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The Science of Control: Synchronizing Current Operations Cells

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The Science of Control: Synchronizing Current Operations Cells

The current operations (CUOPS) cell is essential to translating plans to orders and eventually the execution of combat operations. The CUOPS integrating cell "is the focal point for controlling the execution of operations. It "involves assessing the current situation while regulating forces and warfighting functions in accordance with the mission, commander's intent, and concept of operations."[1] CUOPS synchronizes operations, sustains the common operational picture (COP) and mitigates risk to the mission. In the operations process, the CUOPS cell is the commander's most prominent tool to understand, describe, visualize, and direct operations. Because of the cell's importance, the CUOPS teams must organize and train personnel, information systems, and processes to enable the commander to make a decision based on understanding rather than data points.

Despite the importance of the CUOPS cell, trends from combat training centers (CTCs), Mission Command Training Program (MCTP), and lessons learned from recent deployments demonstrate that units continue to struggle with synchronizing current operations. This is despite — or because of — advances in technology and years of combat experience. Recent trend analyses demonstrate that units commonly fail to integrate warfighting functions throughout the operations cycle. Root-cause analyses from these trends point to lack of home-station training as well as poor standard operating procedures (SOPs). However, perhaps a lack of practical understanding

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[1] Army Techniques Publication (ATP) 6-0.5, *Command Post Organization and Operations,* 01 March 2017, page 2-7.

exists at the field-grade level of the concepts and tools commanders have to exercise control of the battle.

For commanders to exercise mission command, CUOPS cells exercise control. Army Doctrine Publication (ADP) 6-0 defines control as "the regulation of warfighting functions to accomplish the mission in accordance with the commanders' intent."[2] The science of control "relies on objectivity, facts, empirical methods, and analysis."[3] Data and information reported to the operations center can be dense and complex. Utilizing procedural controls, CUOPS can identify variances that give commanders the appropriate decision space to mass effects of combat power and direct necessary changes. Components of command and control (C2) systems are utilized by CUOPS to achieve control over forces.

This article discusses the processes and techniques that optimize CUOPS cells' control over forces. In addition to C2 systems, this article intertwines techniques to manage CUOPS personnel and enhance the rapid decision-making and synchronization process. The operations process of planning, preparing, executing, and assessing forms the outline of this article. The intent is to bridge doctrinal understanding with the practical application of managing a CUOPS cell.

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[2] Army Doctrine Publication (ADP) 6-0, *Mission Command: Command and Control of Army Forces,* 31 July 2019, page 1-17.
[3] Ibid., page 3-1.

Planning: Transition the Plan to CUOPS

Transitioning from planning to execution is a difficult and complicated process. Planners "must allow enough time for the CUOPS integration cell to understand the plan well enough to coordinate and synchronize its execution."[4] A common mistake is allowing planning integration cells to use the majority of allotted time creating the plan and gaining commander approval rather than ensuring shared understanding by CUOPS and subordinate units. This pitfall can lead to poor execution, missed opportunities, an inability to identify risk, and possible mission failure. But transitions are not the sole responsibility of the plans cell. The transition is a shared responsibility between the planning teams and CUOPS teams. The CUOPS team should aggressively seek information, attend meetings, and ask questions to ensure seamless execution.

The daily operations synchronization meeting (OPSYNC) is an effective transition point from plans to CUOPS. The chief of operations (CHOPS) chairs this meeting to ensure all warfighting functions understand their roles and responsibilities. The OPSYNC serves as the proverbial handoff between planning and execution because it aligns resources inside of hours and days. However, due to time constraints, the OPSYNC can only provide a quick conditions check. Therefore, the question is, what are the most beneficial meetings to attend?

A detailed understanding of the staff gatherings can assist CUOPS with collecting the necessary information for execution. There is a multitude of meetings, working groups, and boards to build plans. Depending on the operational tempo

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[4] ADP 5-0, *The Operations Process,* 31 July 2019, page 3-8.

(OPTEMPO), CUOPS personnel usually only have enough time to attend one to two meetings during their shift. Because a board involves a decision from the commander or a delegate, it would seem like a natural selection for CUOPS personnel to attend. However, CUOPS needs an understanding of the "why," not just knowledge of a decision. Because working groups provide in-depth discussions, these meetings can at times be more beneficial for a CUOPS team. For example, a division target working group can provide a more in-depth conversation about target nominations and changes in fire support coordination lines than bullet-point recommendations to the commander on a board. The CUOPS chief of fires can easily transition decisions from the board to CUOPS. The CHOPS needs to carefully manage who attends what meetings to ensure understanding of the plan. CUOPS involvement in planning beyond the near term can pay major dividends with understanding and sharing of information.

Establishing minimum synchronization tool requirements for planning transitions allows appropriate time to revise, rehearse, and disseminate information to lower headquarters. Future operations (FUOPS) cells refine plans from conceptual to detailed and develop the minimum synchronization tools or "fighting" documents for CUOPS. CUOPS can also assist in the process if not outright owning some documents. Minimum requirements for transitions should include, but are not limited to revised commander's critical information requirements (CCIRs), decision support templates, operation schedules (OPSKEDs), overlays, Keyhole Markup Language Zipped (KMZ) files (if digital), and a detailed execution matrix that includes combat enablers. These items and FUOPS participation in the OPSYNC are critical elements in avoiding pitfalls and sustaining momentum.

Preparing

The Army adage of "poor preparation creates poor execution" is never truer than in a CUOPS cell. The ability to sift through hundreds of data points, understand multiple systems and platforms, and then quickly analyze the situation to enable decisions is not an easy task. As the primary C2 systems integrator, CUOPS has to prevent information silos and rapidly disseminate information across the breadth of the force. Thus, preparation in the CUOPS cell mitigates confusion and enhances capabilities. CUOPS preparation should include building reporting requirements, decision support tools, building a common understanding of the COP, and lastly, rehearsals.

Prepare: Build Reporting Requirements

For the COP to be accurate, subordinate units need to understand what is required for reporting. Requirements should be agreed on before execution. Similar to a reconnaissance operation, CUOPS is constantly collecting information from across the force and relies on information requirements to build situational understanding. The CUOPS team utilizes feedback from different sensors such as other command posts and intelligence, surveillance, and reconnaissance (ISR) to collect intelligence requirements. Detailed information such as indicators and warnings enhance understanding throughout the command post by identifying variances in the plan. CUOPS leverages information requirements as procedural controls to develop the COP and build assessments. Clear, sufficient, and commonly understood information requirements combined with disciplined reporting feed the COP. Significant activities (SIGACTs), CCIRs, and essential elements of friendly information (EEFIs) provide a doctrinal framework for information requirements.

SIGACTs should be the most commonly understood reporting requirements. There is no standard definition in U.S. Army doctrine for a SIGACT. SIGACT reports are not only actions that indicate variances, they are also actions that collectively assist in understanding the progress of the operations. A common understanding of a SIGACT is the minimum reporting requirement to higher command posts from subordinate units. These are the routine actions of enemy contact, crossing graphic control measures, and achieving objectives. Units need to clearly define these actions so that no time is wasted by CUOPS requesting reports from subordinates. Figure 1 is an example of a SIGACT list.

	SIGACT LIST
	Below are events the DIV considers to be SIGNIFICANT ACTIVITIES. Based on circumstances, any other event can be elevated to a SIGACT by the CHOPs. THESE ARE THE EVENTS MSCS WILL REPORT TO DIV CHOPS.
1	Anything covered in PIR/EEFI/FFIR
2	Capture/Loss of key terrain or infrastructure
3	Achievement of a BN or greater OBJ
4	Crossing a phase line, DIV CP
5	Contact with enemy unit greater than company size
6	Incident requiring MEDEVAC or CASEVAC beyond BCT Organic assets
7	Loss of HIMARs launcher
8	Loss of Air Defense Coverage (Avenger, Patriot)
9	Key Leader Casualty
10	Any discovery or use of CBRN
11	Downed Friendly Aircraft
12	Loss of Communication with subordinate unit 9 (within COM window)
13	Any CIVCAS incident
14	Collateral damage to key infrastructure
15	Loss of Network Critical infrastructure causing outages longer than 3 hours
16	IA Incident
17	COMSEC compromise
18	Suspect Enemy Air Threat
19	CAB Operational Readiness State falls below 50%
20	Q53, Q37, Sentinel radar inoperable
21	CBRN ROTA
22	UXO/IED 9 line
23	NMC Route Clearance platforms
24	NMC Dig platform
25	Damage to FLS
26	Explosive Hazard Cache discovered
27	Indirect Fire asset down (above 120mm)
28	Radar goes down for more than 30 minutes
29	Unit is black on ammo
30	Loss of Tactical Transmitter
31	Damage/destruction of cultural significant site
32	Enemy/Anti-US Propaganda
33	Damage, destruction of a cultural significant site
34	Detainee abuse allegation
35	Factually incorrect reporting on unit operations
36	Unauthorized release of photo or video documenting unit activity

Figure 1. Example SIGACT list

EEFIs are the items friendly forces want to protect. Items such as counter-battery radars, supply routes, and frequencies are examples of an EEFI. An EEFI is closely tied to the critical asset list (CAL)/defended asset list (DAL). Understanding EEFIs allows CUOPS to prioritize protection assets and develop courses of action for the commander. Any compromise of this information should be included in a CCIR list.

A CCIR is dynamic to the current situation. Effective utilization of CCIRs focuses the CUOPS team to find the right details. A common mistake is to keep the same CCIR

throughout the entirety of the operation. A stagnant CCIR indicates that no reassessment of the current situation has been made or that the operation has not changed upon enemy contact. A CCIR consists of friendly force information requirements (FFIRs) and priority intelligence requirements (PIRs).[5] Similar to reconnaissance and security operations, CUOPS can tailor FFIRs and PIRs to identify variances. FFIRs assist with understanding friendly capabilities. During execution, FFIRs may change based on resource allocation and time. A beneficial FFIR list can assist CUOPS in determining courses of action and regulating the allocation of resources. PIRs are threat-focused information requirements that identify information about the enemy and operational environment the commander considers most important.[6] To a CUOPS cell, PIRs can be too broad. Because CUOPS is trying to determine variances to the enemy situation, the intelligence section should break down PIRs to essential elements of information (EEIs). Essentially, EEIs break down PIRs into indicators that reflect enemy intent or courses of action.[7] For example, if the PIR is *"When will enemy artillery be in range of our main body?"* then a potential EEI could be "Is there enemy movement south of Phase Line Gowins?"[8] The daily OPSYNC should include a discussion of current CCIRs where staff sections are allowed the opportunity to nominate new CCIRs. Effective use of and frequent reassessment of CCIRs can enhance the command post's ability to identify opportunities, exploit enemy

[5] Field Manual (FM) 3-98, *Reconnaissance and Security Operations*, 01 July 2015, paragraph 4-31.
[6] Ibid., paragraph 4-32.
[7] Ibid., paragraph 4-78.
[8] Ibid., paragraph 4-78.

weaknesses, and avoid catastrophes. With CCIRs understood across the force, the CUOPS team can provide the decision space required to adapt to a changing enemy.

Preparing: Develop Fighting Documents

Synchronizing and decision support tools — colloquially referred to as "fighting" documents — succinctly organize information to allow CUOPS to regulate forces. These documents show how the fight should progress as they align resources in time and space. In conjunction with the FUOPS team, CHOPS develops and refines these items. "Fighting" documents include but are not limited to items such as an attack guidance matrix (ATGM), decision authority matrix (DAM), decision support matrix, resource allocation matrix, sustainment overlay, and overall operations synchronization matrix. These documents organize information to allow rapid decision-making by CUOPS. A similar concept would be what a commander would put on a battle board in combat to organize information.

The execution and synchronization matrices must be intricately detailed and inclusive of all warfighting functions. CUOPS uses these tools to control warfighting functions and provide assessments to the commander. The execution matrix outlines the operation by major muscle movements, priorities, and decision points. The synchronization matrix provides visibility in both time and space for resource allocation. Although the execution matrix may not change for several days, the synchronization matrix changes often based on the situation and priorities. The CUOPS and FUOPS cells should work hand-in-hand to develop the synchronization matrix. The synchronization matrix should be as inclusive as possible, with ISR, close air support (CAS), sustainment, and maneuver all represented in time and space. The

synchronization matrix should be refined daily at the OPSYNC. Because CUOPS fights

hours to days, the "one-page, one-day" synchronization matrix is the most effective

construct (see Figure 2).[9]

Figure 2. The "one-page, one-day" synchronization matrix[10]

In addition to the execution and synchronization matrices, each warfighting

function has decision support tools. These tools supplement the synchronization matrix

by framing the operation by warfighting function. These are documents such as the

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[9] Center for Army Lessons Learned, *News from the CTC: The OPSYNC Best Practices,* 10 January 2018, page 10.
[10] Ibid., page 20.

ATGM, high-payoff target list (HPTL), no-strike list, CAL/DAL, and obstacle overlays. CUOPS integrates these tools into the COP and rapid decision-making process. Additionally, CUOPS delegates authorities for action. An example would be the fires cell executing a strike on an electronic intelligence indicator based on the HPTL and ATGM. These warfighting function-specific tools focus team members and provide more in-depth data points.

To eliminate confusion among subordinate headquarters staff and commanders, a DAM based on a higher order needs to be developed with the CUOPS team. The DAM identifies authority for sensitive circumstances. A DAM allows decision space by delegating low-level decisions to the S-3, G-3 or deputy, or chief of staff. Additionally, it gives the CUOPS team clear scope of its authorities. CUOPS authorities should be limited to risk mitigation measures such as requests for support, dynamic retasking of asset criteria, and personnel recovery operations. The DAM alleviates tension and removes the blame game from the CUOPS cell (see Figure 3).

DECISION AUTHORITIES MATRIX								
#	Action / Decision	HHQ	CG	DCG	CoS	G3	CHOPS	BDEs
1	Re-task organize FF units					X		
2	Exceed bypass criteria				X			
3	Approve media release (strategic level importance)			X				
4	Waive medical RoE				X			
5	Change MSR priority					X		
6	Initiate 15-6 investigation				X			
7	Request assets from HHQ						X	
8	Assign a destroy mission to an AVN/FA unit			X				
9	Change priority of support			X				
10	Authorize destruction of sensitive equipment				X			
11	CDE > 3		X					
12	Re-task CAS						X	
13	ATACMS release	X						
14	Change MOPP level					X		
15	Authorize hasty internment of CBRN casualties	X						
16	Authorize destruction of critical HN infrastructure	X						
17	Attack target on the no-strike list	X						
18	Conduct cross-boundary joint fires	X						
19	Bypass a WMD/CBRN site	X						
20	SCAM release (4 hours-48 hours)			X				
21	Employ the DIV reserve		X					
22	Cross-FLOT operation			X				
23	Investigation of a CF/HN partner		X					
24	High value EPW transfer		X					
25	Employ riot control agents	X						
26	Change priority of fires					X		
27	Cross boundary fires planning					X		
28	Change decision support matrix criteria		X					
29	Change priority of AVN support					X		
30	Conduct offensive EW employment			X				
31	Change to CCIR		X					
32	Dynamic retasking of assets (within ATO)						X	

Figure 3. Example decision authorities matrix

Prepare: The COP

A primary responsibility of the CUOPS team is maintaining the COP during execution. The COP is the "end product of knowledge and information activities, running estimates, and battle tracking."[11] Army Techniques Publication (ATP) 6-0.5, *Command Post Organization and Operations*, states that "Units facilitate situational understanding through knowledge and information management, when they create, organize, apply, and transfer knowledge to help develop the COP."[12] Essentially, accurate battle tracking creates the feedback loop between headquarters and subordinates that builds the COP. The tendency is to think of the COP as a consolidated picture of the battlefield displayed

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[11] ATP 6-0.5: *Command Post Organization and Operations,* 01 March 2017, paragraph 3-51.
[12] Ibid., paragraph 3-41.

on several screens. The COP, in practice, is what the staff and subordinate units commonly understand to be the running estimate of the situation. If subordinate units and higher staffs disagree on unit locations and actions, there is no true COP. Preparing a robust knowledge management process is critically important to mitigate against this mistake. Due to proximity to the fight, CUOPS assumes a de facto role of the knowledge management team.

Prepare: Train on Analog, Then go Digital

To train knowledge management and COP sustainment successfully, units need to train and master the analog process. Although the digital COP uses automated means to distill information for rapid decisions, the analog COP requires more discipline and rigor to sustain. The analog COP cannot be consolidated into several screens. Information has to be constantly updated and rules must rigorously be enforced by the CUOPS cell. Working with analog products forces the CHOPS to exercise units' primary, alternate, contingency, and emergency (PACE) plan to ensure the transfer of information. Additionally, an analog COP is still required to sustain operations against a cyber or electronic attack. Mastery of knowledge management with analog products is difficult given the density of data points on the modern battlefield; however, using analog methods will create a mutual understanding of information requirements by outstations and planning cells. Once the CUOPS team understands the analog process, it can develop techniques for digital COP management.

Prepare: Digital COP SOPs

An agreed-on SOP for digital information display should be understood and rigorously trained. Unregulated digital COP displays can overload a unit with data. As a general rule, the digital COP should be intuitive and no person entering the CUOPS floor should have to search for information. The targeting methodology of decide, detect, and deliver (D3) provides a strong organizational construct technique (see Figure 4).

Detect can be maintained by the intelligence section and consists of the current positions of ISR assets, templated or confirmed enemy positions, PIRs, named areas of interest, target areas of interest, and synchronization of ISR assets and CUOPS. The *deliver* section of the COP is controlled by the fires cell and integrates all CAS, air weapons teams, fire support assets, fire control measures, air control measures, CAL/DAL, and a critical munitions list. *Decide* is controlled by the battle captain or noncommissioned officer (NCO) and integrates friendly battle positions relative to enemy positions, FFIRs, and decisions points. Combat power can be displayed over friendly and enemy icons using percentages derived from the correlation of forces (COF) tool (discussed in the assessing current operations section of this article). The D3 technique is intuitive and provides the CUOPS cell the rapid ability to control forces. As stated before, the D3 method is a technique. The point is to use a commonly understood methodology to organize information to enable a decision for the commander.
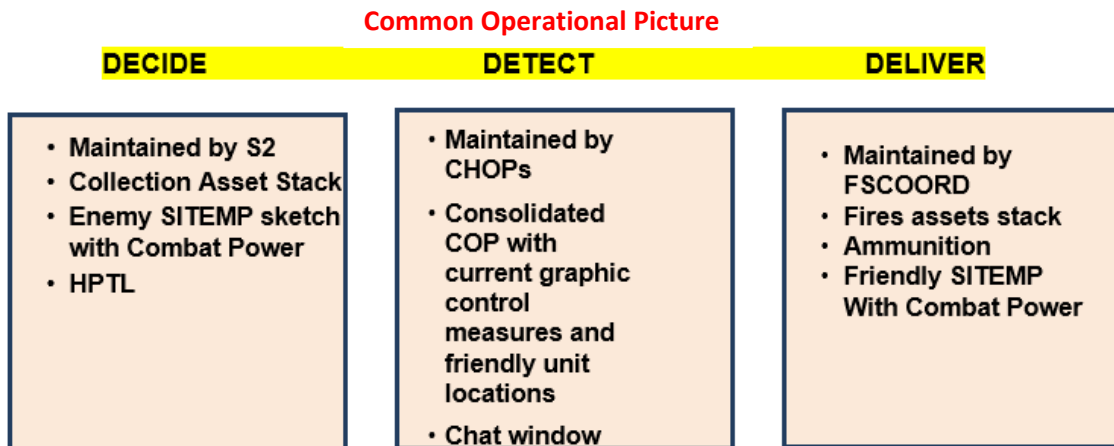
Common Operational Picture

DECIDE	DETECT	DELIVER
• Maintained by S2 • Collection Asset Stack • Enemy SITEMP sketch with Combat Power • HPTL	• Maintained by CHOPs • Consolidated COP with current graphic control measures and friendly unit locations • Chat window	• Maintained by FSCOORD • Fires assets stack • Ammunition • Friendly SITEMP With Combat Power

Figure 4. The decide, detect, deliver COP organizational construct

Final Preparations: Rehearsals

Rehearsals and conditions checks assist CUOPS and outstations with an understanding of the problem. Before the operation, the CHOPS usually has the responsibility of preparing and, in some units, executing the combined arms rehearsal (CAR). This ensures the plan is fully transferred from plans to CUOPS. However, conducting full-force rehearsals during continuous operations is difficult and often not possible due to time constraints. At a minimum, an OPSKED rehearsal utilizing the unit communications SOP (PACE plan) should be conducted to ensure the sequencing of key steps and reinforcing reporting discipline. Additionally, contingency rehearsals assist the chain of command during a serious incident such as a downed aircraft. Rehearsals and conditions checks assist in controlling actions during operations and contingencies. Gene Kranz, NASA mission control lead for the moon landings, stated in his book *Failure is not an Option* that during missions, "you did not have any time for second thoughts or arguments. You wanted the debate behind you. So before the

mission, you held meetings to decide what to do if anything went wrong."[13] The same principle can be applied to the CUOPS cell.

Executing CUOPS

As stated previously, preparation is key to proper execution. But unlike the preparation phase, execution in CUOPS is where the human dimension becomes increasingly significant over time. It is no secret that productivity can decrease when individuals become tired, complacent, or frustrated. The difference in a CUOPS cell is that all these attributes can have particularly pernicious effects on an entire operation. CUOPS teams must develop disciplined SOPs to guard against these issues. Checklists, balancing duties among all individuals, and creating intuitive techniques for the exchange of information mitigate against fatigue and sustain the fight.

Executing: Battle Tracking and COP Sustainment

As stated previously, battle tracking creates the feedback loop between headquarters and subordinates that builds the COP. But battle tracking during a large-scale combat operation can prove arduous as team members become fatigued. It is the responsibility of the CHOPS to develop control measures that ensure continuous updates despite physical limitations caused by continuous operations. The CHOPS should delegate to each warfighting function its responsibilities to the COP using both analog and digital terms. Essentially, battle tracking should be a shared responsibility among the team not one to two individuals. Unit liaison officers are great assets to

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[13] Gene Kranz, *Failure is Not an Option: Mission Control from Mercury to Apollo 13 and Beyond (*New York: Simon and Schuster, 2000) 21.

continuously battle track friendly elements. Each warfighting function inside CUOPS can leverage C2 systems to develop the battlespace picture. Accurate battle tracking is critical to understanding the situation and mitigating risk to mission. Once battle-tracking rules have been established, CUOPS can focus on sustaining the COP.

The battle update brief (BUB) and the commanders update brief (CUB) are tools used by CUOPS to provide feedback to the commander and sustain the COP by clearly articulating up, down, and laterally across the force. The BUB is focused on staff reports, whereas the CUB is focused on subordinate commanders' feedback. CUOPS is generally the office of primary responsibility for these meetings, so the CHOPS must develop formats that extricate information and prevent redundancy. A general rule is to format the CUB to allow maximum time for subordinate commander dialogue. The BUB should provide a platform for the warfighting functions of the battle staff to communicate key issues to the commander. These meetings can differ depending on the echelon of operations centers, but in essence, they are procedural control measures for feedback. Although these meetings are effective with COP sustainment, they should be supplemented by CUOPS-level updates throughout the targeting cycle.

A CUOPS-level update brief should be built into the battle rhythm to supplement the CUB/BUB meetings. For example, every three hours, the team could conduct an "in-stride operations and intelligence" meeting. This CUOPS-level meeting ensures situational understanding and provides commanders with a running estimate of the situation. The in-stride method forces warfighting functions to update both their analog and digital running estimates. A two-minute drill where team members quickly brief their running estimates to the commander should also be included in all SOPs. Updating the

COP is a byproduct of disciplined battle tracking and disciplined action inside the CUOPS cell.

Executing: Communication

Technical systems integration is a vital component of information management. Transmission of information to the CUOPS team can come from multiple mission command platforms. Discipline with these systems should be clearly defined in a rules document designed and policed by the operations noncommissioned officer in charge (NCOIC). Use of a communications platform such as Ventrilo (Voice over Internet Protocol [VoIP] group communications software) for traffic inside the operations center can prevent chaos and shouting. Once people begin to shout, commanders and staff become concerned and CUOPS risks losing the ability to manage a situation. Units should also develop tactical chat SOPs with systems such as mIRC and TransVerse. Tactical chat allows coding of messages and minimal traffic that can assist with OPSKEDs. Email and VoIP should be lower in the PACE plan, but still serve to enhance dialogue. Frequency modulation (FM) and satellite communications C2 systems should be monitored by an operations NCO and checked hourly with outstations. Through a PACE plan, units can utilize redundant measures that flatten the organization and reduce missed communications.

Executing: Battle Drills

ATP 6-0.5 defines a battle drill as "a collective action performed without the application of a deliberate decision-making process."[14] Essentially, a battle drill is automatic and done without discussion. Battle drills should be a part of any rehearsals. During execution, battle drills need to quickly focus all elements' attention. The tendency is to centralize control of the drill by the CHOPS, but the most effective battle drill execution occurs when all team members instinctively understand their roles and execute on cue. A shared responsibility of battle drills enhances responsiveness, communications, and builds decision space. Additionally, they mitigate against fatigue.

Executing: Mitigate Against Human Limitations

Even with effective standardized practices, the CHOPS needs to be creative about keeping everyone fresh. There are many techniques to mitigate this issue. The following is a list of small techniques a CUOPS team can do to keep everyone fresh:

- Provide time and equipment for small exercises, such as a pull-up bar in the operations center or doing pushups.

- Provide staff members with breaks.

- Change the method of two-minute drills or in-stride operations and intelligence. One iteration may be in front of the analog board. The next may be in front of the digital display.

- Use a staggered shift. A staggered shift assists with continuity of operations and loss of context or perspective.

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[14] ATP 6-0.5, *Command Post Organization and Operations,* 01 March 2017, paragraph 3-39.

- Write a rules of the tactical operations center (TOC)/joint operations center (JOC) document. This document lays down business rules for maintenance and conduct. Tasks as simple as trash clean up, if not policed, can have morale impacts.

- Create an environment that allows for the sharing of ideas. It is cliché, but true. There are no dumb questions in the JOC. If you don't know something, ask. The team relies on flattened communication.

Executing: Decision Making in the Operations Center

While a DAM delineates key authorities, the CUOPS will have to make critical decisions in dynamic situations. CUOPS is empowered to mitigate risk to mission, but they cannot be impulsive. The DAM should be designed so that CUOPS must be *compelled* to make decisions, meaning there is little other choice. For example, a downed aircraft scenario should compel the CUOPS team to reallocate resources whereas a convincing request for ISR support from an operations officer does not compel the CUOPS cell to change the plan. To clarify, CUOPS cells are designed to execute the plan and mitigate against its failure, not to change the plan based on feelings or arguments. CUOPS should be given the freedom to make specific decisions where action is required. Changing the execution plan should be the decision of an operations officer or higher.

Assessing CUOPS

CUOPS's role in the assessment/feedback loop is to provide data points and information to feed planning and decisions. This includes battle tracking combat power, resources, and progress of the operation. Additionally, the CUOPS team should constantly reassess its performance to enhance operations. CUOPS is the driver of the assessment process for the battle staff. The feedback loop it creates needs to be understood by all warfighting functions.

Assessing Combat Power

CUOPS has the responsibility to drive battlefield assessments by empirical means. Empirical assessments account for enemy and friendly combat power via battle damage assessments (BDAs). Combat power includes all warfighting functions.[15] In the preparation phase, CUOPS cells need to build BDA reports into the SIGACT list to ensure reports from subordinate elements. Combat power should be tracked via analog and digital means. For analog purposes, a technique is to create "bingo" sheets that account for enemy and friendly combat formations. The bingo sheet or sheets can be kept with the analog board and updated by liaison officers and S-2 personnel. A more robust means of combat power tracking is using the COF spreadsheet. This document is usually kept by operations research and systems analysis (ORSA) personnel in the plans cell. By linking directly with the ORSA team, CUOPS is automatically tying itself to plans and providing data-based assessments rather than guesses. Both the analog and digital methods can be simultaneously maintained by the CUOPS team.

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[15] Field Manual 6-0, *Operations*, 06 October 2017, page 2-21.

Assessing Performance

Journaling events is a key component in understanding the performance of the battle staff. Journaling events and actions assist the battle staff with understanding enemy actions, friendly responses, and identifying variances. Additionally, the information-driven environment today demands accurate accounting of events. To counter enemy propaganda and fabricated claims, accurate recounting of events in time and space is essential. The journal also provides the CHOPS with a tool to assess the speed at which the team operates. The journal is usually assigned to a staff NCO or radiotelephone operator (RTO). This individual needs to be keenly aware of all events and should have a working knowledge of all functions of CUOPS. The digital infrastructure today has multiple platforms that can account for time and events. An agreed-upon, single-source journal document can mitigate disagreements among the staff as to how events took place and counter inaccurate claims. The journal also helps the after action review (AAR) process.

Conducting AARs during CUOPS execution is difficult. The fallout from major events can consume key members of the CUOPS cell. Gathering necessary individuals to collectively learn lessons is an arduous task and usually is lower in priority than the current situation. A technique to mitigate losing lessons learned dialogue is to immediately conduct a hot wash after the event. The RTO and battle NCOs can record and distribute key lessons. Conducting a formal AAR during execution adds another meeting and is usually too far removed from the event to gather fresh ideas. A quick AAR following the event also gives the next shift a chance to obtain the lessons learned.

The immediate AAR method is the best opportunity to learn lessons during high OPTEMPO.

Conclusion

CUOPS teams need to be tough, competent, and disciplined[16] in all actions. As the systems integrator, their focus must be on the fight and to be ready for any contingencies. Modern combat is becoming more complex with new data systems. The CUOPS cell needs to engineer both digital and analog systems that extricate key information for rapid analysis. Essentially, building situational understanding throughout the force is the responsibility of the CUOPS. Doctrinal understanding of the operations process, combined with well-rehearsed procedural controls for the technical and human dimensions, prevent missed opportunities and exploit successes.

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[16] Gene Kranz, *Failure is Not An Option: Mission Control from Mercury to Apollo 13 and Beyond* (New York: Simon and Schuster) 381.