

**National CTC
CCN University Meeting
November 29, 2017
Friday, 10 a.m. Central**

Attendees: Mark Dempsey, Amy Garrison, Debbie Miller (CTC); Chris Kadlec (GSU); David Keathly (UNT); Xintao Liu (Herzing College); Khaled Elleithy (University of Bridgeport)

Next Meeting: TBD

Recording link:

<https://nationalctc.webex.com/nationalctc/onstage/playback.php?RCID=622b836295e7ab6be4965422edaa51fa>

AGENDA – Discussions

***Please see attached PowerPoint for additional information.**

Presenter – Mark Dempsey (CTC)

CCN Points Grid and “CCN U” ELEMENTS

- Reports due March 1 (versus April 1 last year) because the renewal grant timeline is different
- Reporting schedule and points tracking now based on calendar year (January-December)
- BILT language for university subgroup is different than for community colleges: “local or regional BILTs must provide curriculum input annually”
- CCN U receives...
 - 1 point for CCN University phone calls
 - 2 points for developing a new pathway or articulation agreement
 - 1 point to publish a white paper IT-topic
 - 5 points if you collaborate with a Community College (CC) on a white paperThese points are unique to the CCN U sub-group.

Point totals

- CCN U can have a maximum total of 70 points if a university participates in everything
- Level 1 members must earn 24 points

BILT elements

The information highlighted in yellow on the grid is new for everyone (CCN U and community colleges both)

- Added four checkboxes for the Level 1 mandatory deliverables:
 - Use CTC annual revised KSA list in BILT meetings
 - KSA job skill discussions are held in real time not just through asynchronous surveys
 - Your faculty uses information from your BILT to update and revise curriculum
 - BILT gets regular reports on whether their recommendations have been followed or not
- Below in the points section, every CCN school can earn...
 - 2 points if host more than 2 BILT meetings a year
 - 2 points if faculty attends BILT meetings
 - 2 points if trends discussion is a regular part of BILT meeting

To maintain Level 1...

- Perform all “mandatory” deliverables in the top section checkboxes
- Score 24 points on the bottom section

Mark will send out the CCN U points grid after meeting

Chris Kadlec – Publishing a white paper with someone at a community college counts for points. Could we also add to that high schools? We are now trying to bring in high schools.

Mark – I will ask.

Presenter – David Keathly (UNT)

INTRODUCTION AND OVERVIEW OF EXISTING PROGRAMS

Chris Kadlec/Georgia Southern University

- Two degrees and also merging with another program that has an IT degree as well
- Web BS IT, which we work with a consortium on
- On-campus traditional four-year undergraduate degree
- Merging with a IT four-year at Armstrong State University
- Also have a Master’s Program

Khaled Elleithy/ University of Bridgeport

- Traditional four-year degree: BS in Computer Science/Computer Engineering
- Both degrees, students can receive certificates in
 - Networking
 - Security
 - Big Data
- MS degree

Dr. Xin Tao Liu/Herzing College

- Computer Science, IT Technology, and Software Development
- Developed a Big Data Analysis/BS degree
 - Will start next September 2018
- Currently have 60 students
 - Have some issues with students obtaining jobs after training
 - Cybersecurity program includes IT concentration and is not very good; rewriting that program and will start next year as an associate degree

David Keathly/University of North Texas

- Three degrees in UNT Computer Science Department
 - Computer Science/Traditional Bachelor Science
 - Computer Engineering/Bachelor Science
 - IT/Bachelor of Arts – affiliated w/CTC (“BAIT”)
 - Accepts a large number of transfer credits from the community colleges, including certification courses
- Graduate Programs as well

Six possible ways the CCN U group can help the CCN community

David wants the group to decide which ones to pursue

His idea of six ways the CCN U may want to collaborate together

1. Template Articulation Agreements

David Keathly – Since we're moving our BAIT program online, I'm working on building a "Template Articulation Agreement" –

- Targeting BAIT, but the template can be modified to address any subject
- Available by next fall, possibly in the spring
- Might be useful to others who are trying to solidify easier transfer pipelines from community colleges

2. Improving Transfer Acceptance

Ways to improve the acceptance of transfer credits

- David is willing to do a webinar or workshop on the UNT process and the approval (plus the ABET accreditation) of BAIT in Texas

3. Regional Online IT Programs

- As the National CTC sunsets, the hope is to move to a more regional model
- The goal is to have several of the CCN University member schools replicate what UNT is doing with BAIT online
- Students can then transfer seamlessly from community college to university (in person or online) regionally, not just to UNT – UNT can't possibly handle all of the possible BAIT students from 60+ CCN schools

4. Certificate and Program Partnerships

Ways that we can create programs or share resources

- At Georgia Southern before Chris Kadlec arrived, there was a failed attempt to start a master's program in Cloud –
 - Three universities interested, UNT were one of them.
 - Universities would share the master's degree and share the load in terms of teaching different courses
 - Students could enroll at any of the three universities to complete the degree
 - Students would be taking courses offered at different universities taught by faculties at the three universities
- CCN U may be able to do this with the following by sharing resources –
 - Certificate programs (Big Data?)
 - Bachelor degrees
 - Graduate programs
- Keeping in mind that every state has different rules and regulations

5. "CS Principles" Offerings –

- "CS Principles" is a new AP course that students in high school can take – also called "Beauty and Joy of Computing"
- Critical thinking and problem solving – it's a non-majors course (not really a technical course)
- Offer dual credit
- Offered in high school on the AP exam
- There's existing curriculum – part of a nationwide initiative of what should be in that course
- David is working with some high schools locally to train their teachers to teach it
- "CS Principles" is going to be offered as a dual credit course at the high school in David's area during the summer as an 8-week accelerated format

- Ties into the larger CCN initiative or outreach to high schools
- This semester David has 24 UNT students in “CS Principles,” and out of the 24, 20 percent have converted to Computer Science or IT majors
- During the summer, David will teach “CS Principles” as a dual credit course at the Frisco UNT campus for high school students
- Became an AP exam last fall but there’s not a lot of teachers ready to teach it

6. Developing CS Educators in High Schools (TNT)

- “Teach North Texas” program trains people who are CS or IT majors (many are BAIT students) that can use their supplementary courses to obtain a teaching certification. There is scholarship money available.
 - Graduates of “Teach North Texas” will be equipped to teach at a high school level, but won’t “transformed” science or math teachers that have to teach a CS class
 - You earn a CS or IT degree and also a teaching certification as part of that original degree

Feedback on the above six topics or other ideas

Chris – I like developing the CS Educators in high schools. You have an approach that is very interesting to me. I’m also working with some of the high schools around here (in Georgia) and we’re helping them develop the curriculum. We’re not looking at educators; we’re looking at the curriculum. I would be very interested in discussing “Developing CS Educators in High Schools” and expanding it to curriculum.

David – Curriculum is kind of what the “CS Principles” course is. It’s the more critical thinking and problem solving. Students learn how to do algorithms, but not C++.

Chris – Our state requires school systems to develop IT and that would be one course out of a larger set of curriculum. We’re working on a lot.

David – That may be something we could look at. Two groups developed the “CS Principles” course. One was out of California and they called it “CS Principles,” another was more East Coast and they called it “Beauty and Joy of Computing.” So it’s two sets that are both acceptable and both prepare students for the AP exam if they’re doing it as a high school course, not dual credit. So that would be one. What can we do to add more? We could develop a pre-packaged set of curriculum for what we would call Programming 1 and 2, but at a high school level. “Teach North Texas” trains the people to be good programmers before they become high school teachers, as opposed to finding high school teachers we can convert into CS instructors.

Chris – We’re looking at it not just at the undergraduate level, but also the graduate level. We have some people that have already received a degree and are looking to return and give back to the community. I think we can look at several different models.

David – So then of most interest to you is curriculum and developing educators.

Khaled – One thing that we are doing extensively is using articulation agreements to create a pathway for community college computer science programs. This has been successful, and we have been able to recruit students from community colleges in the area. For the high schools, we do some summer camps. For example, last summer we had a big data summer camp for students. They came to the college for

about two weeks and were given hands-on experiences from our faculty. Usually in March we also have something called the “Research Day.” The last two years we also have a section for high school students. They present posters. There is a contest on posters and the best poster gets an award. Usually you get about ten posters in that session.

David – I think “summer camps” is a new topic: going back and revisiting how to help schools in the CCN develop summer programs. It’s been a while since we’ve visited that topic. Summer programs aren’t really unique to the CCN U. Big data is a new topic and I would be interested in that personally. We’re always looking for new things to do for summer programs. We can certainly put that on the list. What I was trying to do on this list of six topics was to focus on items that would bring in more university members and/or strengthen the pipeline between high schools to the community colleges to the universities.

Mark – Would the “Improving Transfer Acceptance” be an appealing topic? To learn how UNT did it? Will community colleges be able to exert influence with their local universities?

David – That’s going to even be an issue for those wanting to partner for our online BAIT if they can negotiate with some of their other departments to have some “ors”. For example, everyone wants English I and English II, but a lot of schools use technical writing for that English II so they can have their certificate or degree allow an “or.” That is, you can take English 2 or technical writing. It will help students who want to transfer not to have to take an extra class (i.e. if there is no “or” then a student is taking English II in addition to technical writing).

Mark – That’s a good one to me. That would be my vote: Improving Transfer Acceptance.

David – That ties in with the Articulation Agreements too. Sounds like we group some of these and start out with a couple of threads. Then we can expand into other things later.

- Thread 1: Transfer Pathway - Articulation Agreements and Transfer Acceptance (focus on community college to four-year universities)
- Thread 2: “CS Principles” and Developing CS Educators in high schools (focus on new incoming high school students)

As we get closer to moving to the more regional model, we can discuss the others. It may change as we get more universities.

Xin Tao – We need to move “Intro to Python” into high schools and we need to develop a simplified A+ class for high schools. This would help high school students who want to go into computer science. I visited China this fall. I hadn’t been there in almost three years and found a lot of changes. The biggest change is that big data and internet of things are everywhere. American education is falling behind China. No U.S. university has IoT curriculum. So I think we need to look at our curriculum and push some courses into high school. He is concerned that programs teach four Cisco classes and take up students’ time that could be spent on other topics. The Cisco content could maybe be taught in one or two classes. I don’t think teaching Cisco in high school is successful. Instead, high school students should take A+, Net+, and Python. He also learned that Chinese government is requiring many universities to teach AI courses. I see the U.S. falling behind and I’ve been fighting this for many years. I don’t see any fundamental change. So I’d like to see the CCN University group do something that will really change our curriculum, especially for community college technician training. China can easily find smart city IT

workers. I don't see any in the U.S. I'm not sure that what's being taught on IoT in the U.S. is sophisticated enough for the industry. Let's modify high school, community college, and four-year university curriculum.

Mark – David, does A+ overlap at all with the “CS Principles” class or is it more basic than that?

David – No, I call “CS Principles” the critical-thinking and problem-solving course. Basically, what that course does is fill in the gaps of what high schools used to teach, but don't teach any more – how to think and how to solve problems. What I'm hearing connects with our threads when we were talking about developing curriculum and people to teach in the high schools.

Mark – Right.

David – When is our next face- to-face activity where most people are going to be together physically?

Mark – Probably Working Connections in July. We usually meet the Sunday before.

David – I guess the next conference for a lot of us would be HITEC.

Mark – Which is also in July.

David – Maybe we schedule in the early spring a couple of brainstorming webinars – a one-hour webinar for each thread for everyone in the CCN University group. I like these two threads. Possibly we split them and have some people work on specific initiatives in each thread. Obviously, we're not going to do it all in the first year, but we can be thinking about where we want to go. If we have a face-to-face meeting at Working Connections, we could schedule an hour or two to discuss more details since we're in the same room. That way, by next fall we have something we're ready to start doing. Maybe in February we can schedule one webinar on the high school part and another webinar on the community college to four-year pathway.

Mark – We may want to invite a few CCN community colleges to the brainstorming session.

David – Sure. Maybe by then we will have a couple of high schools involved. Want to have some strategic people.

Mark – What Dr. Liu was saying, I think, is part of the renewal grant: to push more teaching down into the high schools, the 2+2+2. We're all on the same page. The question is how to do it and what are the next steps.

Chris – I like the brainstorming webinar idea.

David – I will work with Mark on the dates. Is February good for most people? I'm thinking about late February. It's not spring break and it's not finals week.

Final Comments:

Additional webinars by David Keathly

David will be proposing two spring webinars -

- Webinar on online BAIT

- Anyone is welcome to listen but it's mostly directed to those CCN schools who expressed interest in maybe joining the online BAIT rollout
 - Could also be good for those who want to adopt their own version of the UNT BAIT model
 - Offer it in late January
- Webinar on articulation agreements
 - Later April
 - Mostly focus on community colleges, but anyone can attend

Mark – At the last meeting (May 2017) we talked about doing a video. Maybe as we have these February discussions, we'll know more about what the purpose for that might be.

David – The first part of today's meeting was about what the group should do. We also need to think about how we're going to grow the CCN U group. I think that was part of the video goal. The video would highlight who's involved in the university subgroup and what we're doing. I think now we have a better idea. It would be a recruiting video for the subgroup, like a version of those CCN "student success" videos. Current CCN U members can talk about what they have going on and then we can talk about what the group is developing. This isn't really a different thread, but this kind of promotional effort is something else to keep in mind as we try to grow the group.

Mark – Our goal is to add about two new universities a year to get to 15 total (including the five we have now). Just to remind Herzing and University of Bridgeport on this point. In the renewal grant, the idea is that our seven partners, which includes UNT and Georgia Southern, will grow regional hubs. The new CCN member universities and high schools will be located around these regional hubs. So there will be a clear pathway from high schools to community colleges to universities. That's one of the big pieces to the renewal grant.

David – The video could help with those efforts with those hubs. It would also be nice to have a map to show where the hubs are going to be, and we can see where we really need to focus.

Adjourned