

**National BILT Meeting**  
**Mobile Apps**  
**March 24, 2015**

Dawn-- We wanted to give you an update on the mobile apps stackable. Bunker Hill has two TAACCCT grants through the NISGTC. We'll be able to continue this program all the way up to development of an Associate's Degree. We wanted to talk about where we are in terms of successes and the steps that we've taken. We've run two of the courses this spring: the Android Mobile Application Development using App Inventor with 16 students, and Android Programming, with 17 students. So we're creating a pipeline into the program. The program passed through the Curriculum Committee late February, so we're very pleased with that. The committee recognized the need for mobile apps and that this is going to be a big space for us. It passed through Forum on Tuesday, March 10<sup>th</sup> and the President signed on March 19<sup>th</sup>. Now we can officially launch it, and we can officially market it, which is what we are beginning to do. It will be offered as a full certificate this fall so students can enroll in the major. And then as we are launching that, 16 credit certificates in Android will be developing all the way up the stackable to the Associates Degree. This is the one that is launching in the fall. There are several course numbers missing that are yet to be assigned, and anything at a 500 level was also run as experimental. Now that those are fully recognized courses by the college all of those course numbers will change. We did change a couple of the courses. For instance, the 519 and the 527 were directly affected by some of the feedback we received from the BILT. We found that our students were benefitting greatly from our career coach here at the grant, so we added an IT Career Exploration course that is specific to CIT. Other college programs are beginning to follow that model. The iPad and the Android were mixed together, and one of the things that we're going to do moving forward is to separate those two pieces in the starter certificate. And then as they climb higher into the Associate's Degrees they'll have two Programming classes and one of those platforms, and then some understanding of the other two because they'll be taking classes in the other platform. One of the things that we'd like to eventually offer is a Windows starter certificate. We're not exactly sure how that's going to fit, but eventually we see those three working together to grow up to a career certificate and then into the Associate's Degree. Right now the only thing we have launched is the starter certificate in the Android, but we're moving forward with the iPad iPhone IOS piece. We're having difficulties with limited space here at the college in terms of labs. We do have some VMA (Visual Media Arts) space that is a MAC lab, but it's difficult to get lab time. So we're looking at the possibility of offering IOS through our virtual lab. It's difficult to get licensing from Apple for that, so that's the first thing we're looking at. The second would be to identify some grant funds outside of the TAACCCT program and other grants to purchase a lab for the students taking the IOS certificates. That's something that is a resource challenge here at the

college, but we're hoping that we can solve that pretty quickly. So the TAACCCT 3 grant will see the creation of an additional career certificate and Associate's Degree, and hopefully the launch of that IOS starter certificate before it ends in 2016.

Matt-- We had spent a significant amount of time talking about soft skills and also building the student's portfolio. How does that all tie into this?

Dawn-- We begin to pay attention to that in classes like the 113 and the 110 so students understand why a portfolio is crucial. We have a Life Map Center here at the college where one of the things that the students create is an e-portfolio. It's based in the entry level pieces of the curriculum. Then by the time they get to the IT Career Exploration course, they are going back through their course work and identifying the types of skills that they learned, and whether or not their portfolios are representative of what they have learned. We wanted to make sure the initial skills were taught, and how to create portfolios, and then to revisit those skills.

Matt-- I love the concept of a life map. Can I get more information on that?

Dawn-- Yes, I can send you some website links and some of the materials, but it's something that we've had going at the college for a couple of years now based off a model from Florida, and it's quite popular. There are all kinds of different pieces that it entails for a student. It's not just the career piece. The student is actually introduced to the life map as a cohesive piece in those entry classes.

Adrian-- I just came in when you were talking about what you were trying to get from Apple. Could you just let me know what you are trying to get?

Dawn-- We're trying to see if we can run the IOS virtually and just get licensing to do that. Apple doesn't like to do that because they like the software and the hardware to go together. So the college is looking into it to see if that's an option.

Ann-- You have to get all sorts of licenses because the virtual machine may have as many as two or three hundred instances running at a time and Apple wants you to get all of those licenses. Appreciate any help you can give, Adrian.

Adrian-- Probably the easier thing to get is an Enterprise license to distribute and test apps. I can coach you through what to say, because they call to ask you why you need it. That has a limit of about a thousand devices, but you can get multiple Enterprise licenses. Right now provisioning a device is too complicated, and even their version of Test Flight requires you to get approval before you test. The Enterprise license allows you to tack on any device without having to do any of that. There are universities that have their own internal app store.

Dawn-- Okay, excellent. If you don't mind, I'll give you a call.

Ann-- Make it available, if you would, to the entire consortium because I think several of us are looking at larger IOS programs. That would be really great, because we're all running into needing a different way of doing it.

Adrian-- If you ever want me to do a break out session about the mechanics of how you get that, I'm definitely happy to do that. My email is [Adrian@marlinmobile.com](mailto:Adrian@marlinmobile.com).

Dawn-- In terms of marketing, these are the kinds of groups we are initially thinking about. To give you just a little bit of background, the Tech Apprentice Program is a program here in Boston offered to all of the high schools for students who exhibit higher level IT skills and have a desire to enter into an IT program. They work with companies for a summer in paid internships, which is very difficult for a high school student to get. There are about a hundred of these and it's very much supported by the mayor and our ATE Center partner, Baytech. We'll have a pretty wide reach with that program. We also are partners with the Boston Private Industry Council, which partners with about three hundred companies here in the Boston area and has a large STEM and tech focus. So we'll be able to reach employers who may have employees looking to come back and take a certificate program in mobile apps to update their skills. This is a very good partnership so that we can reach out to industry on a wider scale. But we were hoping to get some feedback from you guys on other groups that we may not be thinking about that may benefit from the certificate.

Adrian-- I just met one of the leads from Boston PIC about a month and a half ago. I told him about what you were doing and the certificate and they were just super excited. They really love what you are doing. I would like to get students that have gone through the classes as interns here at my own business to see how well they did with the program.

Dawn-- We're actually working with a couple of students now, Adrian, who we want to send your way. We're just making sure that they tweak their resumes and are prepared to answer some questions.

Adrian-- This is a really good trial run to see how the graduates are doing, what they have learned, and what we can help them fill in.

Dawn-- Excellent. Are there other places to which we should be marketing?

Adrian-- I would suggest one of the places to market to, especially because it's so new, is some of the tech events. For example, it would be really great to get Bunker Hill at least having its people there at Webinow's next event. There is another group called Mobile Monday in Boston. And I would also encourage you to either host an event or be part of an event, like the Venture Café at the Cambridge Innovation. That would be a perfect place for you to host a little meet-and-greet for students and startups. The Venture Café has multiple events.

Dawn-- That's an excellent one. Thank you.

Adrian-- A good friend of mine is a recruiter who just recently transitioned to WinterWyman. He does mock interviews and resume reviews for students. Maybe he could set up an event or have one or two people from WinterWyman review resumes and talk to some of the students.

Dawn-- That's actually perfect because we're holding a mock interview day here for our students on April 9<sup>th</sup>.

Dawn-- So that's our next step: to think about marketing and get folks into this pipeline. We have about 20 students that we think are interested in pursuing this degree now that it's finally launched.

Bellevue, I think you're on deck now.

Judith-- These are just some examples of our success stories. I think we should ask our participants what trends they're seeing in the Mobile App area, as well as Business Intelligence and Database.

Matt-- There's a significant amount of transforming from IOS to Android. The Android market is dwarfing the IOS market, which I find fascinating, and that has happened in very short order. On the breach reports that I get, one out of every seven websites in the Internet has an Android virus set up for it. So another big trend that we're seeing is in cybersecurity and mobile cybersecurity and MDM solutions. It isn't sustainable for Android not to have protected devices. The more it dominates the market, the more technologies will come to bear to protect those users.

Adrian-- Yes, I agree. In order to get onto any phone, Android requires that every app package be signed so that you can know exactly who the developer was. Android Google Play is now doing a review process to add ratings to apps, and they have yet to reveal what that review process looks like. That's a trend of security protection to make sure that nothing goes out that will harm users. I know developers who got their apps flagged because they weren't using a correct privacy policy, and they weren't using a correct opt in screen for users. They actually got taken down from the market. So a lot of that is starting to be more prevalent in Android to match what's happening in the IOS world. The Wild, Wild West of Android is starting to go away. In terms of app development, I see new platforms that are coming in. Just in the gaming space there are platforms like Unity, Marmalade, and another one called Corona, that are taking over. This is a trend where anyone who knows native code is going to be highly sought after, because if you need to introduce something like iWatch or the Apple Watch, that's all going to be done in native code. So a lot of what you are doing in the program in terms of

Eclipse and C, or Objective C is going to be critical. From a database side, everything is now becoming dynamic.

Matt-- The other thing that I was going to tell you on Business Intelligence was that the days of reports with tables, columns and rows are over. Mobile reporting through Visual Business Intelligence is a critical trend moving forward, delivering reports in a usable format for a 4" screen.

Ann-- Matt, you might want to comment about Mobile First.

Matt-- Most Internet surfing is now being done from mobile devices, whether they are tablet type devices or cell phone style devices, which is transforming the way organizations are impacted when they put their websites together. That has transcended into a Mobile First strategy. They are now preparing their websites to look great on mobile devices first, because of the amount of hits that they get on mobile devices versus traditional PCs. That's another big trend that is happening and I see that trend continuing. I don't think PCs are ever going away, just like phones aren't ever going away. But I do see a bigger trend with volumes of users viewing websites on mobile devices. There's also something about Mobile First that's really important to note. If you can't capture a mobile user on your website within the first 15 seconds, they won't come back to your website. That's really the driving pressure to make the mobile experience great the first time they come.

Adrian-- Matt, I absolutely agree. One of the stats that we see is that for 40 or 50 percent of users, if a website doesn't have a mobile app or isn't mobile optimized, it actually sends a message that the business doesn't care.

Matt-- Or that they are antiquated, so they don't want to do business with them anyway.

Judith-- From Bellevue College, what we have to discuss this morning are examples of success stories of students who have gone through the Programming or Business Intelligence certificate programs, and some job placement successes. The average age of a Bellevue College student is 38, and the majority of the students are career changers. Many of them already have degrees, and they are either looking to transition to a different field within IT or they are dislocated workers and need new skills to remain viably employed. The first example is a male student in his forties. He has a degree already, and majored in some of our Programming certificates. Placing a student in a job typically involves multiple meetings, helping the student update their resume to identify the most salient skills, interview practice, practicing the elevator pitch, and making sure the student is aware of his or her job search goals. That's usually three, four or sometimes five meetings to prepare students for interviews. This particular student was hired as a business support developer on the Bing Relevance Team at Microsoft in October. Microsoft typically does not hire anyone with just a 2-year degree. This student already had a

4-year degree, majoring in something else. The next example is a BI student and a little younger. He completed two of our BI certificate programs. He met multiple times with his career coach and was hired as a BI analyst in October. He actually had a 3-year internship. At the end of this quarter I will learn if he is still there, and if he is on his way to earning a \$5,000 bonus. Our last example is a female student, 45 years old. She had quite a bit of database administration experience. She completed a Business Intelligence certificate and was hired as a BI analyst at Microsoft. The majority of our students have been more successful getting hired by local staffing agencies who then place them at local companies. Some of the larger companies in our area are Costco, Amazon, Starbucks, Microsoft, and Nordstrom. We're finding that we have fewer Database success stories than Programming or Business Intelligence because most companies want a lot of experience in database and a lot of our students just don't have that. We have students in our program who are also Networking certificate majors, and our partner college, Everett Community College, is exclusively Networking. We have no examples in Programming, Business Intelligence or Database from Everett, because they don't have those programs.

Sylvia-- The Database people may start off in Database and then migrate towards Business Intelligence because there are more job opportunities in that area.

Judith-- We also have some new 4-year degrees that have been recently introduced at Bellevue College with different tracks, and one is in Database. However, we did not include grant students in that area. By nature of the design of this grant -- we could only include students who were going to be completed with one of those programs. Since our 4-year degree is new, we would not have any completers by the time this grant expires.

Dawn-- Were there any final thoughts from BILT members?

Christina-- Or are there any other partners on the call that would like to give an update about their program at their school?

Ann-- Elizabeth, you're there for Collin. Do you want to do an update?

Elizabeth-- We're revisiting our curriculum and seeing if we need to do some updates. We are pulling Windows out because the demand doesn't seem to be there, plus we were having some major technical issues. Our campus does not offer Windows 8 and you have to have Windows 8 to develop apps for the Windows phone. We have an IOS track and an Android track so we will rework those and pool them together. We are taking input from the grant and seeing if we need to rearrange things, but we're still looking at Android and IOS as being the two that we're focused on.

Christina-- Thank you, Elizabeth. The next BILT meeting will be in June and as soon as we have a date I will send out a message to the BILT members. Dawn and Judith, do you have anything else? Does a BILT member have anything further they would like to add?

Judith-- Nothing else from Bellevue.

Ann-- The business people have told me offline that they would like to see some numbers and know a little bit about job placements when it comes to the next call, so maybe we can put some of that together by that time.

Judith— Absolutely. We'll talk to you about what kind of format you would like that information in, Ann.

Christina-- Okay, if no one has anything further I want to thank the BILT for their time. Dawn and Judith, thank you for hosting.