

Quarterly Cybersecurity BILT Meeting – August 6, 2014

Meeting Minutes

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Welcome and Introductions by John Sands

Industry Trends

Ann Beheler – I just wanted to let you all know that we are putting together with the other partner leads what this grant has truly done for students. We may be contacting many of you to get some stories of how you view what we've done with the money. We want to make sure that the view of Round 1 leads and we want to represent you all for it.

John Sands – We have had good input and guidance. Having a constant chain of communication with the industry has been really great. In the previous calls, we have identified trends that we still had the opportunity to address. One thing that we have talk about was with SCADA. We have also heard about mobility and more content on mobile devices. I want to open up any other discussion on trends.

Gary Toretti – With the latest breaches that have been occurring I think everyone is realizing how important cyber security is. There is that Russian group that has over a billion user accounts; the industry is clearly struggling from an overall perspective. Every day there is a new patch, a new exploitation. I think that from a malware perspective, it is getting bigger and bigger.

John Sands – We are hosting a U.S Cyber Challenge. Today's conference is about malware and addressing exactly what you are talking about. They will also be looking at reverse malware. It may be something that we could add into modules to a couple of the existing courses.

Gary Toretti – We try to build these controls within our network. How do you take things out of the network before it even gets to the end-user; building that type of intelligence that can sweep a threat out of the network before it causes major concerns. Having that security in the network itself is what we're moving towards.

Heather Fox – I'm not sure if you know this but on the nsa.gov website, they do provide mitigation guidance. I'm not sure how much of a help it would be but it is publicly available. The web address is www.nsa.gov/ia/mitigation_guidance. They update that once a while so it is pretty up to date.

John Sands – One thing we really tried to do with our curriculum is try to have the students leave with the understanding the resources that are out there for them. It is a bigger issue than what we can completely teach them. We have a capstone course that we will be rolling out soon and I will show how we incorporate that into it. I think it is important that students know of these resources and community colleges need to help students with all of that. I will paste the URL in the notes

Steven Miller – I recently attended a special interest for the oil industry and one of the big issues for oil companies, the human factor is the biggest concern. They like to partner with academia to change the whistleblower environment. Students need to know that it is okay to say when someone is doing something wrong. That awareness needs to be out there. It is a big issue that needs to be addressed.

John Sands – When we talk about human factor, are we discussing human error or malicious actions?

Steven Miller – Yes, both of those are factors. One of the big concerns is the graduates that come out, post everything going on in Facebook.

Gary Torette – Certainly, humans are the weakest link. Now, you see emails come out that look like they are coming from American Express and look professional. I can read through it and feel that it is malicious. It is getting to the point where even security professionals are looking at things differently. The Average Joe doesn't know enough and click into these malicious links. People are going to click on things and open up attachments.

John Sands – I feel good about the investment that we just made into our last course. This is the focus of our last lab and it is encouraging that we are addressing these issues in our courses.

Update of Curriculum Development (For All Partners)

Ann Beheler – At Collin, we are hiring a new security faculty member. The job includes that the faculty member will go through the entire CASIA curriculum. We are exciting that they will have time to devote to that. Moraine has done a wonderful job of leading this effort.

John Sands – One of the things that we've taken to heart is that we have heard that our students need to know how to be practitioners, as well as understand the overall idea of a security management plan. We have taken a couple of steps in addressing that. We developed a new scripting course that will be offered this fall; it will cover scripting and programming for use in information insurance. We have also developed a capstone course really aligns with the new Comptia CASP certification as well as part of the CSSIP. One thing we did was partner up with IT Squared; this enabled us to be able to use their materials in our courses. We ran a class with 30 faculties attended a 5 day class with this material. We have created our own materials as well and we wanted to share it with you all to get feedback. As a case study, we have the students study what happened at Target and try to identify what went wrong. **Demonstration of course** We have students do an external scan and identify things such as competition. We have them do a SWAT analysis in the form of spreadsheets. We give them some of the materials that are out there for the SWAT analysis, and go out to do the analysis. When they leave our program, they have experience seeing how a SWAT analysis is used and how to do the analysis. The idea with the Target issue was that there was a lot of operational confusion. It really starts at the organization level to keep security tight. In order for students to implement this, we have them identify specific positions for security. They also have to look up what job qualifications would be necessary in order to get experience with organizational management. We also get into risk management and do a simple analysis. We also have them do a qualitative analysis. We just want to give the students a well-rounded experience in organization management within the security. I can see a lot of students coming in to just get components of this.

Ann Beheler – We are modularizing this. It will be available in a full program, as well as modularize this. This is supported by tax payer money; you can use it within your corporation. We are also hearing that if some of the students finish up some of these case studies and place them into portfolios for interviews, it would be valuable. What do you think?

Gary Terreti – I think that is absolutely valuable.

Lynn Hathway – When you say open source, where are you placing this?

Ann Beheler – We are putting in up on NTER.RIOSALADO.edu. Anybody can get the curriculum there. DOL is opening an open source site that we will have to upload everything on there. It will be open up to everybody and we can provide you all with information once we receive it. DOL has taken their time to figure out how they will manage all of the material done with all of this federal money. It will be a sub-site called Murloe. It is

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created commons version 3.0, copyright free, if you want to adapt it or modify it. All you have to do is give attribution to the college that created it.

Lynn Hathaway – A good thing about having a username and password with these websites, it will allow you to keep metrics on who is coming back for this information.

John Sands – One of the things that we do, is every school that wants to use this curriculum, they will contact us. We will then send them the curriculum electronically or by mail. This way, we can keep track of who is using the material.

Ann Beheler – John's piece of this are the labs. On the NTER website, we have analytics on who is using the material but we only get geographical information. I am hoping this DOL/Murloe solution will allow us to get better information on who is using our material. A big challenge is that IT changes so often so we're trying to get all of this online so that it is still relevant.

John Sands – Any comments on the courses? All of this curriculum will be available in the next semester. We put a lot of time and effort into all of this and hope it will be used.

Update of Lab Development (For All Partners)

John Sands – You know partners are using the labs when you get calls about things.

Ann Beheler – I have just gotten approval to hire a contractor to work with a program lead with the colleges. There are so many good things out there to consider what they benefits once they use the labs. I'm going to be moving forward with that on a consortium level so we can get broader usage.

John Sands – I think the virtual labs bring a different element to teaching. A student doesn't have to camp out at school to master a skill. We have some students who will do a lab three or four times in order to master the skill that they are working on in class.

Ann Beheler – A lot of the labs can be completed without anything but a browser. We have scheduled all of our labs into the classrooms. I predict that we are going to schedule less hours face to face and more online through a virtual environment.

Steve Miller – All of our cyber classes are online. The use of NDG NetLabs are frequent. I have also found that there are a lot of publishers that have their own virtual labs with textbooks. Sometimes it is overwhelming to decide what labs to use.

John Sands – We distribute our VM, you won't have to get a Netlab to run these on your network. The real benefit is that a lot of schools can't afford the Netlab environment so this is a great alternative. The problem with that course is that it is relatively expensive. One of the things that we did was come up with a course that will address technologies on an open system platform so it is Linux base. I think that course is going to get a lot of traction but it does not sacrifice student's experience with each of those technologies. That is our latest course and we've gotten really good feedback on that.

New Uses of Virtual Environment (For All Partners)

John Sands – We hosted 5 of the 9 CCDC competitions which has hundreds of students participate. One of the exciting things that we got into this year is that we have worked with the ADI Group. We hosted the first cyber challenge. We had 12 schools participate, 112 students. From that, one of the things that we're looking at doing

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is creating a library of these 'capture the flag' exercises. We could create competitions for students to master those skills. We could distribute those exercises to any schools using our labs.

Student Placement (For All Partners)

John Sands – This is a high area of placement and need. We tracked a cohort last year with a high success rate. Our cohorts involve resume writing, lectures, and guest speakers. We had 25 students participate last year, and 19 of them got jobs directly related to the field. It was so successful that we're going to track another cohort coming up.

Progress on SCADA

John Sands – The SCADA project consists of various steps: working with industry to identify a lab to fabricate and purchase all of the equipment, and implementation of the lab itself. **demonstration of lab fabrication**

Steve Miller – How can we get access to those labs? Will they be open source?

John Sands – Yes, they will be open source like every other lab.

Steve Miller- If I could convince the oil & gas group in Houston for you to come down to do a presentation, would you be willing to do that?

John Sands – Absolutely. I can even have someone come with me to talk about the things being done in the oil industry.

Key Terms and Search Engine

John Sands – One thing that we would do is have a key term search engine. We can actually demonstrate it today. It is the first version and still being tested. The engine is built and just needs to be refined. I would love to hear some feedback on this. **Search Engine demonstration** There is a back-end management tool so we could constantly update this. It will be around longer than the grant will be around. Our team has worked really hard on this and this is a nice quality tool to make the content much more accessible.

Ann Beheler – This is the first time I'm seeing it and I am thrilled.

John Sands – They have put this all together in three months so we're really excited about this. Like I mentioned earlier, we are beta testing it right now.

Ann Beheler – I think the partners are supposed to be turning in key terms with all of the curriculum and labs. If they haven't been doing that, we will get it all together to go into the database.

John Sands – We want to make this look a little nicer by putting the logos on there. Are there any other suggestions on what would make it more attractive? We will be using the NISGTC color scheme and icons that differ between curriculum, labs, etc. I would like to open it up to any comments, suggestions, etc.

Ann Beheler – I'd like to ask our business partners if there is anything they'd like us to do.

Matt Glover – It sounds like you are doing a really good job. I know that within corporate IT, we are struggling with the volume with cyber security challenges. How has the student population growth look like?

John Sands – We have three populations in our program: our student population consists of students coming out of high schools; we have people who work in the field, and people who are changing professions. We really concentrate on more of the students coming out of high school and people changing professions. We do have initiatives at Moraine to find more veterans. Automation is having a strange impact on our field.

Matt Glover – How do you see cybersecurity and the training we're giving students today to build the gap between mobility and the cyber threats that exist every day around us?

John Sands – I think this has become a core skill needed; it is no longer a specialization. The people that have to support what comes onto our network has to know something about cybersecurity. We really need to make a decision on what we focus on and so do other colleges because of our job needs.

Matt Glover – The hackers are more organized than before. We are getting into a framework of the wild west that anything goes. The challenge that we're having is with this huge push to get everything into the cloud, it just is not as secure as we'd like it. Is there a thought within the education realm that cybersecurity is getting so out of hand, is there a way that we can take this message mobile. Allow corporations to train thousands of employees at once.

Ann Beheler – I think we could do that but we're playing catch up. There is nothing that says that we can use what is going onto NTER to train massive numbers of people. I'm willing to try it.

John Sands – That might be an interesting approach. We all recognize that there is a critical shortage. Community colleges are stepping up but not at the amount that we need. I think that we're willing to work in any way to help fix this challenge. We're getting momentum but the challenge is making us chase our tail.

Ann Beheler – In our industry, things are obsolete almost immediately. I don't think we can expect DOL TAACCCT money to be doing it because it won't. I just don't know how to keep it going.

Matt Glover – How do you get the certification message driven out?

Tom Bacarro – The western cyber exchange does training and certification. They also charge for spreading awareness on this. They work closely with the community college in Colorado Springs.

Ann Beheler – I'm not concerned about offering it. I am concerned on having money to develop it. People want our material for a cheap rate but that won't keep the engine going to develop. One of my biggest fears, it will be hard for us to keep this up to date.

Adjournment at 10:40am