Quarterly Networking BILT Meeting - August 19, 2014

Meeting Minutes

Attendance

Ron Halbach – Juniper Networks
Lenny Portelli – Seminole State College
Scott Veibell – Cisco Systems
Robert Thomas – DHS/FEMA
Sean Harrington- Century College
Helen Sullivan – Collin College
Julie Hietschold – Collin College
Diana Sukut – Collin College
Mark Dempsey- Collin College
Ann Beheler – Collin College
Jen McGarvey – Collin College
Molly Guard – Collin College
Saydi Tillman – Collin College
Christina Titus – Collin College
Keith Whitehead – Eastern Florida State College
Lynn Mortensen – Retired from Raytheon
Patrick Fontenot – Northwest Vista College
Eliazar Martinez – El Centro College
Catherine Oleksiw – Measured Transitions LLC
Rene Bylander - WITC
Jonathan Davis- Cleveland Community College
Mercedes Fisher – MATC
Bill Saichek – Orange Coast Community College
Kurtis Sampson – Phillips Healthcare
Tu Huynh – Comerica Bank
Nisheeth Agrawal – Calhoun Community College
David Keathly – UNT
Mark Whigham – Calhoun Community College
Yang Lai – The IS Group
Jessie Pagan – Cisco Networking Academy
Dan Myers – Citrix
Pam Betts – San Jacinto Community College
Zek Cernoch – Northwest Vista College
Dave Keller – Century College
Ernie Friend – Florida State College at Jacksonville
Vincente D'Ingianni- Binary Systems
Kurt Wall – Vertical Resources
Charlie Bess – HP Fellow
Matt Glover – AMX
Glenn Wintrich – Dell
Richard Grotegut – Ohlone College
Jon Hardesty – Collin College
Nancy Cerritos – Wisconsin Indianhead Tech. College
Kim Yohannan – EMC
Belicia Miraval Albornoz – El Centro College
Comfort Ugwuh – Dallas ISD/ El Centro College
Peter Kazarinoff – SHINE

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Welcome and Introductions – Ann Beheler

Trends

Matt Glover – I am in California talking about industry trends. There is a lot of interesting things being discussed. One of the things that I wanted to discuss was the containerization of business data that is separate from your personal data. In the event that you win the lottery and move on, you have the ability to remove your data without damaging your family pictures that you might have on your iPhone. This also means that certain data is in a separate container, which would keep it from being impacted by viruses in your space. There are a lot of different technologies

that can help us do that but that is one of the industry trends that are out there. I opened with that to get the juices flowing this morning. I'd like for everybody else to share some trends as well.

Tu Huynh - It sounds very similar to BYOD (Bring Your Own Device). You also have the Internet of Things. The ability to take advantage of the data that is available to you is also a big deal. Those are a few of the trends that I've seen lately.

Matt Glover – I'll add another one while you're thinking. We're moving into information analytics; Analytics 1.0 was small data, 2.0 is big data where we were harvesting large amounts of data, and Analytics 3.0 is the merger of both of those things and how the business can more nimbly fix an issue when failures will occur in the field, etc.

Glenn Wintrich – One of the things that I've seen is related to the software defined networking. Companies like Coca-Cola have told Cisco that if they don't move towards SDN, they will find another company. Even Cisco is moving on that trend and it will accelerate the trends further. We've been doing it for decades; we just have a fancy name for it now. If a student is applying for a job with Matt Glover at AMX, they should know what Matt does and what the company does. They need to know how they can impact the company and be ready to explain that during an interview.

Matt Glover – I completely agree. I think that is a good sample set. What I'd like to do now is talk about how we think this trend will impact our education system. I'll start with the security. Security goes across everything that we do. Security unaware students are dangerous to operate in their network. I think when we talk about any security element, there needs to be an ongoing focus of how they can secure the system. Does anybody have thoughts on that?

Ann Beheler – I'm surprised that we have even attempted to teach networking without having an overlay of security. I'm glad to see this merger. Our curriculum is still not intertwined all the way through so we may have a way to go with that.

Glenn Wintrich – This is a big issue. My son will leave in October so that he can learn security for three months. These are the types of programs that need to be implemented everywhere. There are people out there that realize that everybody has to have it and networking without security is not working.

Dan Myers – I just want to echo this. It is moving way beyond network security. The internet of things was mentioned before, the design of the interface, etc. Security is becoming very pervasive everywhere.

Matt Glover – There was a content that was pushed out with security and the quick answer that everyone was leaning towards was biometrics. Having retinal scans on your phone, etc. One of the questions that fascinated me was that right now, when we have a breached password, the digitization of passwords are simply ones and zeroes, as it moves through the ether. If you're

able to hack that and know what that looks like, shouldn't you be able to also hack the biometrics signature because it is 1s and 0s when it passes through the ether. There are dangers on all sides.

Sean Harrington – I think this is part of the final networking hour. It has been gaining traction and it has to do with biometrics. The FIDO network is a biometrics and other multi-factor authentication. They are trying to get involved with identity management. The guy that is heading up FIDO came to speak at a conference here in Minnesota. As I understand it, it is the whole concept of doing away with passwords due to the complexities that we all have to deal with to maintain so many of them. One of the weaknesses is that some of us use the same password for multiple sites so if a hacker is able to acquire those credentials, then they can access many other places. The FIDO Network is an infrastructure that uses biometrics and other multi-factor authentication mechanisms that seeks to do away with remembering and storing a password. There is more to it than that but I'm not sure about more. I think that because it is gaining so much traction, I think we would be behind if we weren't gaining better understanding of it ourselves and giving that information to our students.

One member commented – Students with associate degrees will take position that four year degree students were going to take because there is a lot more knowledge being given to students early on. This means that they are going to have to focus on getting that AA certificate but then add on different certificates or study programs. They are going to have to do that consistently through their careers. The industry will start pulling those people to do jobs that were once done by engineers, and engineers will go do something else. We have to prepare the students to be life-long learners because this industry changes so quickly.

Brian Kirsch - Something you want to keep in mind is that in a lot of companies, you are seeing a fraction of administrators versus security personnel. While security is important, some of the fundamentals of server administration are being overlooked. If you look at it through a networking side, you have a networking team with security knowledge but not necessarily as dedicated to security. While security is important, if the network isn't functional, security is irrelevant.

Matt Glover – The only challenge is that we can't have a lot of people doing security but not actually doing the work. These people have to be operational ready. Community colleges are making operational ready students and they all need to be security ready. Whatever challenges that students may face in security, they know those exploits and can identify those.

Glenn Wintrich – I want to add one thing; I would recommend an audit of all of the courses. When they have a lab, do they have a switch or do we make them go through that?

Ann Beheler – You're defining analytics and information on security. How do we get all of this into the curriculum? We're down to 60 credit hours in Texas.

Matt Glover – I think it is the same thing that we do every year or so. We have to go through it and prioritize the hours. That's why a lot of these periphery hours don't make the cut. For security, it has always been pretty high on the list.

Bob Thomas – The issue is that we're trying to cram too much stuff into one thing.

Ron Halbach – We need to put a definition of what type of security you are putting into these other curriculum.

Matt Glover – There are good ways to put networks together and bad ways to put them together. If you really want to lock things down, and need to put multiple layers, etc. It is the general concept of how they put together their networks during the lab events.

Ron Halbach – That makes sense to me.

Glenn Wintrich – Is this something that someone with a two year degree can accomplish? It is the filter about whether you add it to the curriculum.

Ron Halbach – It just needs to be defined for each track.

Tu Huynh – I agree with Matt. We may not be able to put it into the existing curriculum but we could incorporate these concepts some other way. It is something that we need to be thinking about and partnering with our faculty.

Ann Beheler – I believe that I've seen curriculum that discusses change-control. How many faculty members have classes where that is incorporated?

Richard Grotegut – There is a foundation course. We have Samsung in my area- they are interested in student interns that have those skills to work for them. I was just wondering if anyone else was seeing that trend.

Sean Harrington – I want to echo that. I work for US Bank and Idle is so alive and in use in the industry. I agree that it should not be an entire class but I think that an advanced security class that has a certain amount of time that is dedicated to Idle is important. I think there should be a subset of discussion of PCI, HIPPAA, etc. Maybe even capability maturing model?

Matt Glover – The students in community colleges are given the basics. I think that when we talk about this genre of students; I agree that they should have information on this but I also agree with Glenn that it wouldn't be serving the masses.

Sean Harrington - In more rural areas where the targets are smaller companies or shops, Idle is not essential there in those settings. You want to be able to put something out there that will benefit everyone, not just a small number of people.

Glenn Wintrich – Can we just capture the need for an audit to make sure where security can be captured?

Ann Beheler – We would have to have our faculty certified at the high price. We gave up on it a year ago. We can look at it again but at that time, they did not see the value of working with educational institutions.

Student Portfolio Tiger Teams

Ann Beheler – We have several Tiger Teams that we promised to work on. We have one Tiger Team meeting that will take place this Thursday; I know that Matt and Glenn can be here. We will supply the Webinar information – let us know if you'd like to participate.

Glenn Wintrich – If anyone that has created a portfolio, we would love if someone can send us their portfolios so we can show what portfolio templates are being seen.

Ann Beheler – Sounds good. Everybody can send me those portfolios – Again, please let us know if you want to participate in that meeting. Also, we still have a need for Tiger Team participants. I would suggest that we have a few more involved in these Tiger Teams and we can get that all together.

Continuing Education Certificate acknowledgement

Ann Beheler –Many consortiums across the country are counting certificates that are already in the industry or trying to get back into it. We have been working with Continuing Education to meet our goals. The CE courses can assist people with obtaining skills to get higher wages. We have defined smaller certificates for CE, and by doing that we have found that there is a demand for Shell Scripting. It turns out that these certificates are assisting people in gaining the skills to move forward in their careers. We're keeping track of all of these by going to the state with UIWage Data. Does this sound like a good idea? I do not see CE and Credit as either/or. I think that at one point in time, they will need credit. Another time, they will need CE.

Glenn Wintrich – I have been doing a lot of research and for our industry, there is no two year or four year degree because it is a life-long relationship with the university that you went to because it is an ongoing education. Every student that graduates and doesn't do anything to refresh their skills in five years is completely behind.

Ron Halbach – There is an emerging field called **DevOps**? You are going to see an increasing demand for something along those lines. Have we looked into this?

Ann Beheler – I have not personally but we can. It is something that CE might have already looked at but I'm not sure if they have. I can find out.

Ron Halbach – Yes, I think it is important to find that out.

Richard Grotegut - The concept is valid but if we're trying to get employed people out there, giving them that generalist view is probably the best thing out there.

Ann Beheler – Some of the states will allow for something called an Advanced Certificate while others don't. Florida Community Colleges have gone to offering four year baccalaureate degrees; I think that is a response to the needs.

Kurt Wall – I did come up with something that is a team effort in the STEM program. We're trying to drop it down to some of the junior high school level; I think that this can be very beneficial for them. Kids need to learn to give back at an early age so that they learn about team effort.

BILT recognized all of Collin's CE certificates as they noted CE is viable as credit is not always needed.

Update on NSF call for ATE Centers

Ann Beheler –DOL has asked five of us to put together a proposal and have it submitted in 10 days that would create a partnership with NSF and DOL. It is very interesting that DOL has finally seen the important of this merger.

Report from CTC on UNT Summer Camp

David Keathly - This summer we did something different; we did Super Camps at UNT. We did some robotics, some mobile apps, etc. We did three app camps that were directly sponsored by the CTC. We did a similar camp at Cisco in Richardson and we got a lot of interest from that. I thought it was a pretty successful summer season and we look forward to doing it last year.

Mark Dempsey – We did three Working Connections this summer.

North – June 2014 (28 people from 5 states)

1 Digital Forensics
2 Ethical Hacking
3 NetLab+ Setup and Operation

South – June 2014 (40 people from 10 states)

1 Citrix
2 Advanced Network Analysis, Troubleshooting, and Security (Wireshark)
3 vSphere 5.5
4 Cisco Academies

Texas – July 2014 (97 people from 20 states)

1 Android App Development

2 EMC Cloud Infrastructure and Services
3 Ethical Hacking
4 Linux Essentials
5 vCloud Director
6 vSphere 5.5

Also did a brainstorming session during lunch and got good feedback we can roll back into the program (also shared with the attendees), like possible future WC topics, student portfolios, soft skills, getting business involved, building a lab.

Total: 165 enrollments total

SURVEYS
Got great feedback on the survey results – both for the programs overall and the individual instructors and tracks (only a few unhappy attendees)

How would you describe your level of expertise in your track's topic BEFORE this training? In other words, where were you on Sunday night?
How would you describe your level of expertise in your track's topic AFTER this training? In other words, where are you now?

Beginner > Intermediate. 39 (40%)
Beginner > Advanced, 3
Intermediate > Advanced, 31 (31%)
Advanced > Master, 1
74 moved up = 76% of 97

HI TEC – July in Chicago

Three student posters	El Centro – Delivering Enterprise Solutions to Branch Offices
	Collin College – Network Topology
	Georgia Southern – Using Cloud Based Labs

Report on NISGTC's sponsored employer panel

Susie Davisson – We held an employer panel at the end of July. It was a special event for those that have just finished a certificate; invite only. It was a Q&A session. There was a meet and greet afterwards. It resulted in two internships and two students have moved on to the second rounds of interviews.

Matt Glover - It was a great experience for the panelist. It was a great way for us to share with the students on how we built their careers and how they can build theirs. There was a significant

amount of participation from the students so that was great. I met a lot of really great students who are determined to make their careers happen.

Ann Beheler – The DOL Grant supports the CTC students as one of the four strands that we support. I know we have placements from the job fair. We have really benefited from having the job developer in the career coach function because we have some great local businesses that are willing to help our students.

Susie Davisson – The employers will be coming to Collin to talk to the students.

Glenn Wintrich – Can we invite the panelist to join the BILT?

Ann Beheler – Yes, that is in progress.

Other topics of interest

Dan Tuuri – Do you see that baccalaureate degree in Florida as a trend moving through the nation?

Ann Beheler – The four year baccalaureate degrees is a pocket movement. It is moving slower in Texas and other places. I am seeing the real push to make the two year degree to fit into the 60 credit hours so that students don't lose credits when they move on to a four year institution.

Wrap up and date for next meeting

Mark Dempsey - We will send out invitations for the next meeting, which will be on Thursday, November 6th.

Meeting adjourned at 10:00AM