Agile Combat Employment:

Utilizing Remotely Piloted Aircraft to Combat Russian Aggression

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To this day Russia remains a persistent threat to its geographical neighbors in addition to NATO and their western partners. This is no more evident than the ongoing crisis in Ukraine. As the United States positions itself for the potential conflict, the United States Airforce and senior leaders are looking at operational solutions to help combat a near-peer threat. One such solution is the concept of Agile Combat Employment, or ACE. ACE is a proactive and reactive operational scheme of maneuver executed within threat timelines to increase survivability while generating combat power throughout the integrated deterrence continuum.[1] This concept consists of five core elements, posture, C2, movement and maneuver, protection, and sustainment. In examining these key components, we can better discern how Remotely Pilot Aircraft (RPA) can be utilized in these dynamic operations and we can better prepare ourselves for the war of tomorrow.

Before we can conceive how best to proceed with an erupting conflict with Russia, we first must understand the forces at play and the potential war goals of each actor. To comprehend Russia and Vladimir Putin's intentions, we need to look back to the fall of the Soviet Union. The fracturing of the Soviet Union left fifteen separate countries in its wake. All these countries, with the exception of the "stans" are now delineated by the geographical constraints of the region.[1] The remaining boarders were established by Stalin to deliberately weaken them by ensuring each contained a large minority of the population from other states.[2] Each of these countries falls into one of three categories: those that are pro-Western, those that are pro-Russia, and those that desire to remain neutral. The primary factor that dictates where one's allegiance ultimately lays is the dependency on resources and energy. Kazakhstan, Tajikistan, Kyrgyzstan, Belarus, and

[1] Marshall, Tim. 2016. *Prisoners of Geography*. London, England: Elliott & Thompson, 23

[2] Marshall, Prisoners of Geography, 24

Armenia all possess economies intimately tied to their relationship with Russia. As such, it is of no surprise that these nations have joined the Russian-led Eurasian Economic Union and the Collective Security Treaty Organization.[3] This military alliance would likely be the primary adversary if Russian aggression leads to war with the western world.

Now we must consider why does Vladimir Putin and Russia act so pugnaciously with Ukraine and most of the western nations. The kremlin continues to push the narrative that their aggression is to extract concessions from Ukraine.[4] Another possible explanation stems from Russia's deep-set fear of Ukraine becoming closer to other European powers, specifically the European Union and NATO. In the event that Ukraine was to join NATO, it would significantly limit Moscow's ability bully around their neighbors. Russia in effect, would be unable to provoke Ukraine without tying in the rest of the alliance. Therefore, Ukraine is currently at its most vulnerable state. Vladimir Putin may consider igniting the spark of this conflict in order to protect his own position and power in Russia. With support for Putin deteriorating in recent years, he may take drastic action to reinvigorate his image. Elected Autocrats like Putin, are dependent on crises and conflicts in order to project the "Strong Man" persona and sustain their political appeal.[5]

We are however not alone in this fight. There are many nations who suffered greatly under the Soviet Union and now find themselves aligned with either NATO or the EU. It is these nations that could help Western powers deter Russian aggression and serve as the staging ground for allied operations, specifically Agile Combat Employment.

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[3] Marshall, Prisoners of Geography, 24
[4] Matovski, Aleksandar, "Why would Putin invade Ukraine?." (2022).
[5] Matovski, "Why would Putin invade Ukraine?."

The first facet of ACE is the concept of Posture. As the starting point of the operation, its serves as the base for the other four components and is critical for the overall success. This component is categorized by forces being strategically placed to appear predictable yet being able to rapidly deploy operationally from varied locations and in an unpredictable manner.[6] There are multiple benefits to this posturing as it forces the opposition to target numerous locations and assets spread out over a large area. This increased scope of friendly forces also serves to reinforce our perception of our military presence in the region. Against the Russian led forces, this increased presence will bolster the resolve of the NATO members and allies. In preparation for the conflict with Russia and their allies, we would need to be prepared to expeditiously deploy forces in eastern Europe and among the smaller friendly nations bordering Russia such as Latvia, Lithuania, and Romania.

As we look to RPA for posturing, specifically the MQ-9 Reaper, the value of a far reaching and long endurance aircraft is substantial. With an operational range of over one thousand nautical miles, the MQ-9 could feasibly be launched out of a secure airfield in Poland or even Germany and still be able to reach well into Russia, to include overflying Moscow.[7] With substantially longer loiter time than its competitors, the MQ-9 could cover a wide area to conduct Intelligence, Surveillance, and Reconnaissance (ISR).[8]

Command and Control (C2), the second facet of ACE, is crucial to the success of our operations. Centralized Command, Distributed Control, and Decentralized Execution remains integral to remaining agile and allowing friendly forces to quickly adapt to dynamic

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[6] AFDN 1-21, 5
[7] MQ-9 Reaper Fact Sheet, Sept 2020, MQ-9 Reaper Fact Sheet > Creech Air Force Base > Display (af.mil)
[8] MQ-9 Reaper Fact Sheet, Sept 2020

environments.[9] In order to maintain this level of operational flexibility, individual components need to be trusted to act under their own initiative but still accomplish the commander's intent. For this to be accomplished, forces need to possess sufficient knowledge of their intended roles, in addition to an accurate picture of threats.[10] With all these factors, these individual elements will be able to operate expeditiously and cut through the fog and friction of war and overwhelm the opposition in the critical early stages of the conflict. The remote nature of the MQ-9 simplifies the C2 structure and permits a greater ease of communication and coordination. The Mission Control Element (MCE) is traditionally consolidated in the continental United States and has much greater access to support than deployed locations.[11]

Movement and Maneuvering is the concept in which friendly ACE forces will utilize their increased agility and early activation to disperse away from the traditional Main Operating Base (MOB).[12] By quickly deploying to preplanned and coordinated locations, this complicates the situation for the opposition by creating a multitude of additional smaller targets. Maintaining the initiative and continuing the operational momentum is key to this maneuver and will require the proper delegation of authority. By maintaining that heightened level of urgency, our forces would be able to expand our operational footprint in the beginning stages of a conflict. The RPA enterprise is uniquely capable of rapid employment of aircraft with minimal forces forward deployed. With the control of the aircraft being passed quickly to the MCE crew upon launch, the Launch and Recovery Element (LRE) can immediately begin preparing another aircraft for launch.[13] This disconnect from the operators actually executing the mission, grants our forces the

[9] AFDN 1-21, 6
[10] AFDN 1-21, 7
[11] MQ-9 Reaper Fact Sheet, Sept 2020
[12] AFDN 1-21, 8
[13] MQ-9 Reaper Fact Sheet, Sept 2020

ability to quickly disperse aircraft throughout the region while maintaining small maneuverable LRE unit.

The fourth facet of successful ACE operations is the protection of United States assets and personnel. There are a plethora of threats that airbases must contend with in a contested environment or region. As technology continues to advance these threats will continue to evolve as well. The layered Integrated Air and Missile Defense (IAMD) needs to be expansive and layered in order to successfully protect against incoming threats.[14] As we look to how RPA can be utilized in this operation, we need to specifically understand how the Launch and Recovery Element (LRE) operates. Traditionally, the MQ-9 is launched by a crew forward deployed to the specific region. The LRE crew will launch the aircraft using a Ground Data Terminal (GDT) antenna and a clear line-of-sight (LOS) link with the aircraft. Once the aircraft is airborne, a crew stateside will take command of the aircraft via a beyond-line-of-sight (BLOS) link. This is basics of Remote Split Operations.[15] Serving as a component of the larger ACE, this allows for significantly fewer assets and personnel to protect and defend in those forward locations. Additionally, the mobile nature of the Ground Control Station allows for rapid repositioning of these smaller operational nodes.

The final component to understand the effectiveness of ACE is the sustainment of the operation. The dispersal of forces over numerous locations will require significant innovation of friendly logistics. These forces will be required to adapt to more stringent consumption of resources. These smaller operational cells will be required to execute their sortie requirements

[14] AFDN 1-21, 8
[15] MQ-9 Reaper Fact Sheet, Sept 2020

with the bare minimum of resources and support.[16] The more contested a region will play a significant factor on the availability of resources.

The RPA enterprise has significant advantage when it comes to sustainability of an operation. The relatively low cost of a MQ-9 Reaper at an average of $15M allows them the advantage of being expendable.[17] Additionally, with the pilot and crew being physically removed from the aircraft, the MCE operators are not at immediate risk from the enemy forces. By maintaining the continuity of our operators, we are able to operate without the disruptions of needing to train additional crews. However, as an ISR airframe, the MQ-9 is not without its vulnerabilities. Operating at significantly slower speeds, the MQ-9 is unequipped to counter anti-air efforts by the opposition. Additionally, the MQ-9 beyond the LOS range is reliant on satellites for its connection to the MCE crew.[18] Therefore, steps would need to be taken to protect the satellites from both direct missile attacks and targeted cyber-attacks.

As Russia continues its aggressive stance towards Ukraine and its provocative demeanor towards the Western powers, we need to remain vigilant and be prepared to execute immediately. The initial moments of such a conflict would be crucial in securing the early advantage against a near-peer threat. Remotely Pilot Aircraft such as the MQ-9 are uniquely suited for these early states of a conflict. Their expansive area of coverage and incredible endurance make them the ideal airframe for the initial deployment. While the expendable nature of the MQ-9 makes up for their innate vulnerability, the RPA enterprise as a whole is remarkably resilient compared to their manned counterparts. As technology continues to rapidly develop, the capabilities of Remotely Piloted Aircraft will continue to evolve as well. In our continued vigilance against Russia and

[16] AFDN 1-21, 10
[17] MQ-9 Reaper Fact Sheet, Sept 2020
[18] MQ-9 Reaper Fact Sheet, Sept 2020

other near-peer threats around the world, Agile Combat Employment will be critical for the success of our armed forces, and RPA could be the very tool that allows us to succeed in the war of tomorrow.

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