Americans who die of Sudden Cardiac Arrest.

The life that we save may be that of a loved one, or even our own.

## The World of TED

March Meeting recap by

Anne Moss, Secretary

Presented by BJ McMillan

Member, Northern Neck Computer User Group, Virginia

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[www.nncug.org](http://www.nncug.org)



TED is a nonprofit devoted to Ideas “Worth Spreading through TED.com,” annual conferences, the annual TED Prize and local TEDx events.

IDEAS WORTH SPREADING is the stated purpose of the organization, accomplished by building a community of curious souls to engage with ideas and each other. TED began as a conference in 1984 that focused initially on Technology, Entertainment and Design, hence the acronym, TED. It featured demos of a Sony CD Player and the inaugural Apple computer. Speakers included Benoit Mandelbrot (invented fractals) and Nicholas Negroponte (founder of MIT’s computer LAB and Wired magazine). It was very high-

minded and expensive and resulted in financial failure.

In the early 2000’s, TED was reorganized and focused on semi-annual TED conferences in US/Canada, TEDGlobal, and smaller events.

TED Conferences are for one week, with 50 speakers, each limited to 18 minutes; it is limited to 1,000 attendees. It costs \$7,500 to attend BUT one must submit a test, with essay, to be invited. Despite the cost and admissions test, it is hard to get in. In 2009, an attendee was mugged for his conference badge.

Alternatives to attending a conference are: gather with others to watch a live simulcast of a conference for \$3,750, watch a live webcast of the conference from your own PC, a \$600.00 fee or one can view selected videos of TED Talks at TED.com for FREE.

There are 1,600 talks, not limited to the original TED fields. Five to seven new talks are posted each week. These are viewed by over 1 million people/day and have been viewed over 1 billion times total. They are drawn from Conference Themes such as: Rediscovery of Wonder, Substance of Things Not Seen, and Radical Openness.

Subject areas and a few examples are:

- Technology: How technology evolves, Technology crafts for the digitally underserved, Are droids taking our jobs?, The birth of the computer
- Future Devices. Could future devices read images from our brains?, A computer that works like the grain, The wireless future of medicine, Synthetic Voices—Unique as Fingerprints, and Robots with Soul
- Science: Emergency Shelters Made from Paper, My DNA Vending Machine, Sampling the ocean’s DNA.
- Music and Art: Design for all 5 Senses, Software as art, Toy tiles that talk to each other, To hear this music you have to be there. Literally.

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- **Artificial Life:** Robots that show emotion, There might just be life on Mars, Researcher Food Security expert, Robots with “soul,” A monkey that controls a robot with its thoughts. No really.

Past speakers include: Karen Armstrong, Jeff Bezos, Isabel Allende, David Blaine, Julie Taymor, Amy Tan, JK Rowling, T Boone Pickens, Michael Tilson Thomas, Tim Berners-Lee (invented the WWW) and Einstein the Parrot.

Exploring the [Ted.com](http://Ted.com) website is highly recommended. One can browse talks, go to TED.com and watch TED Talks.

- **Watch:** TED Talks. Explore the full library. You can then find Talks by broad topics, or tagged categories such as “jaw-dropping, beautiful, ingenious,” etc.
- **Browse by Topics,** either Watch: Topics or Watch: Playlists
- Once you’ve picked a Talk, you can Download the Talk, Read a concurrently running Transcript (sometimes translated by volunteers into other languages), and find other Talks on similar topics (via suggestions or Tags)
- Some Talks offer Suggestions to Learn More (Leslie Steiner), Suggestions to Take Action (Mitch Resnick), or Updates on the Speaker’s activities since the Talk (Salmon Kahn)

If you register, you can:

- Save a Talk as a Favorite or to Watch Later
- Leave Comments on a Talk
- Participate in TED Conversations (path [TED.com:/Participate/Discuss](http://TED.com:/Participate/Discuss))
- Sign up for emails on new Talks posted
- Share a Talk and see how many contacts actually view the Talk.

TEDx Events are organized locally under license from TED, with local speakers or screenings of TED videos. Eight TEDx events are organized per

day 30,000 TEDx video Talks are online from 130 countries. One can attend a TEDx Event or explore the TEDx library.

Other TED Outlets include:

- TED Blog of daily news ([blog.ted.com](http://blog.ted.com) OR [TED.com: Read/News](http://TED.com:Read/News))
- TED Radio [TED.com](http://TED.com): TEDRadio on NPR
- TEDTV on PBS – [TED.com](http://TED.com) TED TV Programs, Podcasts of [TED.com](http://TED.com) Talks, NPR Radio and PBS Programs – some in audio versions, TED Talks streamed via Netflix.

## Two Factor Authentication—Proof of Identity

by Phil Sorrentino

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March 2014 issue, The Journal  
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When you walk up to a teller in a bank and request information about your bank account, the teller may ask you to authenticate yourself by providing a picture form of identification. But if you have been going to this bank for many years and she is familiar with you, she may just give you the information. In truth, your face and her knowledge of you have provided the necessary authentication for her to respond to your requests. Authentication is much easier in the real world than it is in the software and computer-network world.

Authentication is the act of proving one is really who one says he or she is. In the computer world, we all experience this every time we sign on to one of our accounts or websites. Typically we are asked for a User Name and a Password. The correct User Name and Password combination proves, to the software requesting these items, that we are who we say we are. Of course, we could give our User Name and Password to a friend, something we rarely want to do because then he would be able to authenticate himself as the owner of our account. “Hacking” occurs

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when someone or some software program attempts to guess your Password after acquiring your User Name: maybe from some public information source. (Remember, User Names are available all over the Internet.) This is a form of brute force “hacking” of an account. And unfortunately, there are many other, more sophisticated, ways of hacking into an account.

So, more formally, “Authentication is the act of confirming the truth of an attribute of a datum or entity, which might involve confirming the identity of a person or software program, or ensuring that a product is what it’s packaging and labeling claims to be.”

In other words, Authentication involves verifying the validity of at least one form of identification. As it turns out, practically, there can be three forms of authentication, called factors. Now, two-factor authentication requires the use of two of the three authentication factors. These factors are:

- Something only the user knows (e.g., password, PIN, pattern);
- Something only the user has (e.g., ATM card, email account, mobile phone); and
- Something only the user is (e.g., biometric characteristic, such as a finger print).

(These factors are so important for authentication that they are identified in government documents in the standards and regulations for access to U.S. Federal Government systems.) Some security procedures now require three-factor authentication, which involves possession of a password, and a physical token, used in conjunction with biometric data, such as a fingerprint, or a voiceprint, or a retina scan.

Two-factor authentication is not a new concept. When a bank customer visits a local automated teller machine (ATM), one authentication factor is the physical ATM card that the customer slides into the machine (“something the user has”). The second factor is the PIN the customer enters

through the keypad (“something the user knows”). Without the corroborating verification of both of these factors, authentication does not succeed. Another example is when you use your credit card for a gasoline purchase and you have to enter your ZIP code to confirm the charge. You must provide a physical factor (something you own), the card, and a knowledge factor (something you know), the ZIP code. These examples show the basic concept of a two-factor authentication system: the combination of something the user knows and something the user has.

“Something only the user knows” is termed a Knowledge factor and is the most common form of authentication used. In this form, the user is required to prove knowledge of a secret in order to authenticate, typically, a password, PIN, or a Pattern. All of us are familiar with the password which is a secret word or string of characters. This is the most commonly used mechanism for authentication. Many two-factor authentication techniques rely on a password as one factor of authentication. A PIN (personal identification number), is a secret series of numbers and is typically used in ATMs. A Pattern is a sequence of things, like lines connecting the dots on the login screen of a cell phone or tablet.

“Something only the user has” is termed a Possession factor. A key to a lock is a good example. With today’s computer systems your email account or your phone or a swipe-card is used as a possession factor.

“Something only the user is” is termed an Inheritance factor. Historically, fingerprints, a biometric method, have been used as the most authoritative method of authentication. Other biometric methods such as retinal scans are possible, but have shown themselves to be easily fooled (spoofed) in practice.

Two-factor authentication is sometimes confused with “strong authentication”, but these are fundamentally different processes. Soliciting

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multiple answers to challenge questions may be considered strong authentication, but, unless the process also retrieves “something the user has” or “something the user is”, it would not be considered two-factor authentication.

Two-factor authentication seeks to decrease the probability that the requester is presenting false evidence of its identity. The more factors used, the higher the probability that the bearer of the identity evidence is truly that identity. These systems ask for more than just your password. They require both “something you know” (like a password) and “something you have” (like your phone or email account). After you enter your password, you’ll get a second code sent to your phone or email, and only after you enter it will you get into your account. It is a lot more secure than a password only, and helps keep unwanted snoopers out of your accounts.

Many well-known systems employ two-factor authentication. Some of these are: Amazon Web Services, Dropbox, Facebook, Google Accounts, Microsoft/Hotmail, Paypal/eBay, Twitter, and Evernote. The two factor authentication will typically be employed when you are using a different computer, or a computer from a different location, when trying to access one of your accounts.

Most of these two-factor implementations send you a 6 digit code via a text message for you to input when you receive it. This 6 digit code becomes the second factor to be used with the original password. This definitely adds an extra step to your log-in process, and depending on how the account vendor has implemented it, it can be a minor inconvenience or a major annoyance. (And it also depends on your patience and your willingness to spend the extra time to ensure the higher level of security.) But in the long run the use of a two-factor authentication improves the security of your private information, no doubt something we all want.



APCUG’s FREE 2014 Fall Virtual Technology Conference (VTC) will be held on Saturday, November 1, from 1:00 pm – 5:00 pm Eastern Daylight time. The sessions are 50 minutes in length and offer attendees the opportunity to ask questions via a chat window. Videos from earlier conferences can be found on APCUG’s YouTube channel [www.youtube.com/apcugvideos](http://www.youtube.com/apcugvideos).

To register for this VTC, please click on the link: <http://bit.ly/APCUG-2014-Fall-VTC-Register>

This link is where you can view the presenter bios and, after the conference, you can download the handouts and get links to the videos.

<http://apcug2.org/content/vtc13>

Below are the sessions that are currently scheduled.

### **TRACK 1**

#### **Backing Up Strategies**

Elliott Stern, Maestro Computing Services

#### **Windows 10**

Francis Chao, Member, WINNERS and GSBUG, CA + Tucson Computer Society, AZ

#### **Utilities & Programs That You Need For Your Computer**

David Williams, Secretary, Online Services and Programs, Central Iowa Computer User Group

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### **Setting Up a User Group Facebook Page**

Sabrina Watson, President, Crystal River Computer Users Group (CRCUG), Florida

### **TRACK 2**

#### **Buying and Selling On eBay**

Gary Bigel, Teacher, Seniors Now Computing Learning Center of Orlando

#### **The History of Women in Technology**

Sarah Dutkiewicz, Owner, Cleveland Tech Consulting, LLC; Owner and Administrator, Cleveland Tech Events

#### **Bitcoins and Crypto-Currencies**

Jonathan Nowak, Corporate Computer Support Technician

#### **Virtual Technology Conference Committee**

Judy Taylour, Chair

Jim Evans

Hewie Poplock

Marie Vesta

### **RAMBLINGS—Uninterruptible**

#### **Power Supply**

by Jack Fischer

Director/Communications, The Computer Club, Inc., Florida, [www.scccomputerclub.org](http://www.scccomputerclub.org)  
jafischer (at) juno.com

APC Currents recently had an interesting article on how to pick an Uninterruptible Power Supply (UPS) for your PC. The purpose of a UPS is to power your system during a short-term power outage, preventing the problems and inconvenience of an improper and sudden shutdown. They are available at stores like Staples and Office Depot, and are highly recommended.

SIZE can be calculated by adding up the power-draw on all the devices to be protected. This information is normally marked on the nameplate or sticker on the back or bottom of each device. You may wish to protect not only your PC but also your printer, router, etc.

RUN TIME - Allow sufficient time to save your work and do so in an orderly shutdown. Most

outages are less than five (5) minutes, but may vary depending upon your location.

COVERAGE - You may want to have another UPS to protect your big TV.

### **Micro Center® In Store Clinics**

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Micro Center stores host free events called "In Store Clinics." The clinics cover a wide range of topics. All Micro Center store locations follow the same schedule of topics.

A link for store locations is at the top center of the home page, [www.microcenter.com](http://www.microcenter.com). For those in the Washington, D.C. area, the only store in Virginia is in the Pan Am Plaza at 3089 Nutley Street, Fairfax, VA 22031, phone (703) 204-8400, and the only store in Maryland is in the Federal Plaza at 1776 E. Jefferson #203, Rockville, MD 20852, phone (301) 692-2130.

Micro Center Clinics are held on most weekends, except during holidays. The same topic is usually presented on both Saturday and Sunday. Topics may change and clinics may be cancelled without notice. Please verify the schedule with the store before leaving and register online for e-mail updates ([http://www.microcenter.com/instore\\_clinic/sign\\_up.html](http://www.microcenter.com/instore_clinic/sign_up.html)).

Signing up in advance reserves a seat, recommended as space is limited. This can only be done at a store, either at the Tech Support or Customer Support area.

#### **October – November 2014 Schedule**

Start Time is 2pm local unless otherwise stated.

Oct 18 & 19: Wireless Networking

Oct 25 & 26: Troubleshooting Windows® 8.1

Nov 1 & 2: Virus & Malware Troubleshooting

Nov 8 & 9: Smartphones & Tablets

Nov 15 & 16: Backup & Restore

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### **Arlington Meetings**

Carlin Hall Community Center

5711 S. 4th Street, Arlington, VA 22204

<http://www.patacs.org/arlingtonmeetings.html>

#### General Meeting

1<sup>st</sup> Wednesday (11/5), 7 p.m. ET

#### Technology & PC Help Desk

4<sup>th</sup> Wednesday (11/26), 7 p.m. ET

#### Board of Directors

3<sup>rd</sup> Monday (11/17), 7 p.m. ET

### **Fairfax Meetings**

(with OLLI PC User Group)

Osher Lifelong Learning Institute (OLLI)

4210 Roberts Road, Fairfax VA 22032

<http://www.patacs.org/fairfaxmeetings.html>

#### General Meeting

3<sup>rd</sup> Saturday (11/15), 12:30 p.m. ET

### **Online-Only Webinar**

2<sup>nd</sup> Wednesday (11/12), 7-9 p.m. ET

<http://www.patacs.org/webinarpat.html>