Attacking ISIS by, with, through
Perspectives on coalition Fires in Operation Inherent Resolve
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Soldiers, deployed in support of Combined Joint Task Force - Operation Inherent Resolve and assigned to 2nd Brigade Combat Team, 82nd Airborne Division, enable their Iraqi Security Forces partners through the advise and assist mission, contributing planning, intelligence collection and analysis, force protection, and precision Fires to achieve the military defeat of ISIS. CJTF-OIR is the global coalition to defeat ISIS in Iraq and Syria. (Staff Sgt. Jason Hull/U.S. Army)
In January of 2017, 2nd Brigade Combat Team, 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 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. Some of our perspectives on the planning and execution of coalition Fires may be specific to Operation Inherent Resolve’s (OIR) context, but others are broadly useful for leaders as we consider future excursions with this style of high intensity security force assistance.

**Lethal OC/T network: An imperfect analogy**

Anyone who has experienced a combat training center (CTC) rotation has a useful model for comprehending Task Force Falcon’s core organizational and operational concepts. Fundamentally, the CTC’s observer controller/trainer (OC/T) network wraps itself around a rotational unit with a parallel structure connected by dependable communications and disciplined information flows. The OC/T 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 OC/T network may even feel intrusive at times as its nodes maintain contact with the rotational unit at every echelon. Finally, assuming competence is the OC/T network’s anchor point. Many of the same traits that make A&A teams effective also distinguish the most useful OC/Ts. Empathy, humility and patience truly matter.

Perhaps most importantly, the OC/T network is not enrobed in “fighting” the OPFOR nor the burden of external evaluation. Therefore, OC/Ts routinely achieve a level of shared understanding that outstrips the rotational units’. Of course, they are not all-knowing. Plenty of conversations occur without OC/T oversight and they periodically misread events, personalites or trends. Still, the OC/T 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 advice side of A&A operations.

As for the assist aspects of A&A, start by picturing the same OC/Ts armed with enormous amounts of secure bandwidth, intelligence capacity and strike capabilities. Moreover, imagine this lethal OC/T network’s mission, or moral obligation, also includes attacking the OPFOR relentlessly to ensure the rotational unit wins. Now visualize this lethal OC/T network as only one among equals in an aggressive ecosystem that includes special operations, joint and other coalition stakeholders who are also united in their desire to thrash the OPFOR. As inadequate as this comparison may be, we all reason by analogy. Task Force Falcon operated like this fictional, lethal OC/T 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 Iraqi Army (IA) or Federal Police (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.

**All ‘Six A’s’ of A&A operations**

Through the “lethal OC/T network” analogy, we introduced a handful of the concepts inherent to A&A operations. A3E, or advise, assist, accompany and enable, entered the coalition lexicon before Task Force Falcon arrived to Iraq. The third A of A3E, accompany, ostensibly delineated the riskier forward posturing of combat advisers to help accelerate the counter-ISIS campaign. For Task Force 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, Task Force Falcon pressed consistent messages at every echelon. In fact, we frequently helped the Combined Joint Task Force-OIR or Combined Joint Force Land Component Command-OIR 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. Importantly as well, our predecessors from 2nd Brigade Combat Team, 101st Airborne Division (Air Assault) wisely coached us to prepare for an assist in order to advise paradigm. “Money talks” in combat advising too.

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 axis 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 later, but I often employed our talented S2, Maj. Kevin Ryan, as a finisher for our best military advice. Staff Lt. Gen. Abdul Amir Yarallah Al-Lami, the overall ISF operational commander, always had time for Ryan’s insights. Even more telling, the FEDPOL Corps commander, a three-star in charge of more than 60,000 troops, frequently sought 2nd Lt. Dave Moehling’s perspectives on ISIS.

Pfc. Danielle Rubbo, C Battery, 2nd Battalion, 82nd Field Artillery Regiment crewmember, tightens a fuse on an artillery round in an M109A6 Paladin self-propelled howitzer at a tactical assembly area at Hamam al-Alil, Iraq, Feb. 27, 2017. A global coalition of more than 60 regional and international nations has joined together to enable partner forces to defeat ISIS and restore stability and security. Combined Joint Task Force-Operation Inherent Resolve is the global coalition to defeat ISIS in Iraq and Syria. (Staff Sgt. Jason Hull/U.S. Army)
Moehling, the assistant S2 for 1st Squadron, 73rd Cavalry Regiment and a tremendous military intelligence 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 of 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 form of assistance, gave our partners confidence on the hardest days. Simply put, our targeteers, cannonneers and radar specialists of 2nd Battalion, 319th Airborne Field Artillery Regiment, led by Lt. Col. Dan Gibson and Command Sgt. Maj. Omari Bal lou, helped devastation ISIS’s centrally controlled batteries in Mosul and Tal Afar. Our company and troop commanders, backed by Air Force joint terminal attack controllers (JTACs) and sufficient bandwidth, frequently observed and directed these attacks from within ISF command posts.

Company. As discussed previously, our task force was operating forward with ISF brigade, division and corps commanders upon arrival in January. Predictable and persistent contact with ISF commandrs 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 fingertips sense for the combat’s direction and intensity. This helped our “lethal OC/T 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 Maj. Gen. Joe 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 Staff Lt. Gen. Abdul Al-Lami, 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 they could count on us and 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 Capt. Mike Beum’s A&A team from A Company, 2nd Battalion, 325th Airborne Infantry Regiment. We also put our artillery battalion executive officer, Maj. Steve Ackerson, in charge of a JTAC-enabled strike cell at the Salah ad Din Operations Command’s (SA-DOC) forward command post. After witnessing the following demonstration of coalition leverage, Capt. Zach Beecher, one of 407th Brigade Support Battalion’s most cerebral leaders, coined the phrase “targeted assurance.”

Targeted assurance described an advisor’s subtle choice between competing ISF partners or agendas, always keeping CJFLCC’s and Staff Lt. Gen. Abdul Al-Lami’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 Task Force 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 we discussed the A3E profile previously, I mentioned my proposal for a more relevant “third A,” but there is more to the story. 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.

Even as we transitioned the A&A mission to 3rd Brigade Combat Team, 10th Mountain Division, the ISF plan was evolving daily as the start of the Hawijah offensive approached. As we departed, CJFLCC was organizing a medical evacuation 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 we alluded to previously, Task Force 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 Staff Lt. Gen. Abdul Al-Lami, discussing resource trade-offs with him in a very transparent manner.

Agility. One of Task Force Falcon’s guiding ideas was that ISF should never have to wait for us, and coalition Fires played a starring role. Our commanders and teams nimbly changed directions in response to updated government of Iraq decisions or emergent opportunities to damage ISIS. In fact, 2-325th AIR’s support to 15th IA Division near Badush is a superbly illustrative example. While the Battle of Mosul still raged, Staff Lt. Gen. Abdul Al-Lami 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 on a Monday evening, and by Friday morning, Task Force White Falcon, led by Lt. Col. James Downing and Command Sgt. Maj. Santos Cavazos, was on the move. In a matter of four days, we synchronized logistics as Downing’s team met its new partner, displaced nearly 30 kilometers, began building a new assembly area, and integrated a platoon of 155 mm Paladin Howitzers...
from C Battery, 2nd Battalion, 82nd Field Artillery 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.

Supporting ISF decisive action required Task Force 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 brigade combat team that does not ordinarily maneuver against the enemy. In addition to our usual obligations to prioritize, resource, synchronize, inform, empower and manage risk, myself and our Task Force Falcon staff also had “four fights” to continually synchronize: sustainment, intelligence-driven A&A, lethal targeting with precision Fires and counter-fire, and as always, risk management. We will focus on intelligence and coalition Fires here.

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’s Fires 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.

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 of 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 of our collection and analytic capacities focused on finding and fixing ISIS within several city blocks of the ISF forward line of troops (FLOT).

In Mosul, enemy indirect Fires also gave deeper insights to ISIS thinking and capacity. ISIS tended to mass mortars against the perceived greatest threats and the enemy’s loosening control over its mortars was a tangible indication that its’ centralized C2 was beginning to wobble. Moreover, dynamic targeting to protect ISF units against ISIS SVBIEDs, infantry ambushes or mortar batteries along the FLOT was crucial for assistance and assurance. Then again, as the ISF transitioned from Mosul to Tal Afar in July, we adjusted the task force’s reconnaissance and thinking to feed a deliberate targeting process. We also pursued a methodical intelligence preparation of the battlefield (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 unmanned aerial system (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
a handful of trained or untrained fighters of large structures, ISIS was able to make C2. By tunneling through the internal walls UAS, another manifestation of centralized frequently guided their SVBIEDs with small
furious agility. ISIS commanders also fre- by ISF tanks and engineer blade assets with
Counterterrorism Services. ISIS appeared fastest and nastiest of the ISF fighters, the
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Insight into A&A teams by using hours
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.2 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 Juhrumi 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 Counterterrorism Services. 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 some-
what 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. Staff Lt. Gen. Abdul Al-Lami 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 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 stakeholders to critique it. These stakeholders 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 Maj. Gen. Pat White, our CJFLCC-OIR commander, to participate in this session, and these three assessments fed our overall Task Force IPB that we shared up-and-out, particularly with the ISF.
Our parent division at Fort Bragg, N.C., also ensured our tactical UAS (TUAS) platoons’ 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.
Over the course of nine months, we generated more than 5,000 hours of TUAS FMV collection for the counter-fire 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 brigade combat team S3’s proposal or gave direction for the next day’s intelligence collection plan as late as our rhythmic Operations, Intelligence, Fires, Adviser video teleconferences each evening. 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, TF Falcon’s signalers played a crucial role in connecting this intricate network, but so did 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. Staff Lt. Gen. Abdul Al-Lami’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 Task Force’s Persistent Threat Detection System (PTDS) based at the coalition’s largest base in Ninewah. Thirty-seventh Brigade Engineer Battalion once memorably used the PTDS to find and fix an ISIS small unit crossing the Tigris River, setting up Lt. Col. 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 task force 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 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 task force, 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, 2-325th Airfield’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 Task Force 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.

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 task force, 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 counter-fire.** 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 over 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 August 20, 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 regretfully 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 the Mosul’s jumble of intervening urban crests. Also, Task Force 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 counter-fire 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 frequently.

**Counter-fire.** 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 counter-fire 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 task force counter-fire 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 counter-fired 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/T network” and our A&A battle rhythm, and we remained agile by shifting artillery and
Second Battalion, 82nd Field Artillery Regiment Soldiers fire an M109A6 Paladin self-propelled howitzer from near Hamam al-Alil, Iraq, Feb. 27, 2017. The strikes were conducted to support the Iraqi security forces’ operation to liberate West Mosul from ISIS. A global coalition of more than 60 regional and international nations has joined together to enable partner forces to defeat ISIS and restore stability and security. Combined Joint Task Force-Operation Inherent Resolve is the global coalition to defeat ISIS in Iraq and Syria. (Staff Sgt. Jason Hull/U.S. Army)

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, Staff Lt. Gen. Abdul Al-Lami was counting on Lt. Col. Gibson’s Black Falcons to synchronize the French contingent’s 155 mm 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 mentioned. Staff Lt. Gen. Abdul Al-Lami valued 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. 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 Staff Lt. Gen. Abdul Al-Lami and the ISF accelerated the campaign against ISIS following their victorious Battle of Mosul.

On 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 understanding our senior commanders’ intent and a disciplined battle rhythm. We had to produce results to retain the ISF’s trust, and our senior leaders 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, Task Force 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.

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