

### **Recognizing the Requirement**

The problem of meeting mission requirements with limited organizational capabilities is an inherent leadership challenge that spans services, branches, and echelons. Conducting intelligence operations in an active theater is no different. Meeting mission requirements entails the routine and collaborative efforts of intelligence personnel across echelons and, potentially, over significant geographic distances. During the 3<sup>rd</sup> Infantry Division's (ID's) recent deployment to Victory North, V Corps' area of operations (AO) in Poland and the Baltics, the division G-2 met this leadership challenge by establishing a federated intelligence reach relationship with its direct support intelligence and electronic warfare (IEW) battalion (BN), the 103rd, in Fort Stewart, Georgia. Establishing this type of relationship falls doctrinally within the task of conducting intelligence reach and its various subtasks as outlined in Appendix B of Field Manual 2-0, Intelligence. 1 By going one step further and federating the intelligence reach cell, 3<sup>rd</sup> ID G-2 established a command and support relationship with the cell that ensured some capabilities remained dedicated to the mission for the duration of the deployment. The success of this approach required identifying intelligence requirements and allocating capabilities, deliberately leveraging the operations process, and actively involving leaders across organizations.

### **Intelligence Reach**

Intelligence reach is "the activity by which intelligence organizations proactively and rapidly access information from, receive support from, and conduct direct collaboration and information sharing with other units and agencies, both within and outside the area of operations, unconstrained by geographic proximity, echelon, or command.<sup>2</sup>

Identifying the various mission requirements and the necessary capabilities was a crucial component of the 3<sup>rd</sup> ID G-2's mission analysis more than three months before deployment. To ensure proper identification, the G-2 team completed a

pre-deployment site survey and conducted routine working groups with the outgoing 4<sup>th</sup> ID G-2. From this mission analysis, the 3<sup>rd</sup> ID G-2 analysis and control element (ACE) identified the following mission requirements:

- ◆ Partner nation intelligence support through the Security Assistance Group—Ukraine.
- Exercise support leading up to and during European Command's Austere Challenge 2024.
- Intelligence support to NATO regional defense planning.
- Intelligence security cooperation activities.
- Steady-state intelligence production to include maintenance of a common intelligence picture for an assigned area of responsibility from the V Corps G-2.
- Maintenance of a G-2 home-station mission command presence to provide intelligence support to one remaining brigade combat team.

Once the G-2 team assessed the capabilities necessary to meet these requirements, it determined that staffing for the division ACE, supplemented by augmenting capabilities from across the brigade military intelligence companies, was insufficient to meet all requirements.

The inability of a division ACE to meet its expected intelligence requirements in an active theater is a known capability gap for the Army; consequently, the Army allocates a direct support IEW BN to divisions. However, the 3<sup>rd</sup> ID's request for the 103<sup>rd</sup> IEW BN to deploy in support of the mission in Europe was not granted because of other operational requirements. To meet the division's mission needs the 3<sup>rd</sup> ID G-2 team developed a course of action employing part of the 103<sup>rd</sup> IEW BN through intelligence reach to support the division G-2's forward deployment to Poland. Developing this course of action required determining whether the intelligence requirements could be executed through intelligence reach and, if so, whether the resulting intelligence products would be suitable

for the mission. Because most intelligence requirements necessitated proximity to the source, intelligence reach support from the 103<sup>rd</sup> IEW BN would be limited primarily to significant augmentation of steady-state intelligence production, with only minor support for other requirements. With this assessment, the 3<sup>rd</sup> ID G-2 ACE developed a detailed analysis of steady-state production requirements and the capabilities necessary to support them.

### **Establishing the Intelligence Reach Cell**

To answer the 3<sup>rd</sup> ID Commanding General's priority intelligence requirements, the 3<sup>rd</sup> ID G-2 ACE developed a weekly production cycle. The 103<sup>rd</sup> IEW BN then completed a feasibility assessment based on this production requirement to determine the specific military occupational specialty roles, equipment, and facilities required to support the schedule. The assessment results indicated that the battalion could provide the necessary support with a cross-intelligence discipline reach cell comprising approximately 19 to 21 individuals while still maintaining their other operational requirements (Figure 1).

Based on the assessment, the 3<sup>rd</sup> ID G-2 ACE determined that by leveraging the intelligence reach cell to complete most of its steady-state production requirements, the ACE could then surge to meet its other intelligence requirements in theater. As these requirements would persist throughout the division's deployment, it was necessary to formalize this direct support relationship to allow portions of the division ACE to remain fully dedicated to other mission requirements.

The 3<sup>rd</sup> ID G-2 and the 103<sup>rd</sup> IEW BN collaborated on a fit-for-purpose request for support that enabled the 103<sup>rd</sup> IEW BN to keep its necessary capabilities. The request was submitted through G-3 channels to the XVIII Airborne Corps for tasking the 525<sup>th</sup> Expeditionary Military Intelligence Brigade (E-MIB) with the requirement to support. The 103<sup>rd</sup> IEW BN, a subordinate headquarters of the 525<sup>th</sup> E-MIB, was then formally tasked with directly supporting the 3<sup>rd</sup> ID G-2 for the duration of its deployment using an intelligence reach cell with the capabilities to facilitate the weekly intelligence production. By leveraging this operations process, the 3<sup>rd</sup> ID G-2 employed federated support from an intelligence reach cell and met its mission requirements.

As the 103<sup>rd</sup> IEW BN assembled the intelligence reach cell to support the 3<sup>rd</sup> ID G-2, leaders from both organizations began positioning the cell to enable its long-term support. The battalion determined which personnel and equipment would provide the support. At the same time, the 3<sup>rd</sup> ID G-2 ACE identified space adjacent to its home-station mission command personnel from which the intelligence reach cell would operate. Once established, the intelligence reach cell leadership developed a battle rhythm nested with that of the 3<sup>rd</sup> ID G-2 ACE, training their personnel and gathering the necessary tools to begin production. Approximately one month before the 3<sup>rd</sup> ID G-2 advance elements deployed, the intelligence reach cell acquired the necessary equipment and trained personnel to achieve initial operating capacity

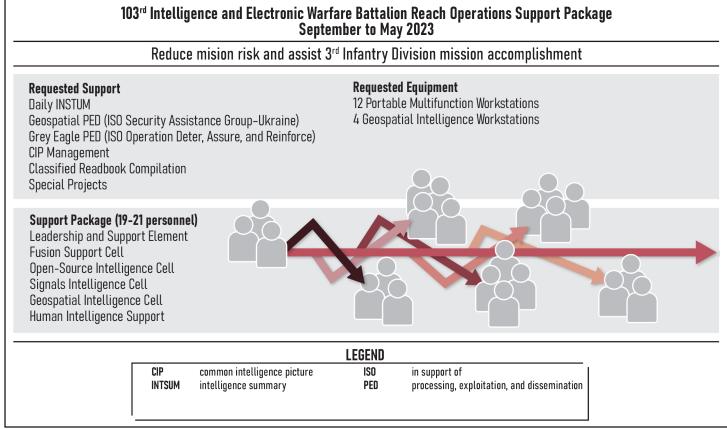


Figure 1. 103rd Intelligence and Electronic Warfare Battalion Support3

and began executing its mission. As the  $3^{rd}$  ID G-2 advance elements transitioned with the  $4^{th}$  ID G-2 in theater, the intelligence reach cell became fully operational and published its first weekly production requirement of three open-source summaries, two intelligence summaries, and one graphical intelligence summary.

### **Operating an Intelligence Reach Mission Team**

Continued leadership engagement and routine production of after action reviews proved crucial to developing the final intelligence reach cell's structure in a way that used talent most efficiently to meet all mission requirements (Figure 2). Throughout the intelligence reach cell's support mission, the 3<sup>rd</sup> ID G-2 ACE's leadership and the intelligence reach cell's officer in charge maintained an open dialogue about production requirements and refinements, which included a weekly synchronization meeting. Additionally, both the IEW BN commander and the intelligence reach cell officer in charge briefly joined the G-2 team at the forward-deployed location to assess the effectiveness of their support and make necessary adjustments.

The G-2 leadership provided guidance and implemented weekly production requirements for the intelligence reach cell. The schedule developed around these requirements had the team working Sundays through Thursdays. The daily battle rhythm of the intelligence reach cell included completing and sending products by 1700 on the day prior to the "required by" date because of the 6-hour time difference between their

location in Fort Stewart, Georgia, and the forward-deployed G-2 in Europe. This allowed the 3<sup>rd</sup> ID G-2 ACE to review and refine the products the following morning before publishing them. Once the forward team published the products, the intelligence reach cell reviewed any changes and used them to inform the development of subsequent products. The intelligence reach cell's product schedule remained flexible to account for forward training exercises and leadership requests for information that required the intelligence reach cell to develop deep-dive products.

### **Lessons Learned**

During the mission, several lessons and best practices contributed to the evolution of better processes, management, and structure of the intelligence reach cell.

**Planning.** Implementing an in-depth road-to-war discussion focused on the AO's political, military, economic, and civil considerations will enable analysts to understand the context in which the forward team operates and help determine the best way to support it. To maintain contextual understanding, the intelligence reach cell analysts must remain synchronized with the division's weekly operations through attendance at commander updates and routine review of the situation reports, the long-range training calendar, and the commanding general's executive calendar. This synchronization enables a responsive intelligence reach cell to be more proactive in its production.

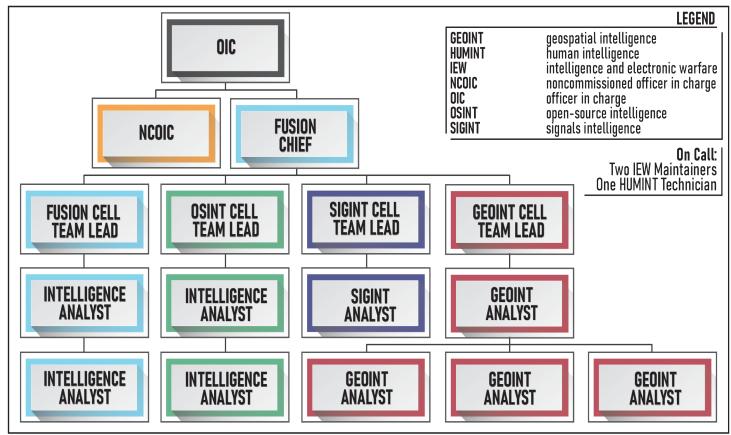


Figure 2. Intelligence Reach Cell Structure<sup>4</sup>

Staffing. Assigning a warrant officer or fusion noncommissioned officer to the team provides the experience and expertise necessary to orient and drive production.

Training. Planning should include courses on report writing, analytical research, product classification, command post computing environment, and specific courses for individual intelligence disciplines. This training enables intelligence reach cell analysts to work more efficiently with their division G-2 counterparts.

**Equipping.** Maintaining active accounts across the SECRET Internet Protocol Router Network (SIPRNET), the tactical SIPRNET, the mission partner environment, and the "This battlefield information collection and exploitation system will ensure that all necessary experience systems are available.

exemplifies

### **Division Focused Open-Source Intelligence**

leveraging external Open-source intelligence (OSINT) has taken many forms intelligence elements throughout its employment in the Army, changing through remotely while ensuring litigation, nascent capability, and organizational redesign. maximum collaboration Employment at the division level can quickly become redunto meet mission dant with theater (66th Military requirements." Intelligence Brigade-Theater) and forward-deployed theater-servicing (519th IEW BN/525th E-MIB) OSINT. The 103<sup>rd</sup> OSINT team, however, operated under U.S. Army Forces Command (FORSCOM) and XVIII Airborne Corps authorities, solely supporting the 3<sup>rd</sup> ID. To deconflict reporting and provide the best service to the division, the 3<sup>rd</sup> ID G-2 provided AO-oriented geographic focus areas from which the 103<sup>rd</sup> OSINT team provided reports. By focusing on open-source reporting in Poland and the Baltics, the OSINT team directly supported 3rd ID's priorities and operations, filling intelligence gaps where other intelligence disciplines lacked authority or international permissions to collect.

OSINT Stand-Up. In tandem with the stand-up of the intelligence reach capability, the 103rd IEW BN established an OSINT program in support of and under the authorities of the 3<sup>rd</sup> ID. The preconditions for conducting OSINT activities included:

- OSINT standard operating procedures (signed by the division G-2).
- ◆ OSINT collection plan (signed by the division G-2).
- OSINT risk assessment (signed by the division G-2).
- Authority to collect (FORSCOM and XVIII Airborne Corps memorandum signed by the respective G-2s).

- OSINT Basic Course mandated for all collectors.
- Army OSINT office memorandum with collection identification numbers for each collector.
- ◆ Compliance with Army Directive 2016-37, U.S. Army Open-Source Intelligence Activities; Department of Defense Manual 5240.01, Procedures Governing the Conduct of DoD Intelligence Activities; and Executive Order 12333, United States Intelligence Activities (as amended by Executive Orders 13284 [2003], 13355 [2004], and 13470 [2008).
- Responsibility to publish to the entire intelligence community.

**OSINT Outputs.** OSINT production consisted of three weekly open-source summaries and infrequent OSINT reports driven by requests for information. As a fluid, rapidly changing intelligence discipline, OSINT has unique educational requirements for staff that may be unfamiliar or no longer keep abreast of emerging OSINT tools, limitations, and regulations. OSINT leaders have a responsibility to actively seek opportunities to inform leaders and commanders about the updated regulations and current suite of available tools that will satisfy requirements most effectively. The 103<sup>rd</sup> OSINT products were among the most well-received products provided by the intelligence reach cell because of their timeliness and value in understanding public perceptions and the atmospherics within a given focus area.

### **Maximizing Collaborative Intelligence**

The 3<sup>rd</sup> ID G-2 met its mission requirements by developing a fit-for-purpose, federated intelligence reach cell in coordination with the 103rd IEW BN. This federated intelligence reach cell resulted from a collaborative mission analysis with numerous stakeholders to identify mission requirements and allocate the appropriate capabilities. The formalization of this team through the operations process ensured its support to the 3<sup>rd</sup> ID G-2 and enabled the massing of organic intelligence resources elsewhere within the division. Finally, the routine involvement of leaders from both organizations throughout the planning and operating of the intelligence reach cell ensured that it not only met mission requirements but continued to improve throughout its direct support to the division. This experience exemplifies leveraging external intelligence elements remotely while ensuring maximum collaboration to meet mission requirements. 💥

### **Endnotes**

- 1. Department of the Army, Field Manual 2-0, *Intelligence* (Washington, DC: Government Publishing Office [GPO], 01 October 2023), B-9.
- 2. Department of the Army, Army Doctrine Publication 2-0, *Intelligence* (Washington, DC: GPO, 31 July 2019), 3-5.
- 3. Figure adapted from original by CW2 Wickham.
- 4. Figure adapted from original by CW2 Wickham.

MAJ Franklin G. Peachey is the brigade intelligence observer, coach, and trainer at the Joint Multinational Readiness Center in Hohenfels, Germany. He previously served as the analysis and control element chief for 3<sup>rd</sup> Infantry Division's (ID's) deployment in support of U.S. Army Europe and Africa's Operation Assure, Deter, and Reinforce. He holds a master of arts in diplomacy from Norwich University, along with master degrees from the Art of War Scholars Program and the School of Advanced Military Studies.

CPT William "Bill" Lairson most recently served as the multidomain officer for the 103<sup>rd</sup> Intelligence and Electronic Warfare Battalion (IEW BN), 525<sup>th</sup> Expeditionary Military Intelligence Brigade located in Fort Stewart, GA. He served as an infantry platoon leader, mortar platoon leader, and company commander for the 1<sup>st</sup> ID in Fort Riley, KS while deploying to Germany and Poland. He holds a bachelor of science in education from the University of Akron.

CW2 Erik Wickham is an Army operations and integration technician who manages all-source intelligence training requirements and synchronizes 103<sup>rd</sup> IEW BN operational requirements in support of 3<sup>rd</sup> ID. His previous assignments include open-source Intelligence team chief for the 103<sup>rd</sup> IEW BN; intelligence sergeant, 10<sup>th</sup> Army Air and Missile Defense Command; South America noncommissioned officer in charge, 470<sup>th</sup> Military Intelligence Brigade; and intelligence sergeant, 2<sup>nd</sup> Squadron, 2<sup>nd</sup> Cavalry Regiment.



### Introduction

The Army is transitioning and adapting to the multidomain threat and requires updated processes and procedures to maintain an edge over future adversaries. The current conflict in Ukraine demonstrates that successful operations and survivability in a deliberate and dynamic fight depend on an army's ability to target expeditiously. The 3<sup>rd</sup> Infantry Division (ID) tested this concept using a strike cell within its division artillery (DIVARTY) to determine if the strike cell could focus the DIVARTY on a portion of the division's targeting requirements. This would enable the division's joint air-ground integration cell (JAGIC) to maintain focus on deep shaping operations. This strike cell concept proved its value during a recent command post exercise (CPX), where the Army's first DIVARTY strike cell enhanced division effects.

### **Testing the Strike Cell Concept**

While deployed in the European theater, Soldiers from the 3<sup>rd</sup> Infantry Division Artillery (3DIVARTY) and the 103<sup>rd</sup> Intelligence and Electronic Warfare (IEW) Battalion (BN), in coordination with the 3<sup>rd</sup> ID Headquarters, conducted CPX III in preparation for Austere Challenge 24 (March 2024), a multinational exercise for the V Corps, with support from the 3<sup>rd</sup> ID and 3DIVARTY.

CPX III simulated the complexities of conducting command and control, maneuver, fires, and intelligence operations in a large-scale combat operations environment. It also tested both the division and subordinate commands' ability to conduct command and control of assigned formations and the 3DIVARTY's ability to synchronize fires and deliver lethal effects. The 103<sup>rd</sup> IEW BN Soldiers were integrated into the 3DIVARTY intelligence section to enhance the unit's target acquisition capabilities and reduce the time from sensor to shooter.

"The Strike Cell integration into 3DIVARTY is a force multiplier that enables effects continuity throughout the division battlespace from the division forward boundary to brigades' front-line trace."—COL Shawn Bault, 3DIVARTY Commander.

The 3DIVARTY received the following capabilities for CPX III: a processing, exploitation, and dissemination (PED) element; a battle damage assessment team; an intelligence, surveillance, and reconnaissance assessment team; and mission manager support to assume responsibility for current collection operations management, freeing the 3DIVARTY intelligence section's officer in charge to focus on providing intelligence analysis and situational awareness.

The 3DIVARTY strike cell comprised a geospatial intelligence imagery analyst to monitor full-motion video and ground movement target indicator feeds and a signals intelligence analyst to monitor and analyze signal and communications data. A mission manager and a field artillery intelligence officer led strike cell operations. This combined effort facilitated a consistent focus on deliberate and dynamic targeting within the DIVARTY.

The 3<sup>rd</sup> ID uses target focus areas (TFAs)<sup>4</sup> to support targeting operations. Each TFA is a 15-kilometer by 15-kilometer square comprising a geographic grouping of target areas of interest and named areas of interest, which are anticipated to contain many high-payoff targets. The division actively targets the deepest TFAs beyond the coordinated fire line (CFL) and assigns the TFA nearest to the CFL to 3DIVARTY. Each TFA is assigned to a strike cell in the division's deep area, approximately 25 to 45 kilometers beyond the CFL, pending firing assets and munitions available. This practice was validated during CPX III and will be applied in future operations.

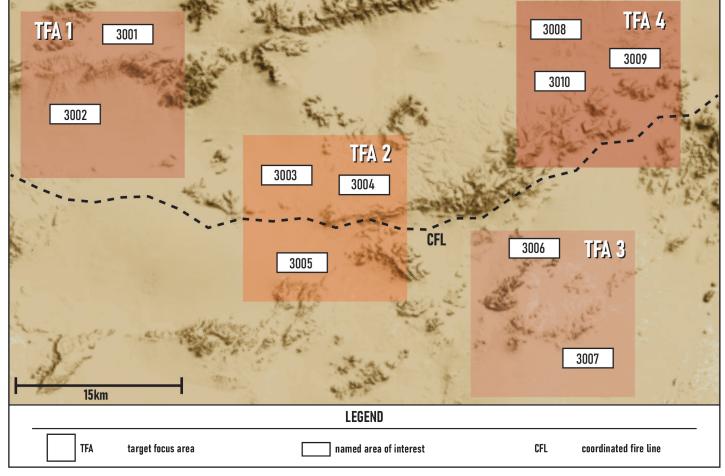


Figure. Example Target Focus Area

The 3DIVARTY, in close coordination with the division fires, the division G-2, and the 103<sup>rd</sup> IEW BN, used DIVARTY capabilities to detect, deliver, and assess targets. This enabled the rapid employment of surface-to-surface fires, decreased target decay times, and ultimately allowed the JAGIC, the strike cell, and the G-2 analysis and control element to maintain focus on deep area shaping operations. The 3DIVARTY passed objectives to the brigade combat teams to maintain constant pressure on simulated enemy formations. The 3DIVARTY then focused on TFAs with their strike cell to enable prioritizing the division's TFA nearest to the CFL. This maximized division effects and permitted the JAGIC to focus on the division's deep fight with long-range and joint fires capabilities.

The 3DIVARTY strike cell provided effective PED support to the field artillery intelligence officer and the fire support element's targeting efforts. The synchronization between the DIVARTY fire support element and the JAGIC was paramount in clearing airspace to ensure timely and accurate fires. The DIVARTY air defense airspace management/brigade aviation element assisted the JAGIC in expeditiously clearing airspace for fires after the division allocated a TFA to DIVARTY. In turn, the JAGIC supported DIVARTY in deconflicting airspace above the coordinated altitude by using airspace control measures to rapidly execute fires.

"The IEW Battalion provides the Division's Artillery element with an expeditionary intelligence capability that bolsters the intelligence capacity of the S-2 staff, allowing for targeting efforts independent of the Division's JAGIC."—COL Marcus O'Neal, 103rd IEW BN.

### Conclusion

The 3DIVARTY strike cell proved to be a critical capability, directly impacting division shaping operations and enabling division transitions across the battlefield. Through CPX III, the 3DIVARTY validated the strike cell concept. The 3DIVARTY strike cell, along with existing 3DIVARTY systems and the 103<sup>rd</sup> IEW BN, was central to the success of targeting operations. The strike cell led the fight when the division main and tactical command posts jumped, enabling a smooth transition and maintaining division effects. Additionally, the 103<sup>rd</sup> IEW BN accomplished its mission of providing additional intelligence analysis and collection capabilities to a division—the Army's unit of action in a large-scale combat operation scenario—enhancing the overall capability of the division's intelligence elements and ensuring lethality for maneuver elements.

"Our DIVARTY Strike Cell is critical to maintaining lethal contact to keep the *combine*<sup>5</sup> churning up ground as we transition contact to maneuver brigades." said MG Christopher Norrie, 3<sup>rd</sup> ID Commanding General.

### **Endnotes**

- 1. Joint Chiefs of Staff, Joint Publication 2-0, *Intelligence* (Washington, DC: U.S. Government Publishing Office [GPO], 26 May 2022), GL-22. Change 1 was issued on 5 July 2024. Signals intelligence is intelligence derived from communications, electronic, and foreign instrumentation signals.
- 2. The mission manager ensured the geospatial intelligence imagery analyst and signals intelligence analyst cued each other, tasked the unmanned aircraft system operator with dynamic movements, and communicated with the division for updated nonlethal effects and theater support. The mission manager also managed the collection plan focused on the high-payoff target list assigned by the division fire support element.
- 3. Department of the Army, Field Manual 3-09, *Fire Support and Field Artillery Operations* (Washington, DC: GPO, 12 Aug 2024), 2-3, 2-7–2-8. The field artillery intelligence officer communicated with the division artillery fires support element fire control officer by sending validated targets for the fire control officer to engage. Additionally, with support from the strike cell, the field artillery intelligence officer contributed to target asseessment (battle damage, munitions effectiveness, and re-attack recommendations).
- 4. *Target focus areas* are a non-doctrinal concept and term used by the 3<sup>rd</sup> Infantry Division to support its targeting operations.
- 5. The term *combine* describes how the 3<sup>rd</sup> ID places numerous effects on the enemy, simultaneously or sequentially, forcing a commander to make a choice between multiple unappealing options.

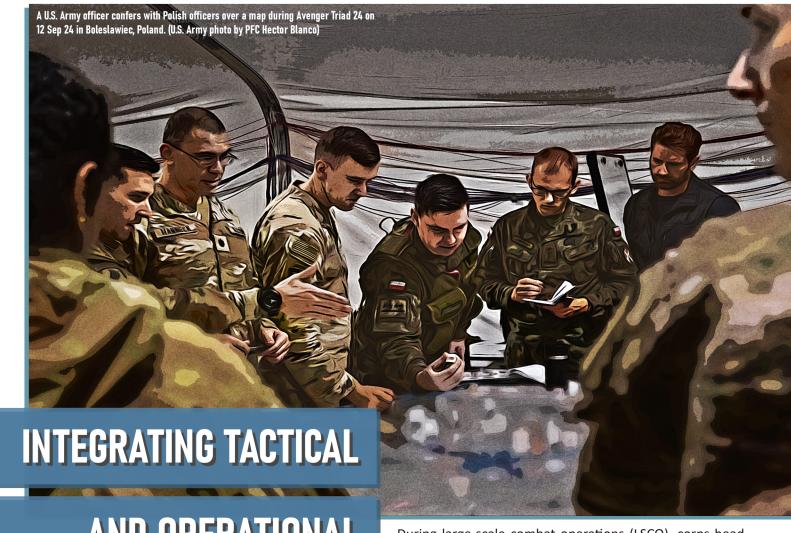
MG Christopher Norrie is the Commanding General, 3<sup>rd</sup> Infantry Division (ID), Fort Stewart, GA. He previously served as the Director, People First Task Force, Office of the Deputy Chief of Staff, G-1. He has held multiple command and other assignments within 1<sup>st</sup> Cavalry Division, 1<sup>st</sup> Armored Division, 1<sup>st</sup> ID, 4<sup>th</sup> ID, the Training and Doctrine Command, and Headquarters, Department of the Army staff. His operational deployments and combat tours include Operation Joint Forge, Operation Iraqi Freedom, Operation Spartan Shield, and Operation Atlantic Resolve. His military education includes the U.S. Army Armor Officers Basic Course, Infantry Officer Advanced Course, and the Command and General Staff College. MG Norrie is a distinguished military graduate of Bucknell University in Lewisburg, PA, and holds master's degrees in business administration from Embry-Riddle University and in national security strategy from the National War College.

COL Shawn Bault is the Commander, 3<sup>rd</sup> ID Artillery, Fort Stewart, GA. He previously served in the Pentagon as Chief of Staff for the Chief of Army Public Affairs. He deployed multiple times in support of Operations Enduring Freedom, Iraqi Freedom, Spartan Shield, Inherent Resolve, and European Assure, Deter, and Reinforce. COL Bault's military education includes the National War College, the School of Advanced Military Studies, the Command and General Staff College, Joint Firepower Control Course, Air Assault School, and Advanced Airborne School. He holds a bachelor's degree in history from the U.S. Military Academy and a master's degree in kinesiology from Texas A&M University.

COL Marcus O'Neal is the Director (J-2) Special Operations Command South, Homestead Air Reserve Base, FL. He previously served as the Commander, 103<sup>rd</sup> Intelligence and Electronic Warfare (IEW) Battalion, Fort Stewart, GA. COL O'Neal deployed several times throughout his career. He deployed to Iraq as both an armor and intelligence officer and to Afghanistan as an intelligence officer. COL O'Neal graduated as a distinguished military graduate from Southern University, Baton Rouge, LA. He holds a master of science of strategic intelligence from the National Intelligence University.

MAJ John Hornecker is the 3<sup>rd</sup> ID Deputy G-2, Fort Stewart, GA. He previously served as the 3<sup>rd</sup> ID Collection Manager and 3<sup>rd</sup> ID Artillery Brigade S-2 in support of Operation European Assure, Deter, and Reinforce (Latvia). MAJ Hornecker previously deployed in support of Operation Spartan Shield from June 2012–March 2013. His professional accomplishments include completion of the Army Intelligence Development Program-Intelligence, Surveillance, and Reconnaissance program. MAJ Hornecker is a graduate of Saint Louis University.

CPT Xavier Ehresman is the 3<sup>rd</sup> ID G-2 Targeting Officer. He previously served as the Commander, Bravo Detachment, 103<sup>rd</sup> IEW Battalion, Fort Stewart, GA. Prior to company command, he served as an infantry platoon leader and battalion assistant S-2 at Fort Drum, NY, and as a battalion S-2 for the 103<sup>rd</sup> IEW Battalion. He holds a bachelor's degree in forensic psychology with a focus in psychology from the University of New Haven. He is currently pursuing a master's degree in human performance and nutrition from Liberty University.



AND OPERATIONAL

**COLLECTION: V CORPS** 

**G-2 LESSONS FROM** 

**AVENGER TRIAD 24** 

**BY MAJOR BRIAN CANIANO** 

During large-scale combat operations (LSCO), corps headquarters operate at the transition between the operational and tactical levels of warfare. Corps commanders must understand the operational context of the battlefield to ensure their tactical operations achieve operational objectives.<sup>1</sup> Intelligence collection provides the information required for commanders to achieve this visualization. The corps G-2 must understand both its own tactical intelligence requirements and the operational level intelligence requirements of its higher headquarters to develop and execute a collection plan that encapsulates both levels of warfare.

U.S. Army doctrine provides a minimal description of efficient methods for corps headquarters to execute this process during LSCO. During the Avenger Triad 24 exercise in September 2024, V Corps refined techniques to integrate tactical collection requirements into a North Atlantic Treaty Organization (NATO) Multi-Corps Land Combatant Command (MCLCC) collection plan and to conduct intelligence collection in a contested LSCO environment. The G-2 collection management and dissemination (CMD) section prioritized corps and division requests for the limited available collection from its higher headquarters while integrating nonintelligence capabilities to maximize collection opportunities. This required V Corps to learn and adapt to intelligence handover and collection differences between the operational and tactical levels.

### NATIONAL STRATEGIC LEVEL

The national strategic level of warfare is the level of warfare at which the U.S. Government formulates policy goals and ways to achieve them by synchronizing action across government and unified action partners and employing the instruments of national power (FM 3-0).

### THEATER STRATEGIC LEVEL

The theater strategic level of warfare is the level of warfare at which combatant commanders synchronize with unified action partners and employ all elements of national power to fulfill policy aims within the assigned theater in support of the national strategy (FM 3-0).

### OPERATIONAL LEVEL

The operational level of warfare is the level of warfare in which campaigns and operations are planned, conducted, and sustained to achieve operational objectives to support achievement of strategic objectives (JP 3-0).

### TACTICAL LEVEL

The tactical level of warfare is the level of warfare at which forces plan and execute battles and engagements to achieve military objectives (JP 3-0).

CAMPAIGNS

CAMPAIGNS

CAMPAIGNS

MAJOR OPERATIONS

A

BATTLES

ENGAGEMENTS

SMALL UNIT & CREW ACTION

Figure 1. Levels of Warfare<sup>2</sup>

### **Exercise Background**

During Avenger Triad 24, V Corps executed LSCO in a contested operational environment against a near-peer enemy. U.S. Army Europe-Africa served as the NATO MCLCC, commanding six corps of U.S., NATO, and allied units across several countries. The MCLCC G-2 CMD required subordinate units to submit requests for collection from the MCLCC and theater capabilities 96 hours in advance of execution to facilitate review and submission into the air operations center's air tasking orders, with ad hoc and dynamic re-tasking within 96 hours also available through proper coordination. V Corps commanded three U.S. Army divisions, an expeditionary sustainment command, a fires brigade, a combat aviation brigade, and additional corps enabler formations. The 336th Expeditionary Military Intelligence Brigade provided V Corps G-2 with additional collection, targeting, and analytical support normally provided by an intelligence and electronic warfare battalion (corps). V Corps conducted both offensive and defensive operations during the exercise in support of the MCLCC.

### **Concept of Intelligence Collection**

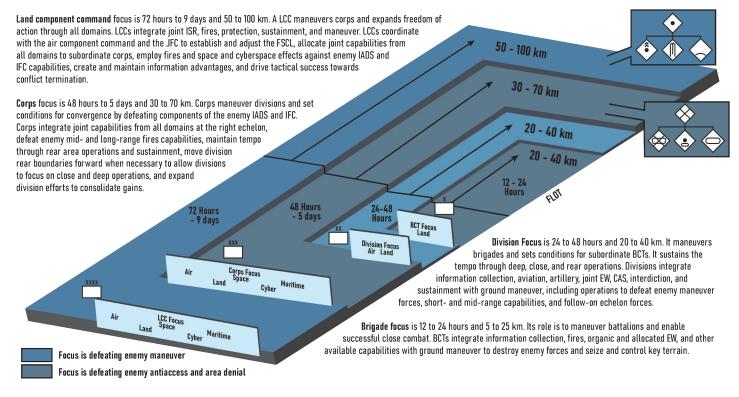
The V Corps collection strategy in entering Avenger Triad was to mix complementary geospatial intelligence and signals intelligence collection from higher echelon assets to cue V Corps full-motion video capabilities to detect high-payoff targets in real time for lethal targeting. Higher echelon assets provided the operational reach and detection capabilities to collect in the V Corps deep area and cue its assets. Organic full-motion video assets provided V Corps with a flexible, real-time capability that could be controlled internally on

the battlefield to expedite the targeting of enemy high-payoff targets. Theater asset availability and corps asset freedom of movement on the battlefield were critical to the success of the V Corps collection strategy.

Corps, divisions, and brigades execute intelligence handover at the tactical level using established graphic control measures known as intelligence handover lines that regularly correspond with the unit's fire support coordination measures. This relationship aligns collection with unit fire support plans to enable sensor-to-shooter operations at echelons in the corps and division deep areas. During Avenger Triad 24, corps and division intelligence handover lines and fire support coordination measures were within operational ranges of their aerial intelligence collection sensors. These lines shift as the battle progresses, with the higher headquarters conducting an intelligence handover of their former areas to their subordinate units to facilitate intelligence operations and targeting continuity.<sup>3</sup>

### **Lessons Learned During Execution**

V Corps encountered several obstacles to executing its collection strategy during Avenger Triad 24. Enemy integrated air defense systems (IADS) at the brigade and above echelons significantly restricted freedom of movement for corps aerial collection platforms. These enemy assets protected the enemy's command posts, electronic warfare systems, and longrange artillery, constituting most of the V Corps high-payoff target list. The enemy's advanced electronic warfare capabilities also prevented V Corps sensors from transmitting their collection feeds for processing, exploitation, and dissemination by intelligence analysts. In addition to the enemy,



Note 1. Distances are from the FLOT toward the enemy

Note 2. Time and distances are illustrative and vary depending on the situation

BCT CAS EW FLOT	brigade combat team close air support electromagnetic warfare forward line of own troops	FSCL IADS IFC ISR	fire support coordination line integrated air defense system integrated fires command intelligence, surveillance, and reconnaissance	JFC km LCC	join force commander kilometers land component command
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Figure 2. Notional Roles/Responsibilities in Time, Space, and Purpose at Different Echelons<sup>4</sup>

weather conditions also restricted the ability of V Corps to utilize real-time full-motion video for targeting. These same restrictions also degraded the ability of the three subordinate V Corps divisions to conduct collection in their deep areas.

The transition from operational to tactical level intelligence operations entails a fog of war as the level of detail that corps and division G-2 sections must anticipate and plan against intensifies. Intelligence handover between the operational and tactical levels of warfare is not as linear as the handover process internal to corps and division. The MCLCC's collection focused on its high-payoff targets and the locations of enemy operational and strategic reserve forces. However, MCLCC and theater collection and targeting priorities were noncontiguous and did not directly align with territory beyond the V Corps deep area. The MCLCC and theater high-payoff targets were often located inside the V Corps intelligence handover line boundaries. Concurrently, there were areas of the battlefield beyond the V Corps deep area that were not a collection or targeting priority for the MCLCC but contained enemy units that would later be relevant to V Corps tactical operations.

V Corps encountered all of these problems simultaneously during Avenger Triad 24. Corps and divisions could not collect across the breadth of their deep areas with organic assets due to the enemy IADS and electromagnetic warfare threats. The

MCLCC had limited collection on terrain and enemy forces beyond the corps deep area that V Corps would later have to detect and target. The operational environment did not support a detailed intelligence handover that could correspond to the pace of combat operations due to the sheer size and tempo of the battlefield. The V Corps G-2 collaborated with its higher, lower, and adjacent intelligence sections to develop solutions to fill these collection gaps.

### **Reimagining Intelligence Handover**

The V Corps G-2 needed to develop a new element of its collection strategy to account for how the LSCO environment's complexity and tempo influenced the application of intelligence collection at the operational and tactical levels of warfare. This necessitated a realization at the corps level that it could not plan collection operations with the expectation of receiving a detailed intelligence handover for all areas beyond the current corps deep area from the MCLCC. The V Corps G-2 assumed responsibility for requesting collection through the MCLCC to fulfill tactical-level information requirements regardless of their position on the battlefield. The focus of corps intelligence collection should dictate the forward boundary based on its relevance to future planning, rather than being limited by the range of corps collection and fires assets. This would enable V Corps to correctly forecast feasible

The General Atomics Aeronautical Systems' MQ-1C Gray Eagle is a medium altitude, long endurance unmanned aircraft system that provides intelligence, surveillance, and reconnaissance collection support.

collection allotments for future operations and develop additional methods to supplement projected gaps in collection without disrupting operations.

These two activities were paramount to V Corps

and the MCLCC's success during Avenger Triad 24.

V Corps was constantly competing for intelligence collection asset allocation with its adjacent corps and the MCLCC due to the sheer size of the enemy on the battlefield. During planning and targeting meetings, V Corps identified intelligence requirements against enemy units that would not be within range of V Corps collection or fires capabilities for at least 48 to 72 hours. V Corps simultaneously recognized that many corps and division collection requirements within V Corps boundaries related to current and future operations would likely go unfulfilled due to the enemy's protection and electronic warfare capabilities. These two factors prompted V Corps to develop a comprehensive and efficient method to holistically assess and prioritize corps and division collection requirements that required support from MCLCC and theater assets.

V Corps G-2 CMD realized it could not assess the fulfillment of these tactical intelligence requirements simply by reviewing the MCLCC and theater collection plans to verify if sensors were allocated to a specific area or unit. The mere presence of collection over an area does not indicate that such collection completes the processing, exploitation, and dissemination process to generate actionable intelligence. To assess the intelligence it could expect to receive from the operational headquarters and the existing gaps, V Corps needed an adequate understanding of the MCLCC collection plan and its overall priorities for intelligence collection. V Corps also required an understanding of the collection plans and priorities of its adjacent multinational and allied corps headquarters to determine whether they were competing similar requirements. V Corps determined that listing both priority intelligence requirements and priority units for targeting best described the relevance of operational-level collection to the tactical level. This collective information enabled V Corps to identify collection gaps against enemy second-echelon divisions and brigades beyond the V Corps deep area that were not enemy operational or strategic reserves. Identifying these gaps early enabled V Corps to request collection against these

forces and empowered
V Corps leaders to place
their command emphasis
on the need for resources to
support collection and targeting
during scheduled battle rhythm events

V Corps G-2 CMD leveraged their daily corps collection management working group to address collection gap concerns within the established battle rhythm and to keep pace with the tempo of LSCO. During Avenger Triad 24, the collection management working group agenda expanded from a review of collection plans between V Corps and subordinate units to include an assessment and review of prioritized collection requests to the MCLCC for the next 96 hours. The V Corps G-2 CMD section developed a list and graphic overlay of proposed collection requests incorporating division and corps requirements for each air tasking order cycle. V Corps G-2 CMD invited adjacent corps collection managers to the collection management working group to facilitate collection plan sharing and discussion. This collaboration was equally relevant to the corps and division CMD sections, as adjacent unit collection activities overlapped both echelons' deep areas. The collection management working group's output was a finalized list of prioritized requests for collection to the MCLCC. These processes resulted in an improved method of establishing collection priorities and identifying collection gaps, creating a shared understanding of collection requirements across echelons.

with the MCLCC.

### **Integrating Nonintelligence Assets for Collection**

Near-peer adversaries in LSCO have great depth in their air defense and electronic warfare capabilities to block the United States from detecting targets using aerial collection platforms. This prevents U.S. units from detecting and shaping high-payoff targets in the deep fight intended to enable successful future ground combat operations in the close fight. Due to the limited availability of theater and national collection assets during LSCO, corps and divisions must develop new strategies to collect intelligence in the face of vast enemy air defense and electronic warfare assets. V Corps developed two approaches to this problem. First, V Corps integrated allied territorial defense force elements into its collection plan to conduct ground reconnaissance against collection requirements. This gave V Corps a deep sensing capability that was not vulnerable to enemy IADS. Second, V Corps massed cyberspace and electromagnetic activities (CEMA) effects to neutralize enemy IADS at pre-planned intervals to support collection for follow-on deep attacks from the V Corps combat aviation brigade.

V Corps had no assigned or attached territorial defense forces. Still, elements of the Polish Territorial Defense Forces and the Lithuanian Land Forces operated within the V Corps area of operations under their respective national chains of command.<sup>5</sup> The V Corps G-2 shared the collection plan for the next 96 hours with its corresponding Territorial Defense Forces liaison officers (LNOs) at the corps command post. The LNOs provided responses from their units on whether they could deliver supplementary collection on identified named areas of interest. The two Territorial Defense Forces communicated collection on targets using spot reports through their LNOs to the V Corps G-2 operations cell. This method greatly facilitated timely intelligence reporting on enemy areas that V Corps aerial intelligence, surveillance, and reconnaissance assets could not access due to the air defense threat.

V Corps also deployed CEMA effects from theater and national assets to temporarily neutralize the enemy air defense systems and enable V Corps full-motion video collection. Like the MCLCC and theater intelligence, surveillance, and reconnaissance assets, these CEMA effects were limited in their availability across the battlespace. V Corps utilization of these effects supported corps out-of-contact attacks from the combat aviation brigade against enemy high-payoff targets. V Corps G-2 CMD integrated with V Corps planning operations for these deep attacks to allocate and request appropriate collection assets. V Corps adjusted its overall collection plan to account for these windows of CEMA effects to greatly enhance the survivability of assets and collection effectiveness.

### Conclusion

The scale and tempo of the LSCO battlefield will continue to increase through technological innovation and expanded military investment from U.S. adversaries. We must recognize our processing and data transmission limitations as the U.S. Army and our allies adapt to these challenges. Tactical command posts must innovate new methods to process and prioritize intelligence requirements on the battlefield to leverage the vast capabilities of theater and national assets. Collaboration between the tactical- and operational-level CMD sections across the battlefield enables the efficient prioritization of collection requests to ensure that tactical units achieve victory in the close fight.

### **Endnotes**

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### The Origin of the Idea

and Sergeant Derrion Robinson

"We've got some work to do and not a lot of time to do it," the Collection Manager said, hustling back to our workspace from the division targeting coordination board. The division's plan for the combat aviation brigade's deep attack had just changed based on recent intelligence we had collected concerning a particular threat formation's strength. As the G-2 collection management team, we needed to adjust our information collection synchronization matrix (ICSM)—the scheduling and tasking tool for all division collection assets—to align with the new maneuver plan.

"It's not a significant change," the Collection Manager continued, handing over his notes. "We just need the second Gray Eagle line to focus on the named areas of interest five kilometers south of our original plan."

The Collection Manager and I exchanged glances. We both knew that any change to the ICSM was a big deal. Shifting even one collection asset would create redundant collection, gaps in coverage, and a lack of mixed assets—a scheduling nightmare that would require a fine-tooth comb review of our whole collection plan for that 24-hour period. This "not significant" change was going to take hours of rewriting the plan, and we didn't have hours. We had minutes.

We needed a more efficient way to process these changes without sacrificing our level of analysis. That's where the Non-classified Internet Protocol Router Generative Pre-Training Transformer, or NIPRGPT, came in. This artificial intelligence (AI) tool enabled us to streamline our collection management, making quick adjustments possible without the usual headaches and providing a new level of collection plan analysis that we hadn't considered previously.

### The Problem

In this article, we will discuss how to access a large language model (LLM), like NIPRGPT, and share basic knowledge about using one, asking it the right questions, and how a problem-solving AI assistant can catalyze your team.

We did not initially think of using AI when faced with the problem of adjusting our ICSM. We have used AI before on our smartphones and for personal projects. We have heard predictions from senior leaders like Andrew Evans, the Director of the Army's Intelligence, Surveillance, and Reconnaissance Task Force, who said, "We must learn to leverage AI to organize the world's information, reduce manpower requirements, make it useful, and position our people for speed and accuracy and delivering information to the commander for decision dominance." Still, in our work we never really saw a current, practical application for AI. The idea of asking a LLM to "generate an information collection plan" seemed far-fetched. We doubted it would produce anything coherent or usable. However, we were out of viable options when we ran into the ICSM problem.

Our unit, the 11th Airborne Division, is the Army's newest division; consequently, we had a fraction of the manning of other Army divisions. At any given time, only three collection management Soldiers were working at our command post. We could not realistically collaborate and synchronize our efforts, whether internally with the team or externally with the rest of the staff, quickly enough to re-create and refine a quality product in the available time. The ICSM often incorporates over 670 data points, with tens of thousands of options for how and when to collect the information needed. Given the small staff and limited time available, the plan was sure to have inefficiencies and errors where we missed certain named areas of interest (NAIs), enemy formations, or targeting priorities requiring a collection focus. Although we applied an A-plus effort, by the end of our rushed edits, it felt like we were stuck with a C-minus product.

As we brainstormed, we found more issues. How could we ensure that our changes did not create redundant collection or gaps in coverage? How could we mix collection assets effectively without spending hours on manual adjustments? We knew that AI could provide some text-based solutions if we needed help writing Annex L (Information Collection), but the ICSM is a product that often needs to be communicated in a format best represented by a spreadsheet. LLMs can't produce spreadsheets. We needed a solution that could manage the complexity of our data and the urgency of our situation.

### The Solution

We started asking basic questions on commercially available Generative Pre-training Transformer (GPT) services using prompts like, "Can you make a schedule for three people who cannot be in the same place at the same time?" "Can

you coordinate for each of those three people to visit ten different parks during a 24-hour period?" "Can you make sure that each of those people is at those parks for multiple hours?" And, finally, "Have the first person focus on parks 1 through 3." We reasoned that this generic situation could represent the problems we faced with the ICSM's development. Surprisingly, these prompts generated text-based answers that were very promising. We realized, though, that while a commercial GPT service could be helpful, its results were not useable. Since we were working with collection assets and operational planning, we needed to find a tool already familiar with Army doctrine and operations available on both controlled unclassified and classified systems.

We began researching Department of Defense LLMs that fit our requirements and identified several options. The most helpful and easiest to use on unclassified systems were NIPRGPT and CamoGPT<sup>3</sup>, but NIPRGPT, specifically, was more suited to our purpose and became our preferred app for testing the integration of AI into our team.

Through trial and error, we could make the LLM work for us rather than the other way around. Our desired end product was a copy-and-paste-worthy ICSM publishable as a division fighting product during a warfighter exercise. By using an Al assistant, we turned an error-prone process that cost us hours of time and included some emotional strain into a process that took minutes, had minimal errors, and allowed us to think about "big picture" problems instead of grinding out updated schedules for a dozen or more collection assets.

Ours was a niche problem set; however, the practical ways we applied AI may also apply to a variety of similar work issues. Accessing NIPRGPT is simple; after that, it is just a matter of asking the right questions.

### **Creating a NIPRGPT Account**

Using your NIPR government email and user certification to authenticate your identity via the Department of Defense Global Directory, you can create a NIPRGPT account and access the platform. The NIPRGPT chat function, which provides the greatest familiarity to most users, allows users to engage in a conversation with the AI platform. The platform's developed algorithm answers users' questions based on a text database that is current as of December 2023. Responses to inquiries are "generated answers," meaning that the platform creates new information from its database. The platform also has a "Workspace" function that enables users to conduct queries of text-based uploaded documents such as articles, doctrine, or white papers. Additionally, the platform offers multiple help options for users who are unfamiliar with AI applications.

Our team's accounts were created within five minutes of applying, and we began testing the LLM. Our requests did not require approval by supervisors or other security managers—unlike many Army programs, access to NIPRGPT needed no

other credentialing. Finally, unlike commercial LLM subscriptions, there is zero cost to the unit.

### **Asking the Right Questions**

The turnaround time for producing an Al-assisted product depends on asking the right questions. As we experimented with our inputs, key phrases and words like "text-based representation" and "spreadsheet" helped the Al tool understand the baseline product we wanted to create. Specifying numbered rows and lettered columns also helped communicate adjustments to the product's layout.

The AI tool excels in its ability to ingest rules and requirements and make on-the-spot adjustments. For example, if a user inputs a rule like, "no information collection asset can collect on an area for more than 2 hours," the AI tool will immediately change pre-coordinated collection timelines to comply with the new conditions. Setting up your rules and requirements at the beginning of product creation shortens the refinement process while minimizing the chances of human error that could result in coverage gaps and redundant collection.

Unfortunately, the chat function cannot retain rules and conditions from previous conversations. This is a known issue that NIPRGPT creators are working to address. Until the issue is resolved, users must re-enter the rules and questions at the beginning of each new chat to return to the desired baseline product.

The chat is also very literal, sometimes requiring users to refine their questions or requests. For example, if a user asks

the chat to make an Excel sheet or a spreadsheet, it will reply that it cannot do so—but it will give you step-by-step instructions on how to use Microsoft "Excel" to create a spreadsheet on your own. However, rewording the request to ask for a "text-based representation" of a spreadsheet will result in a spreadsheet that can be copied and pasted into an Excel workbook. Working through these minor issues is a simple learning process that is more than worth the minutes of effort.

After some trial and error with setting rules and asking the right questions, we had a working set of instructions on how to start a conversation with the LLM to produce the Al-adjusted products we needed within seconds. The LLM even produced a written summary of the adjustments we made to the instructions, which was a great help for understanding the fine-tuning process and rapidly created shared understanding across the collection management team on effectively using this tool.

### **A Practical Example**

Building the rules and asking the right questions is an iterative process. In this example, we prompted NIPRGPT to help us refine our ICSM. We began by stating the product's intent and providing some basic information. The initial interaction (Figure 1) was a request to build a synchronization spreadsheet for a 24-hour period with four assets.

Figure 2 reflects a request to adjust the spreadsheet's layout to swap the information between the columns and rows, reassigning the time as column headers with the assets naming each row.

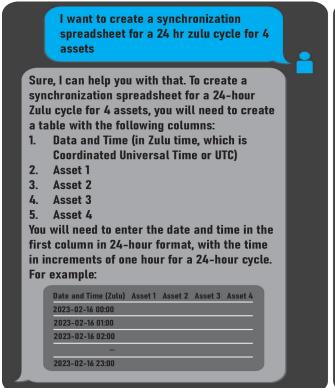


Figure 1. Initial Interaction with NIPRGPT (adapted from author original)

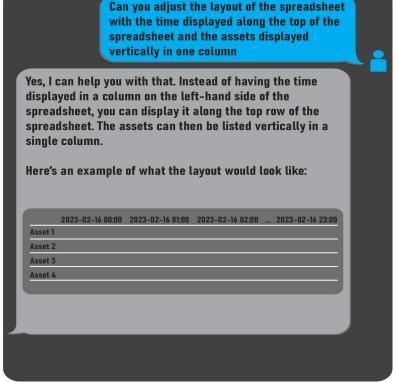


Figure 2. Request for Adjustment Interaction with NIPRGPT (adapted from author original)

After establishing the product layout, we provided the NAIs that needed to be built into the collection plan (Figure 3). These were numbered T-001 through T-020. Each asset was assigned specific NAIs for collection. We placed rules and conditions on the assets' collection scheme. The LLM then created a prioritized ICSM based on the information we provided.

Once the ICSM was created, we set specific collection requirements. At that point, we could also request a summary of each asset and NAI by total collection time to provide a holistic understanding and assessment of the collection plan. Figure 4 (on the next page) illustrates this end product, which we copied and pasted into an Excel spreadsheet without adjustments, requiring minimal user labor.

### **Other Potential Uses for Large Language Models**

As our team continues to grow in understanding of how LLMs work, we can recognize many other potential applications. Examples include brainstorming priority intelligence requirements (PIRs), providing generalized indicators of enemy intent for the information collection matrix, and assisting with generating Annex Ls that are easier to digest for our subordinate units.

LLMs can be helpful when writing PIRs for different division operations. Instead of asking, "Can you write PIRs for our division operation?" we begin by describing some of the operation's mission variables—for example, "We are a division in the offense that is planning to use an air assault in a forested environment with rolling hills while facing a threat the size of a brigade that is set in an established defense.

What are the recommended PIRs?" Typically, this will result in a list of some example PIRs with a doctrinal breakdown by mission variables:

- Enemy.
  - ◆ Determine the location, range, and effectiveness of the air defense.
  - ◆ Locate and assess vulnerabilities of the threat's command and control.
  - ◆ Determine where the threat's reserve is and how it will be committed.
- ◆ Terrain.
  - Determine the weather patterns that will affect air assault operations.
  - ◆ Locate key terrain for landing areas around the objectives.
- **♦** Time.
  - ◆ Determine key moments of vulnerability in the threat's air defense, such as maintenance times or cloud cover, for a defense that isn't radar-assisted.
- ◆ Civil Considerations.
  - ◆ Determine how civilians will interfere with movement or how they will attempt to leave the conflict area.

Although the PIRs are broad and require additional work to tailor them before publishing, they are an excellent starting point. The LLM allows users to rapidly structure their own questions and form the recommended PIRs for the division commander.

I want the assets looking at named areas of interest (NAIs). The NAIs will be T-001 through T-020. Asset 1 will be looking at NAIs T-001 through T-005. Asset 2 will be looking at NAIs T-006 through T-010. Asset 3 will be looking at NAIs T-011 through T-015. Asset 4 will be looking at NAIs T-016 through T-020. I would like to make rules and conditions for the assets as they collect. They will collect continuously throughout the 24-hour period. No asset can collect on more than one NAI at a time. No asset can collect on one NAI for more than 2 hours at a time. Make a random schedule that conforms to the rules I have stated. I apologize for the confusion earlier. Based on your requirements, here's an example of what the completed top row and first few columns of the spreadsheet could look like: 03:00 05:00 07:00 Asset 1 T-001 T-002 T-003 T-004 T-005 T-001 T-002 T-003 T-004 T-005 T-001 Asset 2 T-006 T-008 T-010 T-006 T-006 T-015 T-012 T-013 T-011 Asset 3 T-011 T-012 T-013 T-014 T-011 T-014 T-015 Asset 4 T-016 T-017 T-018 T-019 T-020 T-016 T-017 T-018 T-019 T-020 T-016

Figure 3. Named Areas of Interest Interaction with NIPRGPT (adapted from author original)

	00:00	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00
Asset 1	T-001	T-002	T-003	T-004	T-005	T-001	T-002	T-003	T-004	T-005	T-001	T-002	T-003
Asset 2	T-006	T-007	T-008	T-009	T-010	T-006	T-007	T-008	T-009	T-010	T-006	T-007	T-008
Asset 3	T-011	T-012	T-013	T-014	T-015	T-011	T-012	T-013	T-014	T-015	T-011	T-012	T-013
Asset 4	T-016	T-017	T-018	T-019	T-020	T-016	T-017	T-018	T-019	T-020	T-016	T-017	T-018
	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00		
Asset 1		T-005	T-001	T-002	T-003	T-004	T-005	T-001	T-002	T-003	T-004		•
Asset 2	T-009	T-010	T-006	T-007	T-008	T-009	T-010	T-006	T-007	T-008	T-009		•
Asset 3	T-014	T-015	T-011	T-012	T-013	T-014	T-015	T-011	T-012	T-013	T-014		
Asset 4	T-019	T-020	T-016	T-017	T-018	T-019	T-020	T-016	T-017	T-018	T-019		

Figure 4. End Product Spreadsheet (adapted from author original)

When humans create an information collection matrix, they often run out of ideas or fail to consider all warfighting functions when assessing indicators of enemy intent. LLMs can provide valuable assistance in thinking through different factors, and they can offer example indicators that we can sort through for our specific operation. For example, consider the following LLM query: "What are some indicators of a threat rotary wing attack battalion planning a longrange assault into an American division's area of operations? Account for American tactical air defense and threat strategic enablers." The LLM will produce a list of indicators that includes increased reconnaissance activity, forward deployment of forces, increased logistical support, preparations for suppressing enemy air defenses, enhanced communications, electronic warfare and cyber operations, use of strategic assets, pre-assault reconnaissance, simulation and training, and civilian information operations.

These are only a few examples of Al's potential applications on the battlefield. Our only limits are our creativity and willingness to experiment with finding the right questions to ask.

### Not the Tool for Every Task

While an LLM can help make tasks more efficient, it is not a suitable tool for every task. It is important to understand the limitations and weaknesses of LLMs in the field. For example, an LLM is a poor tool choice when sourcing direct quotes or gathering specifications on equipment, and although it is a powerful assistant it cannot do our jobs for us.

LLMs are not designed to pull direct quotes from doctrine or other published material. The NIPRGPT model is not intended to reference specific sources or documents directly; instead, it generates responses based on a broad survey of resources. This means that the LLM generates a response that a source *could* say or extrapolates what that source *would* say rather than directly referencing what that source *did* say. First Lieutenant Nicholas Brooks, one of the designers of NIPRGPT, recommends finding direct quotes using internet search functions. The NIPRGPT model is not connected to current internet content, so it may not reflect the exact wording or context of a specific quote or doctrinal reference.<sup>4</sup>

Likewise, LLMs are not well-suited for gathering equipment capabilities. The models' responses are based on a wide range of sources and may not always reflect the most accurate or up-to-date information. For this type of information, it is always best to refer to official documentation, internal running estimates, and technical manuals. Once that information is in hand, it can be included in the LLM rules. This will result in more accurate assessments when the model is asked to help with understanding the best uses for specific capabilities.

Al can be a valuable teammate when generating ideas or providing information, but it cannot replace thorough planning or team collaboration. In his October 2024 appearance on The Convergence Podcast, Lieutenant Colonel Blaire Wilcox noted that "[Al] makes professionals better. It doesn't necessarily make amateurs or the inexperienced [into] professionals." There are no shortcuts to good professional

military staff work—but there are catalysts. While AI models cannot understand the nuances of a specific situation or develop a plan independently, they can help generate ideas and prevent the kind of human errors that can be created when processing substantial amounts of data, as was our situation with the ICSM.

By treating AI like any Soldier, we can trust it to provide the best information it has. As with any team member, though, it is important to conduct regular inspections and reviews to ensure that the information it provides is accurate and relevant while continuing to coach it to improve its performance continuously.

### Conclusion

Integrating AI into staff processes, specifically a LLM like NIPRGPT, has proven to be a valuable tool for streamlining tasks and providing a new level of analysis in the 11<sup>th</sup> Airborne Division. We used it to adjust our ICSM quickly and continue to find other uses for it as we develop our standard operating procedures. The practical applications across all staff processes in a G-2 section, the staff sections of the other warfighting functions, and beyond into other echelons of command are limitless.

We cannot allow ourselves to perceive AI as a tool that needs to be perfect and provide independent answers without human input and analysis. It must be employed practically. As our experience demonstrates, the practical application of AI has the potential to improve the quality and efficiency of any team's performance. How can you add AI to your team?

### **Endnotes**

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On a future battlefield a U.S. Army corps executes a joint forcible entry operation into terrain currently occupied and defended by an adversary nation state. This fictional enemy enjoys numerical superiority and a dense antiaccess, area-denial system of systems, including formidable sensing capabilities, integrated air defenses, and an integrated surface-to-surface fires complex employing tube artillery, rockets, and longer-range missiles. The corps must rapidly gain an information advantage-gains realized from a comprehensive understanding of the battlefield while denying the threat any ability to achieve its information goals-to defeat this bristling, lethal, and entrenched enemy force. To accomplish this, the future corps must leverage the latest available technology to obtain, aggregate, interpret, and disseminate large amounts of data at speed to enable the commander's desired approach. Gaining and maintaining this data advantage enables the corps to converge the right effects at the right time in order to address key adversary capabilities and create opportunities for maneuver forces to close with and destroy the enemy.

### Introduction

XVIII Airborne Corps G-2 leveraged an emerging data management technology, the Army Intelligence Data Platform (AIDP),1 to fight and win in a scenario much like the preceding vignette during a recent corps warfighter exercise. In such an environment, the intelligence enterprise must employ technology to maintain pace with the increasing speed of war. The Army must progress beyond 12- or 24-hour reporting cycles, PDF files attached to emails, reviewed and published intelligence information reports, and significant activity storyboards. The intelligence community is a data-centric, data-driven profession responsible for informing decision makers by providing the latest and most accurate information at the speed of now. Having an information advantage supports situational understanding and enables decision advantage. To achieve that information advantage, XVIII Airborne Corps employed AIDP during Warfighter Exercise 24-05 (WFX 24-05) as the primary intelligence warfighting system to execute the following key G-2 tasks:

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BY CHIEF WARRANT UFFICER 3 JUHN BARTLETT	

- ◆ Federate AIDP across echelons.
- ◆ Achieve shared understanding.
- Execute intelligence support to targeting.
- ◆ Perform battle damage assessments (BDAs).
- ◆ Conduct collection management.

The foundational framework of AIDP forms a collaborative platform providing the capability to conduct intelligence preparation of the operational environment in support of mission analysis at the corps level and below. The tools in AIDP provide an intelligence-specific, discipline-agnostic collaborative environment in which tactical echelons communicate in near real time. AIDP can depict the common intelligence picture (CIP) graphically, in conjunction with other staff overlays and estimates. WFX 24-05 provided an environment of speed and complexity, challenging the XVIII Airborne Corps G-2 to adapt while in contact and to meet planning and operational requirements. While AIDP's framework and user interface enabled the G-2 to achieve shared understanding across echelons in near real time, three key areas presented challenges: knowledge management, intelligence support to targeting execution, and single-source intelligence integration.

Working within AIDP's cloud environment presented both advantages and disadvantages. The collaborative tool suite in AIDP provided the primary advantage by enabling synchronization and integration both internally and externally across the battlefield in near real time. This feature was a critical factor to achieving shared understanding across echelons. During WFX 24-05, the XVIII Airborne Corps intelligence process centered around the G-2's "Big 5" production: the CIP, intelligence running estimate, event template, intelligence collection synchronization matrix, and BDA. The G-2 planned to develop and maintain these production outputs within AIDP using live data. AIDP's design enabled "the integration of intelligence and information from all relevant sources in order to analyze situations or conditions that impact operations."2 AIDP's foundational toolsets, Gaia and Dossier,<sup>3</sup> enabled the XVIII Airborne Corps G-2 to maintain these products in real time while simultaneously sharing data and analysis across the formation; however, there were still technological, capability, and knowledge management limitations.

When using AIDP as the primary production toolsuite, analysis did not stop for production; instead, analysis *became* production. Within AIDP, real-time analysis and the ability to modify battlespace geometry rapidly proved remarkably successful. Analysts could modify tactical graphics, manipulate visual analytical tools (e.g., range rings/fans, modified combined obstacle overlays), and rapidly share data, which outpaced the previous production cycles utilizing legacy systems. Creating shared understanding at the pace of operations

facilitated flexible commander prioritization. It truncated the decision-making cycle, relying on orders or dedicated battle rhythm events to publish enemy situation and graphic overlays through the Defense Digital Service.

The XVIII Airborne Corps G-2 created links and data feeds, constantly pushing and pulling data, to ensure the CIP remained current and shared with the common operational picture within the Maven Smart System (MSS).4 MSS is the XVIII Airborne Corps primary mission command system, supporting plans, operations, and fires. This deviation from historical production cycles enabled the G-2 to support deep operations by maintaining a CIP of enemy forces throughout the area of interest. It also enabled the G-2 to provide accurate and timely input into the friendly decision support matrix. While these benefits are clear game changers, the current architecture and interoperability between AIDP and MSS are imperfect. However, AIDP is consistently improving. To address technical issues related to interoperability between MSS and AIDP, field service representatives are working directly with units through Soldier touchpoints to capture and resolve problems, build data link connections, and assist in developing software tools to support the analyst.

### **Knowledge Management**

Developing a knowledge management plan, utilizing the primary, alternate, contingency, and emergency (known as PACE) communications plan, and reinforcing digital discipline is key when working in a live data cloud environment. Prior to XVIII Airborne Corps G-2 implementing a knowledge management plan, analysts found knowledge management cumbersome because AIDP allows real-time access and information flow with constant inputs, edits, and refinements from 100plus users. The XVIII Airborne Corps G-2 quickly identified maintaining quality assurance, quality control, and version control as critical to ensuring the continued accuracy of the G-2's "Big 5" production. The G-2 discovered that the absence of permissions, quality assurance, and quality control capabilities to manage AIDP objects at echelon significantly affected current operations, future operations, and fusion workflows. Subordinate echelons could not refine objects from the bottom-up without impacting the corps picture, and any update to an object in the system impacted every unit and user utilizing AIDP. Leveraging AIDP's chat service enabled the quick dissemination of guidance across the formation to reinforce digital discipline, establish new tactics, techniques, and procedures (TTPs), and confirm acknowledgment from subordinates. Knowledge management is naturally difficult, especially when dealing with live data. AIDP enabled the rapid identification of solutions and dissemination of TTPs all within the platform, showcasing the system's flexibility and allowing the G-2 to transform in contact.

## Intelligence Support to Targeting

Regarding systems and their interoperability, passing objects between AIDP and MSS, specifically within the Target Workbench tool,6 was significantly limited during WFX 24-05. The bifurcation of observation and object-based production created a significant time gap (typically 10 minutes) before the data populated into Gaia. This time gap caused a cascading effect that restricted the XVIII Airborne Corps ability to conduct dynamic targeting, especially in the fast-paced large-scale combat operations environment.

Analyzing and disseminating a near realtime indication of target activity is essential for enabling the intelligence warfighting function to feed the targeting process.

Conducting deliberate targeting

using objects created in AIDP also had its limits. The XVIII Airborne Corps G-2 produced the enemy order of battle using AIDP's Graph tool, creating objects and associating key pieces of equipment for each unit. There were two reasons for this: first, these objects would feed BDA, and second, this would allow analysts and targeteers to gain efficiencies by associating information and intelligence to the objects to build the "target packet" in AIDP instead of the previously used PowerPoint slide deck.

Unfortunately, the target information could not be passed to MSS. This limitation forced XVIII Airborne Corps G-2's targeting team to operate on MSS almost exclusively to support fires and to use the Target Workbench residing on MSS. Once targets were actioned and the collection had confirmed or denied effects on the target, AIDP ingested the observation reports. Analysts in the BDA cell then manually sorted and filtered those reports to associate them with the specific target. This is an instance where XVIII Airborne Corps identified slow, inefficient processes but could not implement a quick-fix solution during WFX 24-05. Nevertheless, it provided a key opportunity for the G-2 to provide feedback on the issue and work directly with AIDP representatives to begin investigating a solution—a practical demonstration of how AIDP supports transformation in the intelligence enterprise, allowing it to fight at the speed of data in conflict.

### **Obstacles to Single-Source Integration**

Integrating single-source intelligence analysis into AIDP is crucial for intelligence to support both targeting and situational awareness during large-scale combat operations. Intelligence professionals work from the assumption that the enemy utilizes fast emplacement, engagement, and displacement of systems to bolster survivability. As a rule, a well-trained crew

can displace within 10 to 15 minutes, making targeting timelines exceptionally tight. Analyzing and disseminating a near real-time indication of target activity is essential for enabling the intelligence warfighting function to feed the targeting process. Moreover, intelligence analysts must provide as much time as possible for the targeting and fires cells to do their jobs, meaning that intelligence should be disseminated no more than 10 minutes from discovery. Integrating single-source analysis tools into AIDP would shorten production timelines and (assuming AIDP will be able to communicate directly with systems used

by the fires cell) could allow for targeting and engagement of enemy systems before their displacement.

Before continuing, it is important to note that AIDP was initially designed for military intelligence brigades-theater to "set the theater" and conduct intelligence preparation of the operational environment. It is a tool still under development. AIDP does not currently host organic capabilities or tools to support single-source disciplines. Because of this, single-source analysts encountered many challenges using AIDP to its full potential in command post exercises before and during WFX 24-05, primarily because the tools were still in development or otherwise not yet released. The next evolution of AIDP will include All Source II/Intel Apps, which will address some of the gaps.

Nevertheless, despite unavailable capabilities and toolsets, single-source analysts worked with field service representatives during the exercise to develop workarounds. This allowed the quick development of data paths, building tools for data correlation, and ingesting analysis from other platforms into AIDP. Additionally, the coding foundation in AIDP allows units to innovate and develop their own tools to aid in analysis, something previous military intelligence programs of record did not allow. This transformation in contact enabled all-source intelligence to provide a timely and accurate CIP.

From a single-source perspective, the first challenge for the signals intelligence (SIGINT) section centered around training. Single-source intelligence analysts did not participate in AIDP's fielding training because the system was released as an all-source-specific suite of tools. XVIII Airborne Corps SIGINT analysts first utilized AIDP during the command post exercise immediately preceding WFX 24-05. This lack of training and experience meant SIGINT analysts learned the

capabilities and limitations of AIDP in real time while participating in the exercise. SIGINT analysts overcame the initial knowledge gap and achieved basic proficiency with AIDP by the end of the command post exercise before the beginning of the warfighter exercise.

A second issue is that AIDP does not possess a SIGINT analysis toolset. SIGINT analysts must accomplish very specific information processing tasks. Although SIGINT reports ingested into AIDP constitute "finished" reporting, SIGINT analysts need certain second-order analysis tools to provide value to the all-source CIP. These tools are not yet present in AIDP. XVIII Airborne Corps SIGINT analysts could not convolve multiple ellipses to provide better targets for deliberate and dynamic targeting efforts. They could not process geolocational lines of bearing to pinpoint signals of interest. Additionally, AIDP could not determine how a signal would propagate across varying terrain or environmental conditions.

For SIGINT analysts to process and analyze the sheer volume of data expected during large-scale combat operations, manipulating the metadata of reports quickly and efficiently to provide greater situational understanding is necessary. AIDP can parse, filter, and cross-reference data and metadata from reports reasonably well; however, the learning curve for achieving this function used time SIGINT analysts could not easily spare during the exercise. To address this, the SIGINT analysts adjusted their TTPs, exporting the datasets from AIDP and importing them into FADE/MIST, a National Reconnaissance Office-sponsored toolset capable of processing metadata in a useful way. Efforts to reintegrate this data into AIDP to support situational understanding and all-source analytics were unsuccessful.

Finally, the timeliness of data integration also created issues. The exercise data path created significant latency between the time of intercept and the time of analysis. As the exercise progressed, AIDP programmers attempted to address that latency but could not mitigate it enough for SIGINT analysts to use the collection to support the dynamic targeting process. As a result, SIGINT analysts supporting the dynamic targeting process moved "upstream" to the U.S. Army Intelligence and Security Command Cloud Initiative instance, which allowed them to submit targets fast enough for the fires section to prosecute them.

Implementing a suite of SIGINT-specific analysis tools in AIDP could address many of the issues experienced by the XVIII Airborne Corps SIGINT section. This suite could include an ellipse convolving tool, a line-of-bearing generator, and a line-of-sight/radio horizon tool. Improving the metadata analysis capability in AIDP to accommodate the types of analysis used by SIGINT analysts or enabling data exported from AIDP for analysis using another tool to reintegrate after analysis could greatly enhance situational understanding.

Enabling AIDP to interface as directly with exercise dataflows as with its real-world counterparts would allow intelligence analysts to train more effectively and operate as they would in real-world situations.

### Conclusion

If the intelligence enterprise is to innovate, adapt, and transform in contact, intelligence professionals must understand both the doctrine and the coding foundation upon which AIDP is built. AIDP's foundational tools, Gaia and Dossier, enabled the XVIII Airborne Corps G-2 to maintain necessary products in real time while simultaneously sharing data and analysis across the formation. This sharing is essential to gain and sustain decision advantage over our adversaries on the modern battlefield. Throughout WFX 24-05, XVIII Airborne Corps encountered and overcame significant technological, capability, and knowledge management limitations. The end user is key to identifying AIDP's limitations, and recognizing this allows intelligence professionals to demonstrate creativity and exploration in developing new tools and tradecrafts. Given this autonomy, intelligence professionals, collaborating with expert coders and software engineers, can quickly adjust, modify, enhance, and improve AIDP. The current iteration of AIDP does not service all requirements for each intelligence discipline, does not include intuitive workflows to create doctrinal products for which the intelligence enterprise is responsible, and does not ingest all required data feeds. Nevertheless, AIDP does provide a solid foundation, enabling the Army intelligence community to transform at speed to overcome the increasing national security challenges of today, as well as those of tomorrow and beyond.

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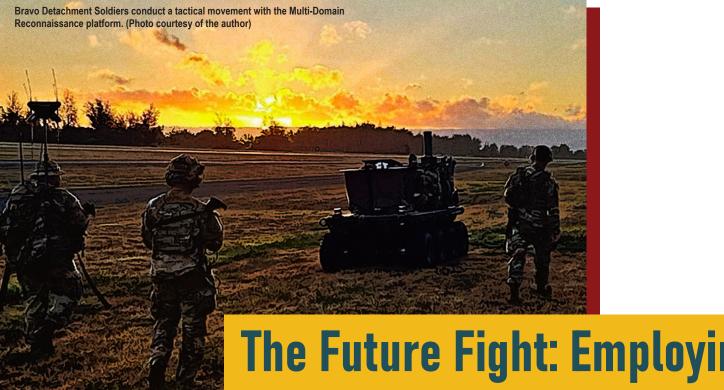
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# The Future Fight: Employing Robots in Tactical Formations

by Captain Leland Lancaster

### **Introduction: Project Context**

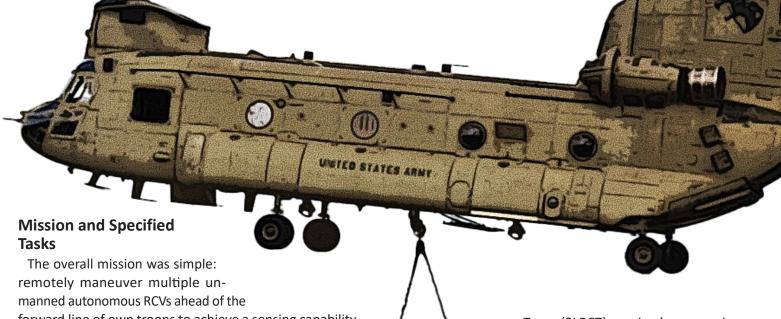
Military intelligence (MI) formations require collection assets capable of finding the enemy and supplying target data in a timely manner. Refining the sensor-to-shooter process is critical to enabling freedom of maneuver on the ground, and this refinement is primarily contingent on technological advances. The Rapid Defense Experimentation Reserve is one of the U.S. Department of Defense's (DOD's) primary means of quickly modernizing the force, and equipping Soldiers with robotic combat vehicles (RCVs) is one of their current lines of effort.<sup>1</sup> After the DOD allocated funds toward developing autonomous RCVs, leaders from the U.S. Army Combat Capabilities Development Command (DEVCOM) contacted tactical intelligence units within the U.S. Indo-Pacific Command to coordinate testing.

In August 2024, as part of this larger DOD initiative, the 125<sup>th</sup> Intelligence and Electronic Warfare Battalion (IEW BN) at Schofield Barracks, Hawaii, fielded and experimented with four fully autonomous Small Multipurpose Equipment Transports, or S-METs,<sup>2</sup> RCVs provided by the DEVCOM Ground Vehicle Systems Center. One was equipped with a Common Remotely Operated Weapon Station (CROWS) lethality system,<sup>3</sup> capable of mounting and autonomously firing crewserved weapons; this unit would provide direct-fire support. The remaining three robots came equipped with a tethered unmanned aerial system (TeUAS) on top of each platform

capable of direction finding and full-motion video; these would provide deep sensing in support of targeting.

After agreeing to the project, the 125<sup>th</sup> IEW BN tasked its Bravo Detachment to conduct the experiment. Bravo Detachment serves as the battalion's expeditionary element, and experimenting with RCVs gave the detachment additional equipment to support its signals intelligence (SIGINT) and processing, exploitation, and dissemination mission. Of note, none of the equipment used during this experiment is organic to the 125<sup>th</sup> IEW BN. Bravo Detachment primarily employs man-packable SIGINT systems in conjunction with small unmanned aircraft systems (UASs) to enable targeting, and they are the first unit in the Army to field this experimental equipment package.

The Ground Vehicle Systems Center provided three weeks of new equipment training; then, during the experimentation phase, the battalion tested these systems in the field during a brigade training exercise. For context, equipping infantry units with RCVs is not uncommon, but units typically use these robots to transport equipment. Employing RCVs as a collection platform gave Soldiers in the 125<sup>th</sup> IEW BN an additional tool capable of providing timely and accurate intelligence. Ultimately, this experiment provided valuable feedback on what worked, what didn't, and how to utilize the platform effectively in the future to enable Soldiers on the ground.



forward line of own troops to achieve a sensing capability. The goal was to get RCVs into the hands of Soldiers to employ in a tactical scenario. Within that scenario, project developers planned to test the command and control of multiple vehicles, payloads, and sensors. Ideally, system operators would direct each autonomous RCV to its hide site, remotely launch the TeUAS, and populate target data on the end user's common intelligence picture. Executing this project required an extensive equipment list, primarily four RCVs and one workstation (known as the Global Expeditionary Miniature Mission Interface, or GEMMI<sup>4</sup>) designed to control all four platforms simultaneously.

Three Multi-Domain Reconnaissance (MDR) RCVs. These platforms were the primary focus of the battalion's testing, and each platform consisted of the following:

- ◆ Eight-wheeled robotic S-MET capable of obstacle avoidance.
- ◆ TeUAS equipped with a full-motion video and direction-finding payload (300-foot tether).
- Extended range tactical communications.
- Beyond line-of-sight (BLOS) sensing and targeting capability via Starlink.
- ◆ Line-of-sight (LOS) sensing ahead of human maneuver.
- Electro-optical/infrared sensing to detect and identify targets.
- Counter UAS sensing; capable of small UAS detection and defeat.
- ◆ Handheld remote capable of LOS driving.
- Operator control unit tablet capable of route mission planning, LOS driving, and TeUAS flight operations control.

**One Direct-Fire Lethality RCV.** Soldiers from the 125<sup>th</sup> IEW BN and the 25<sup>th</sup> Infantry Division's 2<sup>nd</sup> Light Brigade Combat

Team (2LBCT) received new equipment training on this system but did not employ it in a tactical scenario. This platform consisted of the following:

- ◆ Eight-wheeled robotic S-MET capable of obstacle avoidance.
- ◆ Lethality Platform—M152 CROWS capable of mounting most crew-served weapons.
- ◆ 15-foot mast capable of providing Soldiers with an added visual tool (i.e., sight over tall obstacles).
- ★ Extended range tactical communications.
- BLOS sensing and targeting capability via Starlink.
- ◆ LOS sensing ahead of human maneuver.
- ◆ Handheld remote capable of LOS driving.
- Operator control unit tablet capable of route mission planning, LOS driving, and TeUAS flight operations control.

### Global Expeditionary Miniature Mission Interface (GEMMI).

This is an open, high-performance, low-footprint ground control workstation with the following capabilities:

- Computer display kits allowing Soldiers to operate the RCVs' BLOS via Starlink.
- ◆ Autonomous RCV control.
- ◆ Autonomous TeUAS launch, flight, and landing.
- Ability to receive full-motion video from the three MDR RCVs.
- Ability to receive lines of bearing from the direction-finding sensor.
- ♦ Ability to fire crew-served weapons BLOS (not evaluated during this iteration).

### **Execution**

The 125<sup>th</sup> IEW BN experimented over six weeks in three phases: new equipment training, tactical employment, and a distinguished visitor demonstration.

Phase One—New Equipment Training (three weeks). After nearly a year of planning and preparation, new equipment training began in mid-July with the arrival of civilian personnel and all experimental equipment at Schofield Barracks. Approximately 30 contractors and DOD civilians flew to Oahu from all over the continental United States to help facilitate this fielding. Over three weeks, project leads assembled the robots, and Bravo Detachment Soldiers received four sequential blocks of instruction. The training progression covered RCV mobility, TeUAS flight, lethality employment, and GEMMI BLOS autonomous operations. Each Soldier in Bravo Detachment's signals collection teams (SCTs) certified on driving the RCVs, flying the TeUAS with handheld remotes, and passing control of the system to GEMMI operators. The detachment's SIGINT operations cell (SOC) additionally certified on GEMMI BLOS operations, which included passing target data to end users via tactical communications. New equipment training also covered maintenance, initial equipment inventories, and S-MET towing operations with military vehicles. It took longer than initially expected to get the equipment assembled and online, so operations started slowly. Despite these initial hiccups, the detachment's SCTs deployed to the field in time for the exercise kickoff.

Phase Two—Exercise Execution (two weeks). Bravo Detachment integrated its SOC and three SCTs into two weeks of 2LBCT's company situational training exercise lanes in early August. The project's civilians also spent time in the field observing testing and providing maintenance and technological support. Bravo Detachment trained and operated at the same location as 2LBCT during the exercise. However, it did not truly embed with a maneuver unit simply because the project was still in its initial stages. Despite some system limitations, testing the equipment in a live environment gave project managers valuable feedback.

The exercise began with the detachment's SOC postured at 2LBCT's headquarters at Schofield Barracks and the SCTs established in hide sites positioned in training areas across the island. The SCTs in the field received onsite assistance from both civilian contractors providing system support and Pacific Foundry supplying Stratomist emitters that allowed sensors on the TeUASs to obtain lines of bearing. For the duration of the exercise, Bravo Detachment Soldiers utilized the three MDR RCVs to provide force protection support to 2LBCT elements.

During tactical employment, SCT Soldiers on the ground maintained primary control of the system. Operators used the operator control units to move the RCVs during mounted and dismounted operations, and the SCTs conducted handovers with SOC operators manning the GEMMI in the rear while halted. Once at a standstill, the operator, either on the ground or using the GEMMI, flew the TeUAS to its desired altitude. At altitude, operators processed the full-motion video feed, controlled the electro-optical/infrared payload, and tasked the direction-finding payload to receive lines of bearing. By the end of the exercise, all three systems functioned as one unit to geolocate targets up to five kilometers away and pass data back to the SOC in the rear.

Initial feedback from the detachment's Soldiers was primarily positive, but there was concern about the RCV's lack of mobility. Testing revealed that the system has difficulty navigating jungle terrain and cannot be driven with the TeUAS mounted on top. Despite these limitations, our Soldiers found value in fielding the equipment to an MI formation. The platforms allowed the SCTs to position themselves in the brigade's rear area while simultaneously collecting on targets ahead of the forward line of own troops. Once RCV mobility improves and project engineers correct technological bugs in the GEMMI and TeUAS, the system will certainly enhance an MI formation's ability to collect and pass targetable data.

Phase Three—Distinguished Visitor Demonstration (one week). Experimentation concluded with a distinguished visitor demonstration to two Senate Appropriations Committee Defense Staff members and a senior leader delegation from the U.S. Army Pacific. Bravo Detachment Soldiers rehearsed for one week before execution, and the briefing concluded with a live demonstration during which Soldiers highlighted the capabilities, limitations, and real-world implementation of each system. The distinguished visitors were particularly interested in how the GEMMI passed information to fires elements, whether there is a plan to have a direct-link connection to a direct fire system, and whether there are plans to improve RCV mobility moving forward. There are plans to address all three of these issues, and project leads have taken the distinguished visitors' feedback for action.

### Conclusion

The Army's first iteration of RCV testing at the tactical level was a resounding success. The system is not deployable in its current form; improvements are needed to make the platform more mobile, durable, and technologically dependable. Nevertheless, the 125<sup>th</sup> IEW BN's experimentation allowed program developers to assess the system's performance during live training in a harsh jungle environment. Feedback from maneuver commanders, senior intelligence professionals, and Bravo Detachment's Soldiers will allow project leads to make improvements, and the detachment will continue experimenting with this equipment. Adding SIGINT equipment to the top of the platform's mast, conducting sling load operations with the RCVs, and improving the system's BLOS communications are just a few ideas for improvement moving forward.

Author's Note: After this article was written, Bravo Detachment, 125<sup>th</sup> IEW BN, and 25<sup>th</sup> Infantry Division's Combat Aviation Brigade conducted sling load testing on the MDR platform. Testing consisted of a CH-47 Chinook air assaulting the MDR platform and an SCT hide site at two landing zones on Schofield Barracks, Hawaii. This training was the first time the Army conducted sling load operations with the robotic MDR platform, and it was one of the first external sling load operations for the S-MET. Testing confirmed that sling loading the MDR platform is an efficient and realistic method of maneuvering this system across the battlefield. Bravo Detachment's SCTs rigged the load at hide sites in under 15 minutes; subsequent internal and external load operations with a CH-47 took under 5 minutes.

Overall, these RCVs enhance a tactical MI formation's ability to sense deep while reducing risk to the force. It's encouraging that the 125<sup>th</sup> IEW BN could field these robots, receive training from subject matter experts, and implement the equipment in an exercise over a few short weeks. The system

needs upgrades; nevertheless, this project enabled transformational innovation at the tactical level and could potentially add intelligence value to maneuver units in the near future.

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# ANONYMOUS NO MORE: COUNTERING THE GRAY ZONE THREAT

by Lieutenant Colonel
H. Eric Perez-Rivera and
Captain Wade Allen

### Introduction

Adversary state actors successfully leverage gray zone activities and exploit their relative anonymity at the unclassified level to counter the conventional advantages of the United States and our allies. Our current agreements, policies, and procedures are inadequate to oppose the gray zone activities in competition; however, our current doctrine and tactics are more than sufficient to defeat these gray zone activities in crisis and conflict. During two recent North Atlantic Treaty Organization (NATO) exercises, the V Corps G-2 successfully used identity intelligence to remove adversary intelligence operatives' anonymity and defeat the gray zone network in the rear area.

The National Intelligence Council describes gray zone activities as "coercion and subversion... below what constitutes armed conflict but outside the bounds of historically legitimate statecraft." Writing in 2023, Major Ryan Barkholder described the gray zone as "an operational environment in which actors use multiple instruments of power to pursue political-security objectives through graduated activities that are more fervent than steady-state competition, exploit ambiguity, and fall below the threshold of conventional warfare." Deniability is critical to the success of this strategy; attribution risks escalation and effective response by the United States and her allies.

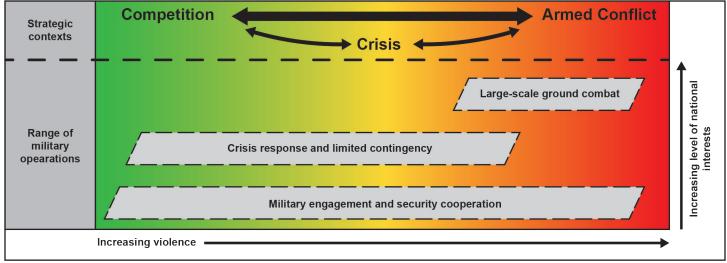


Figure 1. Army strategic context and operational categories<sup>4</sup>

Specific gray zone tactics vary depending on their strategic context. In competition, sustained information operations and using proxy political organizations to counter U.S. access to the targeted region define gray zone threats.<sup>5</sup> In crisis, gray zone tactics elevate to include covert support to organized criminal gangs, sabotage, and increased cyberspace attacks.<sup>6</sup> In conflict, gray zone activities shift to a hybrid threat model operating in the tactical, operational, and strategic rear areas, seeking to undercut the legitimacy of U.S. forces, disaggregate our alliances, remove our will to fight, and disrupt our momentum.<sup>7</sup>

Recently, Russia has expanded its gray zone campaign in Europe. Within the last year, Russia has been accused of—

- ◆ Infiltrating water treatment plants in Finland, Sweden, and Germany.
- Detonating arson devices on DHL facilities and aircraft in Germany and the United Kingdom.
- Sponsoring arson attacks in Lithuania and Latvia.
- ◆ Conducting small unmanned aircraft system (sUAS) overflights of critical infrastructure in Sweden and Germany.
- Attempting to assassinate the Chief Executive Officer of German arms manufacturer Rheinmettal.8

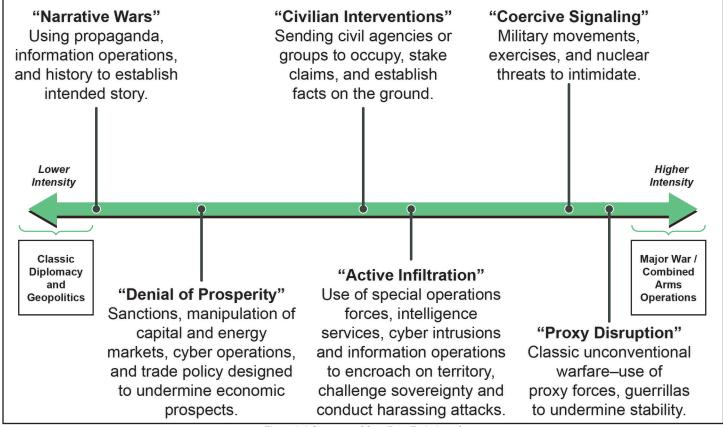


Figure 2. A Spectrum of Gray Zone Techniques<sup>9</sup>

U.S. Army V Corps Soldier studies simulated enemy activity reports as an intelligence analyst during Avenger Triad 24, at Fort Knox, Kentucky, September 16, 2024. (U.S. Army photo by SGT Devin Klecan)

Polish authorities closed the Russian Consulate in Poznan as a result of several incidents in Poland.<sup>10</sup> Countless other events across Europe remain unattributed, preventing an effective, unified allied response.

When faced with a similar attribution gap in the late 1990s, the U.S. Army developed the concept of *identity intelligence*. Used successfully during the Global War on Terrorism, identity intelligence is defined by Joint Publication 2-0, *Joint Intelligence*,

as "the intelligence resulting from the processing of identity attributes" and is used to deny adversaries anonymity. <sup>11</sup> Identity intelligence that leverages biometrics-enabled intelligence (BEI) can remove Russia's anonymity in gray zone sabotage efforts and enable the United States and our allies to defeat adversarial actors. BEI uses the measurable anatomical, physiological, biographical, and behavioral characteristics of an individual (i.e., their biometrics) in combination with other information to connect an individual to a significant activity. <sup>12</sup>

In two recent NATO exercises, the V Corps G-2 used two separate elements of BEI to identify, counter, and defeat gray zone actors in crisis and conflict. During Avenger Triad 24, V Corps used behavioral and biographical characteristics to find, fix, and defeat a state-sponsored threat cell operating in the V Corps rear area. During Northern Spirit 24, V Corps worked alongside NATO allies using anatomical characteristics to identify gray zone actors—including threat actor proxies and transnational criminal organizations—and establish NATO's first international biometric-enabled watchlist (BEWL).

### **Biometric-Enabled Watchlist**

A biometrically enabled watchlist is a Department of Defense capability that aids screening for persons of interest based primarily on their biometrics (mainly fingerprints but may also include iris and facial matching). The persons of interest are identified by intelligence analysis, usually for screening, vetting, persistent targeting, or population management by Department of Defense ground forces.<sup>13</sup>

# Avenger Triad 24: Using Identity Intelligence to Secure the Corps Rear Area

Avenger Triad 24 was a multinational, multicomponent, multi-corps NATO exercise based on a 2025 large-scale combat scenario in the European theater. V Corps was one of six corps, participating alongside the Multinational Corps Northeast, the 1<sup>st</sup> German-Netherlands Corps, the 2<sup>nd</sup> Polish Corps, the NATO Rapid Deployable Corps-Spain, and the Allied Rapid Reaction Corps. The authors led a small team, including an

embedded French officer, in the intelligence section of the V Corps rear command post.

The corps rear command post is responsible for planning and directing sustainment, terrain management, movement control, and security of the corps rear area. <sup>14</sup> During Avenger Triad, the primary threats to these responsibilities were divided between traditional special purpose forces (SPF) conducting reconnaissance and enabling long-range precision fires and gray zone actors employing cyberspace attacks, crowd-sourced intelligence, improvised explosive devices (IEDs) on critical national infrastructure, and protests to halt each corps momentum.

Using conventional intelligence preparation of the operational environment and intelligence analysis techniques, the V Corps G-2, along with the expeditionary sustainment command G-2, the maneuver enhancement brigade S-2, and the military police brigade S-2, was able to identify potential staging locations for the SPF battalion operating in the V Corps area. Employing collateral collection on assets returning to base in conjunction with exploiting downed tactical unmanned aircraft systems and captured tactical unmanned aircraft system waypoints and routine military police patrols, V Corps could find, fix, and finish the SPF battalion within 48 hours. After sharing these tactics, techniques, and procedures (TTPs) with the Multinational Corps Northeast and the 2<sup>nd</sup> Polish Corps, V Corps identified a second SPF battalion moving from the Multinational Corps Northeast's area of operations into the V Corps area of operations. Close coordination with the assigned maneuver enhancement brigade S-2 and combat aviation brigade S-2 enabled V Corps to ambush this massed SPF formation as they entered the V Corps area of operations and neutralized the SPF threat.

Countering the gray zone cell proved more difficult, especially at a releasable level. While the 2<sup>nd</sup> Polish Corps did provide some releasable human intelligence reporting on the gray zone cell, it was often delayed and incomplete. Instead,



V Corps utilized behavioral characteristics to identify several gray zone social media entities, enabling V Corps to use its organic open-source intelligence cell to develop a fully releasable network diagram for tracking the gray zone cell in near-real time. As a result of this TTP, V Corps successfully disrupted an attempted crowd-sourced intelligence collection scheme across the theater and rapidly dispatched maneuver enhancement brigade and military police patrols to gray zone threat locations. These actions ultimately denied the adversary an opportunity to target critical national infrastructure and helped tailor the V Corps messaging campaign. Being able to attribute seemingly mundane events like train derailments, criminal distributed denial of service attacks, and organized protests to this gray zone cell denied the enemy freedom of maneuver and rendered their gray zone efforts insignificant.

Critical to the defeat of this gray zone cell was the ability to share threat information with adjacent multinational corps and host nation agencies. During Avenger Triad, the gray zone cell consistently moved between the corps' rear areas to avoid detection and exploited the seams between the corps' areas of operations. Sharing the updated threat assessments and TTPs between adjacent corps enabled an accurate common intelligence picture, preventing the gray zone cell from taking advantage of corps seams. Additionally, having publicly releasable intelligence enabled V Corps to work alongside the Polish Territorial Defense Forces (and, by proxy, host nation law enforcement) to attribute gray zone actions to the enemy. This attribution and subsequent publication of the threat to the general public increased the sensors V Corps had on the gray zone cell. They directly defeated the crowd-sourced intelligence collection attempt and undercut gray zone actor anti-NATO messaging.

### Northern Spirit 24

Northern Spirit is an annual NATO BEI exercise. In 2024, Northern Spirit was nested with Ardent Defender, an annual

NATO explosive ordnance disposal (EOD) exercise, to assess new NATO identity intelligence doctrine. The common exercise scenario simulated a NATO task force assisting a nation in crisis attempting to counter a state-sponsored gray zone actor. EOD personnel and enhanced field exploitation teams responded to and exploited incidents, sending captured exploitable material to a Canadian lab. Biometric samples collected by the lab were processed through the NATO Automated Biometric Identification System (ABIS) and six additional national ABISs. Once an individual was identified, the biometric

match report was sent to the identity intelligence cell for fusion with all-source reporting and BEWL nomination. During the exercise, a separate legal advisor cell worked through potential issues with NATO, national, and international laws, policies, and procedures. Northern Spirit was the first NATO exercise to simulate a NATO-led BEWL. Both Northern Spirit and Ardent Defender assumed a biometric sharing agreement between the NATO countries and the host nation government.

V Corps provided four personnel to Northern Spirit/Ardent Defender 24: one EOD officer (enhanced field exploitation team observer), one human intelligence warrant officer (ABIS observer), one lawyer (legal advisor participant), and one intelligence officer (identity intelligence participant).

The now obsolete Army Techniques Publication 2-22.82, Biometrics-Enabled Intelligence, dated November 2015, heavily influenced the NATO doctrine for BEI and identity intelligence, laid out in NATO Standardization Agreement (STANAG) 6515, Countering Threat Anonymity: Biometrics in Support of NATO Operations and Intelligence. In contrast to U.S. doctrine, NATO does not retain any biometric data; instead, data collected during NATO operations remains with the member or partner country that originally collected the data.15 The NATO ABIS serves as a transaction manager, temporarily transmitting the search to the federated national ABIS, screening the results against national release limits, and transmitting the screened results back to the original requestor. While this doctrine preserves national equities, it results in a fragmented picture of the adversary. 16 NATO identity intelligence doctrine does not recognize behavioral attributes as part of identification.<sup>17</sup> Until this exercise, NATO also opted not to maintain a BEWL, relying instead on member nations to establish bilateral BEWL sharing agreements. During Northern Spirit, NATO used a BEWL for the first time as a test, starting with two enrollment categories: Person of Interest and Terrorist/Insurgent. There is currently no published NATO STANAG on BEWLs.

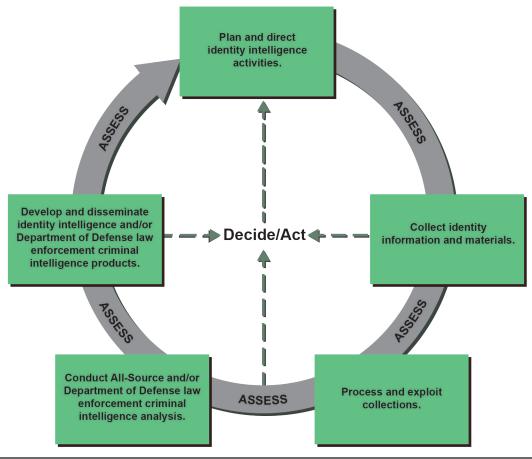


Figure 3. Identity Intelligence Activities Operational Cycle<sup>18</sup>

The Northern Spirit threat consisted of a state-sponsored ethnic separatist movement and a transnational criminal organization serving as a state proxy. Both threat organizations sought to undermine the legitimacy of a Western-aligned host nation government and received training, lethal support, and amplified information operations from their state sponsor, a neighbor of the targeted government. Among the threat tactics observed were one-way attack UASs, complex IEDs, vehicle-borne IEDs, disinformation campaigns, commercial sUAS reconnaissance of NATO facilities, criminal vandalism, and modified commercial drones to deploy lethal munitions.

Through Northern Spirit, the international identity intelligence cell successfully used BEI derived from captured exploitable material collected by the Ardent Defender enhanced field exploitation teams, exploited through a Canadian-led multinational lab, and evaluated through six national ABIS databases to build out threat networks and to nominate several threat personas, insider threats, and persons of interest to the NATO BEWL. The current NATO BEWL doctrine, including the nomination process and BEWL categories, has proved insufficient. During the exercise, the identity intelligence and legal advisor cells collaborated on defining additional watch list categories (including force protection categories). Still, national limitations prevented NATO from adopting all of the 33 current U.S. watch categories.

The current NATO exploitation doctrine and TTPs have proved sufficient for collecting biometrics during the exercise. However, especially with sUAS, BEI failed to remove the anonymity of threat actors on a first-time encounter; only with routine patrols, host nation security force engagement, and field biometric enrollment was the identity intelligence cell able to identify the sUAS reconnaissance cell. Other gray zone TTPs (e.g., arson, IEDs, sabotage) were easier to attribute after the NATO task force and host nation law enforcement established an agreement to share biometric data.

Left unaddressed in Northern Spirit was the application of BEI to the targeting process and how to integrate that targeting process with host nation law enforcement for a judicial solution to gray zone activity. Future doctrine and exercises integrating national and international law enforcement organizations should be developed.

### **Conclusion: An Imperfect Defense**

The experiences of V Corps at Avenger Triad and Northern Spirit highlight successful identity intelligence TTPs to remove the anonymity of adversarial gray zone actions in crisis and conflict. Open-source intelligence enabled V Corps to produce publicly available reports, which inoculated the population against gray zone messaging and disrupted gray zone actors. Cross-corps communication and integrating host nation law enforcement denied the adversary physical, procedural, and

policy-based seams for exploitation. Northern Spirit highlighted a way forward for a combined NATO BEWL that balances national caveats while enabling a better understanding of common threats.

While these TTPs proved successful in crisis and conflict, they are not currently deployable in competition. Historically, the U.S. treats gray zone actions in competition as a law enforcement matter, collected and supported primarily by U.S. special operations forces. Like the terrorism threat in the early 1990s, this policy gap remains exploitable by adversarial actors as V Corps and regional NATO allies regularly witness along the eastern flank. Continued simulation of gray zone threats in exercises, which add to the complexity of current steady-state conventional threats, will help build a shared understanding between allied formations and interagency partners. Additionally, continued U.S. and NATO exercises incorporating identity intelligence will help identify, test, and work through potential policy differences, international agreement gaps, and procedural interoperability to narrow the adversary's window of anonymity.

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### Introduction

During 2024, V Corps participated in two major exercises: Warfighter (WFX) 24-03 and Avenger Triad 24. WFX 24-03 was nested with theater exercise Austere Challenge 24 and led by U.S. European Command; Avenger Triad 24 was a multinational exercise led by U.S. Army Europe and Africa Command (USAREUR-AF) that involved six different North Atlantic Treaty Organization (NATO) and United States corps headquarters. Both exercises offered unique training opportunities that allowed V Corps to advance the Army's understanding of multidomain operations while integrating host-nation, allied, and national capabilities. During Avenger Triad 24, V Corps validated its ability to achieve interoperability with NATO and USAREUR-AF using federated communications systems across all echelons of command with clearly defined common operational pictures (COPs) and mission command information systems (MCIS) by warfighting function.

WFX 24-03 and Avenger Triad 24 both presented challenges, but the V Corps G-2 came away with lessons learned and best practices to share with the greater intelligence community. Through the framework of the three interoperability dimensions (technical, procedural, and human), this article will describe how the V Corps G-2 integrated the Army's MCIS with NATO allies to create a combined theater common intelligence picture (CIP), established intelligence synchronization procedures across the intelligence warfighting function, and leveraged the trust and rapport built through numerous previous engagements with multinational partners to overcome interoperability challenges.

### **Technical Interoperability and Architecture**

Although the most difficult of the three interoperability dimensions to achieve, technical interoperability is critical to enabling the procedural and human dimensions to create shared understanding across multinational forces. Coordination with allied nations well ahead of an operation or exercise is crucial to achieving technical interoperability to accommodate U.S. forces and allies' different systems and processes.

Before WFX 24-03, V Corps G-2 exercise planners scheduled frequent touchpoints with allies from Estonia and the United Kingdom, which resulted in an initial level of technical interoperability. V Corps elements conducting distributed operations from Estonia, the United Kingdom, Poland, Romania, and Germany communicated effectively through email, chat, and distributed collaboration tools such as Cisco Media Server and Command Post Computing Environment. Additionally, V Corps and the multinational divisions could access each other's sharing portals, enabling redundancy for sharing products if other communication platforms were degraded or disrupted.

From a technical interoperability standpoint, the WFX 24-03 intelligence architecture initially relied on the Warfighter Simulation Intelligence Module (WIM) to generate intelligence for the multinational exercise. However, due to network concerns, the WIM generated U.S. Message Text Format intelligence messages at the collateral Secret level, which precluded sharing with allied partners during the exercise. To overcome the issue, the Joint Multinational Simulation Center and Mission Command Training Program instituted the use of the Intelligence Electronic Warfare Tactical Proficiency Trainer (IEWTPT) on the lower-enclave Mission Partner Environment (MPE) network to generate U.S. Message Text Format intelligence messages with the Releasable to NATO Forces (REL NATO) dissemination marking.

Using the IEWTPT as the intelligence warfighting function simulator increased intelligence generated at the REL NATO level, which enabled a vast increase in intelligence sharing ability among allies. It also expanded the intelligence support to targeting supplied by U.S. personnel using the Intelligence

Fusion Server and by both U.S. and allied forces using the U.S. Army Intelligence and Security Command (INSCOM) Cloud Initiative. Intelligence messages generated from IEWTPT on the MPE network enabled timely high-payoff target list equipment targeting, as targeting information did not have to be transferred from the secured internet protocol router network (SIPRNET) to the MPE network where fires mission command systems resided.

The IEWTPT system resided and produced releasable intelligence reporting on the MPE network, but in a real-world environment, intelligence reporting from U.S. collection assets would occur over SIPRNET. The lack of a cross-domain solution at the tactical (corps and below) level hindered the ability to share intelligence with allies in a timely manner. To share intelligence among allies without a cross-domain solution requires a Soldier-in-the-loop to transfer data manually to the MPE network. This method is neither timely nor effective for quickly transferring large amounts of data. While producing intelligence on the MPE network is helpful in an exercise environment, it does not replicate real-world data flow or restrictions.

USAREUR–AF used the Global Command and Control System-Army (GCCS–A) to move the theater CIP from SIPRNET to MPE by transferring red track data through the Radiant Mercury cross-domain solution. The GCCS–A COP and CIP were both available to all personnel via web browser, allowing any user to visualize the battlefield quickly or query for specific units. The GCCS–A CIP also fed V Corps and subordinate unit Command Post Computing Environment mission command systems, which allowed for a comparison to the V Corps G-2 CIP while providing the authoritative top CIP to all training audiences.

United Kingdom intelligence analysts reported that this iteration of WFX was the first time they could use the MPE network to remain federated during planning and execution. For the duration of the operation, they tracked all battle damage assessments and participated in numerous V Corps battle rhythm events, all on sovereign United Kingdom systems.

One technical interoperability shortfall for the intelligence warfighting function was the lack of a Battlefield Information Collection and Exploitation System (BICES). The BICES can provide a direct link for intelligence between the United States and allied partners while delivering data to the NATO Intelligence Functional System used by tactical units. However, BICES does not communicate with mission command systems. With MPE now accredited to process NATO Secret intelligence, bridging the MPE and BICES networks is critical to ensuring technical interoperability between allied intelligence teams and allowing intelligence from all allies to reach the MPE mission command network.

The Maven Smart System is an emerging U.S. Army initiative that uses artificial intelligence and machine learning for geospatial visualization of data. Multinational interoperability must be considered when implementing the Maven Smart System as the authoritative COP for U.S. forces. If allied and partner nations can successfully navigate the technical requirements to integrate the Maven Smart System into their respective information systems, this will get us one step closer to true convergence.<sup>2</sup>

### **Procedural Interoperability**

As a tactical warfighting headquarters, it was essential for V Corps G-2 to create a shared understanding of the enemy scheme of maneuver across the battlespace, which is best achieved through synchronization with the V Corps subordinate divisions. V Corps held daily intelligence synchronization working groups (ISWGs) to accomplish this procedural interoperability: two with adjacent and downtrace units and two with higher echelons. This allowed V Corps and its subordinate elements to ensure each echelon had the same CIP of the enemy and the same understanding of what the enemy was likely to do in the next 48 to 96 hours. These ISWGs were essentially analytic conversations, and while V Corps and the subordinate divisions were not always in agreement about the enemy's next move, the units came out of these meetings with a logical, feasible, and, most importantly, synchronized assessment of the enemy scheme of maneuver.

Over time, the format for the ISWG adjusted to create and refine process efficiencies. At the beginning of WFX 24-03, the V Corps analysis and control element (ACE) briefed the overall enemy scheme of maneuver. The subordinate divisions then provided a detailed microanalysis of that enemy scheme of maneuver, a format that allowed the G-2 and subordinate divisions to remain synchronized on the current enemy situation. However, as time progressed, the G-2 and the ACE Chief realized that this format did not adequately provide the subordinate divisions with what they needed most: the corps-level assessment for the next 24 to 96 hours. The ISWG format was therefore adjusted to allow the divisions to brief first on the close fight. The Corps then closed with its assessment of the deep fight. This adjusted format was well received across the formations and provided the subordinate divisions with a more detailed assessment of how V Corps shaped the enemy.

In addition to the daily working groups, the Corps ACE ensured it had multiple conversations with its subordinate divisions outside of the ISWGs to ensure synchronization during the rapidly changing large-scale combat operations. These frequent conversations were especially important from a procedural interoperability standpoint, as allies from Estonia and the United Kingdom could not always access the same networks and tools as the United States intelligence entities.

Members of the V Corps staff and 2<sup>nd</sup> Corps, Polish Land Forces, staff synchronize their shaping efforts during a command post exercise at Grafenwöhr, Germany, October 26, 2023. (U.S. Army photo by SPC Devin Klecan)

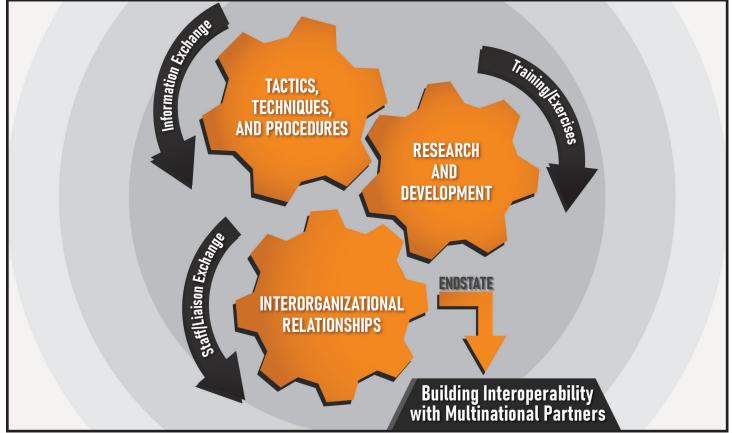
V Corps and subordinate units also passed near real-time information between formations and allies using TransVerse chat.<sup>3</sup> V Corps synchronized the intelligence warfighting function across echelons using chat rooms, each focused on a specific intelligence discipline or function, including targeting, battle damage assessments, general military intelligence, and intelligence operations. The United Kingdom accessed TransVerse through Joint Tactical Chat, NATO's secure, text-based chat system, allowing a seamless transfer of intelligence.

### **Human Interoperability**

V Corps leveraged trust and rapport built through numerous previous engagements with multinational partners to overcome interoperability challenges. Maintaining bi-weekly ISWGs and sharing all military decision-making process products early and often created an environment that deconflicted friction and facilitated a collective understanding across all formations. Following Avenger Triad 24, the V Corps G-2 has continued to build relationships with multinational partners by participating in staff-to-staff talks with adjacent corps headquarters and executing intelligence-focused tabletop exercises with adjacent corps G-2s.



WFX 24-03 and Avenger Triad 24 created challenges with downtrace allied divisions that could not participate in planning efforts and engagements before the exercises. U.S. divisions and separate brigades that only provided response cells hindered the ability of V Corps to build upon the human dimension before the WFX because of scheduling conflicts and competing requirements. Establishing sustained relationships with allied downtrace units to train and operate as a combined unit well before exercises or operations and leveraging liaison officers to fill gaps where the corps and divisions have not achieved full technical and procedural interoperability can lead to better human interoperability.



Building interoperability through key concepts4

There are also technical issues that the Army must address before future collaborations. During WFX 24-03 and Avenger Triad 24, the successful integration of allied partners into the intelligence warfighting function hinged on the support of personnel from digital liaison detachments and the 4<sup>th</sup> Security Force Assistance Brigade, who enabled access to the INSCOM Cloud Initiative on MPE and assisted with integration of CIP data with our allies. However, this is not a sustainable solution to the integration problem. In the future, the challenge of the mission command network interoperability will require a technical solution.

### Conclusion

Future interoperability efforts should include federation of allied mission command networks with the MPE network to enable full access to the GCCS-A COP and CIP web pages, the INSCOM Cloud Initiative, and other available tools to ensure full technical and procedural interoperability for the intelligence community. Additionally, technical interoperability between the MPE and the BICES would dramatically increase enhanced intelligence collaboration among allies and provide redundant procedural interoperability tools to ensure multiple means exist to collaborate and share intelligence data. IEWTPT use on the lower enclave at a releasable level should be sustained, as it increases situational understanding and targeting efforts for both the United States and partner nations in exercise environments. IEWTPT's ability to generate observation reports, electronic intelligence reports, and imagery reports was critical to the success of all training audiences in the exercise; however, this does not replicate real-world collection efforts, and there remains a pressing need for a cross-domain solution from SIPRNET to MPE. While interoperability efforts continue to trend in a positive direction, we can take additional steps to innovate and improve our human, procedural, and technical domain goals.

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