

Increasing Indirect Fire Capability in the Light Infantry Battalion

CPT SAM P. WIGGINS
LTC ALEXI D. FRANKLIN

“[...] you’re going to have to rapidly aggregate to achieve mass and combat power to achieve an effect on a battlefield. So it’s going to have to be a force that’s essentially in a stage of constant motion.”

— GEN Mark A. Milley¹

During the Cold War, the division was the Army’s unit of action, with division field artillery (DIVARTY) formations organizationally centralized and oriented against a peer or near-peer threat in large-scale combat operations (LSCO). During the Global War on Terrorism (GWOT), field artillery assets were assigned directly to the brigade combat team (BCT), and division-level fires synchronization withered. Post GWOT, the Army is reorganizing in order to deter or defeat our enemies during LSCO, and the division is returning as the Army’s unit of action. However, while divisional synchronization may be the U.S. Army’s goal for the way it wants to fight in the future, the most likely and most dangerous course of action is that the enemy will attempt to deny the U.S. Army that ability to conduct a division-level combined arms fight. While the U.S. Army may want to fight LSCO with divisions as the primary unit of action, the enemy gets a vote.

While the U.S. Army is correct to prepare to synchronize at the division level, we must also be prepared to fight at the lowest possible level when the command and control (C2) systems we rely on to achieve synchronization are inevitably attacked. However, the Field Artillery Branch cannot simply swing the pendulum back to a pre-GWOT operational construct. If the division is the unit of action, the natural response of our enemies will be to target our ability to effectively exercise divisional mission command. During the pre-GWOT era, our opponents had limited means to disrupt our communications either through the limitations of the electromagnetic spectrum or a robust U.S. overmatch. That reality no longer exists. The U.S. is vastly more reliant on digital

C2 systems, and our competitors possess robust C2 denial systems — anti-satellite weapons and advanced cyber and electronic warfare tools — that they have already employed (or have given to their proxies to employ) in battle. As a result, while the Army prepares to synchronize fires at above the brigade level, it must also prepare to devolve its fires assets below the brigade level.

In the future, the operational environment in which light infantry formations might find themselves — megacities, triple canopy jungles — will likely be combined with the ability of peer and near-peer competitors to severely degrade the U.S. Army’s capability to centrally control indirect fires in support of dispersed elements. Desynchronization is one cyberattack or severe weather incident away. The Army needs to pre-position fires in space, doctrine, and task organization to be prepared to fight decentralized at a moment’s notice while those assets remain prepared to support centralized objectives. Habitually organized and trained decentralized fires can enable desynchronized maneuver elements to still accomplish their tactical objectives nearly uninterrupted following a desynchronizing event.

The current operational approach is a one-size-fits-all approach where the infantry brigade combat team (IBCT), armored brigade combat team (ABCT), and Stryker brigade combat team (SBCT) deconflict air and ground assets to focus indirect fire efforts on the deep fight. The current

Soldiers in the 2nd Cavalry Regiment fire a M777A2 howitzer during a live-fire exercise in Germany on 19 October 2021.

Photo by Markus Rauchenberger



approach centralizes the preponderance of our tactical indirect fire assets into a few C2 nodes, with primary communication occurring through only a few, relatively severable communications pathways. While fast-moving ABCTs and SBCTs will be both targeting and the target of high-value enemy targets residing in the enemy's support zone, the light infantry brigade and battalion will move at a significantly slower pace, leveraging their skills to clear and hold severely restricted terrain. Mounted maneuver formations have inherent levels of mobility, survivability, and firepower to mitigate intermittent C2 disruption, but the light infantry does not. While devolving assets to all types of BCTs is advisable, at a minimum, the light infantry needs closer control of field artillery assets in order to be able to effectively fight in a degraded C2 environment. If also provided sufficient small unmanned aerial system (SUAS) assets, the light infantry battalion can revolutionize the way it fights and more effectively closes with and destroys the enemy.

As currently written, field artillery doctrine discusses the current near-peer threat in general terms but lacks the conceptual follow-through to mitigate that clearly articulated threat. Army Doctrine Publication (ADP) 3-19, *Fires*, acknowledges that “[p]eer threats will attempt to isolate friendly forces in all domains and the information environment to force friendly forces to culminate prior to accomplishing their mission,” but the tone and tenor of Field Manual (FM) 3-09, *Fire Support and Field Artillery Operations*, does not seem to operationalize this concept. Per FM 3-09, one of the characteristics of fire support is “to always operate as a single entity,” a mandate at odds with the conclusion that opponents will seek friendly isolation. The manual further describes field artillery support as a “top-down process with bottom-up refinement,” a principle again at odds with the potential for isolation. The majority of the explicit considerations in Annex C, Denied, Degraded, and Disrupted Operations, of FM 3-09 are focused on solving highly technical, cannon-centric solutions — how observers should be prepared to locate targets with a map and compass or how to survey a firing location with limited technical aids. In Annex C's short “threat to network connectivity” section, the manual suggests that “[i]f digital communication are denied or degraded [...] data can be transmitted by voice. If voice communications are not possible, courier or liaison personnel can be utilized.” This is an impractical solution not reasonably executed by a light infantry battalion that is both geographically and organizationally remote from artillery support.

In lieu of field artillery support operating as a single entity managed from the top down, the paradigm needs to be reversed: light infantry field artillery support needs to be designed on the premise that fighting isolated is not a possibility but an inevitability. Field artillery assets can and should be leveraged for centrally managed operations at higher levels but must be devolved to the lowest possible levels to enable physically and electromagnetically isolated battalions to maintain the initiative in a denied, degraded, and disrupted environment. Simply put, a habitually attached

fires capability could not as easily be cut off from its parent infantry battalion headquarters in a desynchronizing event. The direct procedural relationship and physical proximity between a field artillery unit and maneuver forces at the lowest possible level would allow for near-uninterrupted operations even in a degraded communications environment. Provided greater indirect fire synchronization and execution capability, the isolated maneuver formation can retain the initiative in the offense or maintain or transition to a strong defensive posture by developing engagement areas with field artillery coverage.

With our near-peers' numerically superior long-range cannons and rockets, their doctrine for their employment, and their willingness to use them with fewer concerns for collateral damage, centralized friendly C2 structures are at an increased risk for destruction. Currently, calls for fire are ideally sent digitally from an observer to the battalion-level fire support element and relayed again to the brigade (or higher) for deconfliction; then they are sent to the firing battalion for execution. This cumbersome process slows the tempo of units and serves as a single communications thread for the enemy to attack. Friendly centralized indirect fire command and control nodes represent no-fail, singularly critical channels through which fire support must travel.

In the last 20 years of combat, light infantry forces were commonly the main effort and became accustomed to general access to close air support on a nearly on-call basis. In LSCO against peer competitors, the United States will not enjoy air supremacy and will more likely than not operate under a condition of air parity or denial. Our peer competitors have advanced integrated anti-aircraft systems and robust, modern air forces. In the air, air assets will be dedicated to achieving air superiority and conducting attacks against high-value and payoff targets in the enemy's support zone. On the ground, armored and Stryker forces will serve as friendly main effort forces while light infantry is relegated to a secondary role, to follow-on to clear secured or bypassed urban or austere terrain. Within the IBCT itself, an increased indirect fire capability at the battalion level would free up IBCT-level fires to shape the brigade commander's deep fight where large, massed fires are needed.

Providing additional organic artillery to the IBCT's four maneuver battalions (three infantry battalions and one cavalry squadron) complicates the enemy's targeting by quadrupling the number of nodes the enemy must sever in order to deny the ability of U.S. forces to conduct combined arms warfare. This is not to imply that devolved field artillery formations would only or even mostly operate in a disaggregated fashion; a functioning higher-echelon headquarters could still direct disaggregated batteries to prioritize fires and synchronize effects elsewhere — the reverse is not true. It is a significantly more complex — if not impossible — challenge for a field artillery battalion to, in the heat of battle, unexpectedly and immediately transition, disaggregate, and fight in an ad hoc way should its higher headquarters be unable to direct its efforts.

A light infantry battalion should have a semi-organic, habitually affiliated fires battery, similar to a forward support company's (FSC) command and support relationship between a maneuver and support battalion. Adding a field artillery battery directly subordinate to the infantry battalion will increase the maneuver commander's ability to rapidly employ indirect fires to effectively shape engagements in the near-peer or peer fight. Closer control over indirect fire assets would allow a battalion-level commander to increase the tempo of combat operations with a rapidity of violence, disrupting the enemy's decision-making cycle.

A hypothetical light infantry fires battery could consist of the battalion's organic mortar platoon, currently associated fire support section, and a third field artillery platoon with a key capability — three high mobility multipurpose wheeled vehicle (HMMWV)-mounted 105mm tube artillery "Hawkeye" platforms, a weapons system currently undergoing Army evaluation and testing. When compared to a towed M119, the superior maneuverability of the Hawkeye and its smaller gun crew allows the system to penetrate severely restricted terrain with a reduced footprint. As HMMWVs are already organic to an infantry battalion, the increased sustainment requirements for the light infantry battalion's FSC will be modest in both parts and manpower.

Currently, the light infantry battalion's mortar platoon operates both 81mm and 120mm systems in an "arms room" concept, where the platoon is not allocated the manpower to operate both systems simultaneously. For mission planning, battalion commanders are forced to either choose one system — thus negating the advantage of having two systems with significantly different advantages and disadvantages — or bring both systems and the appropriate ammunition. In garrison, the battalion's mortar platoon is forced to crew, train, and maintain proficiency on two systems, an additional training burden that can result in expertise on neither

system. Replacing the trailer-mounted 120mm mortar with a battalion-level fielding of the Hawkeye system can solve all these problems. The Hawkeye system can ably fill the role that the light infantry battalion's 120mm systems fill but with its own dedicated manning, longer range, additional ammunition types, a smaller crew, and a reduction in towed rolling stock. The Hawkeye's mobility and ability to emplace and displace rapidly make it much better suited for evading counterbattery fire. Given the near-peer capability and capacity for effective counterbattery fire, speed will serve to increase the survivability of the Hawkeye platforms which, in turn, helps keep the light infantry formations combat effective. The Hawkeye can fire almost twice as far as the 120mm mortar system and can also be effectively employed in a direct-fire role.

Ideally, the battery would be commanded by a major, providing the battalion commander with a seasoned field artillery officer to coordinate execution and delivery of effects. While in a garrison or conducting training, the battery commander would function as a traditional battery commander with regard to training and administrative oversight. In tactical and operational environments, the battery commander would transition to his secondary role to become the battalion's fire support coordinator (FSCORD). The battalion fires support officer would retain primary focus on the planning and implementation of fire support, with the battery commander/FSCORD focusing on mortar and howitzer displacement and emplacement, engagement criteria, sustainment, and communications. The establishment of the battalion's FSCORD to a position equal to the battalion's S3 and executive officer would provide the expertise and staffing to help synchronize the paramount importance that fires planning has on the survival of a light infantry battalion in LSCO.

A Soldier with Test Platoon, 2nd Battalion, 122nd Field Artillery, Illinois Army National Guard, sights in the Hawkeye 105mm Mobile Weapon System during a simulated drill on Camp Grayling, MI, on 23 July 2019.

Photo by MAJ W. Chris Clyne





Photo courtesy of authors

Soldiers in Mortar Platoon, Headquarter and Headquarters Company, 1st Battalion, 175th Infantry Regiment, fire 120mm mortar training rounds for effect during the unit's 2018 annual training at Camp Guernsey, WY.

The battalion fires cell and mortar platoon would remain largely unchanged, save for the aforementioned removal of the 120mm mortar mission and equipment. Placing all of the battalion-level indirect fires professionals under one formation allows for a greater level of synchronization than currently exists. The Hawkeye platoon would consist of three Hawkeyes, a HMMWV-mounted Fire Direction Center, an additional ammunition-hauling HMMWV, and other nominal equipment such as additional Advanced Field Artillery Tactical Data Systems (AFATDS) and high frequency (HF) radios. The proposed Hawkeye platoon and battery command structure would only add an additional 23 personnel to each battalion (12x 13B, 4x 13J, 3x 13A, 1x 13Z and an additional 3x 91F Soldiers in the FSC), representing a force-wide growth of just over 3,100 personnel. Currently existing field artillery force structure should not serve as the bill payer for this growth. However, given the zero-sum nature of Army force structure, eliminating one of the M119 batteries from the IBCT's field artillery battery could potentially serve as one bill payer. Alternatively, acknowledging the increased lethality this capability would represent for light infantry battalions and brigades, this growth could be offset by a reduction in light infantry forces themselves.

Field artillery assets combined with the unique technical capability that SUAS provide have the potential to fundamentally change ground combat much like machine guns, armored vehicles, or airplanes have in the past. Many major conflicts are presaged by a smaller, regional conflict — the Mexican-American War before the Civil War, the Boer War prior to World War 1, or the Spanish Civil War before World War 2. In each “pre-conflict,” technological innovations drove significant changes in tactics and techniques. Success in the

major war that then followed was heavily influenced by the capability of the belligerents to integrate and implement the lessons learned from the previous, smaller conflict. The employment of SUAS to great effect in the 2020 Nagorno-Karabakh war should serve as a cautionary tale to the paucity of employment and integration of SUAS in the U.S. Army today. One of the mission-essential tasks of a light infantry battalion is to conduct a “movement to contact,” defined in Army Techniques Publication (ATP) 3-21.20, *Infantry Battalion*, as “when the enemy situation is vague or not specific enough to conduct an attack.” To be glib, hyperbolic, and reductive, the operational construct here can be simplified as “walk around until you bump into something.” With the absence of dedicated battalion-level intelligence, surveillance, and reconnaissance (ISR), light infantry battalions have little choice but to do exactly that.

The combat platforms in armor and Stryker formations have the long-range sensors necessary to find, fix, and destroy enemy formations from kilometers away, a capability severely lacking across the light infantry battalion. However, light infantry battalions fighting in severely restricted terrain do not require bulky, power-intensive, line-of-sight optics. Light infantry battalions require their own solutions, solutions optimized for close-range combat in severely restricted terrain. Much like the Hawkeye, SUAS represent a novel capability that the Cold War-era U.S. Army lacked and provide another way in which ground combat can be reimagined in the current great power competition (GPC) era.

SUAS are particularly well suited for light infantry combat. Instead of relying on scarce forward observer teams to stealthily insert and observe key terrain or named areas of interest, the light infantry battalion can and should litter the battle zone with low-cost, easily employed SUAS to find, fix, and destroy the enemy. SUAS enable close-in, beyond line-of-sight observation to allow light infantry to identify and engage targets that would nominally threaten a mounted platform but would significantly challenge a dismounted element. The SUAS capability is specifically unique in its ability to revolutionize the light infantry. While the flying speed of the Raven barely exceeds that of a mounted platform, it far exceeds that of dismounted light infantry. Furthermore, dismounted light infantry can carry the 4.2-pound Raven on missions to dynamically employ the SUAS as mission conditions dictate.

The modified tables of organization and equipment (MTOEs) for U.S. Army maneuver battalions of all types list the RQ-11 “Raven” SUAS as required equipment. However, those MTOEs fail to code any Soldier by duty position or additional skill identifier (ASI) as a battalion master SUAS trainer or company-designated unit SUAS operator. While this provides flexibility for small unit commanders, it also represents a vacuum of guidance in how to satisfy an under-resourced requirement. Commanders must independently determine how many personnel to dedicate to this essential

skill and have no authoritative document with which to justify the allocation of scarce training dollars. To solve this problem, commanders have two possible solutions: permanently remove a Soldier from a subordinate squad (thus reducing its combat power) or engage in a perpetual game of tug-of-war within their own formations, forcing a Soldier to attempt to simultaneously master two skills at once.

Armored cavalry squadrons and combined arms battalions have a sergeant in the battalion S2 section with the “Q7” additional skill identifier, denoting the completion of the Information Collection Planner Course (presumably denoting a capacity for SUAS integration). However, the light infantry battalion lacks any doctrinal or MTOE-designated battalion-level staff member as the battalion-level SUAS integrator. As a result, light infantry battalions are particularly disadvantaged and must develop grassroots, ad hoc solutions to integrating company-level SUAS collection into the larger battalion intelligence picture with varying levels of efficacy. The Army should immediately add the “Q7” capability to all light infantry battalion S2 shops that have or may have subordinate units enabled with SUAS to enable better SUAS integration into battalion tactical plans.

In another battalion-level inconsistency, the scout platoons of combined arms battalions are authorized Raven SUAS, but light infantry battalions are not. As a result, light infantry formations face the decision to either reduce the potential reconnaissance reach of their scout elements or reduce the capability from a line company. Simple parity would demand that the Army should add at least one additional SUAS to these formations. However, parity is insufficient; light infantry battalions should be furnished with multiple SUAS platforms per company. The goal of a light infantry battalion should be to find, fix, finish, and destroy the enemy to the greatest extent prior to securing the objective. Greater SUAS density and integration at the battalion level — combined with robust, battalion-led fires — provide the light infantry battalion the ability to shape the battlefield to a heretofore unimagined extent. The goal of an infantry battalion should not be to fight and die every inch of its way onto a contested objective; it should be to rapidly occupy a devastated enemy battle position, destroy minimal residual resistance, and seize terrain for transition to stability or defensive operations. The potent combination of multiple SUAS platforms combined with on-call fires would enable the light infantry battalion to do so.

In a future near-peer fight, the U.S. Army can expect to fight in a markedly different environment than existed during the Cold War or GWOT. Instead of reverting to the construct from the last era of GPC, a third approach to fire support must be implemented, an approach better suited to the acknowledged challenges the Army may face. Degraded communications and isolation in an air denial environment would pose a challenge for maneuver forces writ large, but pose an especially acute danger for light infantry forces when arrayed against our imagined foes. SUAS platforms provide a capability for light infantry formations to identify

enemy positions well before a movement to contact would accidentally uncover them. Light infantry formations are inherently vulnerable and can rapidly become a liability on the future battlefield if not furnished with the appropriate resources. Devolving greater indirect fire capability directly down to the light infantry battalion, combined with the SUAS platforms and integration necessary to maximize the utility of that firepower, will allow these formations to gain and maintain the initiative on the battlefield — even when geographically or electromagnetically isolated — in order to help higher echelon commanders to press the advantage and defeat our opponents.

Notes

¹ Michelle Tan, “Army Chief: Soldiers Must Be Ready to Fight in ‘Megacities,’” *Defense News*, 5 October 2016, accessed from <https://www.defensenews.com/digital-show-dailies/ausa/2016/10/05/army-chief-soldiers-must-be-ready-to-fight-in-megacities/>.

CPT Samuel P. Wiggins is a 2012 graduate of the Salisbury University Army ROTC program who currently commands Company B, 1st Battalion, 175th Infantry Regiment, 2nd Infantry Brigade Combat Team (IBCT), 28th Infantry Division. His previous assignments include serving as battalion fire support officer (FSO), Detachment 1, Headquarters and Headquarters Battery, 1st Battalion, 107th Field Artillery Regiment, 2nd IBCT, 28th ID; and executive officer (XO), mortar platoon leader, and company FSO for Headquarters and Headquarters Company, 1-175th Infantry.

LTC Alexi D. Franklin currently serves as the National Guard Liaison Officer to Joint Task Force - National Capital Region. LTC Franklin’s previous Infantry assignments include serving as the XO of 1-175 Infantry, 2nd IBCT, 28th ID; commander of C Company (Long Range Surveillance), 158th Cavalry Squadron, 58th Battlefield Surveillance Brigade; and a variety of company-grade leadership and staff assignments with the 173rd Airborne Brigade. Commissioned through ROTC in 2005 from Johns Hopkins University (JHU), he holds a bachelor’s degree in political science and master’s degree in government from JHU, a master’s in business administration from Mount St. Mary’s University, and a master’s degree in defense and strategic studies as a National Defense University Countering Weapons of Mass Destruction graduate fellow.



Photo courtesy of authors

A Soldier with 1st Battalion, 175th Infantry Regiment launches a Raven small unmanned aerial vehicle during a training event.