This report summarizes the conference for the FAA Collegiate Training Initiatives (CTI) colleges at the University of North Dakota at Grand Forks ND. University of North Dakota (UND) hosted the conference because the FAA has no money to host anything. The FAA has very little money for anything except providing essential services. UND did an excellent job hosting the Annual CTI Conference and visiting UND provided a terrific insight into how UND leads the nation in Aviation Education. Following are notes on the comments of some of the speakers at the CTI Conference.

**Terry Craft – FAA Collegiate Training Initiative (CTI) Program Manager – CTI Updates**

Terry announced that he has accepted a promotion and will be head of the FAA ATC Staffing Work Group which also includes the CTI program. He will responsible for assessing ATC Facility Staffing needs and determining how many FAA personnel each ATC facility will have and will be a key participant in decisions the FAA makes about hiring from CTI sources and other sources the FAA uses to fill ATC jobs. His replacement for the interim will be Greta Ballentine, an FAA Technical Training Staff member, who will manage the CTI Program pending selection of a permanent CTI Program Manager. Terry will move to his new assignment in ATC Facility Staffing in October 2013. Terry had lengthy experience as an FAA Tower Controller. Greta does not have ATC experience but does have lengthy Human Resources (HR) program management experience.

Terry gave a rapid history of the FAA Collegiate Training Initiative (CTI) program to clarify some of the historic issues the FAA has been working to resolve during his tenure at the CTI program manager for the past 2 and half years. The history of CTI created numerous issues that affect the CTI Schools and CTI ATC Students regarding ATC job selection, hiring and training, and affect the CIT program in all aspects as well as what happens to CTI students at the FAA Academy and at FAA ATC facilities. Terry summarized the history in several distinct eras:

**History - 1990 to 2005**

The FAA CTI program started in early 1990s as one of several government actions following Pres. Reagan’s mass firing of 11,345 controllers August 5, 1981. The Professional Air Traffic Controllers Organization (PATCO) conducted an illegal strike to dispute pay and working conditions (PATCO had made unreasonable demands) that President Reagan could not accept so he fired the striking Controllers. Following the mass firing, the FAA mass hired and trained (as fast as ATC training could occur) replacement controllers while relying heavily upon military controllers, supervisors and managers to fill the gap until replacements completed the formal FAA training to full qualification. Following that turbulent period extending from 1981 to about 1986-87, at direction from President Reagan and the US Congress, the FAA established the CTI program to attempt to provide a more reliable HR pool of qualified applicants for Air Traffic Controller replacements.
Initially the FAA identified and contracted with 13 aviation schools across the US to produce a qualified pool of ATC job applicants through the CTI program, and the FAA added one more School in the late 1990s to a total of 14 CTI schools by 1997. These 14 schools initially produced a large number of available aircraft control applicants. However because of the large hiring that occurred in the 1980s, the FAA hired only a handful of the many qualified applicants from the CTI pool as there were no jobs for these air traffic control applicants to move into. Thus, during the 1990s, with the FAA ATC hiring only about 100 recruits annually, interest in the CTI program from every quarter dwindled. So, by 2005 there was very little interest and the CTI program languished.

History - 2006 to 2011
In the mid-2000s, the Bush administration privatized FAA Flight Services as part of a number of actions to reduce the size of the Federal Government and to shift work that the Federal government had been doing to the private sector work as contracted work with a skeleton crew of government overseers. Additionally, the Bush Administration cut Air Traffic Controller pay which affected Controller retirement benefits, and the FAA established dress codes which most Controllers found onerous. Concern for job security, pay cuts and irritating dress codes spurred about 4500 controllers to retired in less than 2 years. The FAA had been anticipating that the Controllers the FAA had hired in the 1980s would retire in the mid-2000s, but the sudden “rush for the door” that the Bush Administration precipitated was far more than FAA managers anticipated. Those abrupt losses prompted the FAA to look to the CTI program to save the day, only to learn that the pool of available applicants that FAA expected to have available for hiring into the ATC work force was not there. The FAA immediately took steps to reinvigorate the ATC applicant pool. The FAA:

A. Encouraged the existing CTI schools to recruit more ATC applicants,
B. Took steps to recruit more schools into the CTI school ranks and added more schools in 2007, 2008, 2009 and 2010 which increased the CTI schools to 36. However, the two year to four year time gap necessary for CTI students to complete college degree programs before CTI graduates would be eligible to compete for ATC jobs caused the FAA more concerns, so the FAA decided on more immediate actions to increase the pool and....
C. Created a larger pool of applicants through “off the street” public hiring in a repeat of the 1980s hiring effort. The off-the-street hiring efforts concluded in 2008 and did provide a larger pool of ATC job applicants – many thousands –but with inconsistent backgrounds relative to aviation knowledge which caused some management issues in the training process. The FAA was still in a pickle and did one more thing.....
D. Rehired “Fired PATCO Controllers” that had not yet reached age 56 (the age when FAA Controllers can no longer, by law, control air traffic for the FAA).

As a result of all these efforts to produce a pool of applicants for ATC jobs, the FAA solved one HR problem – increasing the pool of available applicants. But the FAA still had issues coordinating training across the FAA Training spectrum with such a large number of people from
such a broad diversity of resources. Dumping several thousand ATC Applicants with a wide variety of backgrounds and aviation experience into a training system that the FAA had staffed and organized for 100 new ATC Applicants each year did work smoothly. The FAA Training Pipeline immediately clogged. The FAA Academy lacked staff, the ATC facilities (the field) needed applicants “right now”, but training in the field was also not ready for the onslaught of new applicants and after completing training at the Academy, training in the field clogged the training pipeline at the end as well. From 2006 through 2009, the ATC Academy suffered a log-jam as the demand for training exceeded Academy through-put capacity and ATC Facility training capability. From 2007 to 2010, the ATC facilities suffered the logjam, but eventually the FAA got a handle on those problems and things smoothed out by 2011. However, the FAA’s problems brought steady scrutiny from all quarters of the Aviation Industry and other quarters and lots of powerful people wanted answers to lots of questions the FAA needed to answer.

During the summer of 2011, the FAA convened a panel of experts to review the FAA actions regarding the CTI program, ATC training and other issues pertaining to replacing retiring FAA Controllers. The Review Panel recommended over 120 changes to the entire process and the FAA began to implement nearly all of those recommendations. Then, the political battles involving the Affordable Health Care Program that involved the US Federal budget between Republicans and Democrats became the hot issue.

History - 2011 to the present
Political battles over US Government funding began to dominate all aspect of Government functions. Starting in 2011 and continuing to the present government shutdown, a series of actions have stalled many government programs and efforts to provide government services. First was the Sequestration deal which did not produce a budget and which dominated and still dominates FAA decision-making. Because 92% of the FAA budget is personnel related, the 5% Sequestration budget cut affects FAA personnel disproportionately compared to government functions that involve equipment, property or immediate services such as ATC and daily flight operations. To meet Sequestration limits, the FAA must cut services and people. Because training is an initial cost for a later gain, in the spring of 2013 cutting training was the easiest way to accomplish the mandatory 5% budget cuts the FAA had to make. So, in May of 2013, the FAA began shutting down CTI Developmental Controller training and completed that shutdown by July 2013.

Facing Sequestration challenges in the Spring of 2013, the FAA had few choices and every choice was difficult:

A. Shut down ATC Contract Towers across the country
B. Curtail operations at less critical FAA facilities (reduce operating hours to meet reduced staffing that sequestration cuts produced), and
C. Furlough non-essential personnel (personnel not directly associated with providing critical functions).
When the FAA actions to meet cost cuts created flight slowdowns that affected Congressional members and staffers who were leaving Washington for Congressional recess, Congress authorized the FAA to redirect money from the Aviation Trust Fund to pay for Controllers. Using Aviation Trust funds halted options A and B above, but not C. As a result, the FAA instituted “Sequestration furloughs” in the spring.

NOTE: The Aviation Trust Fund comes from a tax each commercial passenger pays for each seat on a commercial flight and from aviation fuel taxes general aviation owners and operators pay to fuel aircraft. Federal Law directs how the FAA may disburse Aviation Trust Fund money. Congress created the Aviation Trust Fund specifically to address needs for creating and maintaining US National Airspace System (NAS) airport and navigation infrastructure and to improve safety in the NAS. Following a pattern the US Congress followed in 1995 during the last US Government shutdown, Congress again allowed the FAA to divert Aviation Trust Fund money from projects such as airport runway improvements and Next Gen projects to pay Air Traffic Controller salaries.

Funding for FY 2014
Terry indicated that for Fiscal Year (FY) 2014 the FAA plans to operate using budget levels of the past year - Fiscal Year (FY) 2013 – which is actually FY 2011 funding with a 5% reduction - because Congress did not pass an FY 2012 budget. At this point, FY 2014 is likely to be another Continuing Resolution Authority (CRA). The most current fight between Republicans in Congress and the Democrats in the Senate and Presidency is to produce an FY 2014 budget and – at this point of incredibly ridiculous Congressional dysfunction - is likely to be another CRA. However, FAA Controllers are still retiring and the FAA still needs replacements. Terry indicated that FAA Academy is forecasting about 1150 CTI training slots for FY 2014 and very modest hiring for FY 2014.

CTI Training for FY 2014
Of the approximately 1150 CTI training slots, the FAA will fill approximately 800 Academy training slots with CTI students the FAA has already selected and to whom the FAA has already issued a Temporary Offer Letters (TOL – Temporary Offer of Employment Letter). Restarting the FAA ATC Academy CTI training will require about 90 days after the FAA knows there will be funding for FY 2014. As of 10-3-14, Congress still has not passed any funding measure and the lack of agreement has caused a government shutdown which will cause many disruptions of many kinds for the FAA, the CTI program, CTI students, the ATC community, the Aviation industry, and whole lot of other people.

Most people at the CTI Conference believed Republicans and Democrats will achieve some kind of compromise at some point. But, given current Congressional dysfunction, no one was willing to vouch for an early compromise so the uncertainty that currently exists is likely to continue in the short term. The longer time the shutdown disruption continues, the greater the disruption will be for all concerned. Despite the dallying that exists at the Congressional level, the FAA still
needs to plan FAA Controller replacements and is expecting the first ATC Academy classes for CTI students will commence not sooner than January of 2014. CTI students attending those training classes will be from the approximately 800 CTI students the FAA already selected and hired in the March 2012 ATC Selection process.

Hiring for FY 2014
The balance of 350 slots for FY 2014, the FAA will need to fill via a selection panel that may occur in November or December of 2013 if the budget battle can resolve soon. However, due to HR processing times and panel setup and coordination time, if the budget battles continue and there is no funding clarity, then the panel will likely be in early Calendar Year (CY) 2014. Beyond those 350 slots, Terry indicated the FAA was not able to make a more robust forecast. The last full hiring panel was in March of 2012 and since then, the only hiring effort was a very small hiring panel for Veterans in the spring of 2013. One of the great ironies of the Shutdown is that due to the Shutdown – which is about reducing government spending – the Shutdown has cost the FAA extra training money due to unpredictable training stops and starts.

ATSAT Testing
Terry reported that the old ATSAT testing contract has expired and the FAA has not announced a replacement contract or Contractor. He would not say more about the contract or a possible contractor or a timetable for establishing the contract. He did say that the new testing procedure would probably be more “user-friendly” for CTI students and would be less expensive. The old ATSAT test cost the FAA $360 for each test. The FAA tested thousands of people, so the testing expense was a big issue for the FAA. The new ATSAT test likely will be less than $100 for each test. The higher test cost and the previous testing procedure prohibited the FAA from allowing test takers from retesting except in special circumstances. However, the lower cost and better flexibility of the new ATSAT testing will allow the FAA to consider a change in FAA policy on retesting. This issue is important because the ATSAT test score is a critical hiring selection criterion.

NOTE – all the CTI schools have lobbied for a change in the testing policy to allow students to retest if not attaining a score of 85 or higher. Although 70 to 84.99 earns a passing ranking of Qualified, unless the score is 85 - Well-Qualified, the ATC job applicant has little chance for selection. The number of Well Qualified applicants is much greater than the number of available hiring spaces and the ATSAT score is the first filter the FAA uses to eliminate applicants.

A passing ATSAT score remains in force for 36 months, so a score less than 85 has become an obstacle to hiring – a block that lasts for 3 years. However, if an applicant fails the ATSAT, that applicant can retest after 6 months. So, retesting applicants with scores from 70 to 84.99 try a second time for Well Qualified ranking has been a serious issue for many CTI students and all the CTI schools. With the new test and the lower cost, the FAA may allow student who score
Entry Level Developmental Controller Pay
Terry talked about the pay issues pertaining to Developmental Controllers who attend the Academy. Prior to 2007, the FAA did not pay any Developmental Controllers until the Controller had completed the ATC Academy Course because the condition of employment for Academy attendees was work at the level of GS-0 – someone with no training or skill. From 1990 to 2008, the FAA did not pay ATC Academy attendees anything. ATC job applicants the FAA accepted into the ATC Academy went without financial support from the FAA. In mid-2007, heeding complaints from the CTI schools that had been sending CTI students to the ATC Academy the FAA changed the pay policy. (NOTE - the CTI program manager the FAA appointed in early 2007 was not aware of the FAA “No pay for trainees at the Academy” policy. He learned of the FAA pay policy at the first annual CTI conference in the fall of 2007). Starting in 2008, the FAA adjusted the rules and Developmental Controllers attending the Academy started earning GS 7 pay while attending the ATC Academy. However, the Operations side of the FAA had to justify to the accounting side of the FAA why. The Operations side used the logic that because CTI students had received Air Traffic Basics (AT Basics) training while attending CTI schools, the FAA could title each CTI graduate as “Trained”. Declaring CTI students trained made paying CTI students at GS 7 rates while attending the ATC Academy legal and in accordance with Federal Pay rules.

NOTE: “Trained” under Federal Pay rules means job applicant has basic knowledge of government job the person is filling (ATC Developmental is the job the applicant is filling). By insisting the CTI schools teach AT Basics and requiring students to show proof of training (the college degree), the FAA can legally pay CTI students to attend the FAA ATC Academy ATC courses.

The link between knowledge and pay is the reason CTI managers for the past 6 years have been repeatedly stating – and checking – that CTI students actually have the knowledge of ATC Basics Curriculum that the FAA had each CTI school agree to provide to CTI students. The Check has been the test scores the FAA gleans from the ATC Academy Day 1 General Knowledge Test each CTI student must complete at the start of Academy Training.
NOTE: Terry’s explanation about the pay issues of CTI graduates attending the ATC Academy explains the emphasis on the FAA has been placing on the Day 1 Test scores. CTI school representatives had concerns about why the FAA CTI managers have been so concerned with Day 1 test scores and how the FAA had been using Day 1 Test scores as an assessment tool for individual CTI programs. The whole thing boils down to money – the FAA must justify the expense of paying ATC Academy students who are essentially a drain on FAA finances. Developmental Controllers are, in many respects, worthless to the FAA until becoming certified to work unmonitored (working without direct supervision of a qualified Controller). In this era of fiscal conservatism that Sequestration has created and that some members of Congress are using to validate the usefulness and value of government programs and functions to assess the viability of those programs, government program managers must pay extremely close attention to the return on investment (ROI) of each program. ROI for training Developmental Controllers is significant considering the lengthy training times that starts with FAA ATC Academy training on Day 1, and continues until the Developmental Controllers achieve FAA Certified Professional Controller (CPC) qualification.

Changes to training programs at the FAA ATC Academy
Terry indicated that the FAA is working on several of the recommendations of the 2011 Review Board (RB Panel - the blue ribbon panel of experts who analyzed FAA ATC recruiting, training and assigning Controllers ) regarding improving the efficiency and effectiveness of training and placement for better use of FAA Controller resources. The RB Panel recommended that FAA could do better by “pre-qualifying” Developmental Controllers at the FAA ATC Academy before the students started one of the three ATC development tracks:

- En route (En Route Air Route Traffic Control Centers - ARTCC)
- Terminal Radar (Terminal Radar Approach Control - TRACON)
- Tower (Air Traffic Control Tower – ATCT)

The RB Panel recommended the ATC Academy establish an initial training course that all ATC applicants would attend that would allow the Academy instructors to evaluate each ATC Applicant for best placement and then steer that student into the track that would produce the type and number of Controllers the FAA needs. The tricky part of this arrangement is making the transition from the current hiring procedure where a particular FAA ATC Facility, such as Seattle Center or Boeing Field Tower, hires a CTI student to come back to that specific facility after completing training at the ATC Academy. The change would be that after completing the initial phase – the group phase- the FAA and the ATC Applicant would negotiate a placement taking into account the Applicant’s ability and wishes with the FAA’s need to place people according the skills and abilities that specific facilities require and the staffing levels at those facilities.

Diversity Hiring
The FAA has been working very hard to ensure that the hiring process produces a diverse work force that represents the US population. Terry thanked the CTI schools for supporting his request for information on each CTI school’s diversity recruiting and retention programs. He indicated that the detailed information schools sent him helped him to answer to his bosses how the CTI program strives to satisfy Federal Diversity Law requirements. He said the data shows that Schools are doing a good job recruiting from diverse populations, the problem has been the length of time – an average of 20 months – between CTI graduation and ATC Academy starts for CTI graduates. The long lag of nearly a year and half has caused many CTI graduates to start careers in other areas of aviation. Terry explained that the problem is not with CTI recruiting and retaining but rather with the disruptions to the FAA’s hiring and training process. A rumors had been circulating about an FAA off-the-street hiring panel in order to establish a more diverse workforce. The off-the-street hiring panel rumor upset the CTI community and especially the CTI graduates who had been waiting for Selection Panels. Terry wanted to quell that rumor and explained that some FAA HR staff had speculated about how to resolve the FAA’s hiring diversity problem. He asked everyone to be patient and allow the FAA to work the diversity problem which is very challenging in the context of Congressional budget battles.

Upcoming challenges
Continued political disruptions associated with Sequestration and now continuing with the Government Shutdown will continue to disrupt FAA ATC recruitment and training along with other FAA programs and there does not appear to be an end in sight. The Government funding fight is going on now, the Deficit Ceiling battle will follow, and the Federal Transportation Funding bill is still very much a work in progress. The current climate of government non-compromise is making things very tough for an FAA process that requires accurate future forecasting to attain and maintain any reasonable measure of process efficiency. So the upshot of the legislative logjam and Congressional dysfunction is basically costing more and will likely not end for the foreseeable future. This mess may continue into next election cycle. If neither side establishes a solid power base to force things to happen (which is unlikely to due to gerrymandering in some sections of the US) the dysfunction of Congress will eventually spread and negatively influence many more things about how the FAA and other government agencies and entities function.

For the FAA, ATC training coherency and continuity is very important to training efficiency. Political disruptions have already hampered training efficiency because budget uncertainty has caused training restrictions increased training costs. Air Traffic Controller training takes time – sometimes a long time – years. Developmental Controllers (FAA term for unqualified Controllers) must complete many training steps and phases including an extensive time of “seasoning” – working real air traffic under the direct supervision of a qualified controller. Budget disruptions make establishing effective FAA training routines that are efficient difficult.

- **NOTE**- Regarding “seasoning”, the FAA uses simulation training extensively to build Controller skills. However, controlling simulation air traffic doesn’t equate to controlling
real traffic situations because everyone knows simulation traffic isn’t real. The difference is batting practice using a pitching machine versus facing a real pitcher who is throwing fast balls very close to your head, or learning how to drive in a parking lot versus driving on a street with other cars that turn without signaling or slow down for no apparent reason. Simulation is one thing—“live” is another – and there is always more pressure to perform well with “live”. ATC facility managers must know that each Developmental Controller can handle the pressure of performing as well with live traffic as with simulated traffic. Real air traffic doesn’t allow for “pause” or “reset”. The variability of real traffic creates situations that Developmental Controller can’t predict. Lack of predictability emphasizes how well the Development Controller actually can think, work and react to attain Certified Professional Controller (CPC) qualification. Everyone must be absolutely sure the new Controller is really “Ready for Prime Time” before committing to allow that new Controller to work unmonitored.

All the FAA’s training problems and costs have the FAA looking at options to reduce Controller training cost and time without losing training quality. A number of ideas are floating around that may affect the CTI schools, but at this point, Terry indicated mostly this commentary is just talk. He indicated that after the budget mess resolves, there could be more communication on ideas the FAA is considering that may involve CTI Schools more directly in qualifying and perhaps conducting some training for the FAA beyond Air Traffic Basics. The issues to overcome to attain those goals are substantial, but if the CTI community (FAA and Schools) could successfully overcome those obstacles, there could be a shift in how the FAA conducts ATC training which could allow the CTI phase of Controller training to be more expansive without being more expensive for the FAA. Clearly, there would be much discussion and some changes would likely include changes in Federal law before any formal action between the FAA and the CTI schools would occur. Some ideas under discussion include:

- Increasing ATC training at CTI schools to shift training from ATC facilities to CTI schools
- Testing for direct placement – creating some kind of testing that would allow the FAA to assess student skills and shorten the time a student spends at the ATC Academy
- Allowing CTI schools to use local FAA ATC training facilities to conduct training
- Creating models for education and training that would improve cooperation and collaboration and remove some of the legal barriers that prohibit closer relationships between ATC facilities and CTI schools

All of these ideas have many pros and cons and include many issues that FAA would need to resolve before any of these options could become real. So Terry cautioned that everyone stay calm about possible changes. He indicated that nothing would change very much until the FAA had a clear understanding of the financial structure the FAA had to work with for the future.

In response to efforts to create more specific criteria for selecting Air Traffic Control candidates, Terry also indicated that the FAA had been accumulating statistics about factors the planners of the current FAA ATC selection and training system had thought would be important to
predicting success in ATC training. At the core of the Factors Issues is “proof of relevance” because various factions in the CTI community and also in the political realm had been trying to make a case that one kind of CTI graduate or another would be a better selection into ATC because he or she would do better in training and would have a better chance of becoming a Certified Professional Controller (CPC). For example, the FAA statistics showed

- No significant difference between CTI graduates with a two year degree compared to a four year degree. (Four year CTI schools had been lobbying for some kind of consideration that 4 year degree students should have selection priority.)
- No significant difference between CTI students with a Grade Point Average (GPA) of 3.0 or higher, and those with GPAs up 3.80
- Students with very high GPA (above 3.80) failed at a higher rate than students with good GPA- A very high GPA was an inverse predictor of success in ATC training.
- Having prior aviation experience such as having a pilot license and working in aviation operations related jobs was beneficial and correlated to a higher success rate
- Students with a Well Qualified ATSAT score did better than students with a Qualified ATSAT score. But beyond that basic separation of ATSAT scores, there was no significant difference – students with ATSAT scores of 85 or slightly higher were just as likely to succeed as students with a 100 ATSAT score or slightly lower. Getting a very high ATSAT score was not statistically significant in successfully completing ATC training
- CTI graduates and VRA (Veteran Referred Applicants – military controllers moving directly from military ATC into civilian ATC) did slightly better than candidates who came to the FAA from Off-the-Street hiring pools but the difference was not large
Joe Diskow – Acting Assistant Director of ATC Academy – Changes at the ATC Academy

The GRCC ATC Instructors will have the presentation Joe made available to the CTI Conference attendees and provide much more detail about each track to allow more in-depth review in GRCC ATC classes. Here is a brief summary of the basic training profiles for each track.

Joe Diskow presented the current training profiles for each ATC training track

- En Route
- Tower Cab
- Terminal Radar

Initial En Route – 63 days
- Non radar Academics – 17 days
- Non Radar Scenarios – 12 days
- Non Radar evaluation - 1 day
- Radar Academics – 12 days
- Radar Associate using ERAM – 19 days
- Radar Associate Evaluations – 2 days

Initial Tower Cab – 37 days
- Academics – 15 days
- Table Top/3D labs– 6 days
- Instrument Flight Rules (IFR) lab – 1 day
- Tower Sim System (TSS) labs – 13 days
- Performance Verification – 2 days

Terminal Radar – two tracks – Length of radar training depends on the student’s prior experience. Very few CTI students will go to TRACON facilities because the training failure rate for TRACONS was extremely high – above 95% (less than 1 in 20 CTI students training in FAA TRACONS was successful). Because of the high failure rate, CTI students are unlikely to get a TRACON as a first assignment. Instead, the FAA will move CPCs to fill TRACONS vacancies.

Academy Training Forecast

Joe expects that as soon as the budget mess sorts out and the government gets going again the Academy will restart training. Initially, he said the Academy staff had anticipated that CTI students would be able to start as early as November 2013. Then the budget battle made a Government shutdown likely which will push the entire training schedule restart back to 2014. He thought a January 2014 start was possible if the budget mess resolves in October 2013. A longer delay would mean a later start.
Dave Cink – Air Traffic Manager – Grand Forks Tower - Perspectives from the ATC Facilities

Dave Cink talked about the important of the understanding the entire process of ATC learning, selection, hiring, training and qualification. He offered numerous ideas for everyone to consider regarding the CTI program and CTI students who seek an FAA ATC job. He stated that the FAA has lots of excellent candidates so the FAA can be picky when selecting ATC employee candidates – and is. His comments come from his experience and from his many colleagues since the FAA ATC hiring began increasing in 2005.

Dave said the keys to success are in preparation – prepare for each step of the learning, selection, hiring and training process. His comments derive from many conversations with ATC Facility managers, training supervisors, trainers and human resources staff across the FAA. He said to not use his comments as FAA policy, but rather as observations from professional controllers in the field who see and work with new Controllers who are training to become Certified Professional Controllers (CPCs)

For CTI Students – Prepare yourself for ATC work

- Understand the Time Frames from graduation to selection to interview to training at the Academy. Understand how the FAA ATC Hiring Process works – ask lots of questions, get as much information as possible and learn to be patient- the current budget mess is disruptive to everyone, not just you.
- Make sure you understand the training process and what the FAA training requirements and expectations you must achieve to be successful. Learn about the Job. Visit ATC facilities, spend time with Controllers and learn about job specifics and work environments. Talk with controllers about the job-good and bad comments. Keep your eyes and ears open.
- Learn what you need to know, and be ready for changes and disruptions along the way. Particularly in this time of turbulent politics, learn how to be patient with the process – the FAA is great place to work and the job is great, but there are always bumps in every road and you need to be able to stay flexible and persevere.
- For the ATC Interview, a senior supervisor or a facility manager will conduct the interview in person. Candidates will receive notification of where and when to attend the interview, and Dave offered these observations to prepare for the interview
  - The Interview is NOT an HR exercise – if you don’t pass the interview, you’re done
  - Review the interview questions beforehand
  - Practice answering the questions with someone who can give you ‘honest feedback’
  - Prepare a resume to give to the interviewer that highlights your skills and abilities
  - Make sure you know where to be and then be early to the appointment
  - Dress up, look sharp – you can’t ‘redo’ a first impression
  - Be respectful and be attentive – listen to the questions and to the interviewer
  - Speak clearly, use full sentences and avoid jargon (dude, OMG, whassup)
  - Show the interviewer you can think on your feet, sell yourself but don’t be arrogant
  - Have examples that show you can be a good team player who can lead and follow
- At the Academy, Training is your job – do a great job. Training is hard. Don’t expect your trainer to pat you on the back for things you should know how to do. Listen carefully to every critique,
and strive to do better every day. Training at the Academy is not the real world and everyone knows that, but the training at the Academy does show what you are and how well you can adapt to ATC work and the pressures of ATC, so heed every instruction and listen carefully to every critique. The trainer’s job is to improve your skill and ability to the requisite level. The trainer wants you to succeed but not at the expense of quality necessary to be safe, Things you can do to help yourself at the Academy are all about preparing adequately.

- Study-Study-Study
- Form Study Groups and work together
- Avoid distractions – leave distractions at home, avoid partying
- Find ways to relieve tension that don’t consume a lot of time
- Be prepared for every day, plan ahead, look at what is coming up and be ready for the next thing
- Map Study- learn the Map, the Academy Map is simple
- Retain everything you learn for later. Don’t “cram and dump” – “learn and retain”.
- The bulk of your Pass-Fail grades will occur towards the end of each training track, the Performance Verifications (PVs) so focus on learning what you need to know and apply to pass those PVs. PVs are all about time critical knowledge application.

At the ATC Facility, Training is still your job – Again, do a great job. Training is even harder. Learn from everyone. You will have a primary and an alternate trainer who will guide you but you can listen and learn from everyone.

- Work hours will vary and you will have two trainers who are your primary “go to” people for learning- do what those two people say.
- Expect constant criticism – be receptive – you have much to learn, so learn. Remember, a high ATSAT score and high GPA don’t equate to being a good controller- you must prove yourself at every step of the process. No one cares what you did. Everyone cares what you can do now. Leave your ego at the door.
- Stay Motivated! Training is hard, and for a good reason, there is no place for complacency and every day you work is important, so make every day a great day. Mentally gear yourself for the long haul and expect a lot of criticism along the way to full CPC.
- Stay Focused! Training can be very long, especially for the En Route Track. Dealing with criticism every day about everything you do can be a challenge. Get tough and stay tough.

For CTI Schools – Prepare students for a tough training program after CTI graduation.
Dave said the road to full CPC is long and difficult. Schools must prepare students for that long, tough road. (NOTE- the 18 Hiring and Training Steps provides the path to full CPC)

- Screen students and develop student knowledge, skill and abilities that match the demands of the road ahead. Just knowing the 7110.65 is not enough, students need to know how to apply the rules and procedures in 7110.65 and need to know how to stay calm and remain professional. Your school reputation is your students – if you produce a weak, inept, incapable student who can’t learn and does not understand what to do or when, that student reflects
your program and your school. ATC is not for the meek- ATC students need confidence and knowledge. Challenge your students in ways that provide knowledge and confidence. Test tough and demand quality.

- Focus on applied knowledge in time critical processes. Controllers must be able to tell pilots what to do quickly and correctly and must be able to recover quickly from mistakes and sudden changes. Find ways to develop those skills.
- Focus on teaching students to speak English clearly – embed Phraseology training in your course work. Make sure your students are easy to understand. Consider the real world of less than perfect radio communications and make sure that students learn how challenging real life radio communications can be. Have students visit an ATC facility to see what ATC work is really like. Make ATC facility visits part of your education program
- Use LiveATC.net. The more students practice listening, the better those students will be at understanding what controllers and pilots are trying to communicate. Students who listen a lot will have an much better understanding of how Controllers and Pilots work together to make the Air Transportation System work

Closing remarks
Dave said that prior to 2009, even though the FAA was working with a lot of new people, the characteristics of those people were generally very good. New people:

- Were very motivated and eager to learn
- Had good to great book knowledgeable
- Prepared well and were respectful to everyone
- Had well-rounded backgrounds that made a good fit for ATC

However, since 2009, he and the rest of the field professionals noticed several trends that he felt were not good. Post 2009 graduates had these tendencies:

- Had an attitude that getting to the ATC Facility meant “I’ve got it made”
- Not motivated to train, did not like to train and did not maintain a focus on studying
- Had excellent book knowledge to the point of arguing with the Trainers over technical points
- Lacked Critical Thinking skills, could not apply book knowledge effectively, could not think quickly
- Felt entitled – felt that the Developmental was on par with the CPC
- Wasted time on useless things during breaks in training (playing video games, chatting with friends on the phone)
Dave said he and his colleagues were concerned that future trainees would be like the post 2009 graduates and would lack focus or understanding of the kind of work ATC is. Here is Dave’s list of desirable attributes that CTI students should strive to become and CTI Schools should strive to produce:

- Be able to do several things simultaneously and prioritize all things in correct order and in time manner – speed and accuracy really are critical ATC skills
- Be self-motivated, take initiative to improve training, ask lots of questions, seek information constantly
- Use ‘Off time” well – focus on learning the job, focus on “Being Best” and don’t take anything for granted
- Get as much simulation training time as possible, but understand that the Simulator is just that-a simulation of traffic. Simulator scenarios have limits and can trap students into thinking that mastering the Simulator scenario means the student is ready for real traffic. Normally, simulator scenario focuses on developing a specific set of a few skills- real world traffic is much more diverse and requires using many skills at the same time.
- Online classes don’t provide the level of interaction that ATC work environments demand. Schools should be careful about using on-line education. Online education works for some subjects, but for ATC training. CTI Schools need ATC class work and ATC lab work to improve “hands on” skills.
- Students who are self-responsible and self-accountable. Don’t blame others for a lack of progress. Take every opportunity to learn and improve.