

# Professionalizing Air Intelligence, Part III

The Air Intelligence Tactics Study Group (AITSG)

by Capt Christopher A. Denzel

**C**apt Smith, an MV-22 pilot deployed with a SPMAGTF, walks into her S-2 shop and tells her intelligence officer, “We’re planning a nighttime raid along the coast in four days. Here are the coordinates for the landing zone (LZ) we want to use. Can you get me an LZ assessment?” Twenty minutes later, the intelligence officer walks into Capt Smith’s office and hands her a single page with what is clearly a screen capture from Google Earth, a pin icon at the requested coordinates, a red blob nearby labeled “historic enemy activity,” and a brief statement that “the S-2 assesses the enemy threat in vicinity of this LZ to be medium, with the possible presence of AK-47s and Rocket Propelled Grenades” (see Figure 1).

Dissatisfied with the useless product she has just been given, Capt Smith heads down the flightline to the neighboring CH-53E squadron (HMH). She finds the HMH intelligence officer and says, “I know this isn’t your job, but I asked for an LZ assessment, and my S-2 gave me this,” and hands him the one-page printout. “Can you help me out?” Within the day, the HMH S-2 emails Capt Smith a twenty slide intelligence support product with:

- Threat assessment rings that correspond to standard MV-22 approach profiles.
- Tailored threat assessments for insert, extract a few hours later, and quick reaction force insert if things go sideways.
- Assessments of enemy and civilian atmospheric.
- History of recent enemy activity and enemy reactions to recent aviation operations in the area.
- Recommended directions for ingress and egress based on hostile population centers.

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- Weather forecast with historical wind data for the LZ.
- Modeling of acoustic and radar detection, overlaid with population areas, enabling routing around radar sites and population centers to reduce the risk of compromise.
- Depictions of what terrain will be covered by the shadows cast by the moon at that time of night to facilitate

visual recognition of the LZ on approach.

- Soil composition and assessed brown-out conditions.
- Slope and obstacle assessment conducted by imagery analysts.
- An annex of analytical standards, providing definitions for the estimative terms of capability, intent, threat level, and confidence used throughout the product.

The email states, “This is my standard LZ support product, Ma’am. Let me know if you need anything more.”

That it is possible for this incredible disparity in intelligence support to exist speaks to the enormous gap Marine air intelligence has in standardized processes and products. For those who doubt

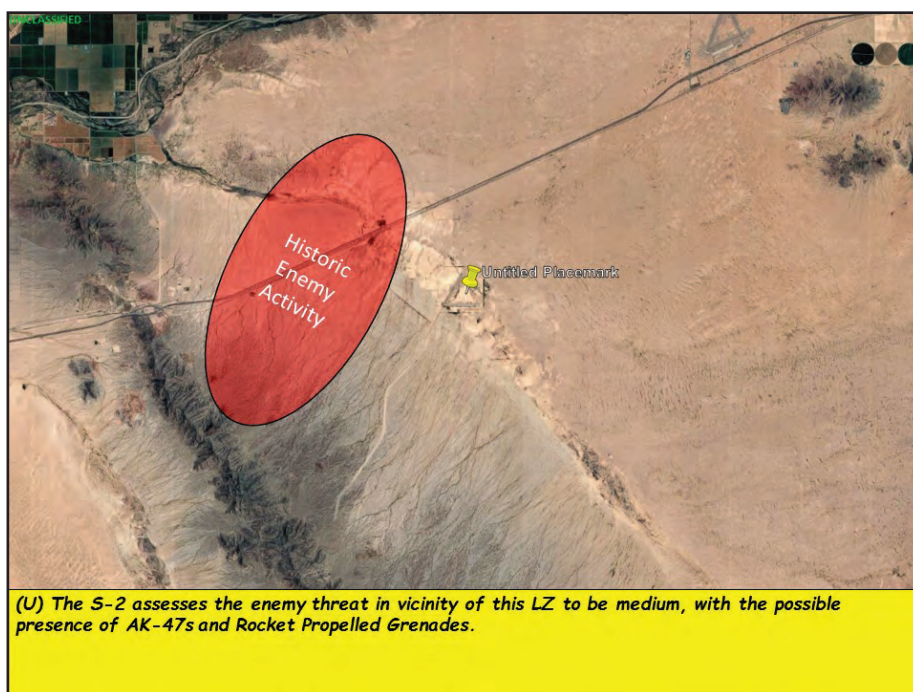


Figure 1.

the above scenario is realistic, I urge you to find a pilot and ask him what his experience has been.<sup>1</sup> I'll wager his response will be, "Let me tell you about this one S-2 I once had ..."

**The Capabilities Maturity Model**

In 1987, the Defense Science Board Task Force on Military Software released a report that concluded, in part:

Today's major problems with military software development are not technical problems, but management problems. Hence we call for ... [a] major re-examination and change of attitudes, policies, and practices concerning software acquisition.<sup>2</sup>

In partial response to these findings, Carnegie Mellon University's Software Engineering Institute developed the Capabilities Maturity Model, which helped to provide an organized strategy of improvement for software that would offer "an evolutionary path that increases an organization's software process maturity in stages."<sup>3</sup>

An intelligence colonel once suggested to me that this model is applicable to non-software military processes, too. However, he would split the model's first level to create a Level 0 (chaotic, ad hoc) and redefine Level 1 (individual heroics). This modified Capabilities Maturity Model (adapted to non-software processes and with the colonel's modification) is depicted in Figure 2.

"The Marine Corps," he then told me, "tends to hover somewhere between 0 and 1." While this statement may be hyperbolic for some areas (though perhaps not others), the model is instructive and his statement rings true, at least for many air intelligence Marines when it comes to the unique processes we use to support Marine aviation.

The AITSG is an effort to move past the Level 0/1 rut into Level 2, setting conditions for Level 3.

**A Lack of Documentation**

Marine aviation has a number of unique intelligence support requirements. These manifest themselves in special products, formats, and considerations that intelligence Marines in the rest of the MAGTF are unfamiliar with and ill-equipped to handle. The air

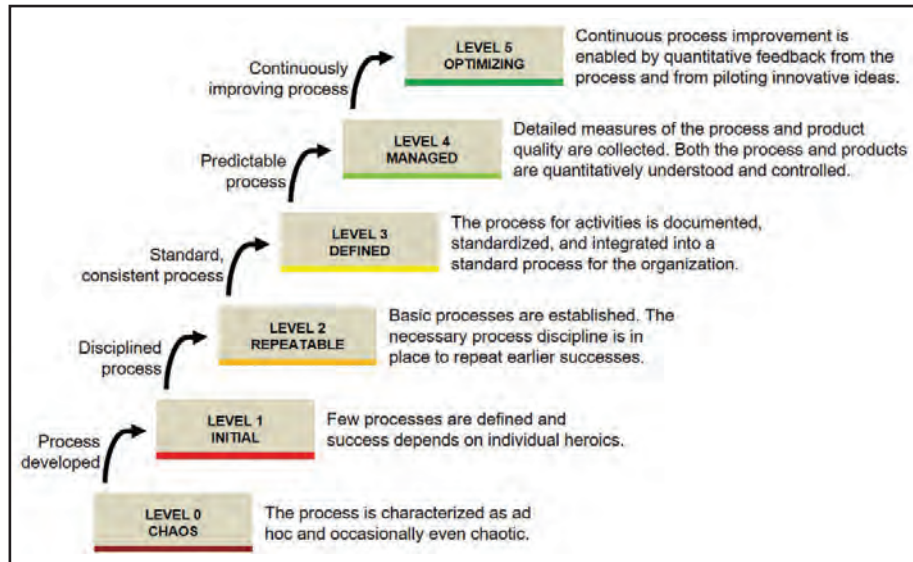


Figure 2.

intelligence Marines that support Marine aviators and aviation planners have developed certain tactics, techniques, and procedures (TTP) and other best practices (collectively, "tradecraft")<sup>4</sup> to meet these unique requirements. Since at least 2004, some of these unique pieces of tradecraft have grown into standard (if undocumented) forms that aviation planners have come to expect from their intelligence Marines. As I have lamented in previous articles,<sup>5</sup> the Marine air intelligence community has done a poor job documenting these.

There are many well-documented intelligence processes we use that are not unique to air intelligence, such as the collections cycle or intelligence preparation of the battlespace. But for tradecraft unique to air intelligence, no such documentation exists despite years of refinement and implementation.<sup>6</sup> No formal or informal documentation exists to help air intelligence Marines assess the threat in an LZ or evaluate and interpret trends and patterns in an enemy air defense system's radar operations. Furthermore, the poor retention of air intelligence expertise within the air wing, which the community experiences, coupled with the decline of major combat operations, has led us to a point where great resident knowledge on "how to do the nuts and bolts of air intelligence well" still exists in recent memory but risks being lost as those skills atrophy and more senior and

experienced Marines leave the Service or the wing.

This isn't to imply other elements of the MAGTF don't have similar unique tradecraft or similar problems with documentation. But this article hopes to present the air intelligence community and other communities throughout the MAGTF with a model that can capture the finer points of tradecraft that may never make it into a formal publication or that might be included in an MCRP if anyone bothered to write them down.

**The Importance of Standardization**

Some malign standardization and view it as limiting. They associate it with constraining prescriptivism, and there are situations where that can be true. But we see the benefits of standards throughout the Marine Corps, such as training and readiness (T&R) standards or rifle qualification and physical fitness standards. These empower the trained and the trainers alike to understand what is required and provide common, relatively objective measurements that enable Marines from disparate areas to be compared more fairly. And while there are those who argue these standards can be flawed, the standards are certainly better than allowing every officer to subjectively judge whether his Marines meet some ill-defined or inconsistent personal standard.

Within Marine aviation, standardization serves additional purposes. SOPs shared across all MAWs allow mission planning and execution to be faster and clearer, as shared operational templates can be rapidly employed by units with little or no experience working together. For example, aircraft from two squadrons that have never met or planned together can arrive overhead a downed aircraft and agree to use the *Naval Tactics, Techniques, and Procedures (NTTP) 3-22.5-ASTACSOP Tactical Pocket Guide, USMC Assault Support Tactical SOP's Tactical Recovery of Aircraft and Personnel* template for airspace

points above. Standardization serves to provide a common baseline that facilitates interoperability (between air intelligence Marines with different backgrounds and between those intelligence Marines and the aviation planners they support) and ensures a minimal level of quality. In the case of standard tradecraft, it also reduces the need for air intelligence Marines to create, from scratch, solutions to the problems they face. Instead, it presents them with a solution that may work “as is” or at least provides a starting point to adjust from. The details of every operation order may be “METT-TC dependent,” but we still use a standard order format.

low, and improvements in the tradecraft that those T&R events train Marines to employ.

### What Is the AITSG?

Having established the need for the AITSG, we can discuss what exactly it is.

Formally, according to its charter:

In support of the Marine Corps Intelligence, Surveillance, and Reconnaissance Enterprise (MCISR-E) Supporting Strategy for Aviation Intelligence, the AITSG, as an extension of the Air Intelligence Community of Practice (CoP), matches Operating Forces (OPFOR) capacity to OPFOR requirements to identify, develop, continually improve, document, store, and disseminate emerging tradecraft for deployed and pre-deployed Aviation Combat Elements (ACE) in any size MAGTF. The endstate is for every ACE G/S-2 to encounter original problems and to make original mistakes.<sup>8</sup>

Informally, the AITSG takes the good ideas air intelligence Marines have every day about how to do their job better, provides a venue for sharing those ideas, serves as a community of interest in improving those ideas, provides mentorship and guidance for those seeking to improve tradecraft, and disseminates the end result throughout the Operating Forces.

### The AITSG Process

Meeting through monthly video teleconference meetings, the AITSG first identifies problems that unit intelligence shops encounter. These may be as simple as mission report checklists that aid in detailed mission debriefs or as complex as the comprehensive LZ assessment the HMH S-2 provided in the opening vignette. The AITSG addresses problems that are solvable at no cost (e.g., a new methodology needs to be developed as opposed to the acquisition of new software or equipment) and within a relatively short timeline. Issues outside this scope are referred to other venues. As a consequence of this focus, the target audience—both for contributors and customers—tends to be company-grade officers and below (i.e., squadron- and group-level intelligence shops).

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***The problem the air intelligence community faces today is that there is no standard. The success of air intelligence shops is “personality driven,” to use a military euphemism ...***

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deconfliction. This is an SOP with which all Marine rotary-wing pilots are familiar and habitually use. One need only read the Department of the Army’s history, “Vietnam Studies: Airmobility, 1961–1971,”<sup>7</sup> to appreciate that basic concepts, like escorting assault support transport aircraft in high-threat areas or even placing weapons on assault support aircraft to turn them into escorts, were once experimental TTP; and it was only through the process of standardization that these important TTP gained widespread employment and acceptance. Furthermore, standardization serves an important safety function. When a mishap occurs and the investigation discovers causal factors, whether they are materiel/equipment or personnel/methodological failures, standards are created and implemented across Marine aviation to prevent the same mistake from happening again.

Some may still shy away from the word standardization, reasoning that every deployment will be different, and each unit’s mission will require tailored support. While correct, that misses the

It’s important to pause here and note that the standardization of tradecraft involves very little work that isn’t already being done. Air intelligence Marines encounter problems and develop solutions in support of their unit and mission daily. A standardization process will merely document that work (which is often lost after each deployment), share it, and incorporate the feedback from other elements of the community to ensure that the solution is complete, comprehensive, and consistent.

The problem the air intelligence community faces today is that there is no standard. The success of air intelligence shops is “personality driven,” to use a military euphemism for “some people are just bad at their jobs.” You might recognize this as hovering between Level 0 and Level 1 on the Capabilities Maturity Model in Figure 2. And the Level 0/1 rut makes the opening vignette possible.

Standardization cannot make every air intelligence Marine a rock star. But it can improve the quality of the ones who aren’t. This includes improvements to air intelligence T&R, discussed be-

Next, the AITSG identifies contributors for a project: those who may have relevant reference material or partial solutions from previous experience. The material from these contributors is then posted to the AITSG SharePoint site on SIPRNet. Those who wish to take the lead on a project to synthesize a more comprehensive and refined solution volunteer to do so. If no one volunteers, those partial solutions are made available to the community as is, and the project is added to a deck of future development opportunities.

The AITSG members help scope the project, identifying an end state and relevant parameters that the finalized tradecraft should meet. This helps identify gaps individuals might miss (for example, that the TTP for assessing the threat at an LZ are not too different from those required to assess the threat at a drop zone, and perhaps the tradecraft solution should incorporate both requirements).

Project members then work on developing the tradecraft. This includes researching existing documentation that might exist in Marine Corps Center for Lessons Learned (MCCLL) holdings, historical examples available on classified networks, data stores throughout the MAWs, or relevant publications from the Marine Corps and other Services. Project members also reach out to the aviation planners being supported, soliciting input from pilots as to what they need, what they have seen that works, and what they have seen that doesn't.

When the tradecraft has been developed to a point where it is usable, it is reviewed by AITSG members who provide feedback. Any areas for improvement are identified and further developed or noted as future opportunities for development.

Once the AITSG agrees that the tradecraft is ready for use, AITSG members are encouraged to use the tradecraft during exercises, workups, and deployments to validate it and identify any areas that are not effective under operational conditions or areas that require additional development. Eventually, it may be referred to MAWs or Marine Aviation Weapons and Tactics

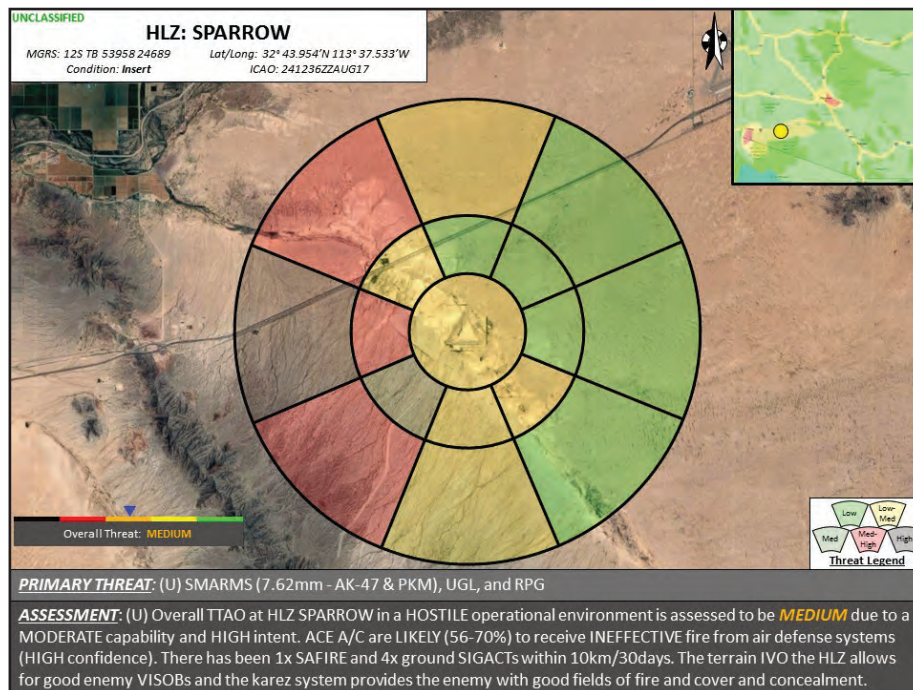


Figure 3.

Squadron One (MAWTS-1) for review, standardization, and endorsement.

**Initial Successes**

Since its first meeting in August 2017, the AITSG has incorporated previously completed tradecraft projects such as the ACE Intelligence SOP (ACEINT-SOP) and the air threat zone matrix (ATZM) guide. These provide readers with an example of what more complex

***Project members also reach out to the aviation planners ...***

finished tradecraft can look like.<sup>9</sup> Since the ATZM guide has been published and shared through the AITSG, the U.S. Central Command Combined Air Operations Center has begun the production of theater ATZM products they term “baseline threat assessments” for areas of hostilities. Furthermore, the Department of State Bureau of Diplomatic Security, Office of Intelligence and Threat Analysis, is exploring adapting ATZM techniques to develop an

“Ambassador Threat Zone Overlay” in support of its diplomatic security mission.

The AITSG has also collected resources for unit-level on-the-job training programs, surface-to-air missile weapons engagement zone management tools, guides to facilitate intelligence support to aviation T&R events, and products and tools for air intelligence support during the rapid response planning process. It has nominated initial sections of the ACEINTSOP to the MAWTS-1 Intelligence Department for review, standardization, and eventual publication. And the MAWTS-1 S-2 is developing a consolidated mission planning intelligence support guide expanding beyond the generic intelligence requirements of the ACEINTSOP to provide a more comprehensive resource to the community.

The AITSG has coordinated engagements with the intelligence sections of special operations forces (SOF) aviation units to understand and share these best practices, and one of these units is participating in AITSG meetings. Such units have already benefited from TTP developed by Marine units and have shared their own TTP within the AITSG. This not only individu-

ally improves both SOF and Marine air intelligence capabilities but also facilitates the MAGTF-SOF integration described in the *Marine Corps Operating Concept*.<sup>10</sup>

When 2d MAW recently leaned into formalizing air intelligence on-the-job training curricula, the officer tasked with the project reached out to the AITSG for assistance. Since then, the AITSG has marshalled new and existing ideas from across all the MAWs to build a more comprehensive product that serves 2d MAW's purposes today and that can be used or repurposed in the future as new T&R events are written and Marines leverage the developed material to teach elements of the events.

And finally, the AITSG has begun efforts to develop a number of new tradecraft projects, to include the comprehensive and integrated LZ intelligence support product described in the opening vignette as well as electronic intel-

ligence analytic techniques and trend analysis. An example of a portion of this LZ product, representative of a common format developed in Operation ENDURING FREEDOM, can be seen in Figure 3. The AITSG has also developed new T&R events for 0207s (air intelligence officers) that add needed details and specificity and has referred them up for review at the next intelligence T&R working group.

### Next Steps: Moving to Level 3

While the AITSG is leaning into standardization by collecting best practices and making them available to the whole community, there has been some sensitivity to the word standardization, as has been previously mentioned. Ultimately, the AITSG is an informal collection of volunteers. It is not authoritative and cannot standardize products or TTP. Only unit-level commanders (or designated personnel) can implement a standard

within their command. So how does the community get there?

As with nearly all Marine aviation standardization, this responsibility properly lies with MAWTS-1 (although more limited standardization can be implemented by commanders at any level). The MAWTS-1 Intelligence Department currently does not have the capacity to develop this tradecraft organically. But if the AITSG has done its job well, MAWTS-1 can receive a nearly complete product, refined by the community and validated by operational use, and approve it as an endorsed standard. MAWTS-1 would need to establish its own process for evaluating and accepting this tradecraft, but it is easy to conceive of an eventual transition from the AITSG to a "MAWTS-1 Intelligence Tradecraft Guide." This would ensure additional review and oversight, add legitimacy to any approved tradecraft, and facilitate dissemination throughout the community as a standard.



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This would provide another crucial benefit as well. As I argued in “Professionalizing Air Intelligence, Part II: Who needs an 0277?” (*MCG*, Mar18), elements of the Intelligence T&R Manual need to be rewritten to capture unique air intelligence requirements in their own detailed events. And, as I discussed in “Air Intelligence Tradecraft and Doctrine: Air Threat Zone Matrix” (*MCG*, May17), what few air intelligence-specific event components do currently exist are lacking in guidance and documentation. A MAWTS-1 tradecraft guide would provide an official reference for these new T&R events

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and, more importantly, serve as a how-to guide for deployed Marines employing this tradecraft in support of operations.

At a minimum, the AITSG provides a venue to capture, improve, and disseminate those solutions already being developed by air intelligence Marines across the Operating Forces, in support of their aviators. Even if it spurs no new innovation and only captures and disseminates innovation that is taking place organically, it has done some good.

It is possible that AITSG efforts may sputter and die if there is a general lack of interest, pervasive feelings by those Marines in the best position to contribute that they are too junior to do so, or too many passive participants who consume but do not contribute. But AITSG efforts need only bridge the few years from now until Force 2025 restructures air intelligence within the air wing. These new units can then establish standardization shops (much as flying squadrons have) that serve as formal focal points for the identification and collection of new tradecraft. Additionally, with this force concentration, it will be much easier to direct and oversee tradecraft identification and collection efforts, ensuring the tradecraft improvement process becomes institutionalized.

Such a world, where the community is continuously dedicated to improvement and has established processes for standardization and integration, would professionalize air intelligence at least to Level 3 of the Capabilities Maturity Model. Then we’ll be really getting somewhere.

**Notes**

1. Elements of this scenario are mildly hyperbolic in some situations (such as deployment with a group or wing) where higher echelons conduct much of this analysis on behalf of the squadron S-2 (especially imagery and weather

analysis by specially trained Marines). But the lack of external support implied above is not entirely unrealistic for a small SPMAGTF or a MEU squadron S-2. If nothing else, this vignette captures a disparity of intelligence support that does exist and is not entirely uncommon. I hope the reader forgives me for the artistic license.

2. Office of the Under Secretary of Defense for Acquisition, *Report of the Defense Science Board Task Force on Military Software*, (Washington, DC: September 1987), available at <http://repository.cmu.edu>.

3. Mark C. Paulk, Bill Curtis, Mary Beth Chrisis, and Charles V. Weber, “Capability Maturity Model for Software, Version 1.1,” *Software Engineering Institute, Carnegie Mellon University*, (Pittsburgh, PA: February 1993), available at <https://www.sei.cmu.edu>.

4. I understand that within intelligence circles, “tradecraft” is a term that can have specific connotations, especially with respect to human intelligence or clandestine operations. However, SOPs, TTP, and “best practices” are all different terms, and these terms are all intentional, and the term tradecraft is the most apt word available to capture this collective meaning.

5. Capt Christopher A. Denzel, “Professionalizing Air Intelligence: An MOS Tactics, Techniques, and Procedures Manual,” *Marine Corps Gazette*, (Quantico, VA: January 2016) and

“Air Intelligence Tradecraft and Doctrine: Air Threat Zone Matrix,” *Marine Corps Gazette* (Quantico, VA: May 2017).

6. It is worth acknowledging that the MCCLL might have been a source of potential value, but generally the air intelligence community also does a poor job at capturing lessons other than administrative responsibilities (security management), operational responsibilities (escape/evasion related materials), and communications responsibilities (connectivity of secret systems) in these after-action reports. Where genuine intelligence lessons learned are captured in MCCLL holdings, there is rarely sufficient detail to reproduce the unit S-2’s solution. I am also guilty of this inadequate documentation in MCCLL reports.

7. LtGen John J. Tolson, “Vietnam Studies: Airmobility 1961–1971,” Department of the Army, (Washington, DC: 1999), available at <https://history.army.mil>.

8. Headquarters Marine Corps Intelligence Department Aviation Intelligence CoP Sponsor, 1st MAW G-2, 2d MAW G-2, 3d MAW G-2, “Air Intelligence Tactics Study Group (AITSG) Charter,” 13 June 2017.

9. The ACEINTSOP is available to readers with an unclassified Interlink account at <https://go.intelink.gov>. Readers with access to classified networks can find the ATZM guide at <https://go.sgov.gov>. These pieces of tradecraft were discussed in the previous *Marine Corps Gazette* articles, “Professionalizing Air Intelligence” and “Air Intelligence Tradecraft and Doctrine.”

10. Headquarters Marine Corps, *Marine Corps Operating Concept: How an Expeditionary Force Operates in the 21st Century*, (Washington, DC: September 2016), available at <http://www.mccdc.marines.mil>.

>Editor’s Note: This article is a continuation of Capt Denzel’s articles on professionalizing air intelligence that ran in the January 2016 and March 2018 issues of the Gazette.

