An Evolution in Intelligence Doctrine

The Intelligence, Surveillance, and Reconnaissance Mission Type Order

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Every day, intelligence, surveillance, and reconnaissance (ISR) assets complete a variety of missions but not necessarily in an effective way. Over the past several years, the Department of Defense rapidly expanded ISR assets and missions, responding to a directive of 2008 from Secretary of Defense Robert Gates that established the department's ISR Task Force and commissioned it "to provide resources needed now on the battlefield" as a means of keeping US forces safe worldwide.[1] Although quick to field ISR platforms like the MC-12, with its heavily used full-motion video capability, the task force does little to address inadequate collection-management processes that hinder timely and relevant ISR operations.[2] However, over

the past several years, the Air Force's ISR operators developed the ISR mission type order (MTO) to overcome impractical and constrictive tasking procedures rooted in doctrine and inflexible theater guidelines that detract from the gains in hardware. As articulated by joint leaders of the past and present, predominant collection-management processes ignore the fluidity of asymmetric operational environments filled with "enemies who are adaptive, decentralized and able to hide in plain sight."[3] The ISR MTO, a more flexible alternative to the traditional ISR tasking method, is a proven and effective corollary to the traditional process, providing timely and relevant collection to supported units while offering higher headquarters (HHQ) flexibility in the application of scarce ISR assets.[4] The Air Force must ensure that both service doctrine and joint doctrine, as well as current tactics, techniques, and procedures, continue to reflect the benefits of undiluted, layered, and responsive ISR operations offered by MTOs.

Doctrine: The Heart of the Collection-Management Problem

The traditional collection-management system suffers from two primary shortcomings: (1) collection requirements management, the authority to determine what the ISR assets will collect, based on priority, and (2) collection operations management, the authority to determine which assets will collect requirements and how they will collect those having priority.[5] Rooted in joint doctrine from 1996, execution of these two management authorities under the traditional tasking process strangles innovative and effective ISR operations.[6]

For example, in Operation Enduring Freedom, the International Security Assistance Force (ISAF) Joint Command (IJC) exercises collection requirements management while Air Forces Central, under the combined force air component commander (CFACC) exercises collection operations management.[7] The IJC prioritizes thousands of requirements garnered from subordinate organizations and matches

them to assets already at its disposal. If the command cannot meet internal requirements with "organic" ISR assets, it submits priority items to the CFACC for theater-level airborne ISR collection.[8] Until recently, the CFACC's execution of collection operations management drew criticism because tasking and collection for theater-level ISR did not supply the timeliness and relevance needed by supported ground commanders.[9] But collection management starts with requirements, thus implicating both parties—and not simply for theater-level ISR operations.

Traditional joint ISR tasking doctrine calls for ranking all of the collection requirements.[10] Consequently, the IJC and its subordinate organizations, as well as the CFACC staffs, create numerical ranking systems associating specific numbers with individual requirements nominated for collection by theater ISR assets.[11] Collection managers use these priority numbers (e.g., 100, 200, etc., from higher to lower priority) to match needs with ISR assets. For instance, on a list of 1,000 collection requests, the top 200 may consist of "priority-100 targets," usually the first to have assets assigned to them. Requirements assigned to ISR assets may be spread over several supported units to maximize the number of priority items collected—a practice that does not necessarily maximize battlefield effects. Tasking inefficiencies arise as this "peanut butter spreading" method promotes a numbers-driven collection-management system, elongates tasking timelines, and encumbers lower-echelon war fighters with HHQ micromanagement.

In an article on the CFACC's ISR approach to counterinsurgency, Lt Col Michael Downs argues that peanut-butter spreading degrades ISR's relevance since "the actual intelligence derived from these missions and the resultant impact on friendly operations" are overshadowed by an emphasis on the number of requirements collected.[12] For example, with regard to the traditional tasking process, at Air Forces Central the CFACC's senior ISR officer receives a briefing on the number of requirements collected by ISR assets without the provision of operational impacts. The assumption that requirements fulfill operational effects because of their high ranking suggests that the more higher-

priority requirements collected, the better. In actuality this collections process results in numbers-driven rather than effects-driven operations.[13] Moreover, it falsely assumes that individual needs, collected incongruently, equate to successful ISR operations simply because of their high ranking. Frontline ground commanders at battalion level or lower, though, are more concerned with the relevance of collected requirements than the number collected. In addition to undue emphasis on the latter, the CFACC's air tasking order (ATO) elongates collection timelines and unnecessarily involves HHQs with individual target selection—a problem in collection operations management.

According to Joint Publication 3-30, *Command and Control for Joint Air Operations*, "The ATO articulates the tasking for joint air operations . . . match[ing] specific targets with the capabilities and forces made available to the [C]FACC for the given ATO day."[14] Thus, the ATO has two functions: (1) to detail assets available to the CFACC and (2) to match those assets to requirements. The reconnaissance, surveillance, and target acquisition annex to the ATO specifies collection requirements matched to ISR assets, and collection managers task these assets according to availability provided by the ATO construct.[15] Maj Stephen Price discusses the applicability of the 72-hour ATO cycle under the previous US Army Corps construct in a major conventional operation.[16] The CFACC demands predictable asset availability, but the ATO cycle forces supported units like battalions to submit their needs days in advance even though "many [dynamic] operations are triggered and approved only hours before execution."[17] Hence, the ATO fails to reconcile sortie generation and optimal tasking, but the two are not mutually exclusive. In addition to elongating the collection timelines, the traditional tasking process fosters overcentralization at HHQs.

More than 80 percent of the CFACC's requirements originate at the primary ground-war-fighting echelons: battalions and regiments.[18] In Afghanistan these echelons submit their needs 72 hours or more in advance of operations for review at no fewer than four HHQs, enabling micromanagement of individual requirements each day.[19] This system

detracts from war-fighting echelons' flexibility to support operations that may occur within the 72-hour tasking cycle, creating an exploitable collections gap. Gen Raymond Odierno, Lt Col Nichoel Brooks, and Lt Col Francesco Mastracchio emphasize that successful ISR operations depend on the agility and initiative of commanders at the lowest level—qualities not encouraged by the traditional tasking process backed by joint doctrine.[20]

Overall, although joint doctrine is sufficient for numbers-driven collection and sortie generation, predominant ISR tasking processes unwisely levy long timelines on subordinate units and overcentralization that encumbers effective ISR operations. The discussion of persistent ISR in the *Commander's Handbook for Persistent Surveillance*, published by Joint Forces Command (now decommissioned) in June 2011, notes that "current processes are ad-hoc, not codified adequately in joint doctrine, and are therefore not responsive in today's operational environment. These ad-hoc processes coupled with improvements in technology leave the joint warfighter 'starving' for actionable information while drowning in data."[21] Major supported commands, such as the IJC, and CFACCs worldwide have changed processes to create conditions for more effective ISR collection management. MTOs are among these processes, but joint doctrine does not yet specifically refer to ISR MTOs as a collection-management method that complements the decades-old traditional procedure. Although we should not discount traditional ISR tasking, we should acknowledge the existence of a more dynamic methodology: the MTO.[22]

Solutions to Shortcomings in Collection Management

An MTO is "an order to a unit to perform a mission without specifying how it is to be accomplished"; in other words, HHQ leaders convey their intent to subordinates rather than give them specific tasks.[23] After Operation Desert Storm, Maj Michael Fischer explored the MTO as a means of overcoming decapitation, cumbersome tasking orders, and overcentralized planning.[24] Although his research addresses kinetic op-

erations, parallels to ISR are unmistakable. Specifically, his examination of command techniques, beginning with those characteristic of ancient Greece, emphasizes two key realities of operations—timeliness and relevance, objectives realized by MTOs.[25] In an effort spearheaded by many ISR operators—including members of the 480th ISR Wing, key leaders at multiple combined air and space operations centers, and the IJC—the ISR MTO emerged as the joint community's and CFACC's answer to previously levied critiques of untimely and irrelevant ISR collection. The ISR MTO must stand as a dynamic ISR tasking method rooted in joint doctrine because the tasking process emphasizes effects rather than numbers and gives subordinate commanders tactical agility founded upon the HHQ's command intent.

ISR MTOs offer three key benefits not available from the traditional tasking method. First, they emphasize qualitative effects as opposed to quantitative gamesmanship. On the battlefield, effects outweigh numbers, and these MTOs focus on effects-based operations (e.g., the neutralization of improvised explosive device [IED] networks or the suppression of border smuggling). Second, they deal with "just-in-time" ISR operations rather than collection requirements generated days before operations begin—requirements that have soured before anyone can use the intelligence. ISR MTOs avoid attempts to predict both friendly and enemy operations days in advance (virtually impossible in dynamic situations) by ensuring collection at the right time and in pursuit of relevant needs without burdensome procedures. Third, these orders concentrate on justification of command intent instead of prioritization of individual targets, pulling HHQs "out of the tactical weeds" and allowing subordinates decentralized flexibility as they use assets in pursuit of headquarters' intent. Ultimately, the ISR MTO must appear in joint doctrine alongside the traditional tasking method, thereby cementing the successes of the matured tasking procedure, which offers ISR planners, operators, and commanders greater flexibility.

To be sure, such orders proved successful, albeit on a smaller scale, with special operations forces up until 2010.[26] Since the beginning of

that year, in US Central Command, dozens of conventional forces used the ISR MTO to great effect. Not until February 2010, however, during Operation Moshtarak, led by the 1st Marine Expeditionary Force (I MEF) in Helmand Province, Afghanistan, did conventional units explore the utility of multiasset, uninterrupted ISR MTOs.[27] ISR mission commanders within the distributed common ground system (DCGS)—more commonly referred to as "MOCs"—lead the ISR mission-management and processing, exploitation, and dissemination elements for multiple ISR platforms like the U-2 and RQ-4 Global Hawk. The author, along with other members of the DCGS, coordinated some of the first ISR MTO missions associated with Moshtarak. These missions were inherently different from traditional ISR taskings insofar as (1) mission performance was evaluated qualitatively instead of quantitatively, (2) taskings came directly from supported units before and during mission execution, and (3) HHQs gave ISR operators a mission intent rather than a specific tasking. Therefore, qualitative effects, direct unit connections for updated taskings, and an emphasis on command intent make up the core of tasking doctrine for the ISR MTO.

For special operations forces, the reality of effects-based ISR changed in 2006 with the strike on Abu Musab al-Zarqawi, the leader of al-Qaeda in Iraq, demonstrating the effectiveness of MTOs.[28] Prior to February 2010, for conventional forces, ISR evaluation was numbers-driven (i.e., requirements tasked, collected, satisfied, and unsatisfied), but ISR MTOs for Moshtarak helped fundamentally alter ISR measures of effectiveness. For conventional units, new questions concerning the outcome of ISR operations emerged: Did we catch any high-value individuals as a result of our collection plan? Did fused, multidiscipline intelligence lead to the discovery of IEDs? Did we verify/deny insurgent tactics? These and similar questions became the measures of ISR effectiveness instead of the old questions: How many requirements did we collect? How many hours of full-motion video did we devote to Regional Command South? Qualitative ISR MTO evaluation portends greater fidelity of fundamental intelligence questions, leading to tailored collection against problem sets. By measuring qualitative rather

than quantitative effects, ISR MTOs enable dynamic operations because supported units can alter collection to better address command intent with ISR assets not tied to "fly the black line."[29]

Traditional ISR tasking spreads assets over many units, maximizing the requirements collected, whereas ISR MTOs dynamically package capabilities in pursuit of qualitative goals. Creation of a multi-intelligence ISR picture is the responsibility of the ISR fusion lead (or ISR tactical coordinator / package commander). The ISR MTO designates this individual to work directly with the supported unit to mass the CFACC's ISR on a particular problem set. Many times, ISR fusion leads are DCGSs led by MOCs who use their intelligence system connectivity to maintain air and ground situational awareness. Working with other ISR operators, MOCs help the supported units layer different types of intelligence to provide multiple perspectives of a target set.[30]

During Moshtarak, the MOCs used multiple assets to identify IEDs in support of the mission that called for maintaining the I MEF's freedom of movement. In one instance, assets supporting that force collected voice communications indicating IED-related activity in a particular area. The MOC verified the report and worked with the I MEF to check it out by passing the target to the RQ-4 Global Hawk for collection of an image. Shortly after the voice intercept, an imagery report was issued to the I MEF identifying a likely IED. The next day, using the collected information, one of the Marine explosive-ordnance disposal teams notified the fusion lead's analytical cell—the DCGS analysis and reporting team—of a recovered 40-pound IED. ISR MTOs made possible this and similar collection scenarios; traditional tasking would have limited the MOC's and supported unit's ability to conduct these types of operations, especially if they interfered with tasked collection requirements, regardless of relevance. Thus, such qualitative results can doctrinally distinguish the ISR MTO from the traditional tasking method, which would consider the pursuit of a single target less optimal because it reduces the total number of targets that can be collected. In addition to supplying a more qualitative focus, the ISR

MTO exploits just-in-time intelligence requirements instead of templated ones.

Another key aspect of ISR MTO doctrine—continual refinement of the target until collection—is not effectively practiced under traditional ISR doctrine. During Operation Moshtarak, the MOC could interface directly with supported units for pre-mission planning as well as during execution to refine targeting without HHQ validation—a significant benefit. Mentioned previously, many ground operations emerge after the tasking of theater-level ISR assets. Under the traditional tasking method, a painstaking "dynamic targeting" process of collection operations management kicks off to cover emerging requirements, a process that very often exceeds 30 minutes to add a single target to a collection deck. One must then multiply this process by the dozens of battalions and brigades as well as the regional commands that currently operate in Afghanistan. Although excessively long deliberations do not always occur, timeliness and relevance are lost when no fewer than four levels of command become involved in approving individual requirements for literally dozens of ISR assets. Instead of multiple HHQs standing between the supported unit and supporting asset, during ISR MTOs, the supported unit conveys target changes directly to the ISR fusion lead or other supporting assets for immediate collection.

ISR MTOs offer collection platforms flexibility to develop ISR collection plans that sometimes are not finalized until minutes before takeoff or even during mission execution. This method of tasking ensures collection of the most relevant requirements based on a rapidly shifting battlespace; the U-2 is perhaps the best example of the process. The DCGS has responsibility for mission planning for many ISR assets, including the U-2. DCGS mission planning cells coordinate directly with the fusion lead and supported units to see that requirements have the most relevance to ground units prior to execution. With the ISR MTO, when a supported unit needs to change its collection deck, the unit simply contacts the ISR fusion lead directly, and either the plan-

ning cells or MOCs responsible for current operations make the change within minutes.

During Moshtarak, the U-2's multidiscipline intelligence-collection capabilities made it a commodity widely sought after. For instance, the U-2 received a tasking to support a major convoy movement from central to northern Helmand Province. Prior to takeoff, the supported ground unit, the I MEF, gave the DCGS the planned route. Beginning its trek before the U-2 arrived on station, the convoy hit several IEDs en route; consequently, the U-2's collection targets were completely changed in a matter of minutes to accommodate a new route established by the convoy commander via radio and mIRC.[31] Traditional tasking of the U-2 probably would have resulted in missing the opportunity to aid the altered convoy route. Again, the ISR MTO outperforms standard collection practices by providing just-in-time intelligence. Joint doctrine should reflect developing MTO tactics, techniques, and procedures, thereby guaranteeing that coalition forces do not use templated collections that might diminish in relevance by collection time, as is the case with the traditional tasking method. Though important during irregular warfare, this flexibility can prove just as significant during major conventional operations, discussed below. But ISR and supported war-fighting echelons enjoy the greatest of benefits—decentralized execution—since assets carry out a mission instead of a specific tasking.

The third and final major advantage of MTO tasking involves tasking by command intent instead of against individual, prioritized targets. To paraphrase Gen George S. Patton, when senior leaders convey their intent to subordinates, the latter demonstrate the best execution techniques to fulfill the intent of those leaders.[32] Traditional tasking encourages supported units to assume a fly-the-black-line attitude towards the CFACC's assets because the latter cannot deviate from previously established collection decks without approval from multiple levels of command, as previously discussed. To illustrate the unresponsiveness of this situation, consider a mission to identify the beddown location

of a high-value individual—where a significant enemy commander exercises command and control. The supported unit supplies the target 72 hours in advance, allowing for HHQ validation. During the mission, a human-intelligence report indicates a change in the location, but the ISR platform, the U-2, requires 30 minutes to alter the collection plan, resulting in an unsupported dynamic requirement since the aircraft has only 30 minutes of on-station time remaining. If, however, the supported unit and ISR operators know that their mission is to identify the high-value individual's beddown location, the MTO facilitates a rapid change to the collection scheme of maneuver. Essentially, the order accommodates the new target to realize the senior leader's intent as opposed to doggedly following an outdated tasking that may be irrelevant by the time collection occurs—if it occurs at all.

Tasked ISR MTOs need "purpose and justification," a short narrative by the subordinate unit explaining to the higher-echelon commander and staff how the unit plans to use allocated ISR assets in support of HHQ's command intent. No longer must such units justify individual requirements to HHQs; rather, lower echelons must make the case that their ISR operations fulfill the headquarters' priorities and that they must have assets for certain periods of time to fulfill the intent of collection in pursuit of established priorities. This means that some units that normally have a few requirements on a collection deck may not see them collected because an ISR asset is devoted to a unit (e.g., a battalion, brigade, or division) for a certain period of time. The MTO tasking method, though, will meet the HHQ commander's intent, attaining greater clarity regarding priority target sets.

For instance, during Moshtarak, the I MEF had access to several ISR assets to carry out the ISAF commander's priority of seizing central Helmand from insurgent elements and securing it. Assets were allocated for extended periods of time (weeks and months) to make sure that the I MEF could develop target sets as opposed to collecting on individual requirements whenever an individual target attained a sufficiently high priority. Allocated ISR assets moved when the tactical

ground commander needed them to move with assistance from the ISR fusion lead at the DCGS. The I MEF articulated changes in collection priorities, according to command intent, to the fusion lead, who advised, assisted, and tasked ISR assets with a shared understanding of command priorities. Under normal tasking guidelines, the calculus of target deliberation and operational constraint would occur at the IJC and combined air and space operations center. Instead, the ISR MTO relies on the individuals most attuned to the dynamic environment—the forward war fighters—to coordinate and execute ISR operations. ISR MTOs thus give supported units and ISR operators the minimum guidance necessary to fulfill the mission as opposed to a list of pre-approved targets that may become invalid by the time of flight.

Conclusion: Push the ISR Planning Envelope

Undoubtedly, the ISR Task Force established by Secretary Gates fulfilled its explicit charge of fielding ISR resources on the battlefield "now"; however, we must still address the implied task of fostering effective ISR tasking. By constricting timely and relevant ISR operations, the traditional method does not adequately consider the dynamic operating environment. The ISR MTO offers the CFACC and greater joint community a qualitative as opposed to quantitative solution. Furthermore, it provides just-in-time intelligence that follows command intent instead of emphasizing laborious timelines with overcentralized ISR targeting. HHQ commanders must give their subordinate ISR operators and planners the flexibility to execute the ISR mission in the context of their objectives—something that only a meaningful change in the tasking of ISR can bring about. Such a doctrinal modification will promulgate fully trained ISR operators and collection managers who can integrate ISR at the focal point of operations. ISR MTOs rely on trust and training; joint leaders must trust not only their people but also their training. Moreover, these orders challenge intelligence professionals to think, anticipate, and respond quickly to fluctuations on the battlefield, making our assets more agile.

Although this article has emphasized irregular warfare, we cannot discount application of the ISR MTO to major theater warfare. Consider, for example, a nonpermissive ISR environment where mobile surface-to-air-missile systems complicate preplanned collection requirements. Alternatively, commanders or ISR planners can appoint an ISR tactical coordinator to work with kinetic or nonkinetic package commanders to apply ISR flexibly to a tactical problem rather than tasking ISR assets against specific targets. The commander's intent may be as simple as supporting the force-package commander in gaining and maintaining air superiority. From that ISR MTO commander's intent, the ISR tactical coordinator can flexibly apply all ISR assets against requirements that will dynamically lead to fulfilling the commander's intent.

Granted, the ISR MTO offers timely and relevant ISR collection to supported units, but we should not consider it a one-size-fits-all tasking method—the pitfall of traditional tasking. The spectrum of conflict ranges from the relatively benign to the dynamic, with requirements that change hourly. On the one hand, traditional ISR tasking adequately addresses relatively stable areas of operation, allowing a commander to maximize the coverage of large areas. On the other hand, ISR MTOs are more appropriate and have proven successful in allowing dynamic missions to meet more narrowly defined goals with requirements that vary constantly. HHQ commanders must have a set of ISR tasking tools that allow mission-specific collection, and ISR MTOs, rooted in doctrine, should be a part of that tool set.

Dennis Drew and Donald Snow write that "military doctrine is what we believe about the best way to conduct military affairs."[33] The ISR MTO—specifically, ISR collection—is a part of that process. This mission type order represents a proven tasking method, already part of tasking procedures for three of the six geographic unified commands. Further, it supports foundational doctrine statements outlined in Air Force Doctrine Document 1, *Air Force Basic Doctrine, Organization, and Command*.[34] Although a part of Air Force basic doctrine, MTOs must

still become part of joint doctrine to ensure the widest understanding and application across the joint community—thus the call for members of the joint community, specifically the ISR Task Force, to address the issue of the optimal application of ISR. Ultimately, a doctrinal shift in ISR tasking will afford the joint community a tailored ISR solution that embodies timeliness and relevance in dynamic environs. ✪

Notes

1. Donna Miles, "Gates Forms Task Force to Promote Intelligence, Surveillance for Warfighters," American Forces Press Service, 21 April 2008, http://www.defense.gov/news/newsarticle.aspx?id=49639.

2. "MC-12," US Air Force, 21 May 2012, http://www.af.mil/information/factsheets/factsheet.asp?id=15202.

3. Lt Col Edward Tovar, "USMC Distributed Operations" (presentation at the DARPA [Defense Advanced Research Projects Agency] Systems and Technology Symposium, Anaheim, CA, 9 August 2005), 22, http://archive.darpa.mil/DARPATech2005/presentations/ato/tovar.pdf. See also Lt Col Daniel Villeneuve, "To Provide Focus: Intelligence and Counter-insurgency," *Canadian Army Journal* 10, no. 4 (Winter 2008): 58–73, http://www.army.forces.gc.ca/caj/documents/vol_10/iss_4/CAJ_vol10.4_08_e.pdf; and Raymond T. Odierno, Nichoel E. Brooks, and Francesco P. Mastracchio, "ISR Evolution in the Iraqi Theater," *Joint Force Quarterly*, no. 50 (3rd Quarter 2008): 51–55, http://www.dami.army.pentagon.mil/site/dig/documents/ISR-Evolution-N-Iraqi-Theater-Odierno-JFQ-2008.pdf.

4. Carlo Munoz, "MTO Strategy Seen as First Step to Increasing ISR Jointness," *Inside Washington Publishers*, 21 May 2010, https://defensenewsstand.com/index.php?option=com_ppv&id=1823430&Itemid=0.

5. Joint Publication (JP) 2-01, *Joint and National Intelligence Support to Military Operations*, 5 January 2012, III-16, III-17, http://www.dtic.mil/doctrine/new_pubs/jp2_01.pdf.

6. JP 2-01, *Joint Intelligence Support to Military Operations*, 20 November 1996, http://www.hsdl.org/?view&did=3737.

7. JP 2-01, *Joint and National Intelligence Support*, III-16, III-17.

8. Organic ISR assets, preallocated to fielded commanders, are not tasked on either the theater or national levels. Theater-level assets are preallocated to the CFACC.

9. Odierno, Brooks, and Mastracchio, "ISR Evolution," 53.

10. JP 2-01, *Joint and National Intelligence Support*, III-15.

11. Field Manual 34-2, *Collection Management and Synchronization Planning*, 8 March 1994, A-11, http://www.fas.org/irp/doddir/army/fm34-2/toc.htm.

12. Lt Col Michael L. Downs, "Rethinking the Combined Force Air Component Commander's Intelligence, Surveillance, and Reconnaissance Approach to Counterinsurgency," *Air and Space Power Journal* 22, no. 3 (Fall 2008): 72, http://www.airpower.maxwell.af.mil/airchronicles/apj/apj08/fal08/downs.html. See also Carl Rhodes, Jeff Hagen, and Mark

Westergren, *A Strategies-to-Tasks Framework for Planning and Executing Intelligence, Surveillance and Reconnaissance (ISR) Operations* (Santa Monica, CA: RAND Corporation, 2007), http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.139.8418&rep=rep1&type=pdf.

13. Rhodes, Hagen, and Westergren, *Strategies-to-Tasks Framework*, 14.

14. JP 3-30, *Command and Control for Joint Air Operations*, 12 January 2010, xx, http://www.dtic.mil/doctrine/new_pubs/jp3_30.pdf.

15. Col David B. Hume, *Integration of Weaponized Unmanned Aircraft into the Air-Ground System*, Maxwell Paper no. 41 (Maxwell AFB, AL: Air University Press, September 2007), 6–7, http://www.au.af.mil/au/awc/awcgate/maxwell/mp41.pdf.

16. Maj Stephen C. Price Jr., "Close ISR Support: Re-organizing the Combined Forces Air Component Commander's Intelligence, Surveillance and Reconnaissance Processes and Agencies" (thesis, Naval Postgraduate School, December 2009), 10–11, http://www.hsdl.org/?view&did=29597.

17. Maj Steven Maceda, "Control of Theater Intelligence, Surveillance, and Reconnaissance for the Ground Commander," *Air and Space Power Journal* 22, no. 4 (Winter 2008): 60, http://www.airpower.au.af.mil/airchronicles/apj/apj08/win08/maceda.html.

18. Downs, "Rethinking," 70.

19. Maj John M. Ives, "They Deserve Better: Ridding the Collection Management Process of Inefficiencies" (presentation, Nontraditional ISR Conference, London, UK, 28 October 2010), http://www.iqpc.com/Event.aspx?id=353262.

20. Odierno, Brooks, and Mastracchio, "ISR Evolution," 53.

21. US Joint Forces Command, *Commander's Handbook for Persistent Surveillance*, version 1.0 (Suffolk, VA: Joint Warfighting Center, Joint Doctrine Support Division, 20 June 2011), I-1, http://www.dtic.mil/doctrine/doctrine/jwfc/surveillance_hbk.pdf.

22. Maj Michael E. Fischer, "Mission-Type Orders in Joint Air Operations: The Empowerment of Air Leadership" (thesis, School of Advanced Airpower Studies, 1993–94), http://ebooks.gutenberg.us/AU_Press_Collection/SAAS_Theses/SAASS_Out/Fischer/fischer.pdf.

23. JP 1-02, *Department of Defense Dictionary of Military and Associated Terms*, 8 November 2010 (as amended through 15 April 2012), 210, http://www.dtic.mil/doctrine/new_pubs/jp1_02.pdf.

24. Fischer, "Mission-Type Orders."

25. Ibid., 7–14.

26. Michael T. Flynn, Rich Juergens, and Thomas L. Cantrell, "Employing ISR: SOF Best Practices," *Joint Force Quarterly*, no. 50 (3rd Quarter 2008): 56–61, http://www.dtic.mil/cgi-bin/GetTRDoc?AD=ADA516799.

27. Led by the US Marine Corps, Operation Moshtarak cleared insurgent forces from the city of Marjeh in Helmand Province, Afghanistan. At the start of the operation in late 2010, Marjeh was considered a significant stronghold of the Taliban insurgency.

28. Carlo Munoz, "Air Force to Leverage New ISR Planning Strategy for Kandahar Offensive," *Inside the Air Force*, 23 April 2010, http://defensenewsstand.com/index.php?option=com_ppvuser&view=login&return=aHR0cDovL2RlZmVuc2VuZXdzc3RhbmQuY29tL2NvbXBvbmVudC9vcHRpb24sY29tX3Bwdi9JdGVtaWQsMjkwL2lkLDE4MjI2NTUv.

29. "Fly the black line," an idiom among ISR operators, means collecting only what is required and nothing more.

30. JP 2-01, *Joint and National Intelligence Support*, III-26 through III-28.

31. Military members use the chat program Mardam-Bey Internet Relay Chat (mIRC) for command, control, and communication.

32. "Never tell people how to do things. Tell them what to do and they will surprise you with their ingenuity." George S. Patton, *War As I Knew It* (Boston, MA: Houghton Mifflin Co., 1947), 357.

33. Col Dennis M. Drew and Dr. Donald M. Snow, *Making Strategy: An Introduction to National Security Processes and Problems* (Maxwell AFB, AL: Air University Press, August 1988), 163, http://www.dtic.mil/cgi-bin/GetTRDoc?AD=ADA422016&Location=U2&doc=GetTRDoc.pdf.

34. Air Force Doctrine Document 1, *Air Force Basic Doctrine, Organization, and Command*, 14 October 2011, http://www.e-publishing.af.mil/shared/media/epubs/afdd1.pdf.

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