

## Convergence Technology Center Business Advisory Council Meeting

**Date: February 15, 2011**

**Location: Conference Call**

### AGENDA

1. Welcome and roll call – Helen Sullivan, Glenn Wintrich, Ann Beheler
2. Trends Discussion – Glenn, Ann and Business attendees
3. HI-TEC Conference (July) - Ann
4. National Center Update - Ann
5. Faculty Externship Updates – Glenn and Ann
6. Job Forecast / Employer Survey - Helen
7. Website Update - Helen
8. Curriculum Update - Ann
9. Event Updates from Collin, El Centro, UNT – Bill Blitt, Eliazar Martinez, David Keathly
10. Next Meeting: May 17, 2011

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### ATTENDEES

<b>First Name:</b>	<b>Last Name:</b>	<b>Company Name</b>
Terryll	Bailey	The Allison Group
Ann	Beheler	CTC Principal Investigator
Ann	Blackman	CTC Program Manager
Bill	Blitt	Collin College
Deborah	Boisvert	BATEC
Pete	Brierley	Collin College
David	Chambers	Aastra
Jerry	Clay	Lockheed Martin
Carolyn	Corbin	Center for the 21 <sup>st</sup> Century
Karl	Dietrich	Lansing Community College
Ellen	Hill	Louisiana State Technical College, Region 8
Ron	Halbach	Juniper
Bryan	Humphreys	Collin College
Tu	Huynh	Comerica Bank
Bill	Johnson	TDI Technologies
David	Keathly	University of North Texas
Cherylee	Kushida	Santa Ana College
Jim	Lantrip	ADT Security Systems
Nina	Laurie	National ICT Center
Eliazar	Martinez	El Centro College

Timur	Mirzoev	Georgia Southern University
Dan	Myers	Citrix
Larry	Pereira	Alcatel-Lucent
Jay	Plaza	Hot City Wireless
Jonathan	Pulling	Lansing Community College
Kurtis	Sampson	Philips Medical
Candy	Slocum	North Texas InterLink
Gordon	Snyder	National ICT Center
Helen	Sullivan	CTC Director
Edwardo	Suniga	Lansing Community College
Craig	Tidwell	Seminole State College
Scott	Veibell	Cisco
Marilyn	Webster	CTC Program Assistant
Glenn	Wintrich	Dell
Kim	Yohannan	EMC

## 1. TRENDS

- Gordon – Commented on wireless conference in Barcelona and rapid transition to IPv6
- Glenn – Yahoo has entered into 3-year plan to move to IPv6. All IPv4 addresses have been distributed. IPv6 is coming whether we want it to or not. It's important for students to understand what are the options to help companies in making this transition and integrating IPv6. He estimates that IPv4 will be around until at least 2020 even after the IPV6 rollout.
- LTE is moving forward and will eventually (2014-2015) replace 3G. The big question is what can we do when this all happens in terms of customer service? (i.e., making sure you have one address book.)
- Gordon – Sprint is WIMAX based, and Verizon is LTE based – both important.
- Glenn – Use of mobile devices will continue to grow. Wireless LANs – with release of tablets – what you can do with them in the current LAN network. Students will see a major shift in “pro-sumer” devices (mobile devices used by business professional consumers like CEO's.)
- Jay – Cell phones used as tethering devices are becoming affordable. (He is currently working with Third World countries.)
- Dan – Brought up the advantages of virtual desktops for businesses and individuals. He discussed software that allows devices to connect to the network and the Windows 7 desktop on devices such as iPhone and iPad. Ron agreed.
- Ahead: will use iPad more than desktop and do practically everything from the iPad and smart phones.
- Ron – He added that the Quality of Service is different on these devices. The APIs are being made public for accessing systems. He also discussed data centers and the importance of being green: Data centers not only have a financial budget, but a power budget. He doesn't see anyone moving away from “green,” and sees “cloud” everywhere.

- Glenn - With the current trend of data centers being consolidated and the gov't reducing the numbers (cutting 800 down from a few thousand) – cutting costs is always an issue. He discussed expectations of technicians to keep the thin client up and running. Students also need to understand at a design level how storage is handled.
- Ron – Network term is now called “fabric.” Move virtual machines available dynamically across locations. 10G is coming, then 40G, then 100G after that.
- Timur and Ron – Need for Security at the data center is still big.
- Gordon – Example: large data center in his area has only two technicians. Is there's a need for technicians at the data center level or will they be “lights out”?
- Glenn: It's becoming less necessary to have workers in one center. They may not all be at the center. But there is a need for the 2-yr degree programs to continue. The technician supporting the data center may not be located within the data center.
- Timur mentioned a trend for certified administrator and data center technicians and for VMWare Data Center Design certification.
- Larry – The data center mesh networking has one-to-one redundancy which can be reduced. The workforce does not need lots of employees physically in the data center anymore.
- David – The traditional NOC has disappeared, and they are virtual now. There is a need for troubleshooting VoIP, SIP and Layer 2. Layer 3 and up is less of a challenge.
- Glenn – small number (10 percent) of network engineers have engineering degrees, but many have experience and certifications and are ideal for retraining.
- Kim – Unified Storage and effective storage consolidation is important. She discussed a product that can do content addressable storage
- Gordon – Asked what are the core skills needed by a convergence technician. Do they need to know IPv6? He also recommended taking a good look at security. Cyber security and cyber warfare are becoming big issues. We also need to look at fiber channel over Ethernet.
- Carolyn – There's an expectation of an influx of students within the next 2-5 years because of the recession. There is a mismatch between what the public (or unemployed) need to learn (in order to get a job) and what they are already trained to do. She said that the government would be better served by paying those out of work to go back to school to prepare them for work, rather than providing welfare alone. If the current trend continues, in 20 years, 30% of the population will be supporting 70% of the population, and we can't afford to do that.
- Larry – At the Barcelona wireless meeting, they are showing a device measuring 2X2X2 inches that would be on a wireless tower containing GSM and CDMA antennas, a much reduced footprint. He recommended that RF be part of the core curriculum. Security also needs to continue to be part of the core.

**SUMMARY on TRENDS:** Overall, things are moving very rapidly – we will have to make some hard decisions regarding core curriculum – what stays and what needs to be removed. We have a limited number of units available.

Ann summarized a list of trends brought up during the meeting. She also asked the members to participate in the Nov. 10 Job Skills Analysis meeting, which will be from a half to full day. This is

scheduled the day before the Green IT Summit, Friday, Nov. 11, at Collin's Spring Creek Campus in Plano.

**Key List:**

- Cloud
- Data Center Consolidation
- Virtualization
- IPv6
- 4G, LTE, WIMAX
- Mobile networking
- Fiber channel over ethernet
- Network as fabric - not the same skills as before
- Moving Servers virtually – may be eliminated with switches but requires new technical skills
- Need for techs in data center admin and virtualization in the cloud
- Virtual storage

**2. HI-TEC CONFERENCE (July 25-28, 2011; San Francisco, CA)**

- Co-sponsored by NSF centers. Main focus is IT, Manufacturing and Engineering
- Ann Br, let BAC council know that the CTC center will sponsor anyone wanting to attend, just contact her.
- Conference website: <http://www.highimpact-tec.org/>

**3. NATIONAL CENTER UPDATE**

- Late April 2011 is the deadline for proposal for grant renewal.
- NVC committee has encouraged our application as a national center.
- We already have mentored colleges nationwide.
- CTC will look at bringing the mentored colleges to scale, so we are not doing so much on-on-one, but using experienced Mentored Colleges to help.
- Focus on mobile convergence.

**4. EXTERNSHIP PROGRAM**

- Our focus of the program is to keep faculty up-to-date through participating with real world projects with companies. There's no financial obligation cost to the companies.
- The grant pays for a faculty member's time.
- The length of time for an externship can be anywhere from a few days to a few weeks.

Ex: An opportunity with Dell in Plano, TX has opened up.

- Eleazar Martinez (El Centro), Bill Blitt (Collin College - Preston Ridge) and David Keathly each extended invitations to visit their campuses regarding the Externship Programs.

**5. JOB FORECAST/EMPLOYER SURVEY**

- This year we'll try a phone survey with council members, rather than online -- to gather information on hiring needs.
- Data gathered will be anonymous, company names are not mentioned.
- Let Helen know if you are interested in being an internship site for students.
- Helen Sullivan or Marilyn Webster will contact you with the survey.
- Candy of Interlink also works with us with us on broad categories of jobs and does job cluster trending.
- Pete Saflund is working on a survey contacting employers to give us feedback on determining how well our programs are working in the workplace.
- Glenn encouraged BAC council members to participate.

## 6. WEBSITE

- We are currently working with vendor, DIF Designs, to update and make the site user friendly. Per Ann Br. – goal is to move the new site in 5 weeks.
- Some have suggested making the site Chrome compatible.
- Per Helen - when site is up and rolling we'll send the link to you.

## 7. CURRICULUM UPDATE

- VoIP was updated this past year
- IPv6 training session in December, 2010, was videotaped and will be offered as online course modules
- Working on updating wireless curriculum
- We've been approached to do a Linux curriculum (Red Hat)
- We also have vendor courses we're working on (VMware, Citrix, etc.)

## 8. EVENT UPDATES

### Bill Blitt (Collin College)

- WC Conference in Dec 2010 was successful
- Career Bytes had to be rescheduled due to weather
- Recently accepted as EMC Learning Academy location.
- April 2011 – will have tech fair and have convergence programs set up for display.
- Summer 2011 – Working connections 10<sup>th</sup> anniversary. Approx 100 faculty to attend this year, as every year..

### Eleazer Martinez (El Centro College)

- They've continued working at West Dallas Campus through community events like Viva Dallas.
- Goal is to increase visibility in Hispanic community.
- Also have had Green IT presentations at El Centro for Convergence program –
- He provides tech support for instructors in South Dallas/ Oak Cliff.

### David Keathly (University of North Texas)

- BA IT programs continue to expand. Up to about 125 students as of fall 2010.
- Will have first graduates in May.

- Wrapping up planning for summer programs.
- New camp this summer is the “App” camp – using Google tools, teaching high school students...

### **ACTIONS**

- Glenn requested that the Business Council create a Tiger Team to look at certification courses offered at businesses that could be made available to students, possibly free.
- Business representatives interested in attending the HI-TEC Conference in July in San Francisco, should contact Ann Beheler.
- Business Representatives have a standing invitation to visit classes and students at our partner and Mentored Colleges. See list and locations of the Mentored Colleges, below.
- Businesses interested in becoming an internship site for a Convergence student should contact Helen.
- Businesses interested in becoming an externship site for faculty should contact Ann Beheler.

**Note:** After the meeting, Glenn shared a link to a story on Converged Data Centers, we thought the Business Advisory Council would be interested in.

[http://searchcio.techtarget.com/news/2240032093/Converged-data-center-infrastructure-promises-to-banish-IT-silos?asrc=EM\\_NLN\\_13300185&track=NL-964&ad=813750](http://searchcio.techtarget.com/news/2240032093/Converged-data-center-infrastructure-promises-to-banish-IT-silos?asrc=EM_NLN_13300185&track=NL-964&ad=813750)

### **Convergence Technology Center Mentored College Cohorts**

Anne Arundel Community College	Arnold	MD
City College of San Francisco	San Francisco	CA
Clark State Community College	Springfield	OH
Diablo Valley College	Oinda	CA
Florida State College at Jacksonville	Jacksonville	FL
Fox Valley Technical College	Appleton	WI
Guilford Technical College	Jamestown	NC
John A. Logan College	Carterville	IL
Lansing Community College	Lansing	MI
Northeast Louisiana Technical College	West Monroe	LA

Northwest Vista College	San Antonio	TX
Ohlone College	Freemont	CA
Orange Coast College	Costa Mesa	CA
Porterville College	Porterville	CA
San Jacinto College South	Houston	TX
Santa Ana College	Santa Ana	CA
Seminole State College of Florida	Sanford	FL
Tarrant County College	Hurst	TX