BILT Meeting August 16, 2016

Attendees:

Julie Abell, DM Home Entertainment
Ann Beheler, Convergence Technology Center (CTC)
Carole Bennett, Women Who Code
Charmelia Butler, El Centro College
Bruce Caraway, Lone Star College
Trevor Chandler, Houston Community College
Trisha Conner, CTC
Mark Conway, NetApp
Narges DeBary, Houston Community College
Mark Dempsey, CTC
Ernie Friend, Florida State College Jacksonville
Matt Glover, Le-Vel Brands LLC
Elizabeth Halweg, Fox Valley Technical College
Sean Harrington, Century College
Dan Heighton, Clark State College
Julie Hietschold, Collin College
Bijan Houshiar, Diablo Valley College
Jason Huebner, Waukesha County Technical College
John Huff, Polk State College
Jimmie Joseph, Ferris State University
Manzur Khan, Houston Community College
John Lattimore, Cleveland Community College
Xin Tao Liu, Herzing College
Patrick Logue, South Plains College
Stephen Lyford, Wharton County Junior College
Rajiv Malkan, Lone Star College
Amelia Maretka, Wharton County Junior College

Debbie Miller, CTC
Michael Miller, Wisconsin Indianhead Technical College
Lynn Mortensen, Raytheon
Brain Nelson, Lansing Community College
David Pope, Ozarks College
Jackie Porter, El Centro College
Susan Randall, Cleveland Community College
William Sanderson, Renton Technical College
Ray Shanehsaz, Houston Community College
Luhong Shen, Herzing College
Candy Slocum, InterLink (+1)
Gordon Snyder, Optec
Jerry Snyder, Sinclair College
Beth Stall, El Centro College
Helen Sullivan, CTC
Susan Svane, North Central Texas College
Greg Teets, Clarke State College
TJ Teoh, Herzing College
Christina Titus, CCTA
Scott Veibell, Cisco Systems
Mike Vickers, Tallahassee Community College
Dwight Watt, Georgia Northwestern College
Mark Whigham, Calhoun Community College
Donnie Willis, North Central Texas College
Kim Yohannan, EMC

Next BILT Meeting:
Tuesday November 15, 2016
8:30 AM – 10:00 AM CST

Welcome and Introductions / Roll Call

Helen: Good morning and Thank you for joining us for the BILT Meeting. Roll call was taken.
Ann: Thank you so much for joining today.

Trends – Discussion led by Matt Glover

1. Software Development - Mesh Architecture

Matt discussed new trends in software development. He does not know if it will have an impact on training over the next 6 months. It is a watch for now.

The development of new business applications can be very costly and time-consuming and the business might only use about 10 to 30 percent of functionality that cost $1 million. Mesh architecture allows various technologies to be coupled together quickly through APIs (set of routines, protocols and tools for building software applications) without as much waste.

Ann – What does that mean for what we teach? Are we moving more into coding and programming?

Matt – The highest iteration of change is at the software level and then moves backward to the hardware level. It is not whether I am part of a Microsoft stack. Can I cross-pollinate my technology with others and then have them work together? The glue holds all the technologies together through a series of APIs.

Mark Conway (NetApp) – The trend you are talking about is certainly something we are seeing as well in managing the storage and data. We use the term "data fabric." On Command Insight data management software makes it easy to monitor and manage your multivendor IT infrastructure. You're weaving together a number of heterogeneous technologies to view in a single environment.

2. Back End Mash Up Applications

Matt – Uber and Airbnb are great examples of companies that have taken apps that already exist and blended them together (Mash Up applications) to create another product and go live quickly. They didn't have to reinvent anything. Instead, they leverage existing cloud technology to create a new, transformational technology.

Ann - Matt do you want to talk about that you are running your business in the cloud?

Matt – I practice what I preach. We are 100% in the cloud and are using both Mesh and Mash Up. We have something called "freedom of talent." As long as they have high speed internet, we can hire talent from anywhere in the world.

So how does this impact education? This trend is not going away. You are starting to see big companies like Oracle and Microsoft buying up hundreds of companies with thousands of technologies and having the ability to sell big packages or specialty items. It is moving in that direction. We need to get our students to think they no longer have to be burdened that they have to bolt on this Microsoft thing.   They can go to the app store and pick the apps needed and then build their own application.

Mark Dempsey – From the chat box: What post-secondary courses do you recommend?

Matt – Ann you might know this more than I do.

Ann – It seems it is more programming/coding related than we have been teaching.

Ernie Friend – I think I see it. There are sort of two pieces, application development and infrastructure. We are focusing on the virtual infrastructure cloud. We are teaching several cloud based courses. I think it is maybe the skills that people need. So maybe you could describe the skills that will be needed.

Matt - In my previous organization, which was an on-site infrastructure team, the process I had when creating new software included: start with the infrastructure team and get specs done (three days of meetings); write up a work order to get the components required to run the software and send to vendor; wait to have components delivered by vendor (one week); once you get it, then build the system (4-8 weeks). The whole process could be as long as two to three months. Now that we are completely cloud based in my new organization we can spin up the system within as little as 15 minutes with the longest custom version being 1 week. It's all specs on a work order in the cloud. We now spend 10 percent of what I used to spend on infrastructure and are no longer hiring infrastructure people. Jobs are now moving to cloud based companies. "Rack 'em stack 'em" jobs will be going away or companies will be hiring less people to do that, but jobs will be moving to central cloud providers. Middle-level companies will start trending to moving to the cloud. Then larger companies like Cisco will be building focused and cloud focused. Training should be both building focused and cloud focused.

Ernie Friend – Directed by our BILT, we're looking at Amazon Web Services, Azure, the top couple of cloud providers. Even in the cloud, there is a physical system somewhere. Someone has to set it up. It's not magic. So you're still doing the same stuff, just in a different way.

Matt – It is magic because it takes less time. We're able to rapidly, nimbly adjust our implementation. Focusing on the cloud providers should excite the students. Smaller and mid-sized businesses don't yet understand the benefits. They're seven years behind the curve. Which means there are still a lot of jobs to fill with the education we're providing now.

Scott Veibel (Cisco) – Certainly the cloud is here but not everyone is using a public cloud. Larger companies are using private clouds or they are creating their own hybrid cloud while smaller and mid-size companies using more public. Cisco sees the trend coming. We're educating students that it won't just be AWS. There are also job opportunities at major companies that own their own cloud. Traditional networks will take a while to go away.

KSA update – Tiger Team results

Ann presented the enclosed charts (starting on page 6) regarding the KSA update. She indicated that the Tiger Team had met and were getting close to completion. The final documents will be sent out when completed.

"America's Promise" grant

Ann- Overview of the Grant

The Department of Labor grant proposal will be going in very soon. Collin will be partnering with El Centro to look at providing accelerated training for unemployed and underemployed. It is a four-year grant that is similar to what we did in the TAACCCT grant and will augment what we're doing at the CTC. It will include faculty training; curriculum review; online courses; broader use of virtual labs; tutoring and career coaches and will pay for tuition and certification testing. It will not pay for living expenses. The grant does include provisions that internship salaries can be partly paid for out of the grant. The overall goal is to get people the skills they need to get a job. We can also go back to the students who dropped out of the previous TAACCCT program and help them finish.

Carole B indicated that Women Who Code (501 3C) has a large social media presence and would be able to assist with marketing.

Matt – I am very excited about it. How does it tie into women, veterans and minorities?

Ann – All three will be a focus.

Matt – Are there provisions that specifically tie those in and then are we crafting it into the grant?

Ann – It will not be specific, however it will include: low income, unemployed, underserved (women/minority), those with barriers to education (exp. women with children), and veterans.

Matt – Matt agreed to write the letter of commitment upon behalf of the BILT. Ann indicated she's looking for commitments such as guiding curriculum, mentoring, consider hiring qualified students, etc.

Ann – BILT members, if you do not wish to endorse this effort, please indicate now on the call (no one on the call indicated they did not endorse) or send an email to Matt after the call. Otherwise we will move forward.

CC grant renewal

Ann – We'll be looking at Internet of Things and edge computing. Plus portfolios – do they help graduates get jobs faster? We're also going to develop regional BILTS that function like the National BILT. The application is due in October.

Teaching "Internet of Things"

Ann – What do you think should be covered in an IoT class?

Matt – It is all about end point sensors. Simple example – sensors placed on trash bins that detect if full and then route truck for pickup.

Carole B – It's all about the context. You have to be able to connect with things. We partnered with AT&T and TI with classes. Sensors are a great starting point. Teach them what sensors are in the context as a whole. We teach the cloud apps Microsoft IoT Hub and AT&T's M2X.

Mark Conway – All the sensors are going to be generating additional data so we also need to capture how we are going to store and analyze all the data. That's where storage management comes in – the level of scale and volume to handle what IoT generates. Cisco Academy is focusing on IoT as well and could be a great partner.

Matt – So basically it sounds like we are talking about 4 main things: 1) sensors 2) centralized hub allows it to collect [data] 3) storage of data 4) the ability to drive intelligence from the data.