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Expanding the Roles of Army Aerial Intelligence, Surveillance, and Reconnaissance

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Abstract

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Over twelve years of warfare resulted in significant increases in manned and unmanned Army Aerial Intelligence, Surveillance, and Reconnaissance (AISR) capabilities. Leveraging these increased capabilities to meet national demands during an era of fiscal constraints warrants an expansion of AISR roles in Mission Command, Joint Fires, Defense Support of Civil Authorities, Homeland Security, and Building Partner Capacity. Mission command recommendations include classification policy reviews and leader development and engagement. Joint Fires recommendations include using AISR for terminal guidance of munitions, strike coordination, and munitions delivery. Increasing AISR roles in homeland missions strengthens public safety and inter-agency coordination. Sharing AISR with partners is a cost effective option to increase ISR capability to combatant commanders. Expanding AISR roles is an expeditionary and fiscally responsible means to support national strategy and is a catalyst for intergovernmental and multi-national cooperation in a fiscally constrained environment.

Expanding the Roles of Army Aerial Intelligence, Surveillance, and Reconnaissance

The last twelve years of warfare resulted in significant increases in manned and unmanned Aerial Intelligence Surveillance and Reconnaissance (AISR) platforms and capabilities. As the nation and Department of Defense enter an era of prolonged fiscal constraints and force reductions, maximizing return on investment and preserving this critical capability requires re-evaluating AISR missions and functions. To meet the demands of the volatile, uncertain, complex, and ambiguous (VUCA) operating environment, AISR missions and functions in the areas of mission command and joint targeting should be expanded. This would fulfill Army requirements in joint operations and unified action, defined in Joint Publication 1 as "effective coordination of Service capabilities and expertise... integrated into joint operations with partner military Services and other defense, logistical, and intelligence agencies."[1]

In addition to combat and contingency roles supporting unified action, AISR can and should play a critical role in the national defense strategy elements of Homeland Security (HS), Homeland Defense (HD), Defense Support to Civil Authorities (DSCA), and Building Partner Capacity (BPC).[2] Timely resolution and consensus on expanding AISR missions is needed to focus investment strategies in the Joint Capability Development process and allow army capability managers and material developers to synchronize investment strategies with the Planning, Programming, Budgeting, and Execution System.

Background

Before looking at expanding Army AISR missions and functions it is important to review how Army AISR is organized and how the platforms are used. Most of the

Army's manned AISR platforms are fixed wing aircraft in hybrid aviation and military intelligence battalions called Aerial Exploitation battalions (AEBs), operating under the control of the U.S. Army Intelligence and Security Command (INSCOM). INSCOM also operates the Hunter unmanned aerial systems (UAS) in the AEBs to answer a wide range of tactical, theater, and strategic intelligence requirements. The Hunter is a mid-size group IV (1600-2000 pound) UAS that is primarily designed for intelligence collection although it is capable of carrying munitions and has successfully employed munitions in Iraq.[3]

The Army Aviation and maneuver community operate two major UAS systems in the divisions. The first system is the Shadow, which is a small size group III (375 pound) UAS designed to meet tactical reconnaissance requirements.[4] Shadow's multi-role uses are limited due to size, weight, and power (SWAP) limitations, although targeting and strike capabilities are in development.[5] The Gray Eagle UAS is a significant unmanned capability that is undergoing development and fielding to the Army's ten active divisions. The Gray Eagle is a large group IV (4,200 pound) UAS based on the predator airframe and represents a true multi-role AISR platform.[6] The Gray Eagle is capable of tactical reconnaissance, multi-discipline AISR collection, communication relay, and has a strike capability including Hellfire missiles.[7] As Gray Eagles are fielded they will operate within Army Division's Combat Aviation Brigades and replace the Hunter UAS within the INSCOM AEBs.[8] Because the Shadow UAS design is focused primarily on tactical reconnaissance functions, for the purpose of this paper, "unmanned Army AISR" will refer to the Hunter and Gray Eagle systems.

General operational employment of Army AISR supports the priority information requirements of Army Commanders, Joint Force Commanders, and theater and national customers. AISR Processing, Exploitation, and Dissemination (PED) of intelligence is supported by a combination of organic, forward distributed, or reach-back PED sites managed through INSCOM, providing real time, near real time, and in-depth post mission analysis of collected intelligence. Tactical reconnaissance functions are performed by all operators similar to first phase exploitation described in Joint Pub 2-03, Geospatial Intelligence in Joint Operations, as "the exploitation of newly acquired imagery within a specified time of receipt…to satisfy priority requirements of immediate need and/or to identify changes or activity of immediate significance…"[9] These tactical reconnaissance functions and initial evaluation of data are conducted in manned AISR platforms by on board or remote operators and in unmanned systems by ground station operators.

There is no common terminology defining phases of PED, although this paper recommends adopting the three phases identified in Joint Publication 2-03 as universally applicable to all PED cycles. Further reference to transmission of time sensitive intelligence will use the term "Phase 1 PED" consistent with the JP 2-03 definition.

Mission Command

In light of the organizational construct, employment, and capabilities of AISR, it is common for AISR platforms and PED sites to possess a high level of situational awareness and battlefield visualization. This advanced battlefield visualization logically supports expanding AISR roles in support of mission command. In Chairman of the Joint Chiefs of Staff Mission Command White paper, General Dempsey writes "leaders

must be able to see, understand and rapidly exploit opportunities in both time and space, guided by their understanding of intent, their mission, environment and the capability of their force."[10] AISR manned platforms and unmanned ground stations frequently see and understand opportunities in the mission environment, but often lack the ability to exploit time sensitive opportunities. The challenge is to blend the AISR situational awareness with the ground commander's knowledge of unit capability to facilitate the speed of operations mentioned by General Dempsey.

The Find Fix Finish Exploit Analyze Disseminate (F3EAD) process exemplifies challenges faced when intelligence and battlefield awareness transition to mission command and direct action.[11] When an AISR aircraft completes the find and fix portions of the F3EAD process, transitioning to the finish phase requires handing the target off to maneuver forces. This is a key point where the AISR platform must support fluid transitions to kinetic operations, and represents a transition from a purely *intelligence* function to a *mission command and maneuver* function. As combatants rarely remain static during engagement, the speed of information flow requires action by maneuver elements and leads to the common question of who is in charge. Does the AISR asset revert to a strictly intelligence advisory role or does it become a mission command platform and direct the maneuver force? With a group of intelligence professionals using PED to develop situational awareness complemented by advanced imagery views of a target area, one would think that sharing time sensitive data with a ground commander to execute mission command was intuitive. The reality is much more complicated.

Mission Command and Intel Policy

Sharing AISR information in near real time to improve mission command has multiple challenges. The most significant challenge involves classification levels and the

stovepipes associated with multi-discipline intelligence products. The two most common multi-discipline collection systems on manned and unmanned AISR are Signals Intelligence (SIGINT) and Imagery Intelligence (IMINT).

SIGINT involves the capability to intercept enemy communications and in many cases geo-locate the source of the enemy transmission, which can sometimes provide stand alone targetable accuracy. However, SIGINT is most effective when used to cue other capabilities, usually imagery systems that are often on board the same AISR platform. The challenge with dissemination is that classification levels of SIGINT data often exceed classification levels of systems available to commanders; this can occur due to degraded communications during mobile operations, or when U.S. commanders work with coalition forces.

SIGINT data involving detailed electromagnetic frequency and encryption information can quickly reach the highest classification levels. However, radio frequency activity, geo-locations, and unprocessed voice usually range on the lower levels of SIGINT classification. To mitigate this classification challenge, manned AISR platforms are often equipped to transmit and receive Top Secret data to communicate with PED sites. However, transmission to line of sight supported units usually occurs at lower classification levels. Unmanned ground station classification levels can vary, and not all are authorized access or have connectivity to Top Secret communications. Army AISR platforms supporting multi-national units face even greater challenges of communications security and compatibility when synchronizing with U.S. mission command systems. In practice, manned AISR platforms become miniature Top Secret information fusion centers that must disseminate time sensitive information through

Secret or lower level networks to provide direct support to ground commanders and coalition partners. Without decentralized classification downgrade or release authority, AISR crews often incur delays in information flow that can preclude efficient mission command.

While the capability, capacity, and volume of SIGINT collection has greatly increased in the last twelve years of warfare, the classification levels and speed of dissemination of SIGINT derived information remain a challenge. Part of the solution lies in SIGINT classification policy changes and training. Delegating classification downgrade and release authority of SIGINT data to AISR PED sites, crews, and system operators can increase the speed of operations. Training AISR crews and system operators to selectively downgrade classification and mitigate risk to sources and methods facilitates mission command in joint and multi-national operating environments.

A sample category of SIGINT information whose classification level could be downgraded in conjunction with decentralized release authority is SIGINT metadata. The activity, geo-location, and radio-frequency fingerprint of SIGINT emitters, (aka metadata) can provide significant, near real time combat information, or Phase 1 PED as referenced in Joint Pub 2-03. Unprocessed SIGINT metadata is often the lowest level of SIGINT classification. With a moderate investment in training, AISR operators should sort and report SIGINT metadata as Phase 1 exploitation. Most of this SIGINT metadata is sorted automatically on board the AISR platforms by SIGINT collection systems and sent to reach-back PED sites for analysis. Revised SIGINT metadata classification and release authority introduces potential to automate Phase 1 SIGINT PED and provide near real time SIGINT emitter mapping to commanders. This Phase 1

emitter mapping could broadcast in near real time through mission command systems at lower classification levels while concurrent advanced SIGINT analysis determines and disseminates advanced SIGINT reports.

Imagery has similar classification challenges. Unprocessed image files are generally the lowest levels of imagery classification. Once the imagery includes source, location data, and analyst comments, imagery classification levels increase. In some cases, U.S. ground commanders use Google Earth imagery to plan operations in communications limited environments or when the presence of coalition partners precludes access to classified data files. More austere, mobile, and multi-national operating environments increase the challenges of access to and sharing of classified IMINT. A solution to this challenge lies in reviewing policy on imagery classification levels and delegating classification downgrade authority to support time sensitive reporting. In short, AISR crews and collectors need the authority to downgrade and release IMINT to capture the full capabilities of the platforms and enable commanders to operate at speeds required for mission command.

If classification policy hampers joint, multi-national, and whole of government information sharing, then comprehensive review of classification policy is past due. Existing classification levels are designed to protect sources and methods but the policy bureaucracy rarely keeps pace with the speed of technology. Global information sharing, coupled with rapid technology proliferation, impacts the modern operating environment. A policy re-evaluation may identify opportunities to downgrade classification levels and expedite dissemination of intelligence to joint, inter-agency, and multi-national stakeholders. An impartial review of classification policy should assess

the effectiveness of protecting sources and methods in relation to any negative impacts on mission command and provide a framework for increased sharing of AISR data.

Mission Command and Maneuver

Expanding AISR roles in mission command is not the sole responsibility of the intelligence community. The maneuver community shares doctrinal and leader development responsibilities to improve AISR mission command roles. General Dempsey's Mission Command White Paper states three key attributes of mission command: shared understanding, intent, and trust.[12] He goes on to state "Building trust with subordinates and partners may be the most important action a commander will perform... it is clear, that in Joint Force 2020 operations will move at the speed of trust."[13] Employing AISR in mission command requires the commander to have a shared understanding of AISR capabilities. Leader development programs, training, and doctrine must address Army AISR capabilities and integration with the joint force.

Building trust in support of mission command should begin with a regular exchange of liaison officers between supported units and AISR elements in training and operational deployments. In addition to liaison officers, supported unit commanders or their designated representatives should regularly fly on manned aircraft or operate from UAS ground stations and PED sites while executing mission command. Direct commander participation in AISR missions will increase battlefield visualization and bridge the gap in the find, fix and finish portion of the F3EAD process.

There are several opportunities in policy, doctrine, leader development and training required to maximize and expand AISR capability in support of mission command. The first recommendation is to adopt standard terminology for the phases of exploitation in accordance with the Geospatial definitions in JP 2-03.[14] The second

recommendation involves a policy review of DOD SIGINT and GEOINT classification guidance to reduce classification levels and delegate classification downgrade authority to AISR crews and PED sites. If these policy changes are implemented, training of AISR crews and PED teams could mitigate risks to sources and methods and increase intelligence sharing in support of mission command. The third and final recommendations involve doctrine and leader development to affect a habitual exchange of liaisons officers between supported units and AISR elements as well as direct leader participation on manned AISR platforms and in ground stations of unmanned platforms. Implementing these recommendations will narrow the gap between intelligence and maneuver functions and enable the supported commander to use the full capabilities of AISR to execute mission command.

Joint Fires and Targeting

Another area in which the capabilities of Army AISR platforms are uniquely suited for expansion is joint fires and targeting. While increases in AISR technology and capability have progressed rapidly over the last twelve years, increased AISR support to joint fires and targeting has not advanced at the same rate. A review of joint doctrine and potential modifications to Army doctrine, training, and policy can maximize return on investment by expanding the roles of Army AISR and increasing both capability and capacity in joint fires and targeting.

Platform Capabilities

To envision the contributions Army AISR can make to targeting, it is important to understand the performance capabilities of manned and unmanned platforms. The Army's Hunter and Gray Eagle UAS are designed to operate in one of three modes of platform command and control (C2), a line of sight (LOS) mode using a direct link to a

ground station (see figure 1), a beyond line of sight (BLOS) using a direct link to a satellite and then relayed to a ground station (see figure 2), or a relay link using one UAS as a relay to extend line of sight control to another UAS operating in a mission area (see figure 3).

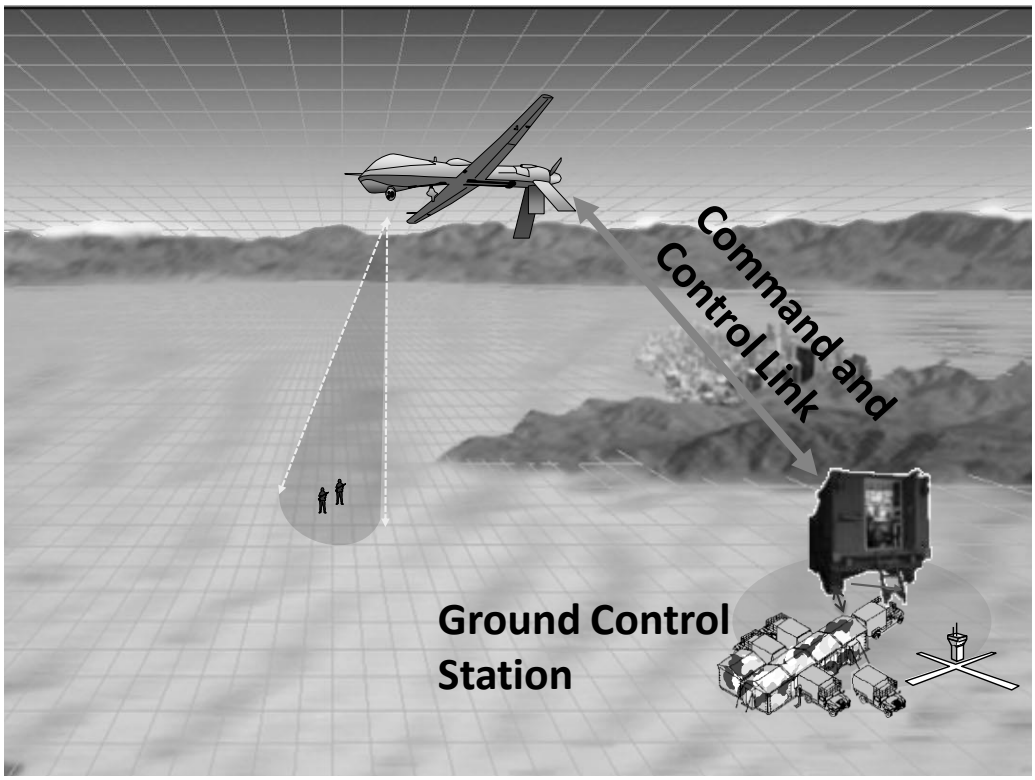

Figure 1: Line of Sight C2 Link

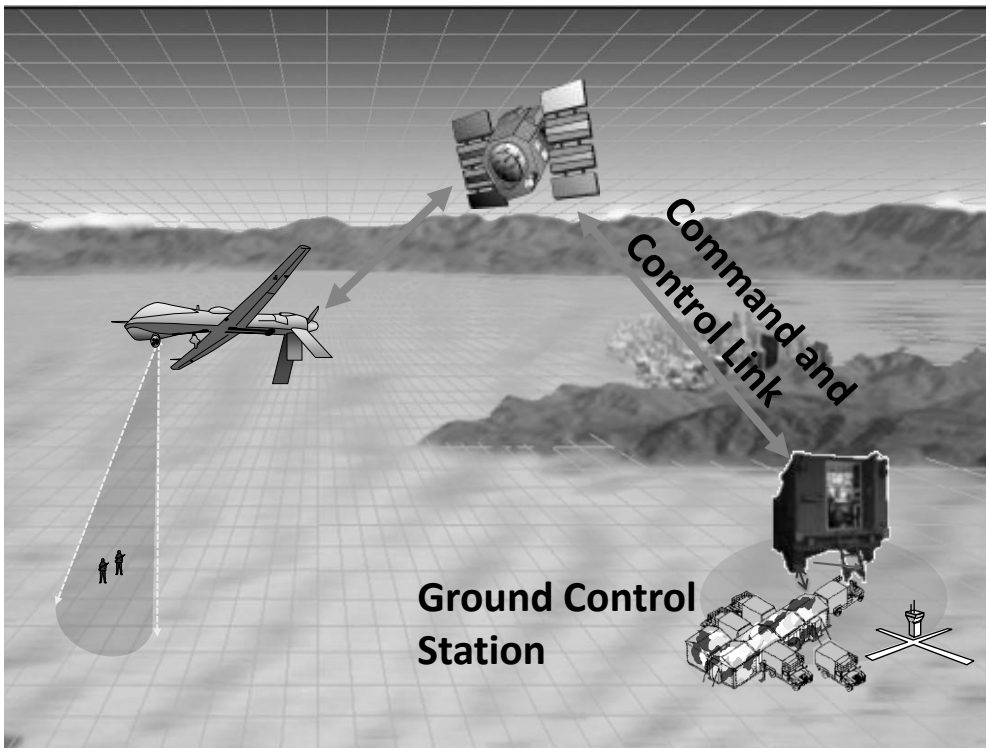

Figure 2: Beyond Line of Sight C2 Link

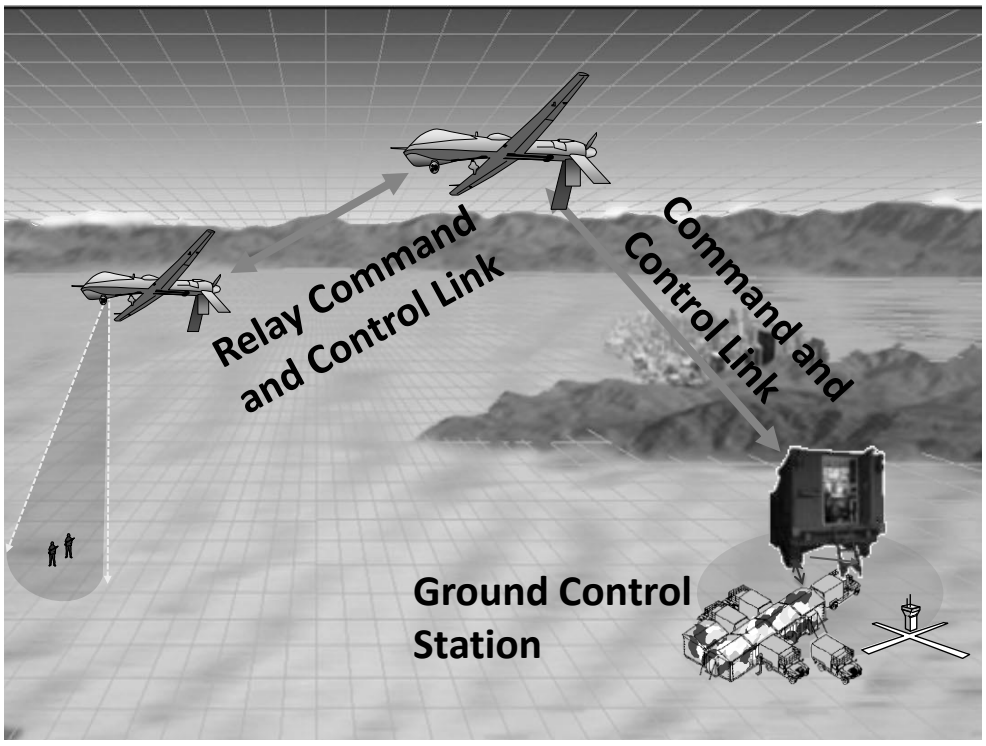

Figure 3: Relay C2 Link

Varying availability of overhead capacity for BLOS coupled with the inefficiency of the relay mode requiring 2 airborne UAS platforms to run a single mission results in most Army UAS operations using line of sight links direct to ground stations. These ground stations are limited in both quantity and off road mobility. Terrain that blocks line of sight between the ground stations and aircraft limits mobility and access, requiring commanders to carefully plan ground station and UAS operating areas.

The strengths of UAS platforms include long endurance, sometimes exceeding 24 hours, and the capability to carry weapons payloads to support joint fires. However, UAS are susceptible to weather, especially icing, a frequent occurrence at AISR operating altitudes. Operating speeds of UAS are slower than manned AISR which creates the opportunity to employ manned AISR as first responders and relieve manned systems with UAS for long term coverage.

Based on their smaller size, UAS are viewed by some as less susceptible to the effects of enemy fire, although they are vulnerable to technical link disruptions from electronic warfare, cyber, and space threats. The smaller size of Army UAS limits the size weight and power of mission equipment add-ons as well as limited growth space to install new systems and technologies when compared to manned platforms.

Army AISR manned platform performance capabilities counterbalance the limitations of Army UAS bringing increased speed and battlefield mobility to the force. The Army's manned and unmanned AISR platforms are complementary and their balanced capabilities increase options available to commanders. Most manned AISR platforms can reach mission areas at much greater speeds than UAS and provide a rapid response capability. Manned AISR platforms are capable of penetrating or

avoiding significant weather such as icing, and often have higher service ceilings than UAS. Since manned platforms (with few exceptions) do not require line of sight links to ground stations they bring AISR mobility and speed to the operating environment. Manned systems are less susceptible to technical and electronic warfare threats; although this advantage is counter-balanced by perceived higher vulnerability to kinetic threats. A trade-off of increased speed and mobility of manned AISR is less endurance than UAS platforms. Manned platforms usually provide a limited on board PED capability and have more SWAP capacity, allowing new technology add-ons and riders from supported units or multi-national partners. A limiting factor for employing conventional manned Army ISR platforms is that they are not modified to carry munitions.

Terminal Guidance of Munitions

The general description of Army AISR performance provides a framework to visualize the increased contribution AISR brings to joint fires and targeting. Terminal guidance of munitions and strike control capability are the first areas where an expansion of Army AISR can increase support to the joint force. The situational awareness on AISR platforms and battlefield mobility often result in AISR crews spending significant time with cued imagery sensor crosshairs on positively identified targets. When these targets are handed off for joint fires, the kinetic delivery platform must acquire the target prior to engagement and conduct an additional review of collateral damage risk prior to weapons release. Each step in the process lengthens engagement time. Standardized installation and terminal guidance capability such as laser target designators on all AISR systems would enable cooperative lasing engagements and tighten the sensor to shooter link. Target laser designation

capabilities are programmed into the Gray Eagle UAS, but manned systems are not programmed to receive this technology, despite target grade laser compatibility with most of the imagery sensors already in use on Army manned platforms.[15] The manned platforms in many cases have IR illuminators to “sparkle” targets and laser rangefinders, but upgrading to target grade laser designators would permit terminal guidance of joint force laser guided munitions and reduced engagement times. Demand for cooperative lasing increases when operating in degraded GPS environments. Terminal guidance capability on Army manned AISR platforms, in addition to those programmed on the unmanned systems, will reduce engagement times, increase availability of limited strike capacity, and expand engagement options for the joint force.

Another benefit of terminal guidance capability on Army AISR platforms would be the opportunity to support the joint mission of Strike Coordination and Reconnaissance (SCAR). SCAR is defined in joint doctrine and Army Techniques Publication (ATP) 3-60.2 as “a mission flown for the purpose of detecting targets and coordinating or performing attack or reconnaissance on those targets.”[16] ATP 3-60.2 also states that “SCAR functions and responsibilities can be performed by any aircraft that has the ability to find targets, communicate target location and description to other Armed Reconnaissance (AR)/Air Interdiction (AI) assets or C2 agencies, and is trained to and capable of leading a SCAR mission.”[17]

The only shortfall in expanding Army AISR roles in joint fires and using the platforms as SCAR assets is training. Existing doctrine combined with Army AISR platform battlefield mobility and sensor capability warrants a significant SCAR training investment. An interim solution can provide immediate capability by attaching sister service SCAR

trained personnel to operate from manned Army AISR platforms or ground stations of unmanned AISR platforms.

Munitions Delivery

Another contribution to Joint fires for Army AISR is munitions delivery. While the Hunter and Gray Eagle UAS systems carry weapons such as guided small diameter bombs and Hellfire rockets, Army manned platforms do not. In light of the complementary performance capabilities of manned and unmanned systems, it would make sense that both carry weapons payloads. Weaponizing manned AISR meets the same capability gaps as weapon systems on unmanned AISR. Doctrine, training, and material solutions for employing weapon systems on manned AISR platforms are similar to those in use on unmanned systems. While Army AISR platforms carry limited numbers of munitions due to seize and weight limitations, the prevalence of Army AISR on the battlefield and development of small diameter bomb precision munitions can provide a strike capability that increases capacity to meet joint force commander objectives.

Expanding the roles of Army AISR to include terminal guidance of joint munitions, strike coordination and reconnaissance, and munitions delivery is consistent with Army and Joint Doctrine and lends efficiency to joint fires and targeting. These expanded Army AISR roles will tighten the sensor to shooter link and increase both responsiveness and options available to commanders. The Army is currently struggling with the challenges associated with the Aerial Scout Helicopter program funding shortfalls.[18] Expanding the missions of Army AISR support to joint fires can mitigate impacts of the proposed retirement of the Army's scout helicopter fleet.[19] As financial constraints reduce service capacity for joint fires, expanding the roles of AISR can

mitigate the impacts of capacity reduction and allow the joint force commander to employ major weapons systems at decisive points in the joint operating area. Increasing Army AISR support to joint fires and targeting is consistent with service roles and missions, supported by joint doctrine, and maximizes inter-service efficiencies in a fiscally constrained environment.

Defense Support of Civil Authorities

Another area in which Army AISR roles might be expanded involves Defense Support of Civil Authorities (DSCA). While the Posse Comitatus Act (PCA) and Title 18 U.S. code limits employment of U.S. Armed Forces in the United States without national emergency considerations, conditions exist where the use of federal forces in the homeland is legal and appropriate.[20] The National Response Framework (NRF), Department of Defense Directives (DODD) 3025.18 Defense Support of Civil Authorities, 5525.5 DOD Cooperation with Civil Law Enforcement Officials, and Army Technical Publication 3-28 all provide guidelines and legal basis for use of federal forces in the United States.[21] Expanding Army AISR DSCA missions can increase speed and efficiency off government crisis management, cultivate relationships between the DOD and the Department of Homeland Security (DHS), and increase public trust through the use of AISR for public safety and support to civil authority. The increased awareness which Army AISR can provide to civilian authorities engaged in disaster response highlights the priority and urgency appropriate for expansion of these Army AISR missions.

When requested by local authorities, federal forces can provide assistance under Immediate Response Authority to “save lives, prevent human suffering, or mitigate great property damage” without a federally declared emergency. [22] Rapidly responding Army

AISR could contribute to greater situational awareness and enable civil authorities to execute mission command of first responders. Army AISR could also be used for Search and Rescue (SAR). In a rare example where policy enables near real time execution, Immediate Response Authority operations can begin based on a verbal request by local authorities.[23] The limitations of Immediate Response Authority are such that support timelines must be consistent with the crisis, and mission duration should generally last for no more than 72 hours.[24] Due to current Federal Aviation Airspace limitations on UAS operations and timelines required for approval, AISR support under Immediate Response Authority favors use of manned AISR platforms. However, as the FAA integrates UAS into domestic airspace control, both manned and unmanned platforms can perform rapid response missions and increase options to civil authorities.

The Stafford Act allows federal support to presidentially declared emergencies and disasters. Specific missions mentioned under the Stafford Act include federal assistance for emergency search and rescue and incident awareness and assessment.[25] A report on the tragic death of 19 Arizona firefighters fighting wildfires in June of 2013 illustrates how a gap in communications between the mission command center and firefighters led to a fatal delay in situational awareness.[26] In the case of the tragic firefighter deaths, access to Army AISR platforms may have bridged the communications and situational awareness gaps and resulted in a different outcome.

While AISR missions under the Stafford Act are similar to DSCA under Immediate Response Authority, the timelines for support and approval processes are more structured. DSCA missions under Immediate Response Authority can evolve into longer term Stafford Act responses based on the nature of the emergency. Long

duration emergencies and search and rescue are ideal missions for Army UAS platforms due to their flight endurance. The use of Army UAS to save lives in support of civil search and rescue is an opportunity to increase public safety and build public trust in a UAS capability that has been mischaracterized as a threat to domestic privacy and liberty. In light of the contribution to public safety and existing staff frameworks of Northern Command (NORTHCOM), Emergency Coordination Centers (ECC), DHS, Federal Emergency Management Agency (FEMA), and local authorities, emergency and disaster response are DSCA missions that Army AISR can and should habitually support.

The Posse Comitatus Act permits federal military support to civil law enforcement agencies insofar as assistance is indirect and passive, and led by civil agencies conducting counter-narcotics, counter-terrorism, and immigrations enforcement activities.[27] Army AISR platforms already support these missions with high success rates.[28] These missions should be expanded as Army AISR platforms draw down from Afghanistan and return to U.S bases. Army AISR support to Civil Law Enforcement Agencies offers efficiencies and advantages to the DOD and Department of Homeland Security. Army AISR crews providing mission over-watch to civil law enforcement agencies gain training efficiencies due to similarities between law enforcement and deployment mission profiles. The Department of Homeland Security and civil authorities gain access to high dollar AISR systems that might otherwise remain underused between overseas deployments. Increasing these missions and expanding Department of Homeland Security access to Army AISR can prevent unnecessary duplication of

capability and capacity, save taxpayer dollars, and increase whole of government inter-agency coordination.

Homeland Defense differs from Homeland Security in that it is led by the Department of Defense and involves protecting U.S. sovereign territory, domestic population and critical infrastructure against external threats or aggression.[29] As Army and joint AISR capacity transitions from overseas contingency missions back to U.S territories, they should support Homeland Defense missions, achieving the Army G2 and INSCOM intent of keeping ISR assets engaged. While Homeland Defense is DOD led, it still involves significant coordination with state, local, and civilian led agencies. Integrating Army AISR into Homeland Defense plans and exercises will help build inter-governmental shared understanding and address capacity shortfalls based on the nature and severity of future Homeland Defense threats.

Homeland Security is defined in Joint Publication 3-27 as “a concerted national effort to prevent terrorist attacks within the U.S.; reduce America’s vulnerability to terrorism, major disasters, and other emergencies…” and is led by DHS.[30] Expanding Army AISR missions in support of Homeland Defense and DSCA strengthens the bonds among the whole of government stakeholders in Homeland Security by increasing shared understanding and building trust in alignment with Chairmen of the Joint Chiefs of Staff vision of mission command.

The authorities to expand Army AISR support and legal framework exist and AISR platforms can contribute significantly to Homeland Security, DSCA, and Homeland Defense. DSCA focused on disaster and emergency response should occur regularly and serve as a basis to increase whole of government operations to increase public

safety and strengthen Homeland Defense and Homeland Security coordination. The timeliness of implementation is critical due to national fiscal constraints and integration with the Planning Programming Budget Execution System. In order to preserve the right capacity of Army AISR, capability developers and budget programmers must act quickly to align Army AISR missions with national security priorities. Stakeholders throughout the DOD, HS, DSCA, and HD should integrate and program Army AISR into operational plans before the platforms return from overseas operations.

Building Partner Capacity

As the U.S. responds to fiscal constraints by reducing military force structure and capacity, Building Partner Capacity (BPC) counterbalances U.S. force reductions by increasing the military capabilities of allies and partners. The 2011National Military Strategy and National Counterterrorism Strategy highlight BPC as a global priority.[31] The Congressional Research Service reported to Congress in 2013 on the Unified Command Plan and Combatant Commands, mentioning shortfalls in ISR platforms and analysts.[32] BPC is an opportunity to increase partner and coalition AISR capabilities, improve theater security cooperation, and meet combatant command ISR demands. If AISR export and sharing policies align with national guidance, BPC can reduce DOD costs of disposal or storage of excess AISR capacity, sustain the AISR defense industrial base, and make the U.S. “the security partner of choice” described in President Obama’s 2012 guidance to the Department of Defense.[33]

As the Army evaluates AISR quick reaction capability (QRC) systems for migration into programs of record or retirement, BPC becomes a cost effective opportunity to dispose of excess systems. The Gray Eagle’s programmed replacement of the Hunter UAS creates one such opportunity to build partner capacity.

Demilitarization or long term storage of excess AISR systems requires programming of funds in the budget cycle, which strengthens the business case for transferring and selling excess AISR to U.S. allies and partners.

In addition to cost avoidance associated with demilitarizing or long term storing of AISR systems, foreign military sales (FMS) of excess AISR can serve as an income source. The Defense Security Coordination Agency whose mission is to “Lead, resource, and educate the Defense Security Cooperation community to shape, refine, and execute innovative security solutions for partners in support of U.S. interests” reported a record 69 billion dollars of foreign military sales in 2012.[34] Added benefits of foreign sales of Army AISR systems include preserving the U.S. defense AISR industrial base and sustaining our AISR technological advantage through a period of reduced government spending.

While the financial business case for increasing AISR through FMS programs is compelling, the most significant benefit is increasing the capabilities of our international partners and allies. In a September 2013 media interview, Mr. Derek Gilman, general counsel for the Defense Security Coordination Agency, characterized the FMS program as a method of promoting military-to-military relationships with international partners.[35] Mr. Gilman went on to state “if partners have U.S. equipment and U.S. training and are following U.S. doctrine, our interoperability is greater.”[36] This increased interoperability enables partners to contribute to both internal and regional security and can reduce partner demands for U.S. AISR.

In 2010, the U.S. delivered two King Air 350 extended range aircraft to the Pakistani Army under an FMS case to increase Pakistani AISR capability.[37] These two

aircraft are similar to the U.S. Army Enhanced Medium Altitude Reconnaissance System (EMARS) program of record and include SIGINT and IMINT payloads. This transfer of aircraft and technology significantly increased the Pakistani Army's counter-terrorism ISR capability. This BPC initiative should serve as a model for Army AISR engagement and demonstrates how sharing of AISR capability increases partner capacity and regional security.

Lieutenant General Terry Wolf, the Joint Staff J5, when testifying to the House Armed Services Committee, said the goal of BPC is to help partners "provide for their own country's internal security and contribute to the greater regional stability as well as participate in multilateral operations."[38] Increasing AISR partner capacity promotes security goals and can improve intelligence sharing between U.S. and international partners. U.S. AISR technology and collection capability aligned with partner cultural, intelligence, and language proficiency, presents opportunity to increase efficiencies in intelligence analysis. Speaking at the National Defense University in May 2013, President Obama said "Much of our best counterterrorism results in the gathering and sharing of intelligence…These Partnerships work."[39] Incorporating U.S. Army AISR into BPC programs aligns with national guidance, promotes multi-national inter-operability, and provides cost sharing opportunities in a fiscally constrained environment.

Conclusions

Expanding the roles of Army AISR across multiple lines of effort is consistent with U.S. strategy and presents opportunities to maximize return on AISR investment. Expanding AISR in support of mission command brings situational awareness and battlefield visualization opportunities to the joint force commander. The potential to delegate classification downgrade and release authority of time sensitive combat

intelligence facilitates dissemination of Phase 1 PED in joint and coalition environments. Increased maneuver leader engagement in AISR operations strengthens the bonds between intelligence and maneuver functions and allows the joint force of 2020 to "operate at the speed of trust" mentioned in General Dempsey's Mission Command White Paper.[40]

Increasing Army AISR support to joint fires and targeting brings efficiency, speed, and lethality to the targeting process. Training AISR crews in accordance with joint doctrine to conduct terminal guidance of munitions, Strike Coordination and Reconnaissance, and weapons delivery, mitigates impacts of reduced force structure. Increasing AISR roles in joint fires and targeting is a fiscally efficient means to preserve the right balance of capability and capacity to the joint commander.

DSCA operations under Immediate Response Authority and the Stafford Act provide a framework for increased public safety and rapid access to Army AISR. Support to DHS and civil law enforcement under the Posse Comitatus Act improves AISR readiness and brings capability to DHS and law enforcement agencies and pools resources in a fiscally constrained environment. Expanding the roles of AISR in Homeland Security and DSCA strengthens intergovernmental coordination and builds relationships that contribute to Homeland Defense.

The Assistant Secretary of Defense for Special Operations, Michael Sheehan testified to the House Armed Services Committee that "partnering with foreign military and security forces has moved from the periphery of our defense strategy to become a critical skill set across our armed forces."[41] Expanding AISR in Building Partner Capacity programs strengthens interoperability through sharing of U.S. doctrine, training, and

equipment. This interoperability brings additional ISR options to combatant commanders and presents opportunities to increase intelligence sharing between the U.S. and partner nations.

The last twelve years of warfare resulted in a rapid evolution of capability and capacity of U.S. Army AISR. In order to capitalize on this investment, a consensus on expanding the roles of Army AISR must occur quickly to synchronize programming and budgeting processes with the demands of the national security strategy. Without dialogue and consensus on expanding roles, Army AISR is at risk of a fiscally induced slide towards reduced capability and waning relevance. Army AISR is at a point of punctuated equilibrium; it is uniquely positioned to play a key role in multiple lines of effort supporting national strategy and interest. Expanding the roles of Army AISR presents an expeditionary and fiscally responsible opportunity to support national strategy and is a catalyst for intergovernmental and multi-national cooperation in a volatile, uncertain, and fiscally constrained environment.

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