The ground liaison officer

Blending art, science to achieve success

By Capt. Victor Cortese and Capt. Jesus Urrutia

The ground liaison officer and noncommissioned officer positions are critical cogs in the wheel of air-to-ground integration. Unfortunately, the positions are often overlooked as opportunities for field artillery officers and senior non-commissioned officers to amplify their professional experience. Offered typically as broadening assignments for a senior captain and sergeant first class, the position provides unique opportunities to work with another service.

The Ground Liaison Detachment is assigned to a Battlefield Coordination Detachment but attached to an air wing or squadron away from BCD headquarters. The team functions autonomously and represents the United States Army as embedded advisors and enablers within a fighter, bomber or mobility wing. Perhaps most importantly, GLOs deploy as liaisons with fighter and bomber wings and coordinate between ground elements and aircrews to maximize integration. The GLOs represent the Army and often brief commanders from sister services on tactical and operational updates and ground commander's intent.

Effective communication, detailed professional knowledge and technical savvy are all traits that contribute to the "science" of GLO service. However, transformative GLOs employ an "art" enabling them to anticipate, coordinate and verify requirements in today's dynamic global environments. They prove themselves invaluable resources to Army, Air Force and Navy units all over the world.

Simply stated, the inherent GLO mission is consistent: integrate with the supported squadron or wing and serve as a conduit to ground forces. Most critically, the GLO provides real-time ground tactical and operational updates to air support assets. Yet the dynamic environments, missions and situations add complex layers to the GLO mission. While the intent is to deploy with the attached Continental United States squadron, operational requirements often dictate otherwise. For example, a GLO may deploy to support an Air Force squadron in Jordan and finish the deployment supporting a different squadron in Afghanistan. Or, a GLO may spend two months in Qatar at the Combined Air Operations Center and then six months aboard an aircraft carrier in the Mediterranean and Persian Gulf. As an Army officer, I never imagined myself aboard an aircraft carrier and briefing F/A-18 Hornet pilots on critical mission details prior to their launch supporting Operation Inherent Resolve. While this is just one unique example of many, it lends insight to the diversity of the GLO mission. Although not inherently associated with naval air wings, carrier air wing commanders (referred to as CAG) consistently request GLO support during deployment operations. Ground liaison officers have continuously supported carrier air wing operations since the start of the Global War on Terror and continue to do so in the fight against the Islamic State.

The drastic differences in support requirements call for a sharp understanding of different rules of engagement, tactical situations and commander's intent across the operational spectrum. Additionally, a robust knowledge of joint Fires capabilities and integration is critical; the Joint Fires Course is a fantastic block of instruction affording GLOs the opportunity to elevate their knowledge and understand the "science" behind joint operations. A successful GLO leverages technical knowledge and important character traits to balance the science and the art of their duty.

In today's advanced technological environment, information and intelligence sharing is easier. However, sifting through the volumes of information – commander's updates, read books, story boards and situation reports – takes dedication and attention to detail. It is crucial to filter the information and provide very busy aircrew with relevant and concise information. To do this, GLOs need to use email distribution, instant chat platforms and a common operating picture to maximize their own understanding and efficiently translate information to aircrew. Additionally, to capitalize on the inordinate amount of information

U.S. Army Capt. Andrew Littel, 555th Expeditionary Fighter Squadron ground liaison officer, reviews information with a pilot before takeoff at Bagram Air Field, Afghanistan. As a GLO, Littel briefs pilots on mission parameters as well as provides pilots with a good perspective of what guys on the ground are going through. (Senior Airman Cierra Presentado/U.S. Air Force)

and navigate dynamic situations, a GLO needs to build and maintain positive relationships with joint tactical air-controllers (JTACs), battle captains and operational or tactical planners. Tapping into the GLO network is also critical since our operational support expands across theatres. Sgt. 1st Class Chris Boyer, a recently deployed GLO shared, "Without the GLO network I would have been at a serious disadvantage. The more experienced GLOs, and those who had been deployed already in that capacity brought me up to speed quickly and efficiently helping to streamline my work load and serve as an immediate asset to the aircrews I supported."

The wealth of knowledge and information shared between GLOs is essential to mission success. All in all, this takes professional tact and sometimes discretion in knowing when to push the right buttons to obtain necessary information. While reading reports and developing products involves the "science," our relationship building underscores the "art." It is important to understand that while dynamic changes are part of warfare, they significantly impact the aircrew's mission planning. Changing support requirements including locations, munitions and time-on-station all critically impact flight operations. As a GLO, it's critical to anticipate changes by maintaining positive relationships with all key players in order to provide aircrews an advantage.

Anticipation is a catalyst for successful coordination and is crucial to enable an aircrew's mission success. The GLO serves as the linchpin for that coordination. Pilots mission planning starts the day prior to their launch and involves detailed preparation and rehearsals. They consider immense amount of planning factors such as jet maintenance, routes, enemy air and air defense threats, fuel, weather and emergency procedures. They often do not have time to thoroughly coordinate with JTACs or interpret a vague joint tactical air request. These are important GLO functions. For instance, during service on the USS G.H.W. Bush we worked in the Carrier Intelligence Center providing critical information during the mass brief two hours prior to mission launches. While the mass brief served as our main information conduit, pilots often visited our workstation for updates or requested ready room briefings a day or two prior to their missions.

"I loved visiting the GLOs at their work station – anything to get a leg up prior to my mission. They made themselves available at any time and always had timely and relevant information which greatly improved my own mission planning on how best to support the ground forces. They kept me informed on updates to support coordination. Their recommendations for ammunition load outs and heads up on potential re-tasking were equally valuable," Navy flight officer Lt. Robert Mayer stated.

Maintaining consistent communication enabled us to relay timely updates to aircrew about our coordination with their JTACs. A rapidly changing operational environment increases the necessity for detailed coordination. Therefore, GLOs need to anticipate changes and directly ensure all parties understand critical mission information and requirements.

On the carrier, dynamic changes to mission requirements occurred either immediately before or after the mass briefs. In some cases, JTACs or battle captains called our workstation only minutes before launch or when aircrew were already airborne. However, by leveraging our strong relationships with JTACs and our understanding of the operating environment, we anticipated changes and coordinated ahead of time. On average, the air wing launched three to four waves of jets a day (each wave consisting of three to four sections) supporting ground forces all over the area of responsibility (AOR). As the GLOs, we stayed abreast on all operations to support the air wing, but keeping organized proved essential to get the most accurate information to the right aircrews in time for their mission. During the summer of 2017, efforts to liberate the Syrian city of Raqqa relied heavily on fixed-wing air support. Russian and Syrian air and ground activity only complicated friendly coordination efforts against ISIS combatants and de-confliction measures sometimes changed by the hour. By staying organized and engaged with our ground counterparts and closely monitoring the situation, we were able to extract a newly created coordination line and brief the pilots as they headed to the flight deck. Additionally, by gleaning information from the ground, we accurately predicted another section would be re-tasked in flight to support operations in Raqqa. During their missions, the controlling JTACs referenced the line while providing target talk-on, and one section delivered an air-to-air strike against a target that violated the coordination measure. By anticipating changes and coordinating as early as possible we provided critical information to the aircrew which helped enable their mission success. Providing important, timely information and coordination builds trust and reliability between GLOs and aircrews. While the "art" of relationship building with counterparts

on the ground is certainly crucial, it also extends to relationships with the aircrew.

The situational awareness and ground tactical understanding a GLO provides to aircrew is essential and credibility is imperative for a GLO. Lt. Nathan Shuey, F/A-18 pilot put it, "The GLO is so important for our overall situational awareness on the ground. They speak the language and can break it down for us to understand and use. I didn't really need a robust check-in brief from the JTACs since our GLOs covered everything. We just got to work right away. Our intelligence folks aren't really able to do that and are already focused on other stuff any way."

An updated and informed aircrew significantly shortens the kill-chain to support friendly ground forces in potentially life or death situations. Equally critical, is understanding the rules of engagement as aircrew will count on the GLO to help them properly prepare for diverse scenarios. During long sea transits, flight operations ceased temporarily. To help pilots maintain situational awareness, we briefed entire squadrons on ground updates and rules of engagement scenarios.

The most successful GLOs leverage all available assistance, including technology, to maximize their support. Typically, GLOs are forced to print multiple copies of products with imagery, grid references and common operating pictures for aircrew use during the mission. Referred to as GLO Books, the bulky packets are not user friendly inside a cockpit, difficult to maintain and time-consuming to update. Importantly however, technological improvements are changing how situational awareness is shared and maintained.

The Air Force and Navy are employing tablets (ATAK and KILSWITCH respectively), for aircrew use during mission planning and execution. Both are replacing thick paper packets with a simple handheld device loaded with imagery. The KILSWITCH (Kinetic Integration Lightweight Software Individual Tactical Combat Handheld) is very helpful in augmenting naval aviators' mission planning and situational awareness in the cockpit during missions. Speaking of the KILSWITCH, Cmdr. Spencer Roberts, a seasoned F/A-18 pilot remarked, "Absolutely invaluable during a mission. I could easily reference what the JTAC was talking about and then quickly get my sensor pod on it. The GLOs made sure anything relevant was uploaded and kept it current. Instead of trying to flip through mountains of paper in the cockpit, I could scroll around the tablet, find the reference point and go from there. It put us on the same page with the JTAC's right away."

This equipment is replacing the standard GLO packet and infinitely improving shared understanding.

Only one squadron intelligence officer of five received any instruction on the KILSWITCH in time for the deployment aboard the G.H.W. Bush. Aircrew and other relevant users did not use the system until the start of the deployment, and as GLOs we only learned of its existence upon arrival. Realizing its importance and usefulness, we filled in the knowledge gap by learning the system and providing instruction to aircrew – taking on the "science" of our role. Instead of printing volumes of products we loaded KMZ (Keyhole Markup Language Zipped) files associated with imagery onto the tablets for the aircrew. We designed the KMZ files as overlays by pulling relevant pieces from other products received from ground units. An overlay file from a battle captain or JTAC is usually tailored to completely fit their situational awareness and operational understanding. The entire file containing loads of information isn't suitable for an aircrew supporting operations for a few hours from 15,000 to 20,000 feet.

Through critical thinking and pilot feedback, we optimized the KILSWITCH's usefulness with timely and relevant overlays and tutorials on employing the device during mission planning and execution. By creating our own overlays, we ensured only relevant information for aircrews made it on the tablets. As a standard operating procedure, we requested aircrew follow along with our briefs by using their assigned tablets to improve their familiarization with critical data such as: grid locations, current forward line of troops, artillery positions, Gridded Reference Graphics and other coordination measures. To highlight its practicality, Lt. Brandon Rodgers, F/A-18 pilot and squadron training officer commented, "Between the mass briefs and informal updates with the KILSWITCH from the GLOs, I had the best situational awareness and operational understanding of the ground forces that I've ever had in my 14 years' experience and four deployments."

The digital medium paired with our updates significantly enhanced aircrew situational awareness before checking on station with the JTAC, significantly heightening their support to ground forces. Learning systems that aren't familiar is an important function for a successful GLO.

An entire naval air wing's understanding of the ground forces scheme of maneuver within Iraq and Syria came down to two army captains. While this is just one lens to view a GLO experience through, it's entirely common. Ground liaison officers are deployed all over the world on challenging and highly autonomous assignments. Charged with coordinating between two military services often in dynamic environments, successful GLOs are excellent communicators, adaptive and critical thinkers. GLOs are important elements in the joint fight, working behind the scenes to integrate combat arms. By leveraging positive relationships and important technology, they balance the 'art' and 'science' of their role and maximize support to the fight.

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