Their Leadership and Ownership:

Concepts for Warfare By, With, and Through

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In January 2017, the 2nd Brigade Combat Team (BCT), 82nd Airborne Division deployed to bolster the Iraqi Security Forces (ISF) in the campaign to annihilate the Islamic State of Iraq and Syria (ISIS) and its so-called caliphate. Task Force (TF) Falcon joined the coalition advise and assist (A&A) effort with two weeks remaining during the 100-day offensive to retake east Mosul, and for the next eight months, we wrestled a complex environment with a simple framework: help the ISF and hurt ISIS every day. Naturally, we had missteps, but our team also served ISF and coalition commanders well on some terribly uncertain days.

We mixed innovative concepts and straightforward tactics to attack ISIS by, with, and through the ISF, yet the entire effort always centered on our partners' leadership and ownership of exceptionally nasty ground combat operations. Several of our candid and contextualized perspectives on organization, mindset, and skill set offer useful examples and angles for leaders to ponder as we consider future excursions with this style of high-intensity security force assistance.[1]

Organizing Principles: Mindset for Warfare By, With, and Through the ISF

Our mission under Operation Inherent Resolve (OIR) proved infinitely different than the exhausting, firsthand combat that many of us experienced in Iraq from 2003 to 2008. For instance, a typical American Soldier's experience during Operation Iraqi Freedom's (OIF's) "troop surge," whether battling Shia militias or the Salafist forebears of ISIS, was that Americans did the deadliest work as Iraqis observed. Moreover, the ISF that we supported were also not the same broken groups that collapsed during the ISIS rampage of 2014. Our OIR journey was dramatically different than both of these circumstances.

Admittedly, the term "ISF" may carelessly over-homogenize our partners' capabilities; each of the three cohorts had its own distinct personality, and our account will bring some of this to life. This collection of host nation troops often demonstrated tremendous willpower and assumed the lion's share of the physical risk no matter which uniform they wore: Iraqi Army (IA), Federal Police (FEDPOL), or Counterterrorism Services (CTS). Still, warfare by, with, and through the ISF was hard work that highlighted three interrelated principles that can help inform how joint leaders think about, resource, and lead A&A operations:

- Advisers do not get to choose their partners;
- Advisers do not control their partners; and
- Advisers must put their partners first.

First, coalition combat advisers did not get to choose their partners. Each of our A&A teams had cause for frustration at times, but some partnerships were clearly more challenging than others. Indeed, some ISF were reluctant at times. Some of their commanders demonstrated inconsistent levels of know-how, and, on occasion, the cohorts' agendas were more competitive than cooperative. On the other hand, we found that ISIS rallied around cunning jihadists who exploited Iraq's sectarian politics and commanded an intoxicating Salafist narrative of martyrdom. In the end, despite being vastly outgunned, organized ISIS small units continued fighting through the Battle of Mosul's final days in mid-July. Our mission statement reflected our pursuit of Combined Joint Task Force-OIR's (CJTF-OIR) interests but also how we worked to steady the episodic imbalance of determination between our partners and the enemy:

> *TF Falcon — by, with, and through ISF in everything it does — advises, assists, and empowers our partners to defeat ISIS militarily in order to help the Government of Iraq (GOI) establish sufficient local security and set conditions that contribute to broader regional stability.*

A key was remaining goal oriented when it was hard —- our job was simply to help the partners that we had dominate ISIS.

Along these lines, our combat advisers had little control over partner decision making, preparation for combat, or execution of operations. Importantly, our commanders embraced being advisers first, accepting that most meaningful decisions and moves were clearly in the hands of the GOI. Indeed, senior ISF commanders required vast support and encouragement at times, but they generally took full responsibility for their operations. Our A&A teams, logisticians, and artillery troops proved infinitely flexible; advisers could never fall in love with ISF plans because they changed so frequently. Moreover, our two-star and three-star commanders' flagship concepts saturated our approach. LTG Steve Townsend of CJTF-OIR was clear that we were to help the ISF fight. Stated another way, our A&A teams did not close with, nor take the ground from ISIS, but instead navigated a fascinating quest of influencing ISF without any authority over ISF. Additionally, MG Joe Martin of Combined Joint Forces Land Component Command-OIR (CJFLCC-OIR) championed "nested, multi-echelon engagement" to help the coalition optimize its influence with our partners. Like any coalition warfare, the host nation force came first; however, our approach to fighting by, with, and through amplified our Iraqi partners' leadership and ownership.

Thus, TF Falcon upheld the ISF as the preeminent member of the coalition against ISIS in Iraq; we measured our success only through our partners' success. This mindset is worth emphasizing because, frankly, superbly capable teammates can lose sight of the partners' centrality at times. To condition our team to always consider the ISF's goals first, our leaders openly discussed the importance of empathy, humility, and patience throughout the formation. We certainly defeated ISIS in Ninewah Province together, but the fact remains that ISF troops bore the weight of the violence on some astonishingly brutal days. The human costs to the GOI's security forces were massive over Mosul's nine-month struggle to defeat our nations' common enemy. I sensed our "by, with, and through ethos" was on track once our teams began to consistently speak with terms like them, they, and their rather than us, we, and our.

Photo by SSG Jason Hull

CPT Mark G. Zwirgzdas from the 2nd Brigade Combat Team, 82nd Airborne Division discusses operations with 9th Iraqi Army Division leaders near Al Tarab, Iraq, on 19 March 2017.

Our language mattered because how we spoke reflected how we thought about our partners' leadership and ownership of operations. Accomplishing our mission was obviously central, but it was not more important than how we accomplished our mission.

"Lethal OCT Network:" An Imperfect Analogy

Anyone who has experienced a combat training center (CTC) rotation has a useful model for comprehending TF Falcon's core organizational and operational concepts. Fundamentally, the CTC's observer-controller-trainer (OCT) network wraps itself around a rotational unit with a parallel structure connected by dependable communications and disciplined information flows. The OCT network's goal is to help unit commanders improve their warfighting craft, largely by helping them see the opposing force (OPFOR), see the ill-structured environment, and see themselves. The OCT network may even feel intrusive at times as its nodes maintain contact with the rotational unit at every echelon. Finally, assuming competence is the OCT network's anchor point, many of the same traits that make A&A teams effective also distinguish the most useful OCTs. Empathy, humility, and patience truly matter.

Perhaps most importantly, the OCT network is not embroiled in "fighting" the OPFOR nor the burden of external evaluation. Therefore, OCTs routinely achieve a level of shared understanding that outstrips the rotational units. Of course, they are not all-knowing; plenty of conversations occur without OCT oversight, and they periodically misread events, personalities, or trends. Still, the OCT network is well-postured to provide vertically aligned insights, perspectives, and ideas that help the rotational unit advance against the OPFOR in an uncertain environment. An imperfect analogy, for sure, but thus far we have only discussed similarities that attend to the "advise" side of A&A operations.

As for the "assist" aspects of A&A, start by picturing the same OCTs armed with enormous amounts of secure bandwidth, intelligence capacity, and strike capabilities. Moreover, imagine this lethal OCT network's mission, or moral obligation, also includes attacking the OPFOR relentlessly to ensure the rotational unit wins. Now visualize this lethal OCT network as only one among equals in an aggressive ecosystem that includes special operations, joint, and other coalition stake holders who are also united in their desire to thrash the OPFOR. As inadequate as this comparison may be, we all reason by analogy: TF Falcon operated like this fictional, lethal OCT network, only the stakes were infinitely more deadly and complex. Our field grade commanders wore two hats, advising ISF corps or division commanders in addition to their traditional responsibilities. Likewise, our company grade commanders advised IA or FEDPOL brigades. Combat advising at these echelons maintained a natural distance between our teams and the savagery of close combat, and this space probably reinforced our focus on helping our partners see the enemy, the environment, and themselves rather than doing the fighting for them.

Align Around the Big Ideas, Then Get Out of the Way

In addition to TF Falcon's seven organic battalion-level

headquarters and internal enablers, we integrated an eighth battalion-level adviser team, a 155mm Paladin battery, and several other formal attachments or informal partners. Our operational profile was as geospatially decentralized as it was dynamic — we had at least one platoon that operated from 14 different bases over the nine-month mission.

Moreover, our A&A operations were also functionally diverse, spanning divestitures of military equipment and supplies for vetted partners, fires and counterfire, civil-military advice, and the deadly work of helping ISF liberate the people of Ninewah.

Steering our decentralized, dynamic, and diverse A&A enterprise called for an enduring set of guideposts that lined up our decision-making and risk evaluation processes. As we entered the A&A fray of Mosul in January, TF Falcon organized around five big ideas:

- Protect ourselves and our partners;
- ISF are always the main effort;[2]
- Attack ISIS;
- Shared understanding; and
- Agility: ISF should never have to wait for us.[3]

We pounded this enduring azimuth consistently for nearly nine months and reevaluated its relevance on several occasions as the campaign advanced in time and space.

When I was a student at the Marine Corps War College, preparation for a guest lecture by retired Marine LtGen Paul Van Riper introduced me to a mission command-styled concept that he dubbed "In Command and Out of Control."[4] Along these lines, I envisioned commanding TF Falcon from the center, an intellectual schema blending the organizational strengths of hierarchies and webs that I had observed during prior combat tours with joint special operations TFs. The chain of command certainly remained intact (particularly our commanders' responsibility to help the CJFLCC manage risk), but we knew the brigade headquarters would get in the way of our teams unless we stayed "up-and-out." Also, our traditional roles in a typical brigade hierarchy were far less notable than our A&A-specific responsibilities to empower combat advisers at the tactical edge. Any leader's control over people and events naturally loosens at each higher echelon of command; I tried to command our A&A network, never to control it.

Relationships: Coin of the A&A Realm

In its essence, TF Falcon was not made up of people — it was people. And, our people did not advise ISF institutions — they advised other people. The fight to liberate Mosul was a decidedly human story of grit and willpower, and the key ISF characters in the story had their own personal relationships, tensions, motivations, and fears. Uncomfortable discussions were the natural order of things, and sturdy relationships with our partners helped us get past them. Rule #1 for us was profoundly unassuming: "Listen." And, Rule #2 was nearly as simple: "Maintain contact." Only by staying with key ISF commanders much of the time, and listening to them all of the time, did our A&A network begin to understand how our partners saw ISIS, the environment, and themselves. This informs Rule #3: "Be realistic." The Battle of Mosul was exhausting for both sides. Even as poorly trained and resourced as ISIS may have been at times, its leaders demonstrated remarkable conviction, an inequality that helped extend their murderous resistance. Expressed differently, by listening during carefully orchestrated contact with the ISF, our team remained realistic about the advice we gave as well as our own limitations in influencing the ISF's fighting path and pace.

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We probably only saw the tip of the iceberg, but our A&A network would have never had a chance of understanding Mosul's unfolding story unless we all committed to our relationships. LTC Jim Browning, adviser to 9th IA Division and commander of the 2nd Battalion, 508th Parachute Infantry Regiment (PIR), went so far as to fast with his partners through Ramadan. As long as we answered the CJFLCC commander's information requirements (IRs), we also allowed the ISF commanders' biorhythms, specifically cultural habits like afternoon naps and late meals, to drive our TF-level battle rhythm. Indeed, teams at every echelon were sensors for relevant atmospherics and answers to higher headquarters' IRs. By living and breathing the ISF leaders' biorhythm, we underscored, directly and indirectly, the ISF's primacy in the fight.

In particular, our A&A efforts with Staff Lieutenant General Abdul Amir Yarallah al-Lami (sLTG A3), the GOI's overall joint forces commander, framed and re-framed a lively puzzle for senior, subordinate, and peer special operations commanders. sLTG A3 was a serious man who evoked Eisenhower for his own ISF-internal coalition, and as his combat adviser, I was physically with him most days and nights. I listened a lot during our 150-day battle to liberate west Mosul, and we had several uncomfortable but candid discussions. After spending the day with sLTG A3, I would typically report insights to the CJFLCC commander using a limited flag officer email distribution in order to help inform our nested, multi-echelon engagement across the team of teams.

After hitting send on these brief messages, we often followed up with phone conversations several nights a week. Later in the evenings, we frequently hosted secure video teleconferences (VTC) to connect sLTG A3 in northern Iraq with his partners, MG Martin and later MG Pat White, in Baghdad. Meanwhile, I often pumped similar, contextualized updates down-and-into our network of field and company grade teams who were also listening, maintaining contact, and pursuing realistic pieces to the ever-morphing puzzle. Consistent dialogue throughout the breadth and depth of our A&A network contributed to shared understanding and advanced our ability to help ISF and hurt ISIS.

Still, it took more than energy and big ears to earn our partners' trust. ISF commanders were pragmatic when evaluating risk: they fought knowing the GOI may not be sending replacement troops, combat systems, or ammunition any time soon. This gave our relationships, no matter how cozy, a transactional quality. Expressed very simply, Rule #4 was: "Assist in order to advise." The ISF senior commanders we dealt with were well-educated, had seen extensive combat beginning with the Iran-Iraq War decades earlier, and had watched senior American advisers come and go for years during OIF and Operation New Dawn. Importantly, they also stood on the business end of American military dominance twice between 1991 and 2003, so they had little patience when they were tested by inexpensive, off-the-shelf ISIS drones or when coalition strike cells developed the situation before directing precision fires. In fact, our predecessors from the 2nd Brigade Combat Team, 101st Airborne Division (Air Assault) wisely coached us to prepare for this "assist in order to advise" paradigm. "Money talks" in combat advising, too. The 9th IA Division leaders appreciated LTC Browning's symbolic show of friendship during Ramadan, but what they really wanted was for him and CSM Curt Donaldson to keep striking ISIS on the final days of close combat in Mosul and Tal Afar.

A common sense feature of relationships was probably the most significant to our mission: strong relationships encouraged accountability in the partnership. Notably, coalition advisers joined FEDPOL senior leadership for the first time as the ISF's counterattack on Mosul began. Obviously, there was some interest mapping for both sides to do, and occasionally the stress and slaughter of the FEDPOL's attack in west Mosul caused passionate reactions: the FEDPOL's three-star commander "fired" our A&A team at least a couple of times. Even so, the team that LTC John Hawbaker and CSM Brian Knight led remained remarkably goal oriented. Their best military advice — delivered with empathy, humility, and patience — as well as their punishing strikes against ISIS, set them up to push back when coalition interests were ignored. This brings us to Rule #5: "Never lose sight of your own interests and use your leverage."

To be clear, ours was never a carrots and sticks-type of relationship. It was much more of an equal partnership — their success was our success. Yet at times, we had to dial our types and amounts of combat support up or down, promote or expose ISF commanders' reputations with key GOI influencers, or shift priorities to exploit aggressive ISF action elsewhere. Again, CJTF-OIR had interests, too.

More so than any other experience in my 22 years of commissioned service, TF Falcon's fight by, with, and through the ISF epitomized central concepts underpinning the Army doctrine of mission command. We were empowered for dramatically decentralized operations because we kept the CJTF and CJFLCC commanders' intents front of mind always, using the aforementioned five ideas to guide our decision making and activities. Like all senior-subordinate relationships, ours were stressed on occasion, but I genuinely trusted all eight of our field grade commanders. Also, our role was critical in informing a unified coalition view, so we tirelessly and transparently over-communicated with our higher headquarters to help them understand the campaign from the ground up. Our commanders also expected everyone in our A&A network to do their jobs, no matter their distance from the combat action: there were no extra Soldiers on our team. More directly, there were no extra minds. Our leaders and Soldiers at every echelon had to continuously solve emerging problems across the warfighting functions. Finally, we organized the art and science of mission command to get the right information to the right leader at the right time so that he or she could make useful decisions in an ever-changing environment.

Soldiers assigned to the 2nd Brigade Combat Team, 82nd Airborne Division fire mortars in support of 9th Iraqi Army Division during the offensive to liberate west Mosul from ISIS.

Photo by SSG Jason Hull

All "Six A's" of A&A Operations

Through the "Lethal OCT Network" analogy, we introduced a handful of the concepts inherent to A&A operations. Advise, assist, accompany, and enable (A3E) entered the coalition lexicon before TF Falcon arrived to Iraq.

Photo by CPL Rachel Diehm

LTC John Hawbaker, commander of 1st Squadron, 73rd Cavalry Regiment, listens during an operational brief with Iraqi Federal Police at a patrol base in Mosul, Iraq, on 29 June 2017.

The third A of A3E — accompany — ostensibly delineated the riskier forward posturing of combat advisers to help accelerate the counter-ISIS campaign. For TF Falcon, we never knew the difference — there was no before and after accompany perspective for us to have.

Because we transitioned while the ISF were still fighting in east Mosul, our combat advisers had to cultivate relations with ISF generals while "in contact." Thus, close proximity to ISF commanders on the battlefield was always a signature component of our mission, so we may have intuitively leaned toward a handful of A's other than advise, assist, and accompany as we honed our A&A mindset and skill set in Mosul's cauldron of violence.

All "Six A's" — and the nuanced concepts and challenges they represent — are security force assistance lessons that we learned fighting by, with, and through the ISF.

• **Advise:** Our teams helped ISF commanders think through their tactical and logistics problems with an eye toward exploiting opportunities, assessing risk, and making sober decisions on how to apply their finite resources. Through nested multi-echelon engagement, TF Falcon pressed consistent messages at every echelon. In fact, we frequently helped the CJTF or CJFLCC commanders be our "finishers." Both of them were key drivers of coalition combat advising as they engaged at the executive levels to influence ISF activities, all the while reinforcing our nested message from the top-down.

• **Assist:** Our partners rarely used the "red pen" before designing a scheme of maneuver. Therefore, some of our most important assistance to them was coaching intelligence-driven operations. First, our A&A network shared intelligence information and products to the extent that we were allowed. As we helped the ISF prepare to attack Tal Afar in August 2017, we actually arranged the entire brigade intelligence enterprise to help them understand which attack axes exploited ISIS's most vulnerable defenses. The value of our advice was found in their execution: our partners dominated ISIS in a 12-day blitz to retake the city. More on military intelligence (MI) later, but I often employed our talented S2, MAJ Kevin Ryan, as a finisher for our best military advice: sLTG A3 always had time for MAJ Ryan's insights. Even more telling, the FEDPOL corps commander, a three-star in charge of more than 60,000 troops, frequently sought 2LT Dave Moehling's perspectives on ISIS. 2LT Moehling — the assistant S2 for the 1st Squadron, 73rd Cavalry Regiment and a tremendous MI mind — always gave informed advice. This consistent, intelligence-driven A&A gave our teams a sharper, more credible edge.

Assist's lethal expression was obviously precision fires. After ISIS conquered Mosul, it prepared a formidable defense for more than two years before the ISF launched the counterattack in October 2016. The defense involved a monstrous mortar capacity, a legion of suicide car bombers whose high payoff target list was topped by ISF tanks and engineering assets, and droves of ISIS infantry. The ISF stubbornly moved through

this medley of violence for nine months, reinforced by coalition strikes from artillery, attack helicopters, jets, and bombers. Meeting the ISF requirement for responsive and precise fires, more so than other forms of assistance, gave our partners confidence on the hardest days. We will share more on fires later, but our targeteers, cannoneers, and radar specialists of the 2nd Battalion, 319th Airborne Field Artillery Regiment (AFAR), led by LTC Dan Gibson and CSM Omari Ballou, helped devastate ISIS's centrally controlled batteries in Mosul and Tal Afar. Our company and troop commanders, backed by an Air Force joint terminal attack controller (JTAC) and sufficient bandwidth, frequently observed and directed these attacks from within ISF command posts.

• **Accompany:** As discussed previously, our TF was operating forward with ISF brigade, division, and corps commanders upon arrival in January. Predictable and persistent contact with ISF commanders was crucial to building relationships of trust and accountability, but accompanying them also fed our efforts to assure, anticipate, and be agile. Accompanying the ISF gave our combat advisers a fingertip's sense for the combat's direction and intensity. This helped our "Lethal OCT Network" provide timely and useful assistance at the point of decision while also pumping perspective to promote shared understanding and unity of effort.

• **Assure:** During my last battlefield circulation with MG Martin before he departed in July, I offered my observation that the "third A" in A3E should stand for assure, not accompany. We have countless examples of how our physical presence, ideas, or fires — or a confluence of these inputs — gave ISF commanders the confidence to keep attacking. In fact, I now have a new paradigm for what non-lethal contact can mean. In OIR, when I was not with sLTG A3, we maintained contact. For the very reason of assurance, quality translators mattered immensely to us. During frequent times of crisis, we encouraged all of our advisers to continually remind the ISF that they could count on us and that their success was our success.

As Mosul's ferocious drama neared its end in July, ISIS attempted to break out of a troubled triangle called the Hawijah Pocket when it seized the historically vulnerable village of Imam Gharbi along the Tigris River. The Battle of Mosul churned, but we quickly repositioned a platoon of M777 howitzers and deployed CPT Mike Beum's A&A team from A Company, 2nd Battalion, 325th Airborne Infantry Regiment (AIR). We also put our artillery battalion XO, MAJ Steve Ackerson, in charge of a JTAC-enabled strike cell at the Salah ad Din Operations Command's (SADOC) forward command post. After witnessing the following demonstration of coalition leverage, CPT Zach Beecher, one of 407th Brigade Support Battalion's (BSB) most cerebral leaders, coined the phrase "targeted assurance."

Targeted assurance described an adviser's subtle choice between competing ISF partners or agendas, always keeping CJFLCC's and sLTG A3's goals front of mind. During the ISIS incursion to Imam Gharbi, I chose to publicly critique an IA general who was underperforming and embolden the SADOC commander who was serious about attacking. It worked. Together, the SADOC's ad hoc team of Ministry of Interior forces, supported by a small TF Falcon strike cell, took charge of the unraveling situation and applied an A&A mainstay: "stimulate and exploit." Our A&A network's commitment of less than 50 coalition troops, a 24-hour orbit of unblinking full motion video (FMV) collection with solid analytics, and some vicious precision fires were enough to help the ISF retake the village from the desperate enemy just five days after the targeted assurance episode.

• **Anticipate:** As previously discussed, I mentioned my proposal for a more relevant "third A," but there is more to the story. MG Martin actually countered with another insightful candidate — anticipate. To be clear, the ISF we enabled during OIR did not issue combat orders nor rehearse operations. In fact, senior commanders normally returned from Baghdad just in time for the start of another bloody phase of the attack. When our partners departed northern Iraq during the transitions, we continued to over-communicate and maintain a disciplined battle rhythm to ensure our A&A network's shared understanding in spite of lapsed Iraqi communications. In fact, during these periods, our partners only occasionally felt compelled to call us with essential updates, so we relied heavily on the CJFLCC commander and senior staff in Baghdad to help us posture our A&A capabilities.

Photo by SSG Jason Hull

Paratroopers from Task Force Falcon meet their Iraqi Security Force partners in a recently liberated neighborhood in west Mosul on 2 July 2017.

Even as we transitioned the A&A mission to the 3rd Brigade, 10th Mountain Division, the ISF plan was evolving daily as the start of the Hawijah offensive

Photo by SSG Alex Manne

A Soldier with the 2nd Battalion, 325th Airborne Infantry Regiment emplaces concertina wire at an undisclosed location in Iraq on 26 February 2017.

approached. As we departed, CJFLCC was organizing a medical evacuation (MEDEVAC) architecture without absolute certainty of ISF intentions. The incoming team was arranging its fires architecture and basing posture with an eye toward maximum flexibility in order to absorb late change. Nothing was first order in Iraq's political-military environment. As stated previously, TF Falcon could never fall in love with a plan, and we continuously challenged our own assumptions. Our A&A network had to always listen, maintain contact with our counterparts, and apply the fundamentals of mission command in order to make the best decisions we could. However, when we sensed increased risk, the commanding general or I would direct clarifying questions to sLTG A3, discussing resource trade-offs with him in a very transparent manner.

• **Agility:** One of TF Falcon's guiding ideas was that ISF should never have to wait for us. Our commanders and teams nimbly changed directions in response to updated GOI decisions or emergent opportunities to damage ISIS. In fact, 2-325 AIR's support to the 15th IA Division near Badush is a superbly illustrative example. While the Battle of Mosul still raged, sLTG A3 decided to press the ISIS disruption zone to the east of Tal Afar. He shared his thinking with us during a routine key leader engagement (KLE) on a Monday evening, and by Friday morning, TF White Falcon, led by LTC James Downing and CSM Santos Cavazos, was on the move. In a matter of four days, we synchronized logistics as LTC Downing's team met its new partner, displaced nearly 30 kilometers, began building a new assembly area, and integrated a battery of 155mm howitzers that were previously based with our cavalry squadron. We kept it simple during these frequent jumps: there were no "routine" patrols, and teams lived out of rucksacks initially. The priorities were always establishing the defense and long range communications.

Organization: An A&A Network's "Pacing Items"

Our field grade-level commanders and key staff did some remarkable work with the CJFLCC team to arrange and re-arrange our TF as we pondered fresh concepts that required new analysis on time, space, force, and risk. Many observers cite airborne reconnaissance assets or coalition jets when debating the biggest contributors to victory in the Battle of Mosul, but such thinking may be a bit too surface level. First, the ISF were the centerpiece — they did the deadly work against ISIS during weeks of claustrophobic close combat. Second, our logisticians of 407th BSB, led by LTC Liz Curtis and 1SG Greg Bristley, worked some sustainment gems with the CJFLCC in order to maintain our agility. It is undeniable that all of these efforts and assets helped the coalition provide ISF with tactical overmatch against ISIS. For TF Falcon, however, the "A&A pacing items" — the most important components of our network that we centrally tracked — were security platoons, secure voice and data communications suites, as well as sufficient power generation to energize our aggressive A&A network.

For this A&A mission, we actually managed infantry and cavalry platoons at the brigade level even though these small units never once attacked an ISIS target themselves. We were constantly adjusting a useful matrix that allowed commanders to keep track of our fluid footprint and task organization as we moved platoons, the core building blocks, in order to accomplish the "Six A's." Indeed, operational agility depended on our anticipation of ISF requirements or our responsive massing of strike effects. However, it also depended on our capacity to secure mobile A&A teams, defend a key fixed-wing-capable staging base, or protect sites for our devastating artillery. At times, the platoons certainly felt like they were battling monotony more so than ISIS, but we could never have done it without the protection they provided. In fact, the 37th Brigade Engineer Battalion (BEB), led by LTC Sebastian Pastor and CSM Augustin Cruz, provided not only mobility and construction capacity, but their engineers also provided much of our mobile security for logistics moves in order to preserve maneuver platoons for base defense or mobile security for A&A teams. This security calculus has to inform senior leaders' thinking and organization any time we consider a similar brand of fighting by, with, and through in a violent, contested environment.

Our distributed network of artillery positions, advisers, and strike cells — based with several ISF units across northern Iraq — required a substantial security overhead to enable relatively few teams in the field. However, we also had to connect it all. Like all warfighting, we had to get the right information to the right leader at the right time in order to make decisions. I began promoting bandwidth as the "#1 class of supply" for A&A operations once I understood how ISIS and the ISF actually fought each other in west Mosul. Simply put, the ISF needed us to strike accurately and often, and a sophisticated communications network connected our precision kill chain; arguably, no security coalition has ever fought as accurately with fires in complex urban terrain as CJFLCC-OIR. Still, much like our finite number of security platoons, communications linkages could also constrain this intricate network of command

posts, unmanned systems, strike aircraft, and howitzers. Consider the integrating processes of targeting and intelligence preparation of the battlefield (IPB); distances that spanned northern Iraq would have unhinged our A&A network if we could not facilitate decision making at the same pace as our perpetually shifting partners.

Our signaleers were the unsung heroes of TF Falcon, and MAJ Evan Kelly, our exceptionally competent brigade signal officer, always had a seat at the table with our intelligence and operations officers. As importantly, recall COL Brett Sylvia's "assist in order to advise" angle as we transitioned in January; he knew that ISF commanders occasionally needed to personally view coalition FMV feeds in order to trust that we were attacking ISIS car bombs and sniper positions. One of our many bright junior MI officers, 1LT Alexandra Brammer, described FMV as "A&A commander currency, buying small amounts of trust and good will." The ISF commanders' personal witness to responsive and precise coalition strikes was the practical lifeblood of assurance. These television feeds in ISF command posts proved to them that we were supporting their operations. 1LT Meghan Mitchiner of our BCT S2 section claimed they had to "observe the overmatch" taking place. For this very reason, power generation may be the second most important "class of supply" for A&A operations. We learned to never underestimate how much juice a decentralized and digitized A&A network requires in order to be effective.

Paratroopers deployed in support of Combined Joint Task Force – Operation Inherent Resolve and assigned to the 2nd Brigade Combat Team, 82nd Airborne Division walk outside of an Iraqi Federal Police patrol base in Mosul, Iraq, on 4 July 2017.
Photo by CPL Rachel Diehm

A Day in a Disciplined A&A Battle Rhythm

Over time, strict adherence to a disciplined A&A battle rhythm was central to our capacity for providing timely and effective advice, assistance, and assurance to the ISF. As discussed previously, our decentralized, dynamic, and diverse network of like-minded warriors had to connect with a predictable frequency built around the right forcing functions, disciplined reporting, and fixed agendas. This framework also helped us reinforce MG Martin's fundamental vision for nested, multi-echelon engagement in real time. Over eight months, we had to shift our internal A&A events around several times: ISIS, ISF, and fickle transportation patterns all had a say in our schedules.

Despite these external variables, however, we may have cancelled any one of our chief one-hour battle rhythm events a total of seven times or less during the marathon fight. By staying organized, we answered chaos with composure. Our battle rhythm was a steadying influence of some very difficult days; indeed, we began our flagship battle rhythm event — the operations, intelligence, fires, adviser (OFIA) VTC — within two hours of TF Falcon's first very serious casualty.

• **Commander's Update Assessments (CUAs):** The first event of our typical morning was the CJFLCC CUA. Each of these daily meetings included a functional area deep dive, and I was particularly interested in Monday's intelligence CUA and Saturday's A&A CUA because these two were built around robust commanders' dialogue. Even though I talked with the commanding general regularly, we still always strove to be insightful in these classified forums because of the broad coalition reach our ideas or perspectives might have. We viewed these settings as opportunities to plant seeds up and outside of the TF, and as appropriate, do some subtle

influencing of other coalition teammates' thinking from beside or below.

• **Battlefield Circulation (BFC):** Our A&A team commanders stayed with their ISF counterparts nearly every fighting day. I found most ISF generals not only wanted us present, but they demonstrated exceptional physical courage while insisting on our relative security. These nuances — our presence and their courage — were central to their command presence and credibility. For me, this meant a consuming but essential regimen of BFC with sLTG A3: always listening, maintaining contact, and investing in our relationship. We went almost everywhere with him, frequently stopping at a final covered position as he went all the way into the main battle zone much like we might expect our battalion commanders to do for a main effort attack. Daily contact with our partners made us more responsive, more aware, and more lethal. Our A&A team commanders frequently shot concise notes to each other or the CJFLCC commander after splitting from ISF leaders in the late afternoon. We also typically hosted the CJFLCC commander in northern Iraq for BFC at least once a week and the CJTF commander every other week, integrating them closely into the A&A operation and connecting them with sLTG A3.

• **OFIA VTC:** We inherited this evening forum from our predecessors, and it was our TF's centerpiece event — we lived off of it. ISF very rarely operated at night, consigning the coalition to disrupt ISIS until direct ground combat kicked off again in the morning. While our partners rested in the early evening, our advisers, key staff, and current operations teams — TF Falcon's whole network — plugged in for 60 minutes. All of our advisers had just spent the day attacking ISIS by, with, and through our partners. The OFIA VTC provided each of our field grade commanders, staffs, and key liaisons a platform to provide updates, insights, and perspectives to each other, our command sergeant major (CSM), and me. It allowed us to synthesize bottom-up inputs and stitch together the shifting story, but it also helped me push my intent, frame sLTG A3's directions to ISF commanders, and convey the commanding generals' positions to our team.

• **Evening KLE:** Nearly every evening, our A&A team commanders typically visited our partners for individual KLEs. Thus, our team of teams could typically have five or more KLEs going simultaneously each night. It was common for the FEDPOL to begin these meetings at 2100 or later each night. In training, we could have never adequately replicated the stress on host nation security forces nor the humanity inherent to warfare by, with, and through a brave but bleeding partner. ISF commanders used these meetings to organize, inspire, or chastise their charges. At times, our ISF counterparts used these venues to vent to us also. Combat in Mosul was bruising, and predictably, ISF leaders were not always satisfied with our support. Still, we stayed committed to a formula of empathy, humility, and patience because the mission required it. For example, our eighth battalion adviser team, rotating teams led by LTC Stu James (of the 1st Battalion, 67th Armor Regiment), LTC Andy Kiser (of the 2nd Squadron, 12th Cavalry Regiment), or LTC Brian McCarthy (of the 3rd Squadron, 8th Cavalry Regiment), memorably stayed above frustration despite a revolving leadership door of 16th IA Division's commander, deputy commanders, and senior staff. At one point in July, LTC Kiser's A&A team helped 16th Division secure east Mosul, attack ISIS in west Mosul, and counterattack to retake control of Imam Gharbi — all at once.

Healthy relationships were critical to achieving an equilibrium between the uncomfortable conversations of accountability and essential doses of empathy. The evening KLEs also allowed our advisers, uploaded with context following the OFIA, to provide intelligence updates, advice, and encouragement. Significantly as well, our advisers guarded against being the ISF's messengers of operational details to other ISF: our modus operandi was to always let Iraqis inform Iraqis. This buttressed the ISF leadership and ownership inherent to the coalition's by, with, and through campaign. The advisers' outputs from evening KLEs were reports that included a brief summary of atmospherics, logistics concerns, activities, and intentions. I typically read up to 10 reports each night after 2200 and could respond with another brief round of feedback to our commanders via email or phone calls.

• **Evening Update:** The A&A teams' inputs and our evening KLE with sLTG A3 also informed my evening update to the CJFLCC commander. We inherited this system from 2/101st Airborne Division, but it was a byproduct of allowing the partners' biorhythm to drive our battle rhythm: the ISF commanders liked to coordinate the next day's action at night. Our email update

Photo by SSG Heidi McClintock

During a key leader engagement near Mosul on 10 April 2017, Iraqi Federal Police leaders meet with MG Joseph Martin, commanding general of Combined Joint Force Land Component Command; BG John Richardson, deputy commanding general-Erbil of Combined Joint Forces Land Component Command; and COL Pat Work, commander of 2nd Brigade Combat Team, 82nd Airborne Division.

had a vast Cc line of coalition players who were based far from the action, and I tried to hit send on this report by 0130 every night. Our goal was that CJFLCC commander, senior staff, and special operations stake holders could review our inputs first thing each morning, a tactic to inform and influence the fight up and outside of our TF. MG Martin frequently explored themes from our update during morning CUAs, and MG White often "replied to all" with his guidance, inquiries, and ideas.

The ISF's efforts were the unambiguous catalyst for success, but we could have never assisted them well enough without our predictable pulse that supported timely problem solving at all echelons. Our design with the battle rhythm was to always keep the team connected with a multi-echelon commanders' dialogue no matter how busy or emergent the situation appeared. We wanted to share critical inputs from the ground up and then allow our CSMs (initially Mitch Rucker and later Randy Delapena) and I to provide feedback to our team.

None of this was cosmic or novel. Like most units, we also had a predictable cadence extended over a weekly or monthly timeframe for integrating systems like targeting and IPB or programs such as command maintenance, command supply discipline, future home-station training, and budget execution.

Fights at Echelon: Skill Sets for Warfare By, With, and Through the ISF

Supporting ISF decisive action required TF Falcon to synchronize effects across the warfighting functions in order to create advantageous situations for their ground combat operations. Thus, I viewed our headquarters' chief responsibility as organizing the key capabilities resident in the brigade's artillery, support, and engineer battalions — the half of the BCT that does not ordinarily maneuver against the enemy. In addition to our usual obligations to prioritize, resource, synchronize, inform, empower, and manage risk, the TF Falcon staff and I also had "four fights" to continually synchronize: sustainment, intelligence-driven A&A, lethal targeting with precision fires and counterfire, and as always, risk management.

Therefore, another way to look at fighting by, with, and through in this context is that we did for ISF commanders what we should normally do for our own maneuver battalions. We synchronized materiel, intelligence collection and analysis, and strike support around the ISF's attack against its own near-peer competitor — ISIS. Not only did the ISF commanders embrace their spearhead roles in the fight, but their maneuver drove the virtuous circle of "stimulate and exploit" moves that ultimately allowed them to advance, seize ground, and liberate their countrymen. Most missions that we prepared for in training were transferable to this OIR context. Rather than synchronizing the combat potential of the BCT to provide our battalions with tactical overmatch, we massed effects for ISF brigades. Thus, our training doctrine — an approach that builds trust through realistic mission essential task list-driven work and prepares BCTs for decisive action wartime requirements — also developed the essential skill sets needed for this muscular style of security force assistance.

Sustainment: Logistics was a balancing act of trade-offs for us. Our unambiguous priority was to help the ISF win, but more than half of our logistics specialists and 90 percent of our property did not deploy. Clearly, much of our A&A network's agility depended on our flexible and tireless logisticians. Also, key CJFLCC-OIR logistics planners, contracting officers, and the deputy commanders were decidedly committed to the fight in Ninewah despite living in Baghdad. Together, the coalition logisticians — another team that believed ISF should never have to wait for us — thought fast and fought fast to keep pace with the battle's relentless dynamism. Even though we had a limited organic ground distribution capacity to meet the mission's decentralized and simultaneous logistics requirements, LTC Curtis and her team worked closely with logisticians at every echelon to generate distribution options through a combination of host nation contracting and our own finite assets. Most moves required security, and some also called for deliberate route clearance.

Perhaps self-evident, but our density of deployed supply specialists, food service Soldiers, and maintenance technicians really mattered. First, one can imagine the supply expertise necessary to steer accountability of organizational and theater-provided equipment (TPE), routine supply transactions, numerous change-of-command inventories, and budget execution. Keep in mind that we only deployed about half of our team overall, so there were similar requirements across our brigade at Fort Bragg as well. Specifically, we divided the BCT's already-stretched property book office for about two-thirds of our nine-month deployment because of the split responsibilities. An obvious implication of deploying so little of our organic property was a vast dependence on TPE. Meanwhile, the Army's automated system of record, Global Combat Support System-Army, also updated during the Mosul operation, increasing churn. All of these activities or programs required command emphasis and consistent supervision.

We also depended heavily on contracting of equipment and materiel to move and sustain the distributed artillery positions and A&A nodes. A critical aspect of this was certainly the need for anticipation and agility in our decision making; we were comfortable being uncomfortable and could never wait too long to commit. As previously mentioned, one of our foundational attitudes was that we had no extra Soldiers, and many of our leaders made memorable contributions while filling nontraditional roles. The host of junior officers who catalyzed our vital contracting enterprise was a sterling example of this. In fact, our BCT food service tech, CW3 Jason Page, masterfully managed these contracting officer representatives (CORs), particularly LTC Pastor's CORs from 37th BEB who bounced all over northern Iraq coordinating scopes of work for contractors, protection requirements, and other engineer targets.

Change was the norm as TF Falcon fed adviser teams and artillery specialists who operated from numerous austere and temporary patrol bases while ISF operations progressed. On a couple of occasions, all it took was an accurate enemy mortar round or two to force teams to move their patrol bases twice in a week. Additionally, our combat vehicle fleet swelled during our first 60 days in Iraq, so on top of the other untried TPE, our team's maintenance enterprise depended on field service representatives (FSRs) for everything from essential ground

mobility platforms to counter-unmanned aerial system (C-UAS) technologies. Therefore, our team was never truly self-sufficient with key communications, protection, and mobility systems, and we carefully managed a throng of FSRs to meet both programmed and emergent maintenance requirements.

Finally, we had to maintain our people. This required preventative and reactive capacity in addition to the CJFLCC's supporting cast. We managed a small pool of chaplains, environmental health professionals, and behavioral health specialists centrally. Eventually, we also included a dentist to round out our arrangement of medical doctors from the Army's Professional Filler System. We were aware that our TF's distributed forces and the human dimension of our Soldiers in a hazardous environment came with risk, so we strove to maintain our counseling, integration, and health promotion practices in Iraq and at home station. Every loss is a loss, and we needed to keep every Soldier in the fight.

Photo by SSG Jason Hull

An ISIS unmanned aerial vehicle captured by Iraqi Federal Police rests on a table at an intelligence-sharing meeting at the Joint Operations Center at Qayyarah West Airfield.

Intelligence-driven A&A: When people have asked me what the hardest aspect of our A&A mission was, I have never hesitated nor overthought my response: it was ISIS. As stated previously, the ISF very rarely ran intel-driven operations of their own, so we drove a regime of intel-driven A&A. The partners certainly understood ISIS tactics, the broad anti-government and sectarian underpinnings of ISIS, etc. They also proved to be capable collectors. For example, much of the 92nd Brigade, 15th IA Division was comprised of Tal Afar natives who were also based at Tal Afar airfield as the ISF attack approached in August 2017. Many of the ISF's tips and atmospherics were immediately helpful, but they struggled with assessment.

By March 2017, we had seen enough in Mosul to begin arranging a useful threat model for ISIS's complex and layered defense. The model generally held for Tal Afar as well. It became apparent that ISIS's defense depended on four critical factors:

1) Suicide vehicle-borne improvised explosive devices (SVBIEDs);
2) Scores of five-man infantry fighting squads;
3) Centralized command and control (C2); and
4) ISF inactivity.

Our understanding of how ISIS fought also reveals insights to our contextualized targeting process; because of the "stimulate and exploit" interplay of current operations in Mosul, a majority portion of our collection and analytic capacities focused on finding and fixing ISIS within several city blocks of the ISF forward line of troops (FLOT). Dynamic targeting to protect ISF units against ISIS SVBIEDs, infantry ambushes, or mortar batteries along the FLOT was crucial for assistance and assurance. On the other hand, as the ISF transitioned from Mosul to Tal Afar in July, we adjusted the TF's reconnaissance and thinking to feed a deliberate targeting process. We also pursued a methodical IPB unlike anything we could have achieved in Mosul's ever-shifting slugfest.

ISIS tactics typically came to life in a disruption zone marked by loosely coordinated indirect fires (IDF); roads pocked with dirt berm, ditch, derelict vehicle, or static VBIED obstacles; and limited commercial off-the-shelf UAS reconnaissance. The battle zone may have been organized into multiple defensive belts or sub-battle zones where ISIS infantry units shouldered a heavy burden, producing "sniper-like effects" even if they were poorly skilled. ISIS also learned to compress its exposure to coalition detection, shrinking the distance from SVBIED staging bases to strike zones, an innovation that Les Grau and Timothy Thomas referred to as "hugging" in their analysis of Chechen fighters during Grozny 1.[5] Additionally, fighting in support zones could be vicious. ISIS senior commanders clearly inspired their charges with their physical presence as evidenced by the ISF's month-long brawl to take al Juhmuri Medical Complex, the "ISIS Pentagon" of Mosul.

In its military prime during the Battle of Mosul, SVBIEDs intimidated even the fastest and nastiest of the ISF fighters, the CTS. ISIS appeared to pursue a high payoff target list topped by ISF tanks and engineer blade assets with furious agility. ISIS commanders also frequently guided their SVBIEDs with small UAS, another manifestation of centralized C2. By tunneling through the internal walls of large structures, ISIS was able to make a handful of trained or untrained fighters appear as "snipers everywhere," a somewhat common report by the ISF on the most violent days. In July's closing days in west Mosul,

we had to attack ISIS infantry small units with the same intensity as we had previously unleashed against SVBIEDs.

Furthermore, ISIS was more or less an Arab-styled army like our partners; it fought with remarkably centralized C2 at times. Along these lines, when senior commanders were present on the battlefield, they made a difference. ISIS mortar battery commanders also seemed to exercise strict control over target selection as well as ammunition breaks. Finally, ISIS took full advantage when the ISF did not press the attack. sLTG A3 agreed that after fighting each other for several months, ISIS knew every signal that ISF troops were inadvertently sending when their attacks had stalled.

Our contributions to coalition IPB were important, but not because our analysis was exact or we had an innate understanding of ISIS's military capabilities, capacity, or intentions. In fact, there was always much more that we did not know than we did know. During the fight for west Mosul, every 25-30 days we released a classified one-page set of intelligence judgments that described how we evaluated ISIS tactics, capabilities, capacity, and intentions in the changing environment. My hidden agenda with these projects was training while we fought, specifically pressing our talented analysts to report evidence-based arguments concisely and precisely. These IPB efforts spurred coalition dialogue — it helped get commanders and staffs talking. If we put our assessment out there, at least it caused other coalition stake holders to critique it. These stake holders included the ISF. Our IPB stirred their "red pen," too.

We periodically used a method that we dubbed "intel armageddon" to energize our thinking. This approach played to our battalions' inherent competitive nature, and the brigade intelligence support element (BISE) was always one of the contestants. Intel armageddon was simple: when our analytics had lost altitude or needed a jump start, I sought three independent assessments of the same tactical problem. For instance, as we began our focused IPB of Tal Afar while the fighting in Mosul wound down, we had two of the battalions and the BISE compete. We actually invited MG White to participate in this session, and these three assessments fed our overall TF IPB that we shared up-and-out, particularly with the ISF.

Our parent division at Fort Bragg also ensured our tactical UAS (TUAS) platoon's full manning with operators, and CJFLCC-OIR weighted the ISF fight in Ninewah Province with plenty of unarmed FMV capability. Foremost, we did not spend energy lamenting gaps in FMV coverage but, rather, focused on avoiding redundancies and fusing the available intelligence overlays that we had. For perspective, these FMV assets provide commanders and analysts with a "soda straw" perspective of the battlefield. They are not magic. They do not find the enemy — humans do. The most critical aspects of FMV collection are the thinking behind where and when to place a sensor in order to increase odds of detection as well as an analyst's ability to recognize the signatures that answer IRs. In fact, these airborne military robots can create a counterproductive illusion of understanding, so we always drove to emphasize the analyst over the asset.

Our message was "hurry to think, not to plan" as we considered how to optimize and prioritize our finite collection assets. We never accepted the harmful egalitarianism of the proverbial "peanut butter spread" when prioritizing sensors, connectors, and analysts.

Over the course of nine months, we generated more than 5,000 hours of TUAS FMV collection for the counterfire fight, dynamic and deliberate targeting, IPB, and ISF security operations to consolidate gains. With so much information coming in, we obviously had to meticulously prioritize analytic efforts to discern the answers to IRs. Because of the brutality along the FLOT, dynamic targeting consumed over half of our FMV collection and analytics during the Battle of Mosul, and I typically approved our BCT S3's proposal or gave direction for the next day's intelligence collection plan as late as our evening OFIA VTCs. For dynamic targeting, TUAS was typically our "fixing tool," cross-queued off of another intelligence source, whether an ISF unit in contact, a radar acquisition, or an ISF human intelligence tip. Moreover, we already discussed how crucial TF Falcon's signaleers were in connecting this intricate network, but so were a bevy of other players. Behind the scenes, a host of mechanics, logisticians, engineers, and tactical controllers fought to keep precious TUAS sorties in the fight.

We actually employed multiple government and contracted sensors based from several locations, allocating FMV reconnaissance to A&A teams by using hours as our unit of measure. Our message was "hurry to think, not to plan" as we considered how to optimize and prioritize our finite collection assets. We never accepted the harmful egalitarianism of the proverbial "peanut butter spread" when prioritizing sensors, connectors, and analysts. sLTG A3's main effort attack axis always mattered because "stimulate and exploit" was the backbone of dynamic targeting during current operations. Philosophically, we also erred on the side of driving an aggressive strike tempo, directing sensors and analytics toward ISIS patterns that we could take advantage of in order to maximize the lethal return on our investment. Whenever practical, our targeting also integrated our TF's persistent threat detection system (PTDS) based at the coalition's largest base in Ninewah. The 37th BEB once memorably used the PTDS to find and fix an ISIS small unit crossing the Tigris River, setting up LTC Pastor to approve a fixed-wing strike that finished the startled enemy.

TUAS collection and analytics also contributed hugely to deliberate targeting. For example, our TF targeteers developed 30 deliberate strike nominations leading up to the ISF attack on Tal Afar alone. Unlike our dynamic process, the TUAS served more as the "finishing tool" for our deliberate targeting, confirming or denying our assumptions about civilian presence prior to coalition strikes on ISIS sanctuaries, lines of communication, C2 nodes, or caches. Our deliberate process

Photo by SSG Jason Hull

A Soldier from the 2nd Brigade Combat Team, 82nd Airborne Division launches a Puma unmanned aerial vehicle during ISF's offensive to liberate west Mosul on 19 March 2017.

complemented the special operations and CJFLCC-OIR efforts, and perhaps predictably, the coalition's intelligence sharing and shared understanding improved as we transitioned from Mosul's dynamism to the deliberate isolation of Tal Afar.

Across the TF, A&A teams thickened the larger collection plan with their own organic fleets of small UAS, and the IA did similarly with off-the-shelf quadcopter drones. For example, 2-325 AIR's layered FMV reconnaissance for the ISF attack on Tal Afar was a framework employed similarly by all of our field grade A&A teams during the operation. First, company-level advisers used Raven and Puma small systems, complemented by IA quadcopters and queued by IA human intelligence, to protect 15th IA's units from close-in threats. Meanwhile, Shadow TUAS helped TF White Falcon's analysts identify ISIS fighting positions, obstacles, and engagement areas near south Tal Afar's outer crust. Finally, the advisers may have also had operational control of long dwell, armed assets in order to hunt ISIS SVBIEDs staged within several blocks of the city's outer obstacle belts. All the while, signal bandwidth and power generation were in high demand.

LTC Sean McGee and CSM Scott Brinson, the team that led 1-325 AIR, may have contributed on an even greater scale than the rest of us. TF Red Falcon served under the operational control of CJFLCC-OIR and helped the Baghdad Operations Command (BOC) protect the capital by hunting down ISIS threats before they materialized in Baghdad. Perhaps most importantly, this A&A team helped the BOC implement a monthly G2 conference, a forum for ISF intelligence officials to share information with each other. Prior to implementing the rhythmic G2 conference, disparate IA commands funneled their reports back to the Ministry of Defense, a remarkably hierarchical approach that stymied timely decision making and exasperated gaps and seams along the figurative and physical boundaries. With MG Martin's support, LTC McGee's team capitalized on GOI concerns about Ramadan threat streams to persuade sLTG A3 to support the first conference in May 2017. CPT Tom Seagroatt, a uniquely gifted MI Soldier, also did a lot more than crank out releasable products for our partners. These advisers wielded outsized influence with BOC influencers, helping the ISF fuse intelligence in depth across the country as the coalition also added its intelligence overlay.

As we departed, the ISF certainly had a great deal of work to do to hone processes that promote unity of effort and shared understanding, but TF Red Falcon helped prod an initial paradigm shift in how ISF commanders shared and communicated among themselves. Their intellectual fingerprints on partner decision making should not be taken lightly, and the proof was evident in the ISF's performance. During almost nine months of LTC McGee's A&A partnership with the BOC, ISIS only struck Baghdad nine times total. The ISF's determined security was impressive, particularly as ISIS increased attempted attacks by 300 percent following the fall of Mosul in July.

Two of our goals were to keep every MI Soldier and every sensor in the fight. As I stated previously, our BCT S2, like several of his battalion-level counterparts, was also a valued finisher with military advice for us. Moreover, we have already described several examples of how we rolled our intelligence enterprise into multi-echelon engagement. Across the TF, we expected young MI talent to simplify the complex, communicate with clarity, and give potent advice to highly educated and experienced generals... all through an Arabic translator.

Lethal Targeting with Precision Fires and Counterfire: Coalition targeting devastated the enemy's IDF capacity in northern Iraq while maintaining strict standards that protected civilians and critical infrastructure. Unsurprisingly, surface-to-surface lethality also depended on superb long-range communications and sound ammunition supply practices. As importantly, our IPB was entirely contextual. For example, Mosul required dynamic IPB, targeting, and decision-making processes suited to the violent slog in dense urban terrain. ISIS seemingly turned most homes, schools, and religious sites into fighting positions or caches and perniciously coerced civilians into action as human shields. It was a grinding, 150-day test of wills and uncomfortably close combat. On the other hand, the ISF attack on Tal Afar offered the coalition more than 30 days to focus IPB on identifying most obstacle belts, conduct precision shaping and preparatory fires, and reposition assets that helped whittle down the ISIS disruption zone well before the ground attack began on 20 August 2017.

Implications of Urban Terrain: With years to prepare the defense of Mosul, ISIS commonly buttressed its cover and concealment by using firing positions in sensitive sites or the upper stories of tall structures. As just one prominent example,

days before ISIS regrettably destroyed the al-Nuri Grand Mosque in the Old City district, it began firing mortars from the grounds' courtyard. Such recklessness was the norm for ISIS, so our team relied on precision munitions and high-angle attacks that could overcome Mosul's jumble of intervening urban crests. Also, TF Falcon leaned on sensible weapons solutions such as Excalibur, fired at very high angles and set to delay, or M1156 precision-guided kits for urban counterfire missions. In retrospect however, we consistently struggled to adequately arrange our sensors to exploit strikes, and assessing battle damage in complex urban terrain was always a challenge as ISIS continually adjusted its tactics.

Counterfire: The fires fight in Mosul taught us that Q-53 radar acquisitions provide a critical overlay. ISIS fought its mortar platoons in a remarkably centralized manner, noticeably changing priorities or shifting ammunition around as the fight progressed. Over time, radar acquisitions fed our running estimates of ISIS's eroding capabilities and morphing intentions. We also saw patterns that we could exploit. Still, our radar acquisitions provided just one overlay, and we only detected a fraction of the shots fired in Mosul's dense urban terrain. Finally, ISIS was a thinking enemy, bent on survival; it adjusted its tactics frequently.

Our counterfire fight aimed to assure the partner. This challenge required us to threat model ISIS artillery and mortar teams, burning a number of intellectual calories to understand how they moved, commanded, and supplied their teams. We used Q-53 radar acquisitions as a baseline overlay but added ISF reporting, FMV analysis, and the Q-50 radars that our A&A teams often employed. Additionally, we frequently fought multiple FMV assets simultaneously under the TF counterfire cell. Integrated and predictive analysis set us up to focus the team's FMV "soda straws" — the handful of fixed-wing reconnaissance robots we controlled — in predicted positions of advantage to find and fix the enemy's IDF assets.

Meanwhile, we used everything from coalition jets to rockets to attack ISIS as we worked with and through the one-star airspace and strike coordination teams at combined joint operations centers in Erbil and Baghdad. Indeed, we even counterfired with M142 high mobility artillery rocket systems at times.

Artillery Fire Support to ISF Operations: As revealed previously, senior ISF commanders did not do detailed planning, and there were no ISF combined arms rehearsals of any sort. Going back to the "Six A's," we assured them with our detailed fires planning, anticipated their schemes of maneuver by leveraging the "Lethal OC Network" and our A&A battle rhythm, and we remained agile by shifting artillery and radar positions and priorities on imperfect information. I suspect that only very senior ISF generals ever really had a surface-level understanding of our fires plans, and they never shared these details "down and in." However, sLTG A3 was counting on LTC Gibson's Black Falcons to synchronize the French contingent's 155mm Caesar cannons, other coalition strike assets, and American howitzers through exhaustive coalition rehearsals. Moreover, there was always some level of assist in order to advise as we previously discussed. sLTG

Paratroopers with the 2nd Battalion, 319th Airborne Field Artillery Regiment engage ISIS militants with precise and strategically placed artillery fire in support of Iraqi and Peshmerga fighters in Mosul in July 2017.
Photo by SGT Christopher Bigelow

A3 valued LTC Gibson's detailed briefings, making our BCT fire support coordinator another prominent finisher at times. In fact, we used "pre-assault" artillery fires to suppress enemy fighting positions, but because the ISF rarely started attacks at planned times, we learned to use another round of "with assault fires" that were synchronized with the ISF's actual crossing of the line of departure. We applied similar thinking for the employment of rotary wing, rocket, and fixed-wing assets.

In Their Own Way: The Essence of Warfare By, With, and Through

It was a privilege to represent our Army and our storied division with the coalition during OIR. We are also honored to have served under two tremendous divisions during the drive to help the ISF dominate our nations' shared enemy. We could not have been prouder of our partners as we departed Iraq in September; the ISF had liberated well over four million people and 40,000 kilometers of terrain, and more than a quarter million people had returned to their homes in Mosul. Perhaps the most heartening aspect was that sLTG A3 and the ISF accelerated the campaign against ISIS following their victorious Battle of Mosul.

In our mission to help ISF and hurt ISIS every day, we never lost sight of the coalition's interests. We kept a consistent azimuth guided by five big ideas and a disciplined battle rhythm. We had to produce results to retain the ISF's trust, and CSM Delapena and I are immensely proud of our teams for balancing grit with empathy, humility, and patience. There was always much more to serving the ISF and coalition well than merely advising and assisting. A learning organization, TF Falcon tinkered with our approach over time, eventually interpreting a formula that practiced all "Six A's" of A&A: advise, assist, accompany, assure, anticipate, and agility. Still, the campaign was incurably human, and naturally, relationships mattered. Solid relationships kept everyone goal oriented on frustrating days, and our connections introduced a deeper accountability to the partnership.

By breaking down ISIS in their own way, the ISF's leadership and ownership of the Battle of Mosul embodied the essence of warfare by, with, and through a partner whose success was the very measure of our success. I still clearly remember the day I sensed the ISF's mass was finally toppling the enemy's Juhmuri hospital fortress in west Mosul. It was the visible beginning of the end for ISIS, and our partners were still leading the day's deadly work. They continue to do so today.

Notes

[1] Joint Publication 3-20, *Security Cooperation*, dated 23 May 2017, cites Department of Defense Instruction 5000.68 while describing Security Force Assistance: "With, through, and by. Describes the process of interaction with Foreign Security Forces (FSF) that initially involves training and assisting... The next step in the process is advising which may include advising in combat situations (acting "through" the forces)."

[2] Perhaps not as self-evident as it may appear, we lifted this central theme from LTG Townsend's seminal Tactical Directive #1, his command direction that arguably unlocked unrealized coalition potential for responsive, precision lethality. His message to advisers was: "Don't make yourself the main effort."

[3] This is also a direct lift from MG Martin's overarching guidance to anticipate ISF actions and posture nimbly. I first recall MG Martin emphasizing the necessity of anticipation during the CJFLCC-OIR Commanders Conference at Camp Union III in Baghdad in January 2017.

[4] Paul Van Riper, "How to be in Command and Out of Control by Paul Van Riper 2," YouTube video, 23 September 2008, https://www.youtube.com/watch?v=WhzRQfhOITA. During his presentation, he offers an alternative title for his thoughts that underscores the complexity of guiding any large, information age institution: "Decision Making in Modern Organizations."

[5] Timothy L. Thomas and Lester W. Grau, "Russian Lessons Learned from the Battles for Grozny," *Marine Corps Gazette* 84, no. 4 (April 2000). Accessed from https://www.mca-marines.org/gazette/2000/04/russian- lessons-learned-battles-grozny.

COL James "Pat" Work currently commands the 2nd Brigade Combat Team, 82nd Airborne Division at Fort Bragg, NC. He was commissioned and graduated from the U.S. Military Academy at West Point, NY, in 1995. He initially served as a rifle platoon leader and heavy weapons platoon leader in the 3rd Battalion, 502nd Infantry Regiment, 101st Airborne Division (Air Assault), before serving as a rifle platoon leader and headquarters and headquarters company executive officer (XO) in the 3rd Battalion, 75th Ranger Regiment. He commanded Company B, 1st Battalion, 23rd Infantry Regiment, as well as Company C, 2nd Battalion, 75th Ranger Regiment. COL Work served as the operations officer and XO of 1st Battalion, 325th Airborne Infantry Regiment, 2nd Brigade Combat Team, 82nd Airborne Division. From 2008-2009, he also served as Aide de Camp to the 20th Secretary of the Army before serving with the U.S. Special Operations Command. In 2011, COL Work assumed command of 3rd Battalion, 187th Infantry Regiment, 101st Airborne Division (Air Assault), and in 2013 began service as a staff officer in the Operations Directorate of the Joint Staff. COL Work earned a Master of Public Policy Degree from Georgetown University in 2010 and is also a graduate of the Marine Corps War College.

Photo by SSG Jason Hull

Members of the 9th Iraqi Army Division, supported by Combined Joint Task Force - Operation Inherent Resolve, fire a heavy machine gun at ISIS fighter positions near Al Tarab, Iraq, on 17 March 2017.