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Air Force Rescue's history seems to repeat itself during every interwar period. In times past, when it is called upon to perform, it initially struggled to relearn lessons from previous experiences and found itself ill-prepared. In the past decade, Rescue has made great strides to firm up doctrine and become the rescue force that America's Airmen need. Air Force Rescue finds itself at a critical juncture with the possible retirement of the A-10C. The A-10C has fulfilled the role of Rescue Mission Commander (RMC). With no assets identified to replace its RMC role, the skillset is in danger of following the doomed path that Air Force Rescue has faced since the Korean War. This paper argues that the RMC needs to be redefined and the HC-130J is the asset to fulfill this role.

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The Need for a Redefined Rescue Mission Commander

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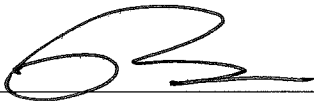
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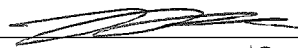
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Executive Summary

Title: That Others May Live: The Need for a Redefined Rescue Mission Commander

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Thesis: Air Force Rescue finds itself at a juncture with the looming departure of its Rescue Mission Commander asset. To break its historical cycle of being an afterthought reacting to changing policies during conflict, Air Force Rescue should redefine the Rescue Mission Commander role tying it to the HC-130J.

Discussion: Air Force Rescue has been rarely utilized in its true form, but with a shift of focus in national policy there is increased probability of rescue operations in future conflicts. The rescue mission is important, not only to the downed Airman or asset, but also to the nation. As technology increases for the United States and its adversaries, it is vitally important to rescue the person or machine to ensure that the United States retains its strategic advantage. Air Force Rescue is unique in its composition as it possesses the only dedicated combat assets to execute the rescue mission. The HC-130J, HH-60G, and Guardian Angel Weapons System (GAWS) comprise the Air Force's Rescue Triad. This Triad integrates with the Rescue Mission Commander (RMC) to form the Personnel Recovery Task Force (PRTF). The RMC is typically an A-10C pilot, even though it is not a dedicated rescue platform. The A-10C is nearing its life expectancy and has faced termination due to budget cuts by Congress. This vacancy must be filled to ensure downed Airmen or assets get rescued. This predicament is similar to situations that Air Force Rescue has faced in the past. Its history is full of reacting to changes in the heat of conflict. There has been lack of foresight, continuity, and proactive investment in Air Force Rescue. Air Force Rescue must break the cycle it has faced in its history to foster the best possible rescue services in the future operating environment.

Conclusion: Air Force Rescue should redefine the RMC definition tying it to its dedicated fixed-wing asset, the HC-130J Combat King II. HC-130J aircrew understand the rescue mission and train for rescue operations every day. The HC-130J can overcome its shortfalls with upgrades which will allow the asset to fulfil the role in the A-10C's absence. Being proactive in this scenario will break the tumultuous cycle and ensure that national security is maintained through the rescue of the United States' military personnel and assets.

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Preface

Air Force Rescue is an often overlooked and unappreciated mission, that is until one needs rescued. Air Force Rescue has returned thousands of military and civilian personnel that would have otherwise been captured or killed. As time progresses, the chances of Air Force Rescue having some effect on your life increases. Its effects will be felt by more people in the future operating environment.

The United States faces a shifting focus on national policy, a shift that makes Air Force Rescue even more important. This topic is important to me because I am a Rescue pilot on the HC-130J Combat King II. The purpose of the paper is to attempt to highlight the situation that Air Force Rescue currently finds itself within and attempt to break its doomed cycle. I have the advantage of nearly 90 years of historical data to pinpoint deficiencies and discover trends that airborne rescue has faced. I genuinely want Air Force Rescue to progress so it can ensure it fulfills its motto: That Others May Live.

I want to thank Dr. Paul Gelpi and Dr. Bradford Wineman for their insight and mentorship on this paper. Additionally, I would like to thank Lieutenant Colonel Jeffrey Dennis for his help and subject matter expertise. Lastly, but most importantly, I want to thank my wife, Sydney, and our four children: Emery, Logan, Everley, and Luke. Thanks for your understanding on the countless nights and days I had to dedicate to this paper. You guys have been the foundation that I was able to rely on. I love you all.

Introduction

Imagine an Airman soaring through the sky with very little restrictions. One will see the deepest blues of the sky above as they get closer to exiting the earth's atmosphere. The earth and all its troubles seem so far away. The roar of the jet engine is nearly unnoticed and for a little while, they forget that gravity exists. In this surreal moment, they find themselves surrounded by some of the world's best warfighting technology. They are comfortably wrapped in a blanket of metal and glass. The moment is almost too good to be true, but then reality comes crashing in through the sound of alarms and lights. A malfunction exists and now the world's best fighter pilots frantically fight to keep their metal blanket from becoming their death shroud. Much to their dismay, they realize their only means of survival is to eject out of their aircraft and begin to parachute to the ground. Gravity wins again and what goes up, must come down. Under canopy, they realize the gravity of their situation as they are in enemy territory. Once they hit the ground, they recognize their dilemma. They made it to the ground, but they are far from safety. A plethora of emotions flood their mind. Is there any hope? The answer lies in the United States Air Force's (USAF) Combat Search and Rescue (CSAR) force. These highly trained warriors will bring this individual home alive.

Air Force Rescue is a rarely utilized tool in its true form. Their lack of utilization is not indicative of a rescue problem, but rather speaks to the expertise of the nation's Airmen. The USAF is the best air force in the world. This is in part to the technology that it possesses, but also to the sheer amount of capital it can invest in its members' training. The USAF allows tens of thousands of training hours to its men and women to ensure that they can execute the mission that they are designed to accomplish. Expertise and technology play an important role in success and safety rates, but the USAF has not faced a near-peer, let alone peer adversary in the recent past. This is becoming more of a possibility, especially with the recent shift in the 2017 *National*

Security Strategy of the United States (NSS) and the *Summary of the 2018 National Defense of the United States of America: Sharpening the American Military's Competitive Edge* (NDS).

The NSS describes China and Russia as a challenge to American power, interests, and influences.¹ The NDS names China and Russia as the Department's principal priorities.² It further states, "[i]nter-state strategic competition, not terrorism, is now the primary concern in U.S. national security."³ With this shift in focus, the possibility of conflict with nations bearing comparable technology and dense Integrated Aerial Defense Systems (IADS) increases. If a conflict does occur, there will be an increased probability of Air Force Rescue's services being employed.

As the possibility of rescue operations increases, Air Force Rescue finds itself at a critical juncture with this shift in policy. Part of the rescue apparatus is nearing its life expectancy. The A-10C Thunderbolt II has fulfilled the role of Rescue Mission Commander (RMC) since Operation Desert Storm and now faces an uncertain future. Despite this, the rescue mission must continue to ensure that the nation's brave Airmen are able to return home and possibly fight again should conflict arise. With the A-10's future uncertain and a shift in focus that places U.S. fighter aircraft in danger, there should be a two-fold look at the future of the RMC role. First, there should be an updated definition of the RMC role. Second, there needs to be critical thought to the replacement of a dedicated asset that can perform the role. This paper will argue that the RMC should be redefined to a specific asset, the HC-130J. To prove this, this paper will detail the current state of Air Force Rescue and look at its past to show the progression of the system

¹ The White House. *The National Security Strategy of the United States of America* (Washington, DC, 2017), 2.

² US Department of Defense. *Summary of the 2018 National Defense Strategy of the United States of America*. Washington, DC, 2018, 4.

³ Ibid, 1.

over the decades while highlighting the barriers it had to overcome. It will address the future operating environment and provide recommendations to ensure continued success.

What is the Rescue Mission?

The definition of rescue is “to free or deliver from confinement, violence, danger, or evil.”⁴ In combat, one could face confinement, violence, danger, and evil and there must be a mechanism to free them. This mechanism is defined as personnel recovery (PR). The joint doctrine, JP 3-50, defines PR as “the sum of military, diplomatic, and civil efforts to prepare for and execute the recovery and reintegration of isolated personnel.”⁵ It further states that PR is a system to heighten morale, to increase operational performance, and to prevent adversaries from obtaining critical information or formulating propaganda.⁶ JP 3-50 defines isolated personnel (IP) as “those U.S. military, Department of Defense (DOD) civilians, and DOD contracted employees and others designated by the President or Secretary of Defense who are separated from their unit, as an individual or group, while participating in a U.S.-sponsored military activity or mission and who are, or maybe, in a situation where they must survive, evade, resist, or escape.”⁷ Personnel Recovery is broken into multiple options; military, diplomatic, and civil. This paper will focus on the military aspect of Personnel Recovery which is executed within the following categories: unassisted, opportune, component, joint, multiagency, and multinational.⁸ The significance of rescue cannot be minimized as it is one of the Secretary of Defense’s war planning requirements.

⁴ *Dictionary*, s.v. “rescue,” accessed March 20, 2019, <https://www.dictionary.com/browse/rescue>.

⁵ Headquarters US Department of Defense, *Personnel Recovery*, JP 3-50, (Washington, DC: Headquarters US Department of Defense, December 20, 2011), ix.

⁶ *Ibid.*

⁷ Department of Defense, *Personnel Recovery*, JP3-50, I-1.

⁸ Department of Defense, *Personnel Recovery*, JP 3-50, I-4.

Why Rescue?

The importance of PR cannot be understated. *Air and Space Journal* published an article titled “A Rescue Force for the World” which stated five important capabilities that PR brings to the U.S. military. The first is the fulfillment of leadership’s promise to bring everyone home. Secondly, the enemy can leverage a captive for their personal gain, effectively turning American tactical mishaps to their strategic advantages. A well-trained PR force will reduce this leverage; thereby, diminishing the strategic-level risk. Third, successful missions ensure successes in other assets. The amount of coordination that goes into a reactionary rescue is robust and touches nearly every capability the Air Force possesses. When a rescue occurs, the agencies involved also get a sense of victory. Fourth, it also diminishes the operational-level risk. Through vigorous training, the Personnel Recovery Task Force (PRTF) can act autonomously allowing other assets to continue to execute their mission even during an isolating event. This dedicated force will allow the ground forces to still receive the required and crucial support that they are relying on. Lastly, PR allows commanders the ability to execute with higher levels of acceptable risk. This mitigating force gives senior leadership the flexibility to make decisions when it comes to selecting targets and allows them the advantage to strike deeper in enemy territory.⁹ PR provides invaluable capabilities to policy-makers.

The PR system is ultimately the responsibility of the Secretary of Defense who delegates the operational implementation to the Commander of the Joint Chiefs of Staff (CJCS). The planning and execution of PR is the responsibility of the Geographic Combatant Commander (GCC) in their respective area of responsibility. Taskings are channeled to the individual units through the Joint Personnel Recovery Center (JPRC). Each branch of the military services is

⁹ Marc DiPaolo, Lee DePalo, Michael Healy, Glenn Hecht, and Mike Trumpheller, "A Rescue Force for the World: Adapting Airpower to the Realities of the Long War," *Air & Space Power Journal* 21, no. 3 (2007): 81-82.

responsible for organizing, training, and equipping their assets to execute PR in accordance with the operation plans (OPLAN) established by the Geographic Combatant Commanders.¹⁰ The JP 3-50 “assigns each service responsibility for its own CSAR because it is not feasible for any one service to field the force structure necessary to routinely conduct CSAR in support of another component’s operations.”¹¹ However, the USAF is the only service to dedicate a force with the sole task of Personnel Recovery.¹²

Air Force Rescue Present Day

The Air Force possesses the only dedicated combat PR assets in the Department of Defense. The dedicated concept means that these units train solely in the recovery of isolated personnel and do not have to worry about other ancillary missions. Other branches have designated forces which means they can perform PR but only as an ancillary skill, not as an expertise. Combat Search and Rescue is the Air Force’s desired method to achieve PR operations. Even though the joint doctrine states that each branch is responsible for their own PR, the Air Force’s doctrine states that PR forces are to be ready to rescue any isolated personnel.¹³ The Air Force typically forms and maintains a personnel recovery coordination cell (PRCC) for coordination with JPRC.¹⁴ This cell provides tasking and is the avenue from the individual units to the JPRC. The individual units are made up of an Expeditionary Rescue Group composed of the Rescue Triad’s Expeditionary Rescue Squadrons. This section will detail the Rescue Triad and present the current problem that Air Force Rescue faces.

¹⁰ Department of Defense, *Personnel Recovery*, JP 3-50, x-xi.

¹¹ Lee K. DePalo, *USAF Combat Search and Rescue Untapped Combat Power*, (Air University Press, 2005), 2, <http://www.jstor.org.lomc.idm.oclc.org/stable/resrep13745>.

¹² *Ibid.*

¹³ Headquarters US Department of the Air Force, *Personnel Recovery Operations*, AFDD 3-50, (Washington, DC: Headquarters US Department of the Air Force, June 1, 2005), 3.

¹⁴ Department of the Air Force, *Personnel Recovery Operations*, AFDD 3-50, 5.

The USAF Rescue force employs CSAR as a means for Personnel Recovery. The recovery force is usually composed of an HC-130J, HH-60G, and Guardian Angel Weapon Systems (GAWS). The HC-130J is the fixed-wing asset of the recovery force. The HH-60G is an armed helicopter that acts as the primary recovery vehicle for the downed personnel. The GAWS is a human asset composed of a team of a Combat Rescue Officer (CRO) and pararescuemen (PJ). These forces make up what is commonly referred to as the Rescue Triad.

The HC-130J Combat King II is the Air Force's dedicated fixed-wing PR asset. It is an all-weather, day or night, propeller rescue asset that is equipped with forward-looking infrared (FLIR), threat detection and countermeasures systems, and satellite and data-burst communications. The HC-130J conducts helicopter air-to-air refueling (HAAR), aerial delivery of personnel and rescue equipment, forward area refueling point (FARP) operations, and the ability to receive fuel while airborne. It can fly at speeds in excess of 300 knots with a range of over 4,000 miles while flying at altitudes of 33,000 feet.¹⁵

The HH-60G Pave Hawk is the Air Force's dedicated vertical lift PR asset. The Pave Hawk is a day or night modified version of the Black Hawk. It is equipped with FLIR, upgraded communications and navigation suite, satellite communications, a robust threat and countermeasures system, and two 7.62mm or .50 caliber guns. The Pave Hawk conducts recovery vehicle operations to include hoist, infiltration and exfiltration of rescue personnel and possesses the capability for aerial refueling from the HC-130. It flies at speeds of 160 knots with a range of over 500 miles and at altitudes up to 14,000 feet.¹⁶

¹⁵ United States Air Force, "HC-130J Combat King II," accessed March 20, 2019, <https://www.af.mil/About-Us/Fact-Sheets/Display/Article/104468/hc-130j-combat-king-ii>.

¹⁶ United States Air Force, "HH-60G Pave Hawk," accessed March 20, 2019, <https://www.af.mil/About-Us/Fact-Sheets/Display/Article/104508/hh-60g-pave-hawk/>

The GAWS are battlefield Airmen that fill the role of the recovery team. It is composed of a CRO, PJs, and Survival, Evasion, Resistance, and Escape (SERE) specialists. The team provides a communications bridge between the airborne assets and the IP. They can perform operations from either the HC-130J or HH-60G. The GAWS possess the capability to provide medical aid in austere and hostile environments. They are trained parachutists, riflemen, and special operations tacticians.¹⁷ It is important to understand that these individuals are separate from their Special Operations counterparts. The Rescue Triad is a main component of the PRTF and usually work alongside the Rescue Mission Commander (RMC).

In a conventional rescue, these forces integrate with and are usually controlled by the RMC. The RMC is a person that undergoes special qualification training to manage rescue missions. These are typically fighter pilots who specialize in Close Air Support (CAS). Once qualified, they are given the callsign Sandy. Although Sandy can be earned by the men and women of most fighter weapons systems, it is typically an A-10C pilot. Sandy and the Rescue Triad form the core of the PRTF. The PRTF conducts multiple exercises and training flights to ensure the core integration remains prepared to conduct this important mission. One of the key features of the PRTF is the ability for other assets to be integrated into the task force as they are needed. The RMC is tasked with ensuring that they are effectively utilized to achieve the desired end state in a safe manner.

Joint and Air Force doctrine both recognize the RMC as a component of rescue. The RMC is “designated through the JPRC, or by the component commander through the PRCC. The RMC initial actions are to collect essential information in the objective area that is threatening to the isolated personnel or recovery force.”¹⁸ The RMC is a qualification for Airmen who can

¹⁷ Department of the Air Force, *Personnel Recovery Operations*, AFDD 3-50, 13-14.

¹⁸ Department of Defense, *Personnel Recovery*, JP 3-50, VI-18.

specifically perform CSAR tactics.¹⁹ A qualification is a specific term in the Air Force flying community. When training an individual, there are two possible outcomes that result, a qualification or a certification. A certification is a training result that requires a syllabus but does not result in an evaluation from a flight examiner. A qualification is a syllabus-driven training program that results in the individual receiving an evaluation from a flight examiner. This triggers an annual requirement for that individual to prove that they can perform the task. This reinforces professionalism and expertise and holds the individual accountable for personal growth and professional development.

The RMC's responsibilities "include establishing communications, locating and authenticating the IP, and protecting the IP until recovery assets arrive. The RMC controls all assets assigned to the PR effort; including, but not limited to, rescue combat air patrol (RESCAP), suppression of enemy air defenses (SEAD), additional strike aircraft, and required aerial refueling."²⁰ The RMC and the Rescue Triad form the core of the PRTF and can be augmented with other assets. The RMC works in conjunction with the Airborne Mission Commander (AMC).

The AMC plays a vital role in CSAR, it serves as a communications and data relay for all the rescue forces and the command elements and is designated by the PRCC.²¹ The AMC is always airborne and controls other missions that are occurring. In its current state, the HC-130J can perform limited AMC roles. The On-Scene Commander (OSC) is the "individual who initiates rescue efforts in the objective area until rescue forces arrive. Initially, the OSC may be any aircraft in the vicinity, including the wingman of a downed aircraft. The OSC's initial

¹⁹ Department of the Air Force, *Personnel Recovery Operations*, AFDD 3-50, 14.

²⁰ Department of the Air Force, *Personnel Recovery Operations*, AFDD 3-50, 14.

²¹ Department of the Air Force, *Personnel Recovery Operations*, AFDD 3-50, 15.

actions are to attempt to establish communication, locate and authenticate the IP, and pass essential elements of information to the AMC. The OSC role will be transferred to the RMC or lead recovery vehicle upon arrival. After transferring OSC duties to the RMC, the original OSC may remain on station in a supporting role.”

Another asset to the PRTF is a Forward Air Controller Airborne (FAC[A]). The FAC(A) is trained to direct air strikes within proximity to the isolated personnel.²² If there are threats moving into the area, the FAC(A) is the legal option for conducting airstrikes on those threats. This role is typically filled by a fighter pilot and is another qualification that the A-10C possesses. This is an important integration to the RMC as it provides the capability of protecting the IP. Understanding the current construct and the capabilities that each role brings to a rescue mission will prove how critical of a juncture the Air Force is at with the retirement of the A-10C.

The A-10C has been the workhorse fulfilling this critical role, but due to budget constraints and force modernization, this lynchpin asset finds itself on the brink of retirement. In 2014, General Mark Welsh, then Chief of Staff of the Air Force, stated that he was unhappy that he would have to recommend cutting the A-10, but he felt it was the right decision.²³ Since 2014, the aircraft’s future has been on a tumultuous journey due to budget restraints and maintenance issues and costs. In early 2018, the Warthog, as the A-10 is referred to, was given an indefinite future extending its timeframe to 2030 thanks to an omnibus spending bill allowing it to receive much-needed maintenance. Despite the extension, there is still uncertainty for the

²² Department of the Air Force, *Personnel Recovery Operations*, AFDD 3-50, 15.

²³ Christian Davenport, “Air Force Plan to Get Rid of A-10 Runs into Opposition,” accessed March 20, 2019, https://www.washingtonpost.com/business/economy/air-force-plan-to-get-rid-of-a-10s-runs-into-opposition/2014/04/10/de0f041c-c015-11e3-b574-f8748871856a_story.html?noredirect=on&utm_term=.69dd4e78bef5.

number of aircraft that will continue to fly.²⁴ On April 12, 2018, Lt Gen Arnold Bunch, Office of the Assistant Secretary of the Air Force, Acquisitions, testified before the House Armed Services Committee on the lifespan of the A-10. During the testimony, he stated that the Air Force plans to submit a request for funds to ensure the re-winging of 109 aircraft, thereby, extending the service life to 2032.²⁵ Regardless of the funding, there is going to be a portion of these that will be grounded prior to 2032. The effects of this on the PRTF will be unknown, but it is important for one to look ahead and plan for the worst-case scenario of the A-10 and its RMC mission to slowly disappear.

Rescue is a robust and complex system that contains many assets from all parts of the area of operations. The Air Force provides three dedicated platforms, the Rescue Triad, to perform this important mission. The Triad integrates with the RMC to form the PRTF and can utilize capabilities from multiple assets to affect a successful rescue. The RMC is typically an A-10C pilot who can fulfill many roles in the rescue mission. With the future of the A-10C unknown, Air Force Rescue must begin to train and equip its rescue forces to conduct operations with a new RMC. This is important to highlight now, since Air Force Rescue's history has been defined as a series of afterthoughts where progression is made only after relearning previous lessons.

The History of Airborne Rescue

A thorough understanding of Air Force Rescue's history is necessary to uncover a cycle that Air Force Rescue has been doomed to repeat throughout its history. This section highlights

²⁴ Oriana Pawlyk, "A-10 in Jeopardy Again? Air Force May Not Keep All Warthogs Until 2030," accessed March 20, 2019, <https://www.military.com/dodbuzz/2018/04/12/10-jeopardy-again-air-force-may-not-keep-all-warthogs-until-2030.html>.

²⁵ *Air Force, Force Structure and Modernization Programs: Hearing before the House Armed Services Committee*, (2018) (statement of Lieutenant General Arnold Bunch, Military Deputy, Office of the Assistant Secretary of the Air Force, Acquisition), 12.

the need for the Air Force to focus on the future of this mission and not let history repeat itself by being caught without a viable RMC option when the A-10 retires.

World War II saw the creation of a global rescue force when General Hap Arnold approved plans to create emergency rescue squadrons in both theaters. Its sole purpose was conducting rescue operations at sea. As the war progressed, leadership began to see its value on land which gave birth to important rescue capabilities, including the helicopter.²⁶ Even in its inception, rescue faced organizational issues in the broad military. The services could not concur on which branch should bear the burden of rescue operations. In 1945, Army Air Corps, Lieutenant General Hoyt Vandenberg settled a deal with the Coast Guard leading to the creation of the Air Rescue Service (ARS) thrusting the soon to be Air Force as the main contributor.²⁷

Prior to the Korean War, the ARS began shaping its identity; however, it was met with internal challenges. Post-World War II, the Air Force's future was strategic bombing. The ARS was associated with the mission of saving lives while the Air Force's identity was based on that of a mission to end lives.²⁸ The focus of the ARS had been peacetime missions and there was no foresight on its utilization in combat. The Korean War caused the ARS to shift its agenda from peacetime responses to combat responses.²⁹ Because of this, it entered the Korean War ill-prepared. The ARS performed as best as it could, and through a "combination of sheer guts, good luck, and a learn-as-you-go mentality, the ARS logged hundreds of combat saves and was responsible for the evacuation of 9,898 United Nations personnel by the end of the war."³⁰ The

²⁶ Ioannis Koskinas, *Black Hats and White Hats: The Effect of Organizational Culture and Institutional Identity on the Twenty-third Air Force*, (Air University Press, 2006) 67-68, <http://www.jstor.org/lomc.idm.oclc.org/stable/resrep13829.10>.

²⁷ Ioannis Koskinas, *Black Hats and White Hats*, 68.

²⁸ Ioannis Koskinas, *Black Hats and White Hats*, 68.

²⁹ Ioannis Koskinas, *Black Hats and White Hats*, 69.

³⁰ Edward B. Westerman, "Air Rescue Service," *Airpower Journal* 4 no. 3, (Fall 1990): 2, <https://searchebscohost-com.lomc.idm.oclc.org/login.aspx>.

ARS received national recognition as a result, as well as gained a reputation of risking its own lives to save others. This led to Brigadier General Richard Kight developing the motto that is still used today, “That Others May Live.” The Korean War led to the notion that rescue was a force multiplier that improved morale and decreased strategic risk.³¹ It also demonstrated the unique capabilities that the helicopter possessed as a rescue platform.³²

Following the Korean War, the ARS resorted to its original mission of peacetime rescue. On September 25, 1958, the Air Force released a directive that stated the ARS would be trained and equipped for the sole purpose of peacetime operations.³³ This Air Force mindset stymied any further growth the ARS could produce. As a result, the service was drastically reduced, and expertise was drifting away. This would prove problematic in a new war.

The Vietnam War was another proving ground for CSAR. The ARS, which changed its name to the Aerospace Rescue and Recovery Service (ARRS), faced tough scrutiny from the other services and had to plead its case that there was even a need for their services. Lt Col Ioannis Koskinas, the author of *Black Hats and White Hats*, attributes this to the Air Force’s lack of foresight during the interwar period of Korea and Vietnam. This lack of foresight for a CSAR capability and lack of doctrine development led the other services to believe that they must assume this role.³⁴ The ARRS had to scale a mountain of ill-suited aircraft and insufficient forces, due to their peacetime focus and lack of combat modernization. As a testament to their resolve, the ARRS overcame the challenges and logged 4,120 saves. They received one Medal of Honor and 38 Air Force Crosses.³⁵ Vietnam also introduced the HC-130P/N as a viable fixed-

³¹ Ioannis Koskinas, *Black Hats and White Hats*, 70.

³² Edward Westerman, *Air Rescue Service*, 2.

³³ Ioannis Koskinas, *Black Hats and White Hats*, 72.

³⁴ Ioannis Koskinas, *Black Hats and White Hats*, 72.

³⁵ Edward Westerman, *Air Rescue Service*, 3-4.

wing CSAR platform. Its HAAR capability proved useful to the newly developed HH-3E helicopter that was capable of aerial refueling. Vietnam was a building block for CSAR, but it still fell victim to the same mindset following the Korean War. In the midst of Vietnam, Colonel Frederick Sohle, 3d Aerospace Rescue and Recovery Group Commander, stated, ““Our development...has been a history of relearning lessons already learned by someone else, but who unfortunately could not or did not document it for other(s) to profit by.””³⁶

Following the Vietnam War, there was a drawdown of CSAR assets again. There were not many combat-related rescues that occurred during the period between Vietnam and Desert Storm. During this period, the Air Force began to shift the rescue mission to a special operations capability. This prompted the Air Force to transfer the better capable aircraft of the ARRS to the Special Operations Wing, leaving the ARRS with aging assets once again. Additionally, the ARRS found itself tasked to conduct noncombat operations in support of NASA manned space flights.³⁷ On a positive note, the cycle would be broken somewhat though, as the ARRS focused its training on combat operations versus peacetime operations.³⁸ Also in the 1980s, funding had been set aside by the Air Force to upgrade the HC-130s in the inventory and acquire the UH-60 which would be upgraded to the current HH-60G. Even in the positive light, rescue suffered defeat by the Air Staff reducing the number of HH-60 variants it planned to buy by 42 percent.³⁹ Additionally, the ARRS began its restructuring journey and joined the Air Force Special Operations Forces (AFSOF) in 1983 forming the 23d Air Force under the Military Airlift Command (MAC).⁴⁰ This lasted for six years when rescue forces branched out as the Air Rescue

³⁶ Edward Westerman, *Air Rescue Service*, 4.

³⁷ Darrel D. Whitcomb, *Combat Search and Rescue in Desert Storm* (Maxwell AFB: Air University Press, 2006): 22.

³⁸ Edward Westerman, *Air Rescue Service*, 4.

³⁹ Darrel D. Whitcomb, *Combat Search and Rescue in Desert Storm*, 24-25.

⁴⁰ Department of the Air Force, *Personnel Recovery Operations*, AFDD 3-50, 2.

Service once again. In 1993, the ARS was dissolved, and all rescue assets were absorbed by Air Combat Command (ACC).⁴¹

Desert Storm began on August 2, 1990. In Colonel DePalo's Air War College paper, he noted that USAF CSAR was a no-show in Desert Storm.⁴² Retired Colonel Darrel Whitcomb expands on the no show in his book *Combat Search and Rescue in Desert Storm*. He states that this was in part to the restructuring that occurred prior to Desert Shield and Desert Storm. The creation of Special Operations Command (SOCOM) and its absorption of rescue aircraft created a shortfall of dedicated rescue assets. The Air Force tried to rebuild the ARS, but this move was too late for any beneficial results.⁴³ In all, Desert Storm saw 43 coalition aircraft shot down and 87 coalition members isolated. Of that, 48 were killed with one member listed as missing. Of the 38 who survived, only eight were rescued, leaving 30 members as Prisoners of War (POW).⁴⁴ It appears that dedicated assets are needed to successfully accomplish the mission. The assumption cannot be made that this would have made a difference in the 30 POWs case, but a dedicated force, like that in Vietnam, could give those individuals the extra chances of successful recovery. Relearning lessons learned is a trend that must be broken.

Following Desert Storm, Air Force CSAR was not utilized in almost every conflict prior to the Global War of Terrorism (GWOT) operations. The perceived rescue gap was bridged with special operations forces (SOF) except for the highly publicized rescue of Captain Scott O'Grady, which was conducted by the Marine Corps.⁴⁵ USAF CSAR saw some action through supporting roles in Operations NORTHERN WATCH and SOUTHERN WATCH. They also

⁴¹ Department of the Air Force, *Personnel Recovery Operations*, AFDD 3-50, 2-3.

⁴² Lee K. DePalo, *USAF Combat Search and Rescue Untapped Combat Power*, 6.

⁴³ Darrel D. Whitcomb, *Combat Search and Rescue in Desert Storm*, 252-253.

⁴⁴ Darrel D. Whitcomb, *Combat Search and Rescue in Desert Storm*, 259.

⁴⁵ Lee K. DePalo, *USAF Combat Search and Rescue Untapped Combat Power*, 6.

were tasked to assist in Operation ALLIED FORCE, but again, the orders were not in a timely enough manner to fully execute.⁴⁶ Although, Air Force rescue forces underwent several organizational changes during this period, it saw a resurgence in the rescue mission and need for rescue capability. Operations ENDURING FREEDOM and IRAQI FREEDOM gave the rescue assets the combat experience they needed to solidify their doctrine.⁴⁷ It opened the doors for them to branch out and participate in other ancillary missions, such as medical evacuation, which built rapport with the other services. Operations NEW DAWN and INHERENT RESOLVE thrust rescue assets back in their traditional roles to recover downed aircrew and further tuned their doctrine. Additionally, rescue saw upgrades to its assets, such as the HC-130P being completely replaced with the HC-130J. This placed a myriad of opportunities for the rescue force to get back to its roots and become the dedicated rescue force it is destined to be.

From its initial concept in World War II to its modern construct, Air Force Rescue has had an honorable history. Even with these accolades, Air Force Rescue has seemed to be caught in a doomed cycle of being an afterthought in the minds of Air Force leaders. With the shift in national policy, it is important to recognize this historical cycle and proactively plan for future operations. The Air Force can get ahead of the A-10C retirement and develop rescue's sole fixed-wing asset, the HC-130J, into the future RMC. To help develop this argument, one must understand the potential future environment that Air Force Rescue will operate in.

The Future of Air Force Rescue

The future of Air Force Rescue has yet to be written, but with a changing direction in national policy, Air Force rescue could be utilized at a greater frequency. The current Commander in Chief's policy shifts the military's focus to potentially facing near-peer and peer

⁴⁶ Lee K. DePalo, *USAF Combat Search and Rescue Untapped Combat Power*, 7.

⁴⁷ Lee K. DePalo, *USAF Combat Search and Rescue Untapped Combat Power*, 7.

adversaries on the battlefield. This places American Airmen conducting these missions at greater risk of getting shot down and needing rescue. In the Cold War era, leaders wanted to rescue their downed aircrews, but this was not the priority. This is evident in the lack of foresight and dedicated assets to rescue during that period. Looking into the future, this mentality cannot be accepted. The Air Force pilots conducting the missions of today and the future are highly trained professionals utilizing state-of-the-art technology. Depending on the aircraft type, they could be conducting missions with operational and strategic effects. Rescue safeguards American investment in its pilot corps while ensuring that critical information does not fall into the enemy's hands. This also applies to the nation's unmanned assets. There are components and information on those aircraft that need recovery so that the enemy cannot exploit the U.S. military's unmanned critical capabilities and gain access to intelligence gathered from the unmanned vehicle. There will always be a need for rescue in the future, regardless of manned or unmanned assets. Air Force Rescue's services could be called upon at a greater frequency with shifting policy that leads to the potential of America's Airman facing more formidable opponents. To help prepare for this future, this paper will detail recommendations that the Air Force should consider ensuring the best possible options for any downed Airman or asset.

Recommendations for Air Force Rescue

With an in-depth understanding of Air Force Rescue's past and its potential future operating environment, one can see the common trends that rescue has faced through its 76-year growth and try to prevent them from reoccurring in the future. Even with its turbulent past, Air Force Rescue has accomplished tremendous feats. They rescued thousands of U.S. Airmen that would not have survived if there were no dedicated rescue assets. Despite this, the future of Air

Force Rescue does hang in the balance and can either be tipped to greatness or tipped to another failure. The Air Force finds itself at another juncture in CSAR with the possibility of its key RMC asset retiring and a shift in focus to more inter-state type warfare. The situation can be likened to the interwar periods of World War II and the Korean War and the Korean War and Vietnam. This section will analyze three trends from its history and then offer solutions to break the cycle it has been doomed to follow. This will ensure that Air Force Rescue can exceptionally perform its mission in the future.

The first trend noted is the lack of foresight and vision among leadership in terms of cultivating and developing a fully functional rescue force. Funding is hard to come by and unfortunately, the military must paint dire circumstances to Congress to get the funding it needs to execute its mission. The military had to tie its mission with national security and therefore needed to spend its money on strategic bombing. The Air Force is supposed to be an offensive force in nature so it would be hard to let go of valuable dollars and not meet that criteria. Leadership failed to notice the force multiplier characteristics that PR provides and therefore did not place the appropriate emphasis it should have to build up the PR force.

The second trend is the lack of continuity among the rescue community. Even when there were great pauses between wars, there must be a way to capture and quantify the knowledge gained during the conflict. This is not an easy task and can almost be impossible at times, especially when the community faces so many drawdowns after each combat tour. Continuity was also lost when the community changed command structures as often as it did. Continuity is a valuable tool and if captured correctly, it can eliminate the need for rescue forces to relearn all its lessons learned from previous conflicts.

The third trend is the military failed to proactively invest in a dedicated rescue force to conduct these personnel recovery operations. A force that specifically trains in the skillset of rescue would be able to penetrate and exploit an adversary's weaknesses to successfully recover the isolated personnel. These rescues are not just numbers on a paper either, but human lives and should be given top priority. In a recent Government Accountability Office (GAO) report, the average cost of putting a fighter pilot through school is \$7 million over five years.⁴⁸ If one was to equate human life to a dollar figure, then the Air Force lost \$602 million dollars in human assets in Desert Storm.⁴⁹ This does not consider the time investment as well. Additionally, this is not meant to sound morbid or demeaning to human life, but rather to demonstrate the necessity of rescuing human life on the battlefield in terms of capital and manpower.

With the trends highlighted, one can apply critical thinking skills to overcome these tendencies to atrophy. The first trend, lack of foresight, is difficult to overcome because the leaders of the time were not privileged to have a path to follow. They were trailblazing the path for rescue and creating the doctrine that the current rescue force operates under. The way ahead for this trend is to notice that there are uncertainties ahead and decisions need to be made earlier in the timeline to smoothen transitions. The uncertainty, in this case, is the selection of a viable platform to fulfill the redefined RMC role.

The successful path for the second trend, continuity, is made easier with mandatory after-action reports and computer databases that readily store the information. Before units, leadership, and commands are changed there must be careful thought to the impacts this has on the mission and the people. The Air Force did not envision that moving the updated assets to

⁴⁸ Government Accountability Office, *Air Force Readiness: Actions Needed to Rebuild Readiness and Prepare for the Future* (Washington DC: Government Accountability Office, October 2018) 4.

⁴⁹ Darrel D. Whitcomb, *Combat Search and Rescue in Desert Storm*, 259.

AFSOC would have the detrimental effects it saw to the rescue mission in Desert Storm. There were professional rescuers who could have performed the mission but never got the chance due to force structure changes. Continuity was not deeply ingrained in AFSOC as it was in the ARS when it came to personnel recovery. Lack of a dedicated platform attributes to the lack of continuity as well. Having a dedicated asset will ensure that continuity is properly captured, and valuable lessons are not lost in translation.

The last trend which is a lack of proactive investment of a dedicated rescue asset is one of the main arguing points of the paper. Redefining the RMC role and tying it to a dedicated asset is the proactive investment the Air Force must make to curtail the third trend. As mentioned, the A-10 fulfills the RMC role, but it is important to note that it is only a designated mission for the platform. They are tasked with multiple missions that are equally important and can result in loss of life if not executed properly. A revamped definition and transition to a dedicated platform would solidify continuity in the long run and help sharpen the foresight of leadership. The future of Air Force Rescue lies within itself, namely the HC-130J.

Redefining Rescue Mission Commander

An updated definition is the first step for a proactive investment of a dedicated rescue asset. Currently, it is defined as a role that is “designated through the JPRC, or by the component commander through the PRCC. The RMC initial actions are to collect essential information in the objective area that is threatening to the isolated personnel or recovery force.”⁵⁰ Current doctrine places emphasis on the RMC being a qualification for a person rather than an asset.⁵¹ Based on Rescue’s history, this paper argues that the definition should be tied to an asset. The new definition should read, “The RMC is a distinct qualification for the aircrew of

⁵⁰ Department of Defense, *Personnel Recovery*, JP 3-50, VI-18.

⁵¹ Department of the Air Force, *Personnel Recovery Operations*, AFDD 3-50, 14.

HC-130J units, these airmen will train and equip to perform CSAR tactics, techniques, and procedures in the full range of military operations.”

This definition nests itself within Air Force doctrine. The restrictive nature of the definition seems to limit flexibility, but it enhances other Air Force doctrinal tenets. Centralized command and decentralized execution⁵² would be the sole responsibility of an airborne asset well-versed and highly trained in commanding a rescue mission. A trained aircrew would apply the “proper application of a coordinated force across multiple domains [and would] produce effects that exceed the contributions of forces employed individually.”⁵³ This is the Air Force tenet of synergistic effects. A dedicated fixed-wing asset would provide balance and priority to the mission as well. Even though it seems that flexibility is lost, it can be argued that it will still be maintained by allowing any aircraft to assume the On-Scene Commander responsibilities until the RMC arrives on station.

The definition allows leadership to effectively plan on a dedicated asset to deploy and meet the Combatant Commander’s rescue needs. Tying it to the HC-130J forces the Air Force Rescue squadrons to remain relevant and forces Air Force leadership to critically think of the consequences of reshaping the forces. Hopefully, this will prevent the same issues that rescue faced during Desert Storm.

Why the HC-130J?

With the transformation of the RMC definition, the HC-130J is the perfect platform to execute this vital mission. The HC-130J is a brand-new airframe possessing many capabilities that would prove beneficial to the RMC role. To bolster the argument for the HC-130J, this

⁵² Air Force Air Education and Training Command, *The Airman Handbook*, Air Force Handbook 1, (Randolph AFB, TX: Headquarters Air Education and Training Command, October 1, 2017), 107.

⁵³ Air Force Air Education and Training Command, *The Airman Handbook*, 108.

section lists the strengths and weaknesses the platform possesses. Additionally, this section will address current technological upgrades that will enhance the mission capabilities and overcome its weaknesses and look at future innovations to kindle foresight for the evolution of the rescue mission.

The HC-130J possesses several ideal characteristics that would enhance the RMC mission. First and foremost, it is the dedicated fixed-wing asset in the Rescue Triad. Where the definition focuses on an asset, the real RMC is the person inside the aircraft. The HC-130J has five aircrew members for its mission crew loadout. This consists of two pilots, one combat system operator (CSO), and two loadmasters.⁵⁴ These aircrew members are trained specifically in the recovery of isolated personnel. They can independently utilize up to seven radios at once all while performing their specific flight duties. This allows the crew to maintain situational awareness with the survivor, as well as the airborne assets and command and control. Each of their stations provides a plethora of other situational awareness tools that can present a better understanding of the operational environment as well as assist in avoiding possible threats.

Another advantage the HC-130J possesses is the cargo compartment and extra carrying capacity of crew members. The HC-130J is arguably the better asset to perform the RMC role. Imagine an RMC that can control the PRTF with spacious cargo compartment or cockpit. They can do this while receiving mission updates graphically via the HC-130J's computer suites, all while possessing a dedicated line to the JPRC in the form of high planform wavelength (HPW). HPW is a satellite-based email system that is encrypted and allows emails to be sent from the CSO's station directly to command and control. During a rescue mission, the GAWS will be

⁵⁴ Air Force Air Combat Command, *HC-130J Operations and Procedures*, AFI 11-2HC-130JV3, (Langley AFB, VA: Headquarters Air Combat Command, June 8, 2017), 21.

onboard the aircraft as well as a flight doctor. Their presence allows the RMC to fully integrate the PRTF and allows face-to-face encounters to ensure mission orders are well thought out and understood by all. They can prepare the isolated personnel with real-time instructions from the ground forces that are recovering them, as well as provide life-saving medical advice from the flight doctor. This cargo space also provides future capabilities for the utilization of technology to increase standoff range.

The flexibility of the HC-130J also provides it an advantage. It can perform its missions in any environment across the globe. It is an all-weather asset that can operate in almost any temperature range. It has higher crosswind limitations than other assets, as well as the ability to land on unprepared surfaces. The HC-130J can take off and land in short distances, unlike most fighter assets. This allows the Combat King II to operate closer to the battle and operate alongside the rescue helicopters. It is capable of long loiter times via its aerodynamic characteristics and its new capability of Air-to-Air Refueling. This allows the aircraft to stay aloft indefinitely provided the aircrew possess the legal flight duty period time. Flight duty period is a certain amount of time the aircrew can stay airborne based off a sleep period. The program is designed to combat fatigue and keep sharp and alert aircrew in the thick of battle. The HC-130J possesses the strengths to be the premier RMC platform, and would not disappoint if the definition became more restrictive.

The HC-130J must overcome some weaknesses, but still, it remains fully capable of fulfilling the role. The first weakness to address is the size of the aircraft as compared to the current RMC. The A-10 has a much smaller radar cross-section that would make it harder for the enemy to detect than an HC-130J. This could present an issue in a non-permissive environment, especially in a rescue scenario where the isolated personnel were conducting deep

strikes in enemy territory. Second, the HC-130J does not possess any weapons in its current state, while the A-10 can hold multiple loadout options. Third, the HC-130J aircrew members are not FAC(A) qualified which can limit the targeting capabilities that the A-10 brings during a rescue operation. Fourth, the HC-130J is slower and less maneuverable than its A-10 counterpart. Lastly, if the HC-130J assumes this mission, then it could detract from its current mission of HAAR and aerial delivery of rescue personnel and equipment. These weaknesses can be mitigated in its current state, but with current technology and the foresight to harness future technology, the HC-130J would live up to expectations once tied to the RMC definition.

The HC-130J can utilize existing technology and future plans to counter these weaknesses. Colonel Jason Hanover, former 563rd Rescue Group Commander, identified the radar cross-section as a capability gap for the HC-130J. In an article he published in *Air and Space Power Journal*, he offered radar-jamming as a possibility to overcome a radar threat environment.⁵⁵ With a shift in mindset, it could prove to be more beneficial to remain outside the enemy's detection range and not highlight the downed aircrew member's position. This would eliminate the need for penetrating a non-permissive environment. With future technology, this becomes a possibility. Leadership should devote foresight to airborne launched Unmanned Aerial Vehicles (UAV). These UAVs possess a significantly smaller radar cross section and could be utilized to act as both a dedicated communications relay and video sensor. This allows the RMC, under the new definition, to control the overhead asset to develop a real-time objective area analysis, thereby, providing the isolated personnel the best possible chance for rescue.

⁵⁵ Jason L. Hanover, "Air Force Rescue: A Multirole Force for a Complex World," *Air and Space Power Journal* 25 no. 3 (Fall 2011): 23.

The HC-130J can be outfitted with weaponry like its Marine counterpart the KC-130J. The Harvest HAWK system is a “roll-on, roll-off” weapons suite for C-130Js in all its variants. The system is composed of a cannon, air-to-ground missile, and sensor package, and can hold four Hellfire missiles.⁵⁶ This upgrade alone would cost about \$22 million per aircraft.⁵⁷ According to Colonel Hanover this would be utilized as a limited organic self-defense countermeasure.⁵⁸ With proper training and upgrades to targeting systems, this could be transformed from an engagement based solely on self-defense doctrine to an offensive engagement if threats get too close to the isolated personnel. That concept would address the third weakness the HC-130J faces. With FAC(A) training and upgrades to the HC-130J’s Electro-Optical/Infra-Red (EO/IR) sensor, Combat King II aircrew members would be a lethal rescue force. Currently, the HC-130J’s sensor cannot provide the fidelity needed for targeting coordinates, but this can be upgraded to produce the desired coordinates needed to fulfill that role. The aircraft could be outfitted with LITENING pods to provide the FLIR and targeting capability needed. A LITENING pod is “a combat proven, self-contained, multi-sensor targeting and surveillance system. [It] enables aircrews to detect, acquire, auto-track and identify targets at long ranges for weapon delivery or nontraditional intelligence, surveillance, and reconnaissance

⁵⁶ John Reed, "Mirrors USMC Harvest Hawk Program: House Bill Directs Air Force to Look at Roll-On Gunship Kit For C-130Js." *Inside the Air Force* 20, no. 24 (2009): 5, <http://www.jstor.org.lomc.idm.oclc.org/stable/24796777>.

⁵⁷ Forecast International, “KC-130J Hercules Tanker,” accessed March 20, 2019, <http://www.fi-aeroweb.com/Defense/KC-130J-Tanker.html>.

⁵⁸ Jason L. Hanover, “Air Force Rescue: A Multirole Force for a Complex World,” *Air and Space Power Journal* 25 no. 3 (Fall 2011): 23.

missions.”⁵⁹ This system would cost the rescue community approximately \$1.75 Million.⁶⁰ This leads to the final two weaknesses.

The HC-130J is a slower and less maneuverable option, but with its future upgrades, it may not need the speed and maneuverability that other assets needed in the past. If the threat ring is avoided, the maneuverability is not needed to avoid threats. Speed is a factor, but with airborne alert and utilizing the strength of the HC-130’s versatility to launch closer to the battle, this can be mitigated. This requires foresight in mission planning at the tactical level and is utilized today. Conversely, the HC-130J can fly at noticeably slower airspeeds than most aircraft. This is useful in aerial delivery of time-critical supplies and helicopter air-to-air refueling. This was listed as a weakness; the new RMC role would prevent the Combat King II from performing its other missions. The least preferred method to mitigate this would be launching an additional HC-130J asset, which would require rescue units to provide more aircraft and aircrew to an area of operations. The community would have to create procedures to ensure that communications could be maintained with all airborne assets and the survivor. A possible solution would be maintaining an orbit in which the helicopters can come to the tanker for fuel vice the tanker going to the helicopter. The airborne launched UAV would help the HC-130J perform all the mission functions it would be charged with under the new RMC definition.

The HC-130J makes the most sense for the RMC role based on its strengths and the ability to mitigate its weaknesses. It possesses useful capabilities to thoroughly conduct the mission while showing promise to fully exploit future technologies. This aircraft and highly

⁵⁹ Northrop Grumman, “LITENING Advanced Targeting Pod,” accessed March 20, 2019, <http://www.northropgrumman.com/Capabilities/litening/Pages/default.aspx>.

⁶⁰ Defense Industry Daily Staff, “\$27M for LITENING Targeting and Recon Pods,” accessed March 20, 2019, <https://www.defenseindustrydaily.com/27m-for-litening-targeting-recon-pods-0929/>. This is an estimate and the average price of 5 past orders the military made. Appendix A.

trained aircrew will provide commanders a flexible and fully capable rescue solution. The HC-130J is the force-multiplier for the mission that is a force-multiplier.

Conclusion

There is a shift in focus in national strategy. Near-peer and peer conflict have become more of a reality and so has the possibility of rescue operations. Air Force Rescue has proven to be an afterthought in the history of military operations. Since Desert Storm, rescue has been on an upswing and it currently finds itself at a juncture with a part of the PRTF is nearing its life expectancy. The A-10C's departure would create a major void in CSAR in the form of the absence of the RMC role. This paper argues that despite its size and lack of weaponry, the HC-130J is the perfect asset to fulfill a newly defined RMC role. It is the most knowledgeable asset with the highest situational awareness in a dynamic environment. It can perform command and control functions, as well as serve as part of the rescue operation all while showcasing superior loiter time. Certain upgrades can enhance its capabilities and provide the Combatant Commander the necessary tools needed to achieve mission success with minimal assets. Whereas the dedicated Close Air Support will be lost in its current state, this can be regained with upgrades that already exist and have been battle tested. It makes sense that the RMC is assumed by the asset that is a dedicated rescue asset. The argument was developed by an in-depth look at the current PR system and doctrine. The central problems that rescue face today were identified through a brief overview of its history. During each interwar period since World War II, rescue has been destined to atrophy to a state in which it has to relearn its role while executing its mission with ill-equipped assets. Understanding Air Force Rescue's history and viewing it through the lens of the potential future operating environment provides support for this paper's argument. The best possible solution for Air Force Rescue's crossroad is redefining

the RMC role and tie it to the HC-130J. It possesses multiple strengths and weaknesses that can be mitigated with technology and ingenuity. The stage is set for rescue to finally break the trend cycle it has been doomed to repeat. With proper foresight to harness the future technological advancements, the HC-130J will be synonymous with RMC. With an updated definition tied to one community, continuity will be maintained regardless of changing commands. The redefined RMC role is a step in the proactive investment that the Air Force needs to make to further its rescue capability. With these counter-trends, the vicious cycle that rescue finds itself in would be broken and rescue can finally focus on ensuring that others may live.

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