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GETTING MORE BANG FOR THE BUCK:

INCENTIVIZING AIRCREW CONTINUATION TRAINING

by

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ABSTRACT

With the ever-increasing dependence on Air Force Reserve Command (AFRC) aircrews to fill critical operational roles, it is not enough for AFRC aircrews to just be current. They also need to be proficient. The central question of this report is: How might AFRC incentivize flight continuation training to maximize proficiency and encourage aircrews to make the most of each training sortie?

The problem/solution methodology was used in this research to evaluate methods of incentivizing aircrews to get more out of their continuation training. Whether through pay or another means, incentivization programs were explored that make best use of AFRC training dollars and maintain a higher state of currency, proficiency, and ultimately preparedness.

The key findings revealed that, while pay-for-performance, specifically the direct correlation of flying tasks performed to pay earned, appears to be a fair means of rewarding aircrew who take proficiency seriously. Civilian incentive models also suggest that this method may decrease overall morale and exacerbate AFRC's current aircrew shortage.

Through a thorough examination of proficiency, pay, and various models of workplace incentives, this research concluded that proficiency needs to be emphasized over currency. As a result, five courses of action (COA) are recommended to present Air Force leaders with multiple avenues from which to approach aircrew proficiency. The COAs affecting Additional Flight Training Periods (AFTP) are unique to AFRC – and to some extent the Air National Guard (ANG) – but some have application potential to the total force.

The research findings pointed to a recommendation that AFRC assigns a minimum flight time to the first AFTP before a second AFTP is earned. This COA costs AFRC no additional AFTP funds while encouraging more training opportunity without tying pay to specific events.

Introduction

Air Force Reserve Command (AFRC) aircrews are heavily used to fill critical operational roles. They continually confirm their essential role in the total force structure, and it is not enough for them to maintain minimal currency; instead, aircrews should aim for maximum proficiency. For many Air Force career fields, the pace has not slowed in the past 15 years' "War on Terror," but has in some cases increased the mobilization rate and requirement for combat-ready aircrews as the cost of resources has continued to go up. Despite Continuing Resolution Acts and reduced budgets, AFRC is expected to maintain their part in the total force structure and be as proficient as their Active Duty (AD) counterparts. Assuming flying hours are adequate for training proficiency, aircrews must make the most of their opportunities to train. If home station training is not taken seriously, aircrews may find themselves ill-prepared in some situations despite adequate training opportunities afforded them. With this in mind, how might AFRC incentivize aircrew continuation training to maximize proficiency and encourage aircrews to make the most of each training sortie?

All too often, AFRC aircrews put significant time into preparing for a continuation training sortie only to cut it shorter than the scheduled and briefed duration for reasons other than maintenance or weather. In many cases, the "bump plan" – the plan in-place in the event a formation sortie goes down to a single aircraft before takeoff – has more to do with who needs to get paid and less to do with the quality of training.

AFRC allocates 48 Additional Flight Training Periods (AFTP) per year to each aircrew member, intended to adequately train for the unit's operational mission(s), but they have minimal fulfillment criteria. Without filters and guidelines, aircrews can look good on paper, but be less than fully proficient. When this happens, AFRC does not get the intended return on

their investment. Since money and time are finite resources, the expectation is that training accomplished during sorties is maximized – and quality counts. It is unsatisfactory for aircrews to maximize their pay at the expense of minimal training.

The problem/solution framework is used in this research to examine the issue that continuation training in AFRC runs the risk of being shortchanged because of the way AF Reserve aircrews receive pay not just to stay current, but proficient. AFRC aircrews authorized limited AFTP training dollars need to make better use those funds because the total force is counting on them to be trained to the same standard as their active duty counterparts and because, while currency is expected, proficiency is critical.

The Air Force Reserve has several ways to pay its aircrews to perform flying duties, the primary method of which is through AFTPs, equating to one day of pay per period. Intended to compensate AFRC aircrews for their work and provide multiple continuation training periods throughout the year, AFTPs have minimal guidelines for their use and are a very loose measure of an aircrew member's proficiency. Therefore, in theory, an AFRC aircrew member could be a maximum participator in terms of pay and be only minimally proficient.

The current system of paying aircrews for training has been around for a long time. In this research, changes to AFRC aircrew pay are considered based on actual training accomplished as well as both pay- and non-pay-based incentivization methods to encourage better planning and execution of continuation training, ultimately arming AFRC with more proficient aircrews.

AFRC aircrews should make the most of their continuation training time. Instead of the current system of pay, where an aircrew member's pay is based on whether they took off or not, the findings in this research intend to show how AFRC can better utilize aircrew training dollars by incentivizing continuation training, whether through pay or other means. Through an

incentives program, overall aircrew currency, proficiency, and ultimately preparedness should improve.

This research report begins with a brief history of AFRC, establishing historical relevance and why it is important that AFRC aircrews take preparedness seriously, and then moves to in-depth examinations of currency vs. proficiency, Reserve pay, and incentives. It concludes with proposals and recommendations based on research evaluation and findings.

A Brief History

Air Force Reserve Command (AFRC) aircrews fill vital roles in support of the active component and the defense of the United States. Established in 1946 during military restructuring following World War II, the organization that is today's Air Force Reserve was originally designed to "take the form of a flying club with the primary objective of providing pilot proficiency."[1] Throughout their history, the Air Force Reserve has been called upon to complete the same missions as their active duty counterparts: fight the nation's wars, conduct humanitarian missions, train Airmen, and backfill vital positions, to name a few.

In 1950, with international tensions rising and action in Korea looking more and more likely, 193,000 Reserve Airmen (146,683 Air Force Reserve and 46,413 Air National Guard) were called back to active duty to fill various roles. [2] [3] After the Korean War, the Air Staff, recognizing the importance of a proficient reserve force, authorized additional flying training periods.[4] The additional resources paid dividends shortly afterwards when more than 5,600 Air Force Reservists were called up for the Berlin Airlift.[5] Although not extensively mobilized for the Vietnam War, AF Reservists still filled vital roles in support of fighting forces.

The next major mobilization was in 1990 when President Bush called up over 20,000 Air Force Reservists for duty in Operation Desert Storm, where they filled valuable support and combat flying roles.[6] From the events of 11 September 2001 through today, Air Force Reservists have found themselves regularly mobilized, sharing the deployment load with their active duty counterparts, and sharing a success rate indicative of their commitment to duty and professionalism.

Proficiency vs. Currency

> *To become proficient in any field you must practice. There is simply no achievement without practice and the more practice, provided it is done intelligently, the greater will the proficiency be and the sooner it will be attained.*
>
> Emmet Fox

Why It Matters

The term *proficiency* is often confused and inappropriately correlated with *currency*, but the two have very different meanings. The Oxford dictionary defines proficiency as "a *high degree* of skill; expertise," whereas currency is simply and minimally meeting a time-based requirement. Air Force Instructions (AFI) for each airframe give minimum requirements for aircrew members to meet currency requirements. As long as an aircrew member remains current, they are likely only formally evaluated once per year in their annual evaluation period. Proficiency, therefore, becomes a product of available resources – aircraft or other training devices, and money to operate the aircraft and pay for the aircrew and all of the required support elements – and the effort that aircrew puts into increasing their personal proficiency.

Military accident investigation reports from 2014-2016 reveal two primary causes for over a billion dollars of damaged or destroyed property and equipment, and loss of life: 1) maintenance issues, often materiel or systems failure, and 2) pilot error, commonly due to lack of proficiency. In the case of the latter, leaders constantly assess risk and, as appropriate and available, take measures to avoid or mitigate unnecessary risk. In the flying world, operational risk assessment (ORM) is *formally* assessed and reviewed before flight, and is *informally* reassessed in every phase of operation. Unexpected weather, changes in the mission and unforeseen factors drive continuous risk assessment.

Pilot flying skills, increased through proficiency exercises, are critical to breaking the chain of events that leads to aircraft mishaps. The more pilots (or any aircrew) fly and practice the essential tasks assigned to their mission, the better they are equipped to anticipate trouble areas before, or as they arise.

The key to best preparing for both normal and abnormal operations is making training experiences worthwhile. Legendary American football coach Vince Lombardi said, "Practice does not make perfect. Only perfect practice makes perfect."[7] This great quote is applicable not only to sports, but to life. Similarly, for training sorties, the adage "you get out of it what you put into it" applies. Training sorties flown with little pre-planning and lackluster execution have minimal value to the overall increase in aircrew proficiency. While a sortie might be sufficient to "check the block" for multiple currencies, aircrews and their leaders must make sure they are separating the value of proficiency versus currency, defined in basic Air Force Instructions (AFI) for all aircrew.

The Air Force's definition of *proficiency* is "a measure of how well a task is completed. An aircrew member is considered proficient when they can perform tasks at the minimum acceptable levels of speed, accuracy, and safety."[8] The definition of *currency*, on the other hand, is "a measure of how frequently and/or recently a task is completed" and it "should ensure the average aircrew member maintains a minimum accepted level of proficiency in a given event." [9] While it is important to have minimum standards and for all to know what those standards are, it is essential that flyers and leaders create an environment which motivates aircrews to go beyond minimums and strive for higher proficiency.

Federal Aviation Administration (FAA) standards for currency and proficiency are even further displaced. A 2008 FAA safety publication entitled "Proficiency and the Private Pilot"

attempts to clarify for the civilian pilot the difference between currency and proficiency, and gives tips on how to improve proficiency. Different from military flying, civilian aviation has many fewer tasks on which to remain current, and a lower rate of currency. As a point of comparison, the FAA requires pilots to accomplish three daytime and three nighttime takeoffs and landings within the preceding 90 days to remain current.[10] While that averages out to one landing per month, in reality, all takeoff and landing requirements can legally wait until the very end of the 90-day currency as long as they do not go beyond that period. In contrast, Air Force F-16 pilots are required to complete one day landing every 30 or 45 days, based on experience level, and one night landing every 21 or 30 days, again based on experience level.[11] For further comparison, a C-17 pilot has a semi-annual requirement to complete 8, 10, or 12-day takeoffs and landings based on experience level, and have a further restrictive requirement of completing at least one of each per month. Additionally, C-17 pilots have a quarterly Night Vision Goggle (NVG) takeoff and landing requirement of two or four iterations based on experience level. So while the total numbers are not completely disproportionate between FAA and military flying currency requirements, it is easy to see the emphasis on task recency for military pilots, at least in this similar event.

Why the disparity between civil and military currency requirements? There are many reasons, but the best answer may simply be cost. While the military flyer does not pay out-of-pocket for flight time, the civilian private pilot typically does, and flying is not inexpensive. It is for this reason that there are numerous articles written specifically for civilian pilots regarding making the most of their precious, limited, costly flight time. Some recommendations are: 1) developing a routine for all aspects of preflight, flight, and post-flight activities and skills, and occasionally performing them for an instructor pilot to ensure best

practices are kept; 2) if out on a sight-seeing flight, practicing stalls, stall recovery, and other perishable skills; and 3) setting personal goals of maintaining specific parameters for altitude, heading, airspeed.[12] [13] It does not have to feel like work or formal training but instead considered self-improvement to increase competency in the same way a professional musician practices their instrument to mastery. Airline pilot Bill Singleton astutely commented that "current and proficient are adjectives used to describe separate and distinct levels of competency," and makes the challenge that "Proficiency… describes a pilot who conducts each flight with the competence of a professional or with expert correctness," and correlates this professionalism with going beyond being legal to fly to "being safe to fly."[14]

Measures of Proficiency

The Air Force has a few implied ways of measuring, or at least give an attempt at measuring, aircrew proficiency. Each task in the Mission Design Series (MDS), or type of aircraft, Volume 1 – Aircrew Training, in conjunction with the RAP Tasking Memorandum (RTM) (for Air Combat Command (ACC) and Global Strike Command (GSC) assets), has an event description explaining the purpose of the task and outlining the minimum requirements, minimum supervision for non-current aircrew, and restrictions, as applicable. Tables 1 and 2, respectively, show examples of similar C-17 and HH-60 tasks.

These examples, similar in concept, but from two very different airframes and mission sets show that, while some guidance is given, the event descriptions do not go in-depth to the standards of performance. Additional information is found in other documentation such as the Air Force Tactics, Techniques, and Procedures (AFTTP) 3-3.(MDS) and, in this case, ATP-3.3.4.2, which governs the international standards for air-to-air refueling, where time, altitude, and airspeed standards are established, but are given no parameters. If aircrews are expected

meet a standard of performance baseline, tasks should have clear, measurable criteria, and there is no reason they cannot be included in one training document.

Table 1 – C-17 Proficiency Event R010 Receiver AR

7.14.22. R010 Receiver AR. 7.14.22.1. Purpose: Continuation training for pilots 7.14.22.2. Description: Aerial refueling conducted with one or more tanker aircraft 7.14.22.3. OPR: AMC/A3T 7.14.22.4. Training Media: Aircraft or WST 7.14.22.5. Instructor: Not required for continuation training 7.14.22.6. Additional Information: Pilots (FPL+) may credit one AR event per sortie by accomplishing closure from pre-contact position and maintaining sustained contact. As a guide, sustained contacts are 5 minutes (tanker autopilot on) and 5 minutes (tanker autopilot off). Crewmembers maintaining Air Refuel Currency in the Simulator must demonstrate complete AAR Rendezvous, performing ATP-56B RV Delta or Golf procedures from IP inbound through End AR or Practice Emergency Separation.

Reprinted from AFI 11-2C-17 Volume 1, *C-17 Aircrew Training,* 1 June 2012.

Table 2 – HH-60G Flying Training Events Description and Requirements

Helicopter Air-to-Air Refueling (Day or NVG) [AR16/AR14] (All): Event in which crewmembers perform probe to drogue operations in order to receive fuel from a capable aircraft in flight. Minimum requirements: Pilots and plug certified co-pilots: Rendezvous, Join-up, Contact (left and right) and Crossover. Non-plug certified co-pilots: Rendezvous, Join-up and Crossover. SMA: Rendezvous, Join-up, Crossover and a single contact. **Exceptions**: If unable to make left or right contacts due to equipment malfunctions, environmental conditions, or tanker configuration, multiple single hose contacts and a crossover may credit the event. Operational Rescue Missions do not require a crossover or left and right side contacts.

Reprinted from Headquarters Air Combat Command (HQ ACC)/A3J, ACC/A3T, PACAF/A3T, USAFE-AFAFRICA/A3T, ACC/A3G and AFRC/A3T, for HH-60G Operations Group Commanders, HH-60G Ready Aircrew Program (RAP) Tasking Memorandum, Aviation Schedule 2017 (AS-17), 01 October 2016.

The standards for the Helicopter Air-to-Air Refueling (HAAR) receiver high and low rendezvous position are 200 feet above and 300 feet below the tanker aircraft, respectively. The goal, of course, is to be right on the altitude with no deviations, which is not practical, so it is important that parameters are set. If task guidance is not set in the 11(MDS) series Volume 1 or RTM, aircrews should internally establish parameters. Initially an altitude parameter might be set plus or minus (+/-) 100 feet, but with increased experience and proficiency, it can be further reduced. Aircrews should look for measurable goals with which to establish desired training objectives and create opportunities to improve their personal skills and that of their crews.

For Instrument Flight Rules (IFR) flight, whether simulated or actual, each 11-series MDS-specific Volume 2 (Aircrew Evaluation Criteria) AFI has some proficiency task standards of measurement. For example, each of the Volume 2s for the five MDSs (B-52, C-17, F-16, HC-130, and HH-60G) examined in this research generally require +10/-5 Knots Indicated Airspeed (KIAS), heading within five degrees of controller's instructions for a Precision Approach Radar (PAR), and less than glide slope and/or azimuth within one dot on the aircraft's panel instrumentation. The exception is the HH-60G, which has tighter parameters (+/-5 KIAS), likely due to the airframe's slower operating speed. These parameters, used evaluation purposes, determine the level of proficiency based on qualification criteria, expressed as Q1, Q2, and Q3.

Each sub-area of an evaluation is graded Q (Qualified), Q- (Qualified but needs additional debriefing or training), or U (Unqualified). For the purposes of this research, a sub-area rating of Q is assumed to meet the Air Force definitions of proficient and current in the evaluated areas. With a rating of Q-, the aircrew member is current in the evaluated area(s), but is

considered less than fully proficient. With an evaluation grade of U, the examinee's performance is below Q or Q- standards, compromises flight safety, and "requires debriefing and/or additional training, as determined by the flight examiner."[15]

Assessing the complete performance, the evaluator determines an overall qualification level of Q1, Q2, or Q3. For a rating of Q1, the evaluated aircrew member demonstrated the requisite knowledge and performed all sub-areas to Q standards, as defined in the MDS-specific 11-series Volume 2, earning no U grades in any sub-area, and if any areas were graded Q-, they were cleared up during the evaluation. For Q2, the aircrew member performed safely, but there were one or more areas where additional training was required and a non-critical area of U was awarded. To earn an overall rating of Q3, the aircrew member demonstrated an unacceptable level of safety, performance, or knowledge.[16]

This method of evaluation is standardized throughout the Air Force, tailored for each airframe and per task. There are similar standards between airframes in instrument flight, less similar for contact, or basic aircraft handling maneuvers, and wildly dissimilar standards in tactical flying due to the variety of missions. Conducted annually, the formal qualification, instrument, and mission evaluations provide a good snapshot of proficiency to the aircrew member and the commander, and ensure the member is proficient according to Air Force definition. Evaluations do not, however, thoroughly cover *every* area the aircrew member is expected to perform well to be considered proficient.

RAP's Try at Proficiency

Apart from formal evaluations, ACC has created an RTM for each airframe, the purpose of which is to provide operational focus for aircrews in their primary, secondary, tertiary (if applicable), and supplemental skills training. For example, the F-16CM Block 50/52 defines

three primary missions: Offensive Counter-Air – Suppression of Enemy Air Defenses (OCA-SEAD) (day/night), Defensive Counter-Air (DCA) (day/night), and Offensive Counter-Air – Escort (OCA-ESC); and three secondary missions: Air Interdiction/OCA-Attack Operations (AO) (day/night), Close Air Support (CAS) (day/night), and Counter Fast Attack Craft/Fast Inshore Attack Craft (Counter FAC/FIAC) (CFF) day/night. The F-16CM Block 50/52 RTM also lists seven items under the heading of *Basic Skills*, which are pilot requirements for all levels of readiness, Combat Mission Ready (CMR), Basic Mission Capable (BMC), or Basic Aircraft Qualification (BAQ). The differences between the readiness levels are that a CMR pilot is deemed "qualified and proficient in all of the primary missions tasked to their assigned unit and weapons system," a BMC pilot "accomplishes training required to remain familiarized in all, and may be qualified in some, of the primary missions of their weapon system and unit."[17] BAQ is not a normal qualification status, except for General Officers above Wing level, and BAQ flyers have only Instrument and Emergency Procedure requirements.

Each flying event, from the primary and secondary missions through basic skills and other flight even requirements, has an associated number of iterations required for the RAP reporting period, usually aligned with the fiscal year, but in some instances aligned with the calendar year. The tables are organized by mission, Inexperienced and Experienced (determined by hours in the airframe), CMR and BMC, and further refined to Regular AF, AFRC, and Air National Guard (ANG) requirements. As indicated in the F-16CM Block 50/52 Flight Mission/Sortie Requirements table shown in Appendix A.1, proficiency is expected for primary missions, whereas for the secondary missions, only familiarization is expected.

In a 2006 study for Air Force Institute of Technology that compared F-15C RAP scheduling versus a RAND Corporation scheduling program, the author concludes that the F-

15C RAP is not sufficient to maintain proficient crews, and that the way to fix the problem is through more flying hour funding.[18] He notes that despite the apparent intent of RAP to create proficient pilots, the 11-2F-15 (as does the 11-2F-16) Vol 1 states, "RAP missions may not provide sufficient hours to experience pilots to achieve overall unit experience levels."[19]

An example of a critical task that is not necessarily evaluated is the Restricted Visibility Operations from the HH-60 community. The actual event, more commonly referred to as "Brownout Landings" is arguably the most dangerous task HH-60 aircrews perform, and certainly one event that has accounted for a large amount of the total Air Force helicopter fleet damage for the past 15 years. Put in quantitative perspective, for the US Army from 2002-2015, this specific condition "caused nearly 400 aircraft losses in combat operations at a cost of 152 lives and roughly $1 billion."[20] But in complete fairness, the Army has nearly 4,000 helicopters to the Air Force's current HH-60 fleet of fewer than 100.

Restricted Visibility Operations (RVO) are performed when landing conditions are expected to result in restricted visual cues, typically due to blowing dust, sand, or snow. As the helicopter approaches the landing surface, the downward thrust from the helicopter's rotor system pushes the surface particulate into the air and around the aircraft, limiting forward and downward visibility. Sometimes the visibility restriction is minimal, creating very little threat, and other times it is severe, completely impeding any visual reference to the ground. Without synthetic aperture or terrain-following radar, an autonomous landing system, or any other system to "see" through obscurants, HH-60 crews must rely on hands-on flying techniques to safely land and take off from areas in a restricted visibility environment. Techniques are published in the Air Force Tactics, Techniques, and Procedures (AFTTP) 3-3.HH-60G, but to note, they are just that – techniques – and do not have specific, measurable, evaluated

parameters. Instead, the measure of success is whether or not the aircraft was damaged in the maneuver, and proficiency is a factor of successful execution of multiple iterations without incident.

RVO are but one example of a task that requires a high level of proficiency but where there is no specific metric to track proficiency. Pilot's RVO currency is one event every 90 days.[21] To log the event, pilots must complete four Day or NVG landings and takeoffs, two as the pilot and two as the pilot flying. The task does not require actual restricted visibility conditions, but instead "focuses on techniques and procedures designed to conduct landings and takeoffs during periods of restricted visibility caused by rotor-wash circulation of elements that obscure crewmembers visibility."[22] The HH-60 RTM sets requirements of six iterations of the Restricted Visibility Operations task for inexperienced pilots and four for experienced pilots for the 12-month training cycle. Moreover, the task is not emphasized even as a basic skill, but is just one task in the long list of flying event requirements, despite the historic and future potential of aircraft damage and human injury and loss of life completing this one task in actual restricted visibility conditions.

> *Hold yourself responsible for a higher standard than anybody expects of you. Never excuse yourself.*
>
> Henry Ward Beecher

Where the Onus Resides

In the world of civilian private piloting, the onus for both proficiency and currency fall squarely on the shoulders of the operator. Aviators maintain log books not only to keep track of total hours for lower insurance rates, but also as an easy reminder of their flying proficiency. At a glance, their logbook gives them good data on recency of flight, currency, and if adequately recorded, can be a great way to track skills practiced on previous flights, but is only

as valuable as it is accurate. Although falsification is easy and possible with civilian flying records, one would hope that pilots would recognize the dangers in this and avoid inaccurate reporting. Thankfully this is nearly not the case in the commercial airline industry where, in many modern airframes, a pilot's flight time is automatically calculated and logged by the airplane.

Human nature finds pride as a barrier to improvement. Individuals are often hesitant to admit weakness, and even less so in the type-A personality dominated profession of flying. Flight instructors recommend "chair flying" events, a technique where the student sits alone and works through all of the procedures – radio calls, decision points, physical movements, etc. – required for mastering the given skill. This technique is not limited to inexperienced students. Experienced special operators, athletes, and others use this and other similar techniques to enhance their proficiency via mental preparation and acuity to "see" their way through the event without actually using perishable resources or putting themselves in danger. North Carolina women's soccer coach Anson Dorrance said, "The vision of a champion is someone who is bent over, drenched in sweat, at the point of exhaustion, when no one else is watching."[23] True professionals, even those who are not familiar with this quote, take this level of excellence to heart.

In an article from *Flight Training* magazine, aviation writer Douglas Ritter suggests that "to many pilots, flying is divided into training and flying, or using skills learned while training to do something practical with the airplane,"[24] but that this should not be the case at all. He asserts that pilots should integrate practice maneuvers into their routine flights, whether or not under the guise of "training." Attempting to break the misconception of a necessary difference between training and other types of flying, Ritter goes on to say, "Maintaining proficiency

doesn't mean the same thing as recurrent training. It also does mean honing and practicing different techniques every time you fly."[25]

In a similar analogy, consider the new driver who, at age 16 has a federally recognized license to operate a motor vehicle. That license is the same one that someone fifty years their elder (and with that much more driving experience) carries, so the skills are the same, right? Of course not. The young driver has the same privileges as the experienced driver, but has a lot to practice and learn before reaching the same level of proficiency. Most life skills have similar examples showing that qualification does not equal proficiency.

Air Force leaders and aircrews are ultimately responsible for their proficiency and that of those under their command. Several of the RAP Tasking Memorandums (RTM) used in this research are clear about this right up front, stating, "This RTM provides the baseline for Commanders to develop a realistic training program to meet unit Designed Operational Capability (DOC) tasked requirements as well as specific deployment requirements. These programs will have clearly defined objectives and goals that enhance mission accomplishment and safety."[26] In the case of the C-17 community that does not have a RTM, but rather incorporates similar information in their 11-series Volume 1, they also view proficiency as a leadership responsibility, stating, "The unit commander will ensure each crewmember receives sufficient continuation training to maintain individual proficiency." Aircrew members must speak up when they believe their skills in any area of their expected skill set is lacking. While the individual might view speaking up as exposing a weakness, good leaders encourage the dialogue to promote growth of both the individual and the organization.

Onus also resides in accurate, truthful reporting. Not that professional Airmen would stretch the truth or have anything less than the utmost integrity, but an unintended consequence

of pressure from any direction – leadership, peer, or RAP – to meet at least a minimum standard is that training events might be called "good enough" when they are not completed to the standard given by the definitions of the events in the MDS-specific Volume 1 or RTM, are or accomplished to the "letter of the law" but not to the "spirit or intent of the law." To credit a Combat Search and Rescue Sortie, HH-60 aircrews must accomplish the items in Table 3.

Table 3 – HH-60G RTM Attachment 2, Mission Definitions and Training

Combat Search and Rescue Sortie, Day/NVG [SR07/SR86] (All): Sortie designed to employ skills critical to the effective recovery of distressed or isolated personnel (IP) during major combat operations.

Minimum requirements:

(1) Scenario designed for the medium threat environment that incorporates threat mitigation and asset coordination to recover Isolated Personnel
(2) Secure and/or anti-jam radio system/datalink planning and use
(3) Formation employment
(4) Threat identification, mitigation and countermeasure procedures
(5) Locate survivor, planning and execution (w/ any/all available means)
(6) Applicable CAS brief IAW JP 3-50
(7) Authentication and survivor communications planning and execution
(8) Survivor recovery
(9) Egress
(10) Full mission debrief using mission reconstruction tools as equipped (VTR, PFPS, etc.)

Reprinted from Headquarters Air Combat Command (HQ ACC)/A3J, ACC/A3T, PACAF/A3T, USAFE-AFAFRICA/A3T, ACC/A3G and AFRC/A3T, for HH-60G Operations Group Commanders, HH-60G Ready Aircrew Program (RAP) Tasking Memorandum, Aviation Schedule 2017 (AS-17), 01 October 2016.

Aware of the pressures to make RAP numbers look good for their superiors and the possibility that aircrew could pad their reporting based on "close enough" training that met the letter but not the intent. To discourage inaccurate reporting, RTM authors included the statement, "…accurate reporting of RAP missions and events accomplished permits the MAJCOM to apply resources, policy, or guidance to address or prevent shortfalls."[27] This

should be viewed as a welcomed "get out of jail free card" for commanders with individuals who fail to meet their RAP totals during the reporting period for legitimate reasons, but instead the truth is often misrepresented to avoid highlighting deficiencies.

Squadron leadership determines the tone of a squadron to include expectations from training flights. If the various levels of leadership do not take impactful training seriously, the subordinates will not either. First, the commander sets the example, demonstrating the squadron standard even if it is an unpopular move. It would be far worse to live with the knowledge that a mishap could have been avoided with better training. The idea of emulated behavior is clear to parents. Especially in their children's early, formative years, parents are keenly aware of their modeled behaviors and work with their children on which modeled behaviors to emulate and which to maybe save for later in life, if at all. Leader influence was the point of the 5th Special Forces Group (Green Berets) professional visit to General Electric's executive offices. After shadowing the daily routine of the executives for several weeks, the soldiers returned to their unit, where the commanders observed "a significant boost in performance, communication, and leadership."[28] Leadership by example cannot be overlooked or understated. AFI 1-2, *Commander's Responsibilities*, makes the statements that commanders must: "train and develop their Airmen"[29] and "ensure their units are adequately trained."[30] These can only be effective if they "lead by personal example" and "strive to leave their unit better than they found it."[31] [32] These statements speak directly to the influence that squadron leadership can and should have on every aspect of squadron life, no less the influence they can have on effective continuation flying training.

Without a deliberate and thorough planning, crews could easily fly a sortie that "checks the block" on each of the tasks without really getting anything out of the training. Civilian

aviation writer Douglas Ritter, in an article about proficiency targeting the civilian private piloting world, adeptly noted, "Flying to tighter standards is only half of the solution. The other half is the self-discipline needed to adhere to those self-imposed standards."[33] This point can – and should – be taken to heart with military aircrews as well. Applied to the Air Force, aircrews have an obligation to themselves, the service, and the nation to put their full effort into creating and maintaining the most effective flying force possible through deliberately planned and executed continuation training. The US taxpayer has a reasonable expectation that the military is using tax dollars appropriately to maintain proficiency, and ultimately the most effective fighting force possible. "It costs approximately $6 million to train a basic qualified fighter pilot."[34] To get that pilot fully mission qualified adds more than a couple million dollars to the bill. The total cost to make a new aircrew member varies per airframe with helicopter pilots costing comparatively little due to the airframe's lower operating costs.

Air Force leaders focus on providing combat-ready forces to fight the nation's wars. Determination of whether aircrews are ready for combat rests far more on currency and less on proficiency, therefore reporting of "combat-ready" forces, while technically accurate, does not always give the most accurate depiction of actual proficiency levels. Commanders use the Status of Resources and Training System (SORTS), Defense Readiness Reporting System (DRRS), and Air Expeditionary Reporting Tool (ART) to report readiness levels to higher headquarters.

"SORTS is a commander's objective assessment of the unit's ability to execute the full spectrum mission for which the unit was organized."[35] It evaluates squadron resources (people and equipment) from a standpoint of reported on-hand versus available, as well as training readiness initially from a very sterile look at currency and (in the case of ACC-coded flying

units) RAP lookback, and then allows the commander to apply (contrary to the definition of SORTS) subjectivity to the final reporting statistics. For example, if an Airman is current on all events with the exception of an emergency procedure sortie, the initial response is that the Airman would not be reportable as available in SORTS; however, the commander may objectively assess that member reportable based on an ability to get that Airman the required training within the assumed mobilization notification period. Conversely (but not likely to happen), if an Airman is good on paper, but the commander does not believe that this Airman is prepared to deploy and execute the mission, the commander does not have to report that Airman as available, but that would count against the unit's training ("T") rating as having a member assigned but not mission capable.

Though somewhat similar in many ways to SORTS, DRRS "is a commander's *subjective* assessment of the unit's ability to accomplish tasks based on the mission for which the unit was organized or designed," and it "provides an assessment of the unit's ability to perform assigned missions."[36] Inputs from the squadron level get filtered up the chain and are ultimately integrated into DRRS-Strategic (DRRS-S) for the Joint Staff to consider when conducting contingency planning and allocating forces.

ART, the third readiness reporting tool provides "higher levels of command the necessary information to make force and resource allocation decisions to effectively support theater commanders."[37] Whereas commanders view SORTS and DRRS as report cards that can make him look good or bad, ART is not considered a report card, largely so that reporting unit commanders do not over exaggerate their unit's capabilities. Accurate reporting is expected in all reporting tools, with ART perhaps being the most critical of the tools since its results are directly tied to the unit's ability (or inability) to perform its stated mission at that moment in

time. If the unit is unable to perform its mission, higher level leaders need to know those details to apply the necessary resources to regain the capabilities. Squadron commanders should emphasize full disclosure and accurate reporting of day-to-day flight training, even (or especially) at the risk of identifying shortfalls and potentially exposing weaknesses in their squadron.

When completing these monthly reports, commanders count on their Airmen taking the initiative to ensure proficiency and readiness as much as possible. This is complicated in RC units, where members may travel from great distances to participate and even those who live locally have competing priorities (school, civilian employment, etc.) that make maintaining proficiency, let alone currency, all the more challenging. This is why all AFRC Airmen, particularly Traditional Reservists (TR) must make the most of their limited training opportunities. Commanders, too, must ensure that their training plans are effective, not wasting Reservist's valuable time, and prepare their Airmen to the best of their ability to complete their core mission(s).

The bottom line is that flying proficiency must be owned by individual Airmen as well as by their leaders. Whether the system of pay for aircrews changes or does not and whether the number of flying task iterations increases, decreases, or stays the same, in the end it does not matter if the individual flyer does not take responsibility for their own proficiency and AF leaders do not hold their crews responsible for quality training and accurate reporting.

What's Important: Getting Paid

Pay Statuses (and Why They Matter)

Adventure, a change of pace, camaraderie, and service to country are all reasons that reservists serve. Although a typical reservist paycheck is not enough for an individual to live off of, pay is still a major factor in reservist participation and there are a number of ways an AFRC Airman can get paid.

In an AFRC flying squadron, pay slang like "U-T-A," "rootah," "A-T," "teeps," "jeeps," "rumps," "man days," "prog tour," and "civ status" abound. To a bystander who is unaware of this jargon, pre-mission discussion of pay statuses might sound like a foreign language. AF aircrews log flight time on Air Force Technical Order (AFTO) 781, shown in Appendix A.1. Column 38, Air Reserve Component Flight Duty Status Code, of this form can be a mystery to non-AFRC and ANG aircrews. Reservists and Guardsmen use this column to indicate the pay status(es) used during the flying period(s), indicated by a number, 1 through 4 as follows: [38]

1 = Active Duty (funding from an Active or Reserve source)

2 = Unit Training Assembly (UTA) (Inactive Duty)

3 = Additional Flying Training Period (Inactive Period)

33 = Dual Additional Flying Training Period (Inactive Duty)

4 = Civilian (ART)

Any time a Reservist flies, being on a pay status is a must and the member may split the statuses as long as a minimum of 0.1 hours (3-8 minutes) of flight time is logged in that status and as long as the statuses are Inactive Duty Training (IDT) statuses, which for flying purposes are 2 (UTA) and 3 (AFTP). For example, a Traditional Reservist on a training flight during the week is most likely to do a 33 status, but may do a 2/3 or 3/2 for purposes of completing a

UTA period for continuation flying training in conjunction with an AFTP opt to do a single 3, depending on the total amount of time completing flying duties, pre-mission planning through post-flight.

The pay status "1" is an Active Duty (AD) "man day," funded by either an Active (Military Personnel Appropriation (MPA)) or Reserve (Reserve Personnel Appropriation (RPA)) source. Included in these categories is Annual Training (AT), Active Duty for Training (ADT), Active Duty for Operational Support (ADOS), and MPA for contingency/deployment. No other military status is allowed on the same day as AD is performed, so a "2" or "3" status cannot be on the same AFTO Form 781 for the same person. It is, however, allowable for a "4" status to precede or follow AD status. Pay status "2" is UTA, which is an IDT status; therefore, flight time on a given sortie is allowed to be split with another IDT status or civilian status. "3" is an AFTP, which is also an IDT and may be doubled (as in "3/3") or split with "2" or "4" status, and Air Reserve Technicians use "4", civilian status, when not flying in a military status.

For a "good" year, one that counts toward retention and retirement (R/R), a Reservist must earn a minimum of 50 points, and like Active Duty Airmen, the Reservist cannot earn more points than days in the year. For Airmen on active reserve status, 15 points are automatic for participation and AT offers at least 14 points (with the possibility of three additional travel days, available if needed, but not required). Each UTA is four IDT periods, multiplied by one UTA per month for a total of 48 UTA IDT periods per year, each of which equal one day of basic pay and one point toward R/R. So even if AFRC Airmen only do AT and UTAs, they will easily make a "good" year with no less than 77 retirement points. More duty periods, however, are usually available for the typical Airman to perform duty in other pay statuses

previously mentioned, and aircrews have the additional 48 AFTPs available to them. The only "catch" on those additional duty periods is that if they are IDT, they are limited to a maximum of 130 retirement points. After reaching 130 IDT retirement points, the member may still perform IDT, but will receive pay only without points.[39]

Additional Flight Training Periods

AFTPs are the pay status of focus in this research since they are the only status that is explicitly "authorized for primary aircrew members for conducting aircrew training and combat crew qualification training to attain and maintain aircrew flying proficiency and sustain required readiness."[40] Each AFTP has a minimum of four hours, but may extend to the completion of the mission and is equivalent to one day of pay and one point towards retirement.[41] Each AFRC aircrew member has 48 AFTPs annually, executed at a *maximum* rate of 16 per quarter. Doing the math, an Airman that uses 16 AFTP per quarter beginning 1 October, will have none remaining after the 3rd fiscal quarter. So while Airmen should manage their AFTPs appropriately to last the fiscal year, if they run out, the unit may offer other additional pay statuses, resources permitting.

A subset of an AFTP, an Additional Ground Training Period (AGTP) is also an IDT period that is only available to those authorized to perform AFTPs. Each AGTP is part of the fiscal allotment of 48 AFTPs and "no more than one half of the authorized AFTPs per FY may be performed as AFTPs,"[42] so AGTPs are currently limited to 24 per FY.

An example of typical use of dual AFTPs is as follows: An AFRC aircrew member shows up to begin pre-flight planning duties for an NVG training sortie at 1600 for a 1700 aircrew briefing and 2030 takeoff. The sortie takes off on-time at 2030 and continues for a three-hour duration, landing at 2330. Following the sortie, the crew has a thorough debrief and conducts

post-mission duties, departing the squadron at 0100. The Traditional Reservist (TR) pilot had a 9-hour duty day with three hours of flying and chose to split the sortie between two AFTPs. The first AFTP began at 1600 and ended at 2100 with the flying portion beginning at 2030 and ending at 2100 for 0.5 hours of flight time. The second AFTP began at 2101, ended at 2330 for 2.5 hours of flight time, and the pilot's duty day (along with the remainder of the AFTP) ended at 0100. The Airman could have used one AFTP for the entire sortie, but AFI 36-2254 Vol 1 allows for two IDT periods, so the pilot is completely within regulations to get two days of pay and points towards a "good" year for one nine-hour work day (though the minimum is actually four hours per IDT for a total of eight hours for a dual AFTP).

So what did AFRC get in return for two AFTPs? They got a crew that flew three hours and accomplished some level of training, which is not known until the crew logs a training accomplishment report and, right or wrong, currently has no bearing on aircrew pay.

In another example, the same pilot shows for pre-flight planning duties at the same time and takes off at the same time as in the previous example. This time instead of completing the three-hour sortie, the planned live-fire training was curtailed because of an aircraft issue and landed early, just 35 minutes after takeoff. The sortie time was a total of 0.6 hours and only accomplished NVG Low-Level, which is not a RAP event. Still, the pilot is completely within rights to get dual AFTPs from the day as long as the duty day is a minimum of eight hours. In this case, the first AFTP was exactly like the first example, starting at 1600, ending at 2030, and logging the same 0.5 hours of flight time. The second AFTP, however, shortened by aircraft issues, only had 0.1 hours (3-8 minutes) toward it which, by regulation, is completely justified. But again, the question is what training was accomplished and did AFRC get a viable return on its investment?

In a third example, a pilot is going to embark the aircraft part-way through a planned sortie. This two-pilot aircraft will take off at 2030 like the other planned sorties, but will swap one pilot at the sortie's halfway point. The second-sortie pilot logs flight time from 2200-2330 for a total of 1.5 flight hours. This pilot came in for pre-mission planning duties with the other crewmembers at 1600 and left at 0100 after debriefs and post-mission duties. The AFTP flight time began at takeoff and concluded at landing, so the AFTP ran from 2100-0100 with 1.5 hours of flight time. While the pilot could have logged one AFTP from 1600-0100, the option is available to get an AGTP to cover the time from 1600-2100.

Some examples of ways to get AGTPs are: "simulator training required for primary aircrew; ground training activities directly related to the aeromedical evacuation crew member when assigned with an instructor; physiological, life support, aircraft systems, weapons and tactics, and threat awareness training."[43] Additionally, "Wing commanders may request a list… of additional activities or duties which qualify for AGTPs."[44]

Pay Comparison

At a glance, one might surmise that Reserve Component (RC) members get paid at a disproportionate rate to that of their Active Component (AC) counterparts. After all, for just one UTA "drill" weekend, participating members get paid for four days whereas an AC member is compensated at the rate of one day of pay for one day of service. In AFRC, each four-hour IDT period equals one day of pay. Typical AFTP/AGTP, and Reserve Management Periods (RMP), all of which are IDT periods, are only required to last four hours.

The Reserve Officers Association published an in-depth review this issue following the Department of Defense's release of the 2012 Quadrennial Review of Military Compensation. This report compared days actually worked to days paid for both AC and RC and concluded

that given that the AC receives pay for weekends, holidays and earned leave where no work is done, the pay-to-work ratio for the components is nearly identical, shown in Table 4. Although this does not take AFTPs into consideration, a similar argument exists for the AFTP program, where AC flyers receive base and special pays for days they do not fly.

Table 4 – Comparison of Days Worked to Days Paid for Active and Reserve Components

	Active Duty	Reserve Component
Days Paid	365	63
Days Worked	260	39
Less Leave	27	0
Less Holidays	11	0
Adjusted Days Worked	222	39
Pay-to-Work Ratio	1.64 to 1	1.62 to 1

Reprinted from Reserve Officers Association of the United States, *Drill Pay Under Fire: The Impact of the 11th QRMC on the Reserve Component*, Reserve Officer Association White Paper (Washington, DC: Reserve Officers Association of the United States, August 2012).

Prior to 2008, reservists were not compensated for their commute to and from their duty location. Congress passed, and President Bush signed, the National Defense Act of 2008 which authorized Service Secretaries an option to reimburse members traveling over 100 miles one way, up to $300, based on one round trip per month.[45] In short, members living 100 miles or more away from their place of duty receive travel compensation up to $300 per month. This IDT travel pay, however, does not compensate out-of-town aircrew members for multiple visits to the unit for continuation training. Yes, the Reserve is a total volunteer force, but without the Reserve, the total Air Force and DoD would be strained, if able at all, to complete their missions. AC units would be deployed more than they are today, and the DoD would either

have fewer resources from which to pull or would pay substantially more for the same force than they do today.

The 11th Quadrennial Review of Military Compensation gave alternative suggestions for mileage reimbursement for less than 50 mile, 50-100 mile, and greater than 100 mile commutes based on years of service.[46] Ultimately, the Department of Defense settled on 150 miles as the "outside the local commuting distance" definition,[47] which represents approximately 10 percent of Guard and Reserve members.[48]

Indicated in the Air Force's fiscal year 2017 budget, more aircraft and missions will be transferred "to Air National Guard and Air Force Reserve locations that would otherwise have no mission due to fleet divestments."[49] This transition has been in motion for some time and is an indication of the AC's heavier reliance on RC forces. In 2014, AFRC commander Lt Gen James Jackson noted that the AC was already "handing over more missions to the Reserve."[50] In the same year, Congress formed the National Commission on the Structure of the Air Force (NCSAF) that made 42 recommendations. Perhaps the most noteworthy recommendation was to dissolve AFRC, to which then AF Chief of Staff Gen Mark Welsh, recognizing the value of AFRC to the total force, said that recommendation was "a nonstarter."[51]

"A January 2013 report by the Reserve Forces Policy Board determined that fully trained, deployment-ready [RC Airmen] cost two-thirds less than their AC counterparts. While reserve forces account for 39 percent of military end strength, they consume only 16 percent of [DoD's] budget."[52] These numbers, difficult to ignore, are extremely important in an ever-constrained defense budget and make an easy argument for DoD's reliance on RC forces.

The 2015 NCSAF recommended moving approximately 36,000 AC Airmen to the RC to save $2 billion,[53] which the Air Force disagreed with on the basis that to do so would be to

accept unreasonable risk to completing assigned missions. So while the Air Force acknowledges the potential cost savings, it is not ready to make such a bold shift in AC to RC manning.

Considering the value of the RC to the total force in sharing deployment commitments and overall cost savings, RC travel compensation seems like a small bill to pay to maintain RC forces. If AFRC were bursting at the seams with pilot manning, the story might be different; however, AFRC shares part of the total Air Force's current fighter pilot shortage of 700, projected to go to over 1,000 by 2022 if the problem is not fixed soon.[54] Furthermore, those numbers do not account for shortages in other airframes.

The Heart of the Matter: Where Proficiency and Pay Meet

For purposes of this research, AFTPs are the only form of pay examined for proficiency flying because they are the only form of reserve pay specifically fenced for AFRC aircrews. Although Reserve Airmen may fly in *most* of the other active and inactive pay statuses, those statuses are available to all Airmen and not intentionally programmed by AFRC and implemented by individuals for the *sole* purpose of flying training.

AFPTs are not only a resource that AFRC affords aircrews to maintain proficiency and currency, but can also be considered a pay-based incentive to citizen Airmen who elect to serve as part of the Reserve to continue to serve. But sometimes pay is taken for granted and (albeit legally) manipulated to maximize pay without maximizing the intent of the additional pay, which is to build flying proficiency. If a pilot takes off and flies for 0.2 total flying time (9-14 minutes), that pilot can get paid two AFTPs as long as 0.1 of flight time is logged in each AFTP and the total duty is at least four hours in each period.

From a pure training resource allocation perspective, it is hard to argue that the pilot could have completed enough effective training in the 0.2 of flight time (maximum of 14 minutes) to justify using two of 48 annual AFTPs. Current AFRC AFTP policies, however, do not address a minimum training value for AFTP usage, leaving any scrutiny to the member or unit leadership.

It is challenging, if not impossible, to establish a minimum time value that equals a level of proficiency for any given training sortie because training time does not equal training value. If a pilot flies a three-hour cross-country flight, core mission skills as outlined in the RTM and 11-series MDS-specific Volume 1 may not be the focus, but the skills worked on could nonetheless provide valuable training. In this case, by simply operating extensively in the

National Airspace System, the pilot may gain valuable training which may not otherwise be a normal practice if the majority of proficiency flying is tactical. Lack of log-able RAP training items does necessarily mean that flying proficiency was not improved. Similarly, the simple fact that a pilot logs very little flight time during a training sortie does not by itself mean that valuable training was not accomplished, though the chances of more proficiency through longer duration definitely increases – to a point that will vary by individual.

Despite a small amount of flight time, aircrews could still re-hack basic flying currency, to include a takeoff and landing, which by itself has some – though very little – value unless the member is nearing the end of that currency. For example an HH-60 Instructor Pilot could lead a crew through an Emergency Procedure (EP) sortie, a 90-day currency, in just 0.5 – 0.7 flight hours (30-45 minutes). While the duration is not particularly impressive, it may be just what one or more of the aircrew members needed. It seems unreasonable that an aircrew member would go overdue such an easy currency to maintain, but it can happen more easily than one might think. If the Airman is routinely needed for night tactical flying, has been scheduled for the basic day sortie but the sortie cancels due to maintenance or weather, or if the currency is inadvertently overlooked, that Airman could be grounded or restricted to flight with an instructor. This example, however, only accounts for currency, not proficiency. More time spent during a thorough EP sortie analyzing and troubleshooting each emergency situation *should* lead to a higher level of proficiency.

In another example, the 11-2HH-60 Vol 1 defines a Low-Level sortie as "enroute flight below 500ft AGL/AWL with emphasis on altitude management, terrain/obstacle avoidance, and crew coordination principles."[55] There is no minimum time (or any other metric) associated with this currency item, but it is easily a critical and perishable skill in which HH-60

crews must have maximum proficiency. Depending on the availability of a low-level flying area near the base of operations, HH-60 crews could feasibly (and legally, based on the event description minimum requirements) log this event in a very minimal amount of time that meets the requirement but clearly not the intent. If the aircrew meets the requirements of a Low-Level sortie in just 15 minutes of flight time, should they be allowed to not only log the event, but also to get paid two days (dual AFTPs) for the abbreviated training?

There is something to be said for efficient training, but there should also be a minimum standard for training and pay. Flying training events could be re-looked to have better measurements based on time, distance, or other specific, clearly defined criteria. Similarly, AFTPs, purposed for flying training, could also be re-looked to be based on more concrete measures so that their intended use is better met.

One point of concern of a pay-for-performance AFTP system is in regards to sorties cancelled or shortened due to weather, maintenance, or other unforeseen issues. To that point, before implementing such a program, if the intent is greater proficiency, then weather, maintenance, or other issues would not create an exception. Whether perceived as fair or not, in an AFTP system based either on task completion or flight time, if requisite training events not accomplished or time minimum is not reached for any reason, pay decreases accordingly, just as it would be under any other circumstance. Responsibility to increase individual pay would then be on the unit to provide other (non-AFTP) IDT pay as deemed appropriate.

Incentivizing Continuation Training

Civilian Workplace Incentives

A glance at civilian businesses (those interested in making a profit) shows various types of incentives used for a number of reasons, most of which fall under the main ideas of increasing sales, gaining and retaining customers, and improving employee output, efficiency, and loyalty. The civilian workplace is a good starting point for exploring how AFRC might maintain more proficient aircrews through pay and/or non-pay incentives.

Forbes magazine contributor and entrepreneur Patrick Hull shares five incentives (of many) that he personally found worthwhile and effective: 1) Financial bonuses; 2) Non-financial perks such as days off, social activities, etc.; 3) Workplace amenities like a gym, cafeteria, and daycare center; 4) Educational incentives; and 5) Positive recognition.[56] Car dealerships notoriously reward salesmen with financial bonuses or time off to the highest performers. Pharmaceutical sales representatives are similar. The more of their company's product they sell, the more rewards salespeople receive. In elementary schools across the country, classes enjoy pizza parties for raising the most money or bringing in the most "Box Tops for Education." Southwest Airlines is well-known for being a great company with great benefits and a great work environment, and has no shortage of applicants.

Not everyone, however, believes that incentives actually work for long-term productivity. Social Scientist Alfie Kohn stated, "Incentives… do not alter the attitudes that underlie our behaviors. They do not create an enduring *commitment* to any value or action. Rather, incentives merely – and temporarily – change what we do,"[57] suggesting that traditional incentives may provide a bandage, or temporary fix to workplace motivation issues, but are not a long-term solution. In a separate article, he again suggests that monetary incentives provide

only temporary compliance rather than "changes in attitudes and behavior," and states that, "rewards, like punishment, are strikingly ineffective. Once the rewards run out, people revert to their old behaviors."[58] He also suggests that even a reward, if it is not what the awardee expects, is "indistinguishable from being punished" and cautions that with performance-based income, workers will focus too much on producing the desired numbers and not enough on efficiency and creativity.[59]

Profit-sharing is a good incentive for some businesses, but typically only works at established companies where there is enough long-term stability (or the perception thereof) and enough steady profitability to make profit-sharing worthwhile. It is apt to bring people together for a common goal, but often de-motivates employees in times of lower profitability.[60] Like other plans, profit-sharing also has potential down-sides. Employees (vs. managers) often do not see company profitability numbers and therefore not know what impact their hard work is making on their bottom-line and employees not involved directly with production may not realize their impact on organizational profits. An example is a "front-line receptionist [who] may not understand that interactions with vendors, clients and random people off the street can actually make a difference in the profitability of the company."[61] In a military organization, the application of profit-sharing is not in end-of-year profits, but in unit inspection results and readiness reporting numbers. When everyone pitches in, the unit succeeds.

Different types of incentives work in different situations. While monetary incentives sometimes work well for lower paid employees or who are financially more challenged, for those earning higher wages, or who are less motivated by money than by other incentives, managers must find other ways to inspire better work performance. Monetary incentives tend to work best in sales, but still need to be carefully tailored. Clearly one size does not fit all.

Incentives in Sports

Who is the best at (*fill in the blank*)? From an early age, the spirit of competition in sports has fueled individuals to be better than the next person. Amateur athletes often have the allure of a lucrative, professional sports career, and professional athletes work at being the best in their sport, often drawing ridiculous incomes. The answer to who is the best in a given sport is usually an easy answer. In individual sports, it is hard to say that an athlete is not the best in the given sport if that athlete has never been defeated, has the lowest time, best score, or any of a number of metrics. In team sports, statistics track data for the team and individuals on that team. In professional baseball for example, an incredible number of statistics are kept that record a player's every move. With this data, it is easy for a team to rank-order their players based on hard facts, and the best at a given position, or in a given situation, even down to the specific venue. Sports rankings are easy to come by because everything in the sporting world is *measurable*. In baseball, how many times the player was at bat, how many times the player hit the ball and where, and where based on type of pitch, how many times a player struck out, number of bases stolen, and the list goes on and on.

Personal and team rankings are a great motivator in sports. It is great to be at the top of the rankings, bad to be at the bottom, and while not great, it is usually not that bad to be somewhere in the middle. Especially in a relatively small pool, or in a pool of people who are fairly close relationally, the one considered the best is distinguished from the group as is the one who is considered the worst a their craft. Those at the top are motivated to keep working hard at remaining in the top spot, though they can fall prey to pride, not work as hard as those working to replace them, and lose their coveted position. Those not at the top have a perpetual carrot dangling in front of them to work harder, the exception being that one who is constantly at the bottom. A feeling of hopelessness for a team or individual remaining at the bottom of

their bracket does little, if anything, to motivate them to do better. In fact, the worst team in professional sports is often rewarded, as in the case of professional US basketball and football, where the league's worst teams get the highest draft picks the following year. While to some it may seem cruel, rankings are often viewed as public praising and shaming, which for some works well.

Developing the Plan for Flyers

> *Excellence is an art won by training and habituation. We do not act rightly because we have virtue or excellence, but we rather have those because we have acted rightly. We are what we repeatedly do. Excellence, then, is not an act but a habit.*
>
> Aristotle

Examples of incentives from the civilian workplace and sports arenas are effective (or not) in their respective areas, and there are lessons on incentivization and motivation to be learned from each of them. But what can be implemented in the military, and specifically AFRC, to motivate aircrews to get more out of continuation training? There are a number of methods that might be dreamed up to create competition amongst aircrews, but the foremost concern is safety, as the intent is not to insert more risk than is already inherent in the profession. Instead, the intent is to create a competitive spirit that encourages aircrews to improve their personal flying skills.

First, if the basis of incentivization comes from competition like in sports, to make rankings legitimate, events must be fairly and consistently measurable by creating conditions and standards for each task, as well as a way to observe and record the performance without bias. For multi-crew aircraft, the job of judge can be held by another designated crewmember; or, to take away any disagreements that might arise in-flight, an on-board recording device for

later review. For single-pilot aircraft, on-board recording devices be used and reviewed after the sortie. Recording and grading events has the effect of: 1) ensuring crews are conducting the training they say they are doing, 2) giving objective second-source feedback, and 3) providing the subject aircrews immediate feedback and the ability to review performance and improvements well after the event.

The primary challenge in building the competitive atmosphere is in creating the measurable standards by which non-retribution evaluation occurs on each sortie rather than only during standard periodic evaluations. With the measured standards from any given training sortie, it would be relatively easy to create a standings list of every pilot (or other aircrew member), rank-ordering them for use in an incentive-based program.

ACC RAP intends to establish a minimum baseline for aircrew Combat Mission Readiness, which in the Air Force's eyes equates to both qualification and proficiency. The program, however, is only as good as the effort that is put into it, both at individual and leadership levels. Aircrews must take a more active, deliberate role in planning and executing training, and leaders must take necessary measures to ensure their Airmen are properly trained by providing purpose and leadership by example.

Possible Courses of Action

In an effort to increase proficiency of flight crews and based on the research in this report, five courses of action (COA) are proposed, listed in no particular order.

COA #	ACTION
1	**Create pay-for-performance-based AFTP system**
2	**Separate AGTPs from AFTP program and replace AGTP by other IDT**
3	**Change AFTP minimum flying time from 0.1 to 2.0 for first AFTP**
4	**ACC increases RAP requirements**
5	**Keep AFPT program as-is, but increase leader involvement**

COA 1: Create pay-for-performance-based AFTP system. AFTP payout limited based on flying events accomplished.

a. Develop a three-tiered pay system, designated levels 1, 2, and 3. Each AFTP has the same maximum possible value that it does today, but would be de-valued as follows:
   i. Level 1 – one event = 100% pay
   ii. Level 2 – one event = 50%, two events = 75%, three events = 100%
   iii. Level 3 – one event = 50%, two events = 70%, three events = 85%, four events = 100%.

b. Using the F-16CM Block 50/52 RTM as an example (though the concept is applied to any airframe):
   i. Level 1 events: Primary and Secondary RAP missions in Table 5b (Appendix A.1)
   ii. Level 2 events: Table 5c (Appendix A.2), Table 6a (Appendix A.3), Table 6b (Appendix A.4), and Table 7b (Appendix A.5)
   iii. Level 3 events: Table 7a (Appendix A.6)

Pros:

- Does not cost AFRC additional money; AFTP program funded at current levels.
- There will be more unused funds than under traditional AFTP program, possibly re-purposed at the end of the fiscal year.
- Gives low performers a reason to perform or be financially penalized.

Cons:

- Like corporate world warnings of incentive pay, could create dissatisfaction, leading to more aircrew separating from AFRC, further stressing the current pilot shortage
- Highest probability of inaccurate reporting, giving false indication of individual proficiency and unit preparedness to maximize pay.

COA 2: Separate AGTPs from AFTP program and replace AGTP by other IDT.

Pros:

- Maintains AFTPs specifically for flying duties
- Keeps AGTPs from being used in lieu of an AFTP when conditions prohibit AFTP use (sortie cut short, whether intentionally or not)
- Makes better use of RMP funding that often is under-utilized in flying units

Cons:

- Could cost units and/or AFRC more money if every member uses all AFTPs and requires other funding for non-flying duties. If members leave AFTPs unused, other IDT method of funding ground duties costs AFRC less because flight pay is not included in other IDT statuses

COA 3: Change AFTP minimum flying time from 0.1 to 2.0 for first AFTP before being authorized a second AFTP in the same duty day.

Pros:

- Forces aircrews to fly a minimum amount, creating more opportunities for greater proficiency, before getting a dual AFTP
- AFRC aircrews would not use AFTPs at the rate that they currently do, providing more AFTP flying opportunities
- Takes task reporting inaccuracies out of the equation

Cons:

- Aircrews accustomed to earning dual AFTPs on short flight times will get paid less

Notes:

1) This time value is for illustrative purposes and requires more study to determine whether this or another amount of time is reasonable. One-half to two-thirds the duration of a standard training sortie should be considered a standard for determining this value.
2) AFRC would also need to consider whether an AGTP is authorized before or after the AFTP, which for Airmen would simply be a work-around to not logging enough flight time for a dual AFTP.

COA 4: ACC increases RAP requirements.

Pros:

- Provides more flying participation opportunities for AFRC aircrews
- Aircrews becomes experienced faster

Cons:

- More costly to AFRC
- Requires more AF Reserve aircrew participation (time off from civilian employer, which may negatively affect)

COA 5: Keep AFPT program as-is, but increase leader involvement.

Pros:

- No new system for aircrews to learn
- Unit-level leaders more involved with ensuring quality of training

Cons:

- If leaders maintain status quo monitoring of their unit's training, there is no reason to expect improvement in readiness or proficiency.
- Implementation is non-regulatory and only as good as the effort leaders are willing to put into it.

The Way Ahead

Standing on a long history of support to the nation and the Regular Air Force, the Air Force Reserve Command (AFRC) is a major contributing part of the total Air Force. AFRC aircrews can be found in every theater of operation and therefore have an obligation to be as prepared to perform their core missions.

A mix of currency and compliance to minimum training event levels are the measures by which Air Force leaders assess readiness. The Ready Aircrew Program (RAP) is the unit of measure for Air Combat Command assets, and the MDS-specific Volume 1 is the measure for non-ACC assets. Ways of increasing aircrew proficiency should receive maximum emphasis, particularly in Reserve Component (AFRC and Air National Guard) flying organizations where the individual's civilian work schedule limits the member's availability (and therefore potential opportunities) to fly.

Conclusions

As presented throughout this research, the money paid by AFRC in the form of AFTPs to ensure flight crew proficiency does not necessarily mean that effective training was completed or proficiency was increased. The introduction of an incentivization program could be either pay- or non-pay-based, which would determine whether implementation occurs only in AFRC or in the total AF. Models from the civilian workforce and from sports examples could be adopted as either independent incentive elements or as multiple elements to construct an aircrew incentive plan, and would be part of determining their utility across the total force.

Each potential course of action listed in this research has advantages and disadvantages. No one COA is a perfect solution, so pros and cons are presented to best equip leaders in making the best possible decision for the Air Force and its Airmen. Additional data could be

completed to present statistical data from surveys and mathematical models that were not accomplished in this research. The effect AFTP pay changes have on aircrew retention and training reporting, as well as analysis showing increase or decrease in overall cost to AFRC for aircrew pay, should be studied before any major changes are made to the system.

Five courses of action (COA) were presented in this research to give Air Force leaders a number of options to improve aircrew proficiency. Of the five COAs, there are various levels of risk assumed versus rewards gained.

The most dramatic and potentially riskiest plan is COA 1, which completely overhauls the AFTP program to align with pay-for-performance. While potentially an effective system that rewards good planning and execution and penalizes the opposite, implementing this COA may be risky from a manning perspective due to today's undermanned flying career fields. A huge benefit to this plan is that it would not cost AFRC more money in the AFTP program. In fact, it would likely save money, but without additional research it is difficult to ascertain whether or not this COA would cause dissatisfaction and be an impetus for aircrew members leaving AFRC, creating an even larger aircrew manning deficit.

Some might consider no action as the riskiest, while others might perceive any change as risky. If AFRC's goal is to minimize change, COA 5 of this research – the least dramatic or dangerous – is the best plan. It keeps pay and reporting systems the same, but pushes leaders into taking a more active role in their squadron's training.

What is clear is that there are measures the Air Force could emplace – measures not currently used – that could be implemented to improve aircrew proficiency and get the Air Force a better product for its money. The experience gained through increased proficiency hones skills that are critical to maintaining the best aerial fighting force in the world.

Recommendations

COA 3 of this research is the recommended COA because it meets the intent of increasing proficiency in AFRC aircrews with minimal (albeit some) impact to the AFTP system that currently exists. By setting a minimum time value for the first of a dual AFTP, crewmembers are encouraged to plan sorties that fulfill a minimum time requirement, thereby increasing the probability that more effective training sorties will be planned and executed. When a sortie is flown below the set minimum time value, the member will be unable to accomplish a dual AFTP. This COA, while not perfect, best meets the intent of this research by incentivizing aircrew training, specifically among Reserve Component forces, to make best use of limited resources.

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Appendix

Appendix A.1 – F-16CM Block 50/52 RTM Table 5b – Flight Mission/Sortie Requirements[1]

Table 5b – Flight Mission/Sortie Requirements								
MISSION	TASK ID	CMR (INEXP/EXP)			BMC (INEXP/EXP)			NOTES
		RegAF (Incl Active Associates)	AFRC	ANG	RegAF (Incl Active Associates)	AFRC	ANG	
PRIMARY MISSIONS (PROFICIENT)								
OCA-SEAD (day/night)	SR29/SR30	27/25	27/17	22/15	14/11	14/11	14/11	5, 6
DCA (day/night)	SR21/SR22	10/10	10/6	8/5	6/5	6/5	6/4	6
OCA-ESC	SR08	8/8	8/6	8/6	6/5	6/5	6/4	6
SECONDARY MISSIONS (FAMILIAR)								
AI/OCA-AO (day/night)	SR72/SR73	4/3	4/3	4/3	4/3	4/3	4/3	6
CAS (day/night)	SR18/SR19	4/3	4/3	4/3	4/3	4/3	4/3	6
Counter FAC/FIAC (CFF) (day/night)	SR45/SR46	4/3	4/3	4/3	4/3	4/3	4/3	6,7
BASIC SKILLS								
TI	SR63	3/2	3/2	3/2	2/1	2/1	2/1	
BSA	SR17	6/4	6/2	6/2	2/1	2/1	2/1	
BSA (night)	SR33	2/2	2/2	2/2	2/2	2/2	2/2	6
BFM	SR16	7/5	7/4	6/4	4/3	4/3	4/3	
ACM	SR15	7/5	6/4	6/4	4/3	4/3	4/3	
AHC	SX10	2/2	2/( )	( )	1/1	1/( )	( )	
INSTRUMENT	SX08	4/4	4/( )	( )	2/2	2/( )	( )	8
CC OPTION								
CC Option	N/A	6/6	19/6	5/5	5/5	5/8	4/6	1,9
RED AIR								
Red Air	SR26	14/14	14/14	14/14	12/12	12/12	12/12	10
HHQ Red Air	SC03	--	--	--	--	--	--	10,11
TOTAL RAP		**108/96**	**120/72**	**92/68**	**72/60**	**72/60**	**68/56**	

Appendix A.2 – F-16CM Block 50/52 RTM Table 5c – Flight Event Requirements[2]

Table 5c – Flight Event Requirements								
EVENT	TASK ID	CMR INEXP/EXP			BMC INEXP/EXP			NOTES
		RegAF (Incl Active Associates)	AFRC	ANG	RegAF (Incl Active Associates)	AFRC	ANG	
CSAR (On Scene Cmdr)	RA96	4	4	4	2	2	2	12
LGB Actual	WD26	1	1	1	1	1	1	13
IAMS Actual	RA27	1	1	1	1	1	1	
FSWD/Heavy Weight	RA23	2	2	2	2	1	1	14
Chaff	RA13	39	39	39	27	27	27	
Flares	RA21	39	39	39	27	27	27	
CFTR	RA12	6	4	4	1	( )	( )	12
Have Quick / Secure / SINCGARS	RA26	12	12	12	12	8	8	12
SATCOM	RA46	4	( )	( )	2	( )	( )	12
Dynamic Targeting A/G	WD31	6	6	6	4	( )	( )	15
Killbox Operations	RA72	6	6	6	3	( )	( )	
EP A/A	RA15	9	8	8	4	4	4	16
EA A/A	RA17	9	8	8	4	4	4	
EW Range	RA32	12	6	6	6	3	3	17
Low A/A	LE06	8	6	6	3	3	3	12
Low A/G	LE05	8	6	6	3	3	3	12
Flag Event	RA20	2	( )	( )	( )	( )	( )	12
Term Attack Control w/ SOF	RA05	2	2	2	( )	( )	( )	18
Term Attack Control w/ JTAC	RA06	4	4	4	( )	( )	( )	18
Moving Tgt LGB Attack	RA73	4	4	4	( )	( )	( )	12, 18
Moving Tgt Strafe	RA74	6	6	6	( )	( )	( )	18
CAS in Urban Terrain	RA07	6	6	6	( )	( )	( )	18
Night Strafe	RA91	6	6	6	3	3	3	18
4-Ship A-A Employment	RA01	7	5	5	( )	( )	( )	12
AAR (day)	AR01	2	2	2	2	2	2	
AAR (night)	AR02	1	1	1	1	1	1	
Formation Approach	AP10	3	3	3	3	3	3	19
Live SFO	RA60	6/4	6/4	6/4	6/4	6/4	6/4	
Off-Station TDY/Training	SD03	11/9	6/4	6/4	7/6	4/3	4/3	12,20
Degraded/Denied GPS	EC08	6	6/3	2	3/2	2	1	21
Degraded/Denied Comm	EC05	6	6/3	2	3/2	2	1	22
Degraded/Denied Datalink	EC04	6	6/3	2	3/2	2	1	23
ACA Qualified Pilots:								
Aerial Gunnery	GU01	1	( )	( )	1	( )	( )	24
Low Slow VID	RA43	3	4	4	2	2	2	24
Slow Shadow	RA50	3	4	4	2	2	2	24
Alert Scramble	RA10	3	4	4	2	2	2	12,24

Appendix A.3 – F-16CM Block 50/52 RTM Table 6a – MTC Requirements[3]

Table 6a – MTC Mission Requirements								
MTC MISSIONS	TASK ID	CMR (INEXP/EXP)			BMC (INEXP/EXP)			NOTES
		RegAF (Incl Active Associates)	AFRC	ANG	RegAF (Incl Active Associates)	AFRC	ANG	
OCA-SEAD Pkg Escort	MT03	6	( )	2	2	( )	2	25
OCA-SEAD	MT10	6	( )	( )	2	( )	( )	
Maritime SEAD	MT02	2	( )	( )	1	( )	( )	
DCA	MT04	2	( )	2	1	( )	2	
OCA-ESC	MT21	1	( )	( )	2	( )	( )	
AI/OCA-AO	MT20	( )	( )	( )	( )	( )	( )	
CAS	MT14	( )	( )	( )	( )	( )	( )	
CFF	MT01	4	( )	( )	2	( )	( )	
CC Option	N/A	5	20/8	4	5	8	4	26
TI	MT18	4	( )	( )	3	( )	( )	
Tactical Skills Drills	MT08	( )	( )	( )	( )	( )	( )	27
Instruments	SQ17	2	( )	( )	1	( )	( )	42
Emergency Procedures	MT17	4	4	( )	4	4	( )	28, 42
Totals		36	24/12	8	24	12	8	4

Appendix A.4 – F-16CM Block 50/52 RTM Table 6b – MTC Event Requirements[4]

Table 6b – MTC Event Requirements								
MTC EVENTS	TASK ID	CMR			BMC			NOTES
		RegAF (Incl Active Associates)	AFRC	ANG	RegAF (Incl Active Associates)	AFRC	ANG	
A/A Intercept vs. Electronic Attack (EA)	MF01	10	10	2	7	7	2	29
Degraded Systems	MF05	14	14	3	10	10	2	31,30,31
IMC Intercept	MF06	4	4	( )	2	2	( )	
IMC SEAD	MF53	4	4	( )	2	2	( )	
DMO	MF07	12	2	2	8	2	1	30,32
EP A/A	MF08	10	10	( )	4	4	( )	
EA A/A	MF09	10	10	2	5	5	1	33
Moving Target Attack	MF11	4	4	( )	3	3	( )	29,34
Urban Target Attack	MF12	4	4	( )	3	3	( )	29,34
Virtual Flag Event	MF34	1	1	( )	( )	( )	( )	30,35
Degraded/Denied GPS	MF41	6	6	2	3	3	1	30,36
Degraded/Denied Comm	MF42	6	6	2	3	3	1	30,37
Degraded/Denied Datalink	MF43	6	6	2	3	3	1	30,38
Large Force Employment (LFE)	MF30	2	( )	( )	1	( )	( )	30,39
Night Unusual Attitude Recovery (UAR) with NVDs	MG77	1	1	1	1	1	1	
IMC Operations	MG82	( )	( )	( )	( )	( )	( )	40
ACA Qualified Pilots:								
Low Slow VID	MF02	3	3	( )	2	2	( )	29,41
Night Low Altitude VID	MF03	3	3	( )	2	2	( )	29,41
Slow Shadow	MF04	3	3	( )	2	2	( )	29,41
Dense Friendly Intercept	MF51	6	6	( )	3	3	( )	29
Alert Scramble	MF10	4	4	( )	3	3	( )	29,30,41

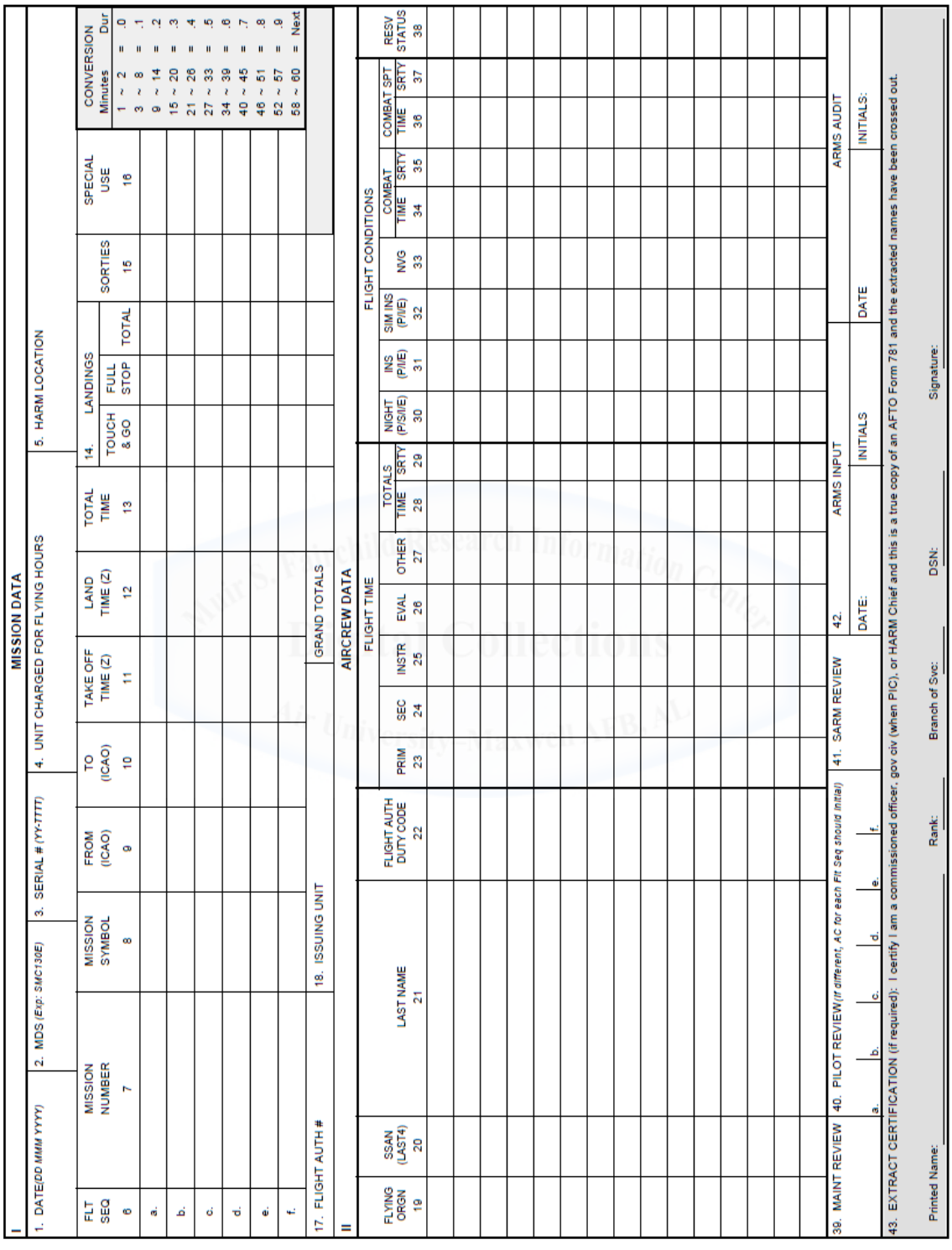
Appendix A.5 – F-16CM Block 50/52 RTM Table 7b – Flight Training – Weapons Qualifications Requirements[5]

Table 7b – Flight Training - Weapons Qualifications Requirements								
WEAPON EVENT	**TASK ID** Sim Att/Sim Hit Live Att/Live Hit	**CMR**			**BMC**			**NOTES**
		RegAF (Incl Active Associates)	**AFRC**	**ANG**	**RegAF** (Incl Active Associates)	**AFRC**	**ANG**	
Precision Guided Munitions								
AGM-88: HTS	WD03/WD04	QUAL	QUAL	QUAL	FAM	FAM	FAM	45,46,47
AGM-88: HAS	WD43/WD02	QUAL	QUAL	QUAL	FAM	FAM	FAM	45,46,47
IAM	WD45/WD46 RA28/RA29	QUAL	QUAL	QUAL	FAM	FAM	FAM	45,46
LGB	RA40/RA41 RA38/RA39	QUAL	QUAL	QUAL	FAM	FAM	FAM	45,46
MALD	RB09	( )	( )	( )	( )	( )	( )	48
Unguided Munitions								
UGB	FH01/FH02	QUAL	QUAL	QUAL	FAM	FAM	FAM	45,46
20mm Strafe								
TAC STRF	RA34/RA97	QUAL	QUAL	QUAL	FAM	FAM	FAM	45,46,49
Air-to-Air								
AIM-9	WD11/WD12 WD09/WD10	QUAL	QUAL	QUAL	FAM	FAM	FAM	45,46
AIM-120	WD07/WD08 WD05/WD06	QUAL	QUAL	QUAL	FAM	FAM	FAM	45,46
A/A Gun	RA94/RA95	QUAL	QUAL	QUAL	FAM	FAM	FAM	45,46

Appendix A.6 – F-16CM Block 50/52 RTM Table 7a – Instrument/Emergency Procedure Event Requirements[6]

Table 7a – Instrument/Emergency Procedure Event Requirements									
EVENT	TASK ID	CMR			BMC			BAQ	NOTE
		RegAF (Incl Active Associates)	AFRC	ANG	RegAF (Incl Active Associates)	AFRC	ANG		
Penetration	AP03	4	4	4	4	4	4	4	42
No-HUD Penetration	AP04	2	2	2	2	2	2	2	42
Precision Approach	AP01	8	8	8	8	8	8	8	42, 43
No-HUD Precision Approach	AP06	4	4	4	4	4	4	4	42, 43
Non-Prec Approach	AP02	8	8	8	8	8	8	8	42, 43
No-HUD Non-Prec Approach	AP05	4	4	4	4	4	4	4	42, 43
Circling Approach	AP21	2	2	2	2	2	2	2	44
Off Station Approach	AP32	3	3	( )	3	3	( )	3	42
Trail Recovery	RA61	8	8	4	8	8	4	2	42
Trail Departure	DP02	8	8	4	8	8	4	2	42
Alt Entry SFO	RA63	4	4	4	4	4	4	4	

Appendix A.7 – Air Force Technical Order (AFTO) 781 (front)[7]



(THIS FORM IS SUBJECT TO THE PRIVACY ACT OF 1974 - SEE REVERSE)

I MISSION DATA

1. DATE(DD MMM YYYY)	2. MDS (Exp: SMC130E)	3. SERIAL # (YY-TTTT)	4. UNIT CHARGED FOR FLYING HOURS	5. HARM LOCATION

FLT SEQ 6	MISSION NUMBER 7	MISSION SYMBOL 8	FROM (ICAO) 9	TO (ICAO) 10	TAKE OFF TIME (Z) 11	LAND TIME (Z) 12	TOTAL TIME 13	14. LANDINGS TOUCH & GO	14. LANDINGS FULL STOP	14. LANDINGS TOTAL	SORTIES 15	SPECIAL USE 16	CONVERSION Minutes / Dur
a.													1 ~ 2 = .0 3 ~ 8 = .1 9 ~ 14 = .2
b.													15 ~ 20 = .3 21 ~ 26 = .4
c.													27 ~ 33 = .5 34 ~ 39 = .6
d.													40 ~ 45 = .7
e.													46 ~ 51 = .8 52 ~ 57 = .9
f.													58 ~ 60 = Next
17. FLIGHT AUTH #		18. ISSUING UNIT			GRAND TOTALS								

II AIRCREW DATA

FLYING ORGN 19	SSAN (LAST4) 20	LAST NAME 21	FLIGHT AUTH DUTY CODE 22	FLIGHT TIME PRIM 23	FLIGHT TIME SEC 24	FLIGHT TIME INSTR 25	FLIGHT TIME EVAL 26	FLIGHT TIME OTHER 27	FLIGHT TIME TOTALS TIME 28	FLIGHT TIME TOTALS SRTY 29	FLIGHT CONDITIONS NIGHT (P/SI/E) 30	FLIGHT CONDITIONS INS (P/I/E) 31	FLIGHT CONDITIONS SIM INS (P/I/E) 32	FLIGHT CONDITIONS NVG 33	FLIGHT CONDITIONS COMBAT TIME 34	FLIGHT CONDITIONS COMBAT SRTY 35	FLIGHT CONDITIONS COMBAT SPT TIME 36	FLIGHT CONDITIONS COMBAT SPT SRTY 37	RESV STATUS 38

39. MAINT REVIEW	40. PILOT REVIEW (If different, AC for each Flt Seq should initial)	41. SARM REVIEW	42. ARMS INPUT	ARMS AUDIT
	a. b. c. d. e. f.		DATE: INITIALS	DATE INITIALS:

43. EXTRACT CERTIFICATION (if required): I certify I am a commissioned officer, gov civ (when PIC), or HARM Chief and this is a true copy of an AFTO Form 781 and the extracted names have been crossed out.

Printed Name: Rank: Branch of Svc: DSN: Signature:

AFTO FORM 781, 20080911 PREVIOUS EDITION IS OBSOLETE ARMS AIRCREW/MISSION FLIGHT DATA DOCUMENT

Notes

[1] Headquarters Air Combat Command (HQ ACC)/A3T, PACAF/A3T, USAFE/A3T, ACC/A3G and AFRC/A3D, for F-16CM Block 50/52 Operations Group Commanders, F-16CM Blk 50/52 Ready Aircrew Program (RAP) Tasking Memorandum, Aviation Schedule 2017 (AS-17), 01 October 2016.

[2] Ibid.

[3] Ibid.

[4] Ibid.

[5] Ibid.

[6] Ibid.

[7] Air Force Technical Order (AFTO) 781, *ARMS Aircrew/Mission Flight Data Document*, 11 September 2008.

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