

# NETWORKING 101

## WEST VIRGINIA NETWORK (WVNET)



# WEST VIRGINIA HIGHER EDUCATION TECHNOLOGY CONFERENCE

West Virginia Higher Education Technology Conference (WVHETC) 2014 will be held October 27-28, 2014, at The Waterfront Hotel in Morgantown, West Virginia. This annual conference brings together higher education, K12 and state agencies for a common purpose, that of embracing new ideas, developing new insights, and designing new approaches to help move education forward in the state. The conference starts on Monday, October 27, with the opening keynote luncheon and ends on Tuesday, October 28, with an exhibitor reception beginning at 3:00 pm.



←—Dr. Marjorie Darrah will be the Opening Keynote Luncheon Speaker on Monday, October 27 and will speak on the topic of *Using Technology to Give Students What They Need*. Dr. Darrah is Associate Professor of Mathematics at WVU and the CEO of eTouchSciences.

→—Wanda Baker will be the Breakfast Keynote Speaker on Tuesday, October 28 and will speak on the topic of *Ecosystem for Innovation*. Wanda is the Executive Director of eLearning and Learning Technology Systems for the North Carolina Community College System, the 3rd largest in the U.S.



←—Senator Robert Plymale will be the Exhibitor Luncheon Keynote Speaker on Tuesday, October 28 and will speak on the topic of *Legislative Update — Analytics*. Senator Plymale is the VP of Economic Development for the MU Research Corporation and is currently serving his sixth term in the WV State Senate.

→—Paul Garnett will be the General Session Speaker on Tuesday, October 28 at 10:00 a.m. and will speak on the topic of *Using New Wireless Technologies to Increase Digital Inclusion and Improve Education Outcomes*. Paul is a Director in Microsoft's Technology Policy Group, where he focuses on promoting higher-bandwidth, more efficient and ubiquitous spectrum-based broadband connectivity. He has been instrumental in the development of TV White Space technology, which has been used to bring broadband Internet to rural areas of Ghana, Kenya, Malawi and Tanzania.



An ambitious schedule promises an exhilarating conference experience and allows for leisure-type activities such as the Social Event on Monday night featuring a Costume Contest followed by Halloween Trivia and before you hit the road on Tuesday, an Exhibitor Reception with plenty of food, prizes and giveaways!

Attendees who register and pay in advance may choose to participate in any of the following three pre-conference training sessions: *Blackboard System Administrator*, *DegreeWorks*, and *e-Tech Teach* and/or a post-conference session on *IT Academy Workshop\**. We're expecting two hundred or more participants this year for the return of this important higher education technology conference. Fifty-plus concurrent sessions, 10 poster sessions, tantalizing and plentiful regional cuisine, the latest technological advances to be demonstrated by thirty-plus exhibitors, and networking with educators from all over the State of West Virginia will be just a few of the opportunities available to attendees. For more details, visit the conference website: [wvconference.com](http://wvconference.com)

\*Join this session by Angela Carlson, Microsoft, (Wednesday, October 29th 8:00 AM-4:00 PM — \$40.00 separate registration) to learn how to implement the IT Academy on your campus. ITA provides resources that can be easily integrated into new or existing curricula. Learn best practices for using Microsoft IT Academy (MSITA) curriculum in the classroom from teachers who have successfully implemented the program in their college courses.

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## CUSTOMER SATISFACTION SURVEY

As you might remember from last newsletter, we are continuing our Customer Survey Program, and our customers continue to tell us how we can continue to improve what we do on a daily basis here at WVNET. In conjunction, we have monthly giveaways of WVNET-themed memorabilia as a show of appreciation for your feedback. We've definitely seen an increase in responses from our customers and for that I'm appreciative. We strive to take seriously each response and to make changes when they are needed.



**This month, WVNET would like to congratulate Nikki Brown from Mountain Ridge Middle School in Gerrardstown, WV.** Nikki, who is a teacher as well as the Technology Specialist for the school, brought light to an aberration with our service that we may not otherwise have been able to discover. Due to her taking the time to complete our survey, I was able to discuss the problems with her and then coordinate with staff so that we can determine a better way to serve our customers in the future. Nikki was highly impressed, commenting, *"I've never had someone take a survey so seriously, and it's nice to know that someone is paying attention!"*

That is the goal, Nikki, and any comments either positive or constructive in nature, may tell us how WVNET can be more efficient in what it does. That's exactly why we have this program in place. Again, at the end of every month we will draw a winner and get in contact with them to send items of our appreciation. Please complete our survey by looking within the incident email of any interaction that you have had with us. As you can see, we take all comments to heart. Thanks again Nikki, and thank you to all of our customers who help us improve WVNET. We are nothing without the people that we serve. *(Guest article by Booker Walton, NOC Manager)*

## WVNET MEETS WITH FCC



On Wednesday, October 8<sup>th</sup>, two WVNET employees, Lead Systems Programmer Randy Long, and Customer Resource Specialist Booker T. Walton III, visited Washington, DC, for a meeting with the Federal Communications Commission.

This meeting was part of a broader project WVNET is working on in coordination with TV Band Services (TVBS) in an effort to make caching services part of the E-Rate Eligible Service List for the 2015 Calendar Year. TV Band Services has developed a caching service called URCast which reduces WAN usage in schools by placing a caching server inside of the school, allowing instructors to place content in the software's

MessageCenter and then giving students access to download lessons quickly and without class disruption on a daily basis. This service has dropped WAN bandwidth usage significantly by using the LAN infrastructure already in place to deliver content to the student's device (i.e, desktop, laptop, and any mobile device.)

One of the test deployments for URCast was in Barbour County Schools at Mount Vernon Elementary in Flemington, WV. Mount Vernon has 5Mb of WAN connectivity meaning that if 30 students were all downloading something at the same time connectivity would almost be at a standstill. On September 12<sup>th</sup>, URCast was deployed at Mount Vernon Elementary as a partnership between WVNET and TVBS. The positive impact on the digital infrastructure was almost immediate. Without an increase in WAN, LAN, or Wi-Fi, students were then able to access digital learning resources almost immediately. By downloading lessons inside the LAN on the caching server instead of over the internet, the drain on internet bandwidth is dramatically reduced.

Long and Walton were joined at the FCC by two top officials from TVBS, Chief Operating Officer Chris Cooney, and Wireless Communications Executive William Seiz. This was the third such meeting between TVBS and the FCC, striving to achieve E-Rate eligibility for caching services as well as helping structure the definition. WVNET joined them in this meeting to speak to the successes established at Mount Vernon Elementary, as well as to the technical proficiency of the caching service itself.

Within the next few weeks, the Federal Communications Commission should be announcing the E-Rate eligible services. *(Guest article by Booker Walton, NOC Manager)*

## NOC HELP DESK TIP OF THE MONTH

How many of you have received an email at some point purporting to be from the bank, a lender, Facebook, an ecommerce site or some other entity that is vital to your daily life, which simply states “everything is in a state of dismay and please click on this link to rectify the situation?” If you, like most people, say yes, and click the link, you’ve been a target of a phishing or a spear-phishing campaign. In a follow up to September’s article about password security and in recognition of October as *National Cyber Security Awareness Month*, this article discusses phishing and how to avoid becoming a victim of a phishing attack.



First, what is phishing? Phishing is the use of electronic communications, most likely email, to attempt to have a victim open a malicious file or to click a link that goes to an attacker-controlled web page. These attacks prey on emotion, and they use that to help social engineer a victim into throwing caution to the wind and opening the file or clicking the link. The tactic of phishing is the third most used methodology for a cyber attack according to *Verizon’s 2014 Data Breach Investigations Report* <http://www.verizonenterprise.com/DBIR/2014/> and it is widely used because, in most cases, it eliminates the need to get past intrusion prevention/detection systems and firewalls. For those of you that aren’t tech savvy, think of it as having a large and heavily reinforced castle to protect all the data and then think of phishing as someone unknowingly just opening the draw bridge and letting the attacker in.

A few notable attacks that resulted from phishing attempts are:

*Target, who was breached due to a subcontractor falling victim to phishing and happened to have credentials to Target’s system on the infected machine.*

*RSA, who fell victim because an employee opened a malicious Excel file in an email in the spam/junk folder.*

*Home Depot, for which the exact details of how the phishing succeeded are not public as of now.*

This may not sound like something that is of concern to the home user, but it is. For example, according to the press in the United Kingdom, there are about 3,000 home users attacked daily with about 1,000 daily in the United States. The FBI estimates that there is an 87 percent rise in the use of this attack vector, so home users need to be aware of the risks and protect themselves as well.

Now this all may sound like a scare tactic and a method to promote fear, but look at it as an attempt to raise awareness and aid the users in protecting themselves. To do that there are several simple things one can do to avoid becoming a victim. If you get an email purporting to be urgent and it is from a financial institution, Facebook, or ecommerce site, then look at the sender address. The domain in the sender email (everything after the ‘@’ symbol) should be that company’s URL; for instance, amazon.com or facebook.com. If that is not there, then the email is most likely not legitimate. If it looks legitimate, then look at the URL of the link or the attached file. Typically, financial institutions will not send emails to talk to customers. Groups like Facebook or Amazon will not send emails about confirming passwords or any kind of link that would ask you to login. If you are still unsure at this point, then err on the side of safety and contact the company and/or individual the email claims to be from directly rather than assuming it is ok and just clicking through. Of course, also keep your computer clean and free of malware and viruses. A great (and free) program to do this is Malwarebytes [Malwarebytes.org](http://Malwarebytes.org)

If all of this knowledge and advice is great, but you fear it may be too late and there has already been a successful phishing attack then here is some advice to get things back to normal with minimal risk. First, always monitor your accounts for unusual activity and watch your credit report to ensure nothing is out of the ordinary. Second, change passwords for all accounts associated with this, especially if linked to social media accounts (Facebook sign-ins on third party pages) as this could lead to more targeted phishing attempts on friends and family. Lastly, if there is any suspicious activity on accounts, they should be closed and opened as a new account to change all identifying numbers.

Phishing may conjure images of the well-known examples of a Nigerian Princess who has a sum of money waiting for you, or money a relative one never knew they had requesting a small sum to release an inheritance that doesn’t exist or the like, but this is a very real and dangerous thing to fall prey to. As a result of the Target attacks for instance, now more than 1,000 other vendors may be at risk from the same malware. RSA, whose whole business is based on secure encryption had their private keys stolen which almost crippled them for a short time. Of course, Home Depot is in the same vein as Target. As I tell people all the time, “*This is 2014 and the notion that saying one didn’t know is no longer applicable in terms of computers.*” We, as users, should be the ones who take ownership, recognize and heed the consequences of an online presence. A better job of protecting oneself will go a long way in the right direction. (Guest article by NOC Employee Tony White)

Follow the WVNET NOC Facebook Page at:

<http://www.facebook.com/wvnetnoc>

And the Twitter Feed at:

@wvnet\_noc

If you would just like to get the text message version of our Twitter updates, you can sign up via SMS:

Text follow [@wvnet\\_noc](https://www.facebook.com/wvnetnoc) to 40404. Standard text messaging rates will apply.

## FROM THE DIRECTOR

WVNET is buzzing with excitement these days! Karen Saffron and the WVNET Media Services Team have been working hard to give us the best Higher Education Tech Conference ever. Booker Walton and Randy Long were invited to the FCC to discuss WVNET's content caching servers in K12 schools. Andy Parker and Chris Freeman have been setting up the first free municipal super Wi-Fi in Huntington. And Allen Daugherty has been building fiber optic networks across Charleston to connect with less costly internet access points. WVNET has partnered with WV Public Broadcasting and the City of Charleston on this last project. WV Public Television will finally be able to broadcast the Governor's State of the State Address and other happenings at the Capitol in high definition by connecting their Charleston studio with the State Capitol Building by high-speed fiber optic cables instead of satellite feeds.



WVNET is proud to be asked to partner with others to make WV a better place through the smart use of technology!

## BARBARA LONG SELECTED TO RECEIVE COMPLIMENTARY REGISTRATION TO SIGUCCS



Barbara Long has received notification from SIGUCCS\* that her application to attend this year's conference in Salt Lake City has been selected by the awards committee. The award covers complimentary registration to the track of her choice (either the Management Symposium or the User Services Conference), one pre or post conference workshop and up to 3 nights at the conference hotel. This year's conference will take place November 2-7, 2014, in Salt Lake City, UT, and is centered on *BUILD YOUR OWN DESTINY*.

WVNET Director Dan O'Hanlon comments, *"Barb, I am so proud of all this wonderful recognition you are receiving nationally. You really make WVNET shine. Thanks for all that you do. —Dan"*

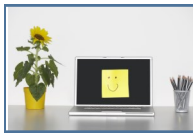
*\*SIGUCCS is an association of professionals who support and manage the diverse aspects of information technology services at higher education institutions.*

## LETTER TO THE EDITOR FROM SENATOR BOB BEACH

WVNET is always happy to hear from its newsletter readers and received the following email from Senator Bob Beach, 13th Senate District, Transportation-Chair, regarding the September issue of our newsletter: *"Thank you Fran. This publication is very useful. The information provided is timely, useful and to the point. Happy to see you're on top of things. I for one like many in NCWV enjoy our interaction with you. Keep up the good work. You have been and shall always be a friend of the Legislature. Thank you. (cc: Jeff Kessler, Clark Barnes, Craig Blair, and Donna Boley.)"*



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## MU STUDENTS EXPLORE PRIVACY ISSUES IN ESSAY CONTEST



*(From left) Patricia Proctor, director of the Simon Perry Center for Constitutional Democracy, Olivia Milam, second place winner, Sophia D. Mills, first place winner, and Dan O'Hanlon, retired Cabell County Circuit Court Judge*

<http://www.herald-dispatch.com/news/briefs/x302500576/MU-students-explore-privacy-issues-in-essay-contest>  
*MU students explore privacy issues in essay contest*

Sep. 22, 2014 @ 09:01 PM

LACIE PIERSON

HUNTINGTON — Two Marshall University students are a little richer in knowledge and finances after finishing in the top spots of the sixth annual Dan O'Hanlon Essay Competition at Marshall University.

Sophia D. Mills, of Proctorville, Ohio, and Olivia Milam, of Spanishburg, West Virginia, were awarded a total of \$1,500 in scholarships during an award ceremony Monday evening in the Memorial Student Center on campus as a part of Marshall's annual Constitution Week celebration.

Each student crafted answers to the essay question, "Edward Snowden, Counter-terrorism and the National Security Agency: Does the Government's collection of Metadata Violate Our Fourth Amendment Rights?."

"The question this year was pretty challenging," said Patricia Proctor, director of the Simon Perry Center for Constitutional Democracy and a pre-law advisor at Marshall. "The thing that characterized these essays was the maturity displayed by the writers in reviewing both decisions and respecting both decisions, even the one with which the writer did not agree, and the very thoughtful quality of the work in addition to some of the research they did."

Students submitting an essay for the contest were asked to consider conflicting decisions on the topic by federal judges in the Southern District of New York and the District of Columbia. Students then were asked to explain which judge's rationale they found to be the strongest and why they agreed with that judge.

Both Mills and Milam said the essay question represented an intersection of their own personal and academic interests.

For winner Mills, a political science major, the political and topical nature of the question was most appealing.

"Things like this always interest me," said Mills, who earned a \$1,000 scholarship in the contest. "I like current events, and I liked that it was something legal and something political while being something that was actually in the news, new and fresh."

Milam, who is enrolled in Marshall's college of Information Technology's engineering and computer science program, already has earned bachelors degrees in history and philosophy.

She said this year's essay contest topic was one with which she easily connected.

"I thought it was a good topic," said Milam, who earned a \$500 scholarship. "I'm interested in where the technology is going in terms of its legality, and it has a lot of repercussions. I've looked at this contest since it was formed, but the topic was never one that I was interested enough to want to get into the contest. This year, the topic was one I was very interested in."

Former Cabell County Circuit Judge Dan O'Hanlon, for whom the contest is named, has not missed an award ceremony since the contest began in 2009.

O'Hanlon said he is still grateful for the anonymous \$50,000 donation that launched the contest, which he said will affect students for the better for years to come.

"This donor is still affecting lives for the good," O'Hanlon said. "I am amazed at how smart the students are in the middle of their college careers. Marshall is doing a tremendous job teaching them how to analyze things, how to think critically and how to express that. I am absolutely so proud of Marshall University."

Follow Reporter Lacie Pierson on Twitter, @LaciePiersonHD.

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