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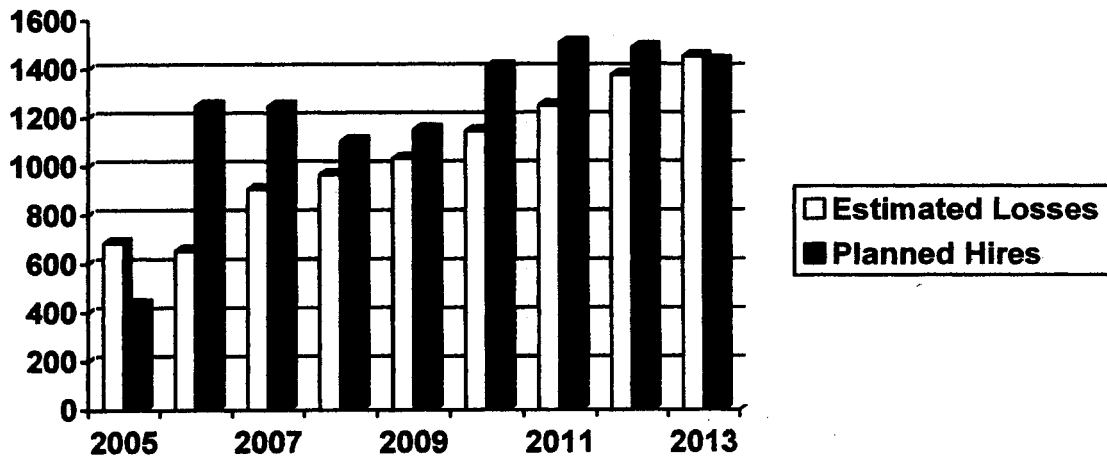
## CURRENT TRENDS IN AIR TRAFFIC CONTROLLER RECRUITMENT AND TRAINING

José R. Ruiz

### Introduction

The Federal Aviation Administration (FAA) currently employs approximately 15,000 air traffic controllers (FAA, 2004). Over the next 10 years, more than 11,000 members of the air traffic control (ATC) workforce will become eligible to retire (FAA, 2004). How is the FAA planning to offset this impending wave of retirements? In December 2004, the FAA announced its plan to hire 12,500 air traffic controllers over the next 10 years (FAA, 2004). Figure 1 displays projected controller losses and hires through the year 2013.

Figure 1. Air Traffic Controller Planned Hires and Estimated Losses.



**Current Trends in ATC**

In the months following the FAA's announcement of its forecasted employment strategy, careers in the ATC segment of the aviation industry have enjoyed a resurgence of public interest. For example, ATC careers and training were recently highlighted in an article by Collins (2005) for *Flying Magazine*, a nationally distributed aviation publication. The Aviation Management and Flight (AVMAF) Department at Southern Illinois University Carbondale (SIUC) has been approached with a large number of inquiries from interested students regarding ATC careers. These students represent a broad range of academic disciplines with varying levels of aviation specific knowledge. Dr. D. NewMyer, Department Chairperson for the AVMAF department at SIUC mentioned, "I feel certain that the inquiries we've received regarding air traffic control training and air traffic control careers are a nationwide phenomena and are not unique to SIUC" (personal communication, June 9, 2005). As organizations within the aviation industry experience financial turmoil, organizational restructuring and personnel downsizing, a career as an air traffic controller seems appealing, stable and fairly lucrative.

Median annual earnings of air traffic controllers in 2002 were \$91,600. The middle 50 percent earned between \$65,480 and \$112,550. The lowest 10 percent earned less than \$46,410, and the highest 10 percent earned more than \$131,610. (U.S. Department of Labor, n.d., para. 25)

This article will examine current trends in air traffic control recruitment and training, with emphasis on the active duty military, the Employment of Retired Military Air Traffic Controllers Program, FAA sponsored job fairs and the Air Traffic Collegiate Training Initiative (AT-CTI) Program.

**Background**

What events led to the FAA's present manpower dilemma? In August 1981, members of the Professional Air Traffic Controllers Organization (PATCO) voted to go on strike. President Ronald Reagan ordered the striking air traffic controllers to return to their duty positions within 48 hours (FAA, 2004). More than 10,000 striking air traffic controllers ignored President Reagan's mandate and were subsequently fired (Nolan, 2004). Between 1982 and 1991, the FAA hired an average of 2,655 air traffic controllers per year to replace the fired PATCO controllers (FAA, 2004). This employment strategy created the potential for much of the air traffic control workforce to reach retirement age at

approximately the same time (FAA, 2004). Predictably, between 2002 and 2012, the majority of the air traffic control workforce is becoming eligible for retirement (Nolan, 2004). How does the FAA intend to recruit and train an estimated 12,500 air traffic control applicants over the next 10 years? If selected for employment, where can an air traffic controller expect to be assigned?

***Air Traffic Control Facilities and Responsibilities***

The majority of civilian air traffic controllers are employed by the FAA or the Department of Defense (DOD). An air traffic controller can be assigned to a variety of ATC facilities, including a Terminal ATC Facility, an Enroute ATC Facility or a Flight Service Station (FSS).

***Terminal ATC facility.***

An air traffic controller assigned to a terminal ATC facility is involved in the active control of air traffic in either the Air Traffic Control Tower (ATCT) or the Terminal Radar Approach Control (TRACON). The ATCT is perhaps the most visible of ATC facilities. It is typically located near the center of an airport. The ATCT provides aircraft separation through the use of visual separation techniques and radar assisted separation techniques (if radar is available). The FAA regulates the operation of 483 ATCTs located throughout the United States (DOT, 2003).

In most cases, the control tower is delegated the responsibility for separation of participating aircraft operating within a 40-mile radius of the airport. This airspace usually extends from the Earth's surface up to an altitude of 6000 to 10,000 feet MSL [mean sea level]. (Nolan, 2004, p. 214)

The TRACON is responsible for providing aircraft separation through the use of radar separation techniques. At smaller, low activity facilities, the TRACON function may be performed in the ATCT. At larger, busier facilities, it may be housed in a separate building near the ATCT (Nolan, 2004). The TRACON plays an important role in assisting aircraft transition from the enroute structure to the terminal (airport) environment.

***Enroute ATC facility.***

An Air Route Traffic Control Center (ARTCC) is responsible for providing aircraft separation through the use of radar separation techniques in the enroute ATC environment. ARTCCs provide aircraft separation services in areas that involve large parcels of airspace that can encompass thousands of square miles. "The FAA has chosen to distribute this separation responsibility domestically to 22 air route traffic control centers in the United States" (Nolan,

2004, p. 206).

*Flight service station.*

Air traffic controllers assigned to a FSS are not actively involved in the separation of air traffic. A FSS provides pre-flight, in-flight and emergency assistance to all pilots on request. Flight service station controllers offer pilots real-time weather conditions and forecasts for airports and flight paths. A FSS can also relay air traffic control instructions between controllers and pilots and initiate searches for missing or overdue aircraft (wikipedia, 2005). There are 61 automated and 14 non-automated flight service stations located throughout the United States and Puerto Rico (DOT, 2003).

**Air Traffic Controller Recruitment and Training Programs**

Prior to 1990, all civil air traffic controller training was conducted at the FAA Academy. Large numbers of air traffic controller applicants were recruited from the general populace. The advent of the Air Traffic Collegiate Training Initiative (AT-CTI) shifted the responsibility for recruitment and fundamental air traffic controller training to collegiate aviation (Morrison, Fotouhi & Broach, 1996). Historically, the military has also served as a fertile recruitment venue for military air traffic controllers wishing to enter the civil sector (FAA, n.d.c.).

The FAA will draw from a variety of sources to repopulate its ATC workforce. These include eligible, former Professional Air Traffic Controllers Organization (PATCO) controllers, Department of Defense (DOD) civilian controllers, the general public, the military, and graduates of the AT-CTI program (FAA, 2004). The following discussion will focus on four air traffic controller recruiting venues: active duty military, retired military, FAA sponsored job fairs and the AT-CTI program.

*Active Duty Military*

Historically, the military has served as a potential source of highly trained and experienced air traffic controllers. Having adhered to similar standards practiced by their civilian counterparts, active duty military air traffic controllers represent a pool of demonstrated ATC experience (Nolan, 2004). The FAA recognizes that the military has made a significant investment in the screening, training, and development of its air traffic control workforce. For example, the Veterans Recruitment Appointment (VRA) program is a recruitment venue that does not require former military air traffic controllers to attend the FAA Academy for training if selected for appointment to a terminal facility. They are entered into a stage of field training that is determined by the receiving

facility (FAA, 2004).

The maximum allowable entry age for an FAA air traffic controller is 30 (FAA, n.d.d). Not surprisingly, a number of younger, active duty military controllers leave the armed forces with the intention of becoming FAA air traffic controllers. In an effort to assist the Department of Defense (DOD) maintain its cadre of experienced, active duty military air traffic controllers, the FAA established the Employment of Retired Military Air Traffic Controllers Program (FAA, n.d.b).

*Employment of Retired Military Air Traffic Controllers Program*

Retired military air traffic controllers are a resource that represents extensive operational experience and technical expertise. But the FAA's maximum allowable entry age prohibited this group from pursuing FAA air traffic controller positions. The Retired Military Air Traffic Controllers Program now allows the FAA access to this experienced workforce pool.

To qualify for the Retired Military Air Traffic Controllers Program an applicant must:

1. Be on terminal leave pending retirement from active duty military service or have retired from active duty military service, on or after September 19, 1999.
2. Have received either air traffic control specialist certification or a facility rating according to FAA standards.

In addition, you must be a U.S. citizen at the time of application and meet all application, qualification and position requirements, including applicable medical and security requirements. (FAA, n.d.b, para. 3)

Applicants who are selected for employment are placed on a time-limited appointment with a specific termination date. The initial appointment is not to exceed 10 years; however, extensions can be granted in 5 year increments, based on organizational needs and performance, through the age of 56 (FAA, n.d.c). "An appointment may not exceed the last day of the month in which you reach age 56" (FAA, n.d.b, para. 8). Program appointees do not receive initial training at the FAA Academy, but they will receive field training at the gaining facility (FAA, n.d.b). Finally, program appointees are compensated at the ATC-3 band, which is currently \$50,725 (FAA, n.d.b).

## Current Trends in ATC

### FAA Sponsored Job Fairs

FAA sponsored job fairs are being used to recruit ATC applicants from the general populace for a limited number of controller positions at specific enroute ATC facilities. M. Brown, a student at SIUC, attended an FAA sponsored job fair intended to recruit controller applicants for assignment to the Indianapolis Air Route Traffic Control Center. In discussing his perceptions of the event, he noted that "More than 600 people applied for about 60 positions. It was very competitive and the likelihood of being selected was small, but I want to become a controller - it was worth the effort." (personal communication, October 4, 2005)

An attractive component of being selected for a controller position through an FAA sponsored job fair is that prior air traffic control training or experience is not required to apply for these positions. However an applicant must:

1. Maintain U.S. Citizenship
2. Possess three years of progressively responsible work experience, or a four year course of study leading to a bachelor's degree. A combination of work experience, academic education and certain kinds of aviation experience may also be qualifying.
3. Pass the Air Traffic Selection and Training (AT-SAT) exam
4. Speak English clearly enough to be understood
5. Pass a rigorous medical examination
6. Pass a security/background investigation
7. Pass a pre-employment drug test (FAA, 2005)

The FAA will train the people hired for these positions. Individuals who are selected and hired will be placed on temporary appointments and must pass a rigorous training program in air traffic control conducted by the FAA in order to continue their employment. New hires will spend several weeks at the FAA Academy in Oklahoma City, Oklahoma receiving their initial training. Those who are successful and meet all other requirements may be given permanent appointments and continue their training in their air traffic facility. Further training at the FAA Academy is also possible. (FAA, 2005, para 7)

The emergence of FAA sponsored job fairs as a recruitment vehicle is an indication that the FAA is willing to explore new recruitment venues in an effort to offset impending controller retirements.

### Air Traffic - Collegiate Training Initiative (AT-CTI)

The Air Traffic - Collegiate Training Initiative (AT-CTI) is a post-secondary academic program designed to recruit and train students for careers as ATC specialists. The FAA established the AT-CTI program with the intent of using collegiate aviation as a primary means of realizing future ATC staffing requirements (FAA, 1998, p. 1).

The AT-CTI program was implemented in 1989 with a specific set of objectives, including the following:

1. Test the concept that non-federal, post-secondary educational institutions can develop, deliver and implement air traffic control recruiting, selection and training programs.
2. Attract females and minorities to careers in air traffic control.
3. Develop a more educated work force in the FAA.
4. Use collegiate aviation as one of the primary means of meeting the future needs of the FAA for air traffic control specialists (ATCS). (Ruiz & Ruiz, 2003, p. 12)

Over time, the AT-CTI program has evolved in size and scope. The FAA originally partnered with two academic institutions, the Minneapolis Community and Technical College, formerly known as the Mid-America Aviation Resource Consortium (MARC), Eden Prairie, Minnesota; and Hampton University, Hampton, Virginia (Broach, 1998). In 1991, three more academic institutions were selected for the program. These institutions included: Community College of Beaver County (CCBC), Monaca, PA; University of North Dakota (UND), Grand Forks, ND; and University of Alaska-Anchorage (UAA), Anchorage, AK (Morrison, Fotouhi & Broach, 1996).

Presently, 14 collegiate institutions across the United States offer two year or four year ATC degree programs that can lead to employment with the FAA (FAA, 2004). The 14 academic institutions include:

1. College of Aeronautics, Flushing, NY
2. Community College of Beaver County, Beaver Falls, PA
3. Daniel Webster College, Nashua, NH
4. Dowling College, Oakdale, NY
5. Embry-Riddle Aeronautical University, Daytona Beach, FL
6. Hampton University, Hampton, VA
7. Inter American University of Puerto Rico, San Juan, PR

8. Miami-Dade Community College, Homestead, FL
9. Middle Tennessee State University, Murfreesboro, TN
10. Mount San Antonio College, Walnut, CA
11. Purdue University, West Lafayette, IN
12. University of Alaska-Anchorage, Anchorage, AK
13. University of North Dakota, Grand Forks, ND
14. Minneapolis Community & Technical College, MN

The initial review of literature did not reveal the most recent addition to the list of AT-CTI designated collegiate institutions - the Minneapolis Community & Technical College (MCTC). However, it is now listed on the FAA website [[www.faa.gov](http://www.faa.gov)]. The Minneapolis Community & Technical College was a founding member of the AT-CTI program. However, in the early 1990s, they surrendered AT-CTI status and entered into an arrangement with the FAA to provide enroute specific air traffic controller training. Program training was intensive and lasted a total of 18 weeks. Graduates were allowed to bypass additional skills and equipment training at the FAA Academy and proceed directly to their gaining facility. In 2004, FAA funding issues led to the elimination of the MCTC enroute ATC training program. The institution has since restructured its ATC training program and is now offering an AT-CTI approved, Associate of Applied Science Degree in Air Traffic Control as of Fall 2005 (T. Buzzard [MCTC ATC Program Director], personal communication, 25 April 2005).

AT-CTI programs are not financially subsidized by the FAA (FAA, 2000). Therefore, students are responsible for funding their education and training. Facilities/resources among AT-CTI institutions vary; for example, the Community College of Beaver County (CCBC) maintains a student operated air traffic control tower (CCBC, n.d.). A number of AT-CTI institutions provide access to radar simulation equipment, while others are limited to didactic instruction. Regardless, the FAA views all AT-CTI graduates as equally qualified (Collins, 2005). Upon program completion, AT-CTI graduates are required to attend the FAA Academy for additional skills and equipment training prior to proceeding to their gaining facility (FAA, 2000).

All AT-CTI students must pass the FAA AT-SAT exam either before or shortly after enrollment in an AT-CTI

program. Upon graduation, students who receive a school recommendation, and meet all qualification requirements, including age criteria, qualifying score on the pre-employment exam, medical requirements, and security criteria are placed on an AT-CTI database for employment consideration (FAA, n.d.a). "Eligibility under this program [AT-CTI] is good for two years from the candidate's graduation date, candidate reaches age 31, candidate declines a position, or the candidate is selected, whichever comes first" (FAA, n.d.a, para. 8).

#### Conclusion

The FAA has composed an ambitious 10 year staffing plan. That plan is to serve as a blueprint for repopulating an aging ATC workforce that is poised for retirement. The agency will pursue a variety of paths in its attempt to maintain air traffic controller staffing levels, including, the hiring of retired military controllers, members of the general public, active duty military controllers, and graduates of the AT-CTI program.

Expanding the controller applicant pool to include retired military air traffic controllers in time-limited positions should assist in relieving short term FAA staffing issues. However, the maximum employment age of 56 will limit the impact that this group will have on controller staffing.

FAA sponsored job fairs will assist in recruiting applicants for specific ATC facilities, but these events are held so infrequently, and are so competitive, that they will have a marginal effect on staffing levels. The active duty military will continue to supplement the FAA controller workforce. Military controllers are highly trained, experienced professionals; the FAA recognizes these advantages and will continue to consider them for FAA controller positions.

The FAA's endorsement of the AT-CTI program as a recruitment and initial training venue increases the credibility, legitimacy and popularity of the program among potential applicants. As a result, the AT-CTI program will be viewed as one of the most effective methods of recruiting and training aspiring air traffic controllers.

Upon weighing the potential impact that each recruitment/training avenue might have in maintaining the air traffic controller workforce, it would appear that the AT-CTI program, and the active duty military, will emerge as the FAA's primary recruitment and initial training venues for the foreseeable future.

***Current Trends in ATC***

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