More Command, Less Control

Revolutionizing the culture of C2

by Maj Brian Kerg

A Bloody Lesson

In 2025, a Russian armored division attacked north from Crimea and into the Ukrainian province of Kherson under the false narrative of liberating Kherson's ethnic Russians from Ukrainian oppression. Recalling the consequences of inaction during the Crimean War of 2014, the international community rallied to respond.

Special Purpose MAGTF-Crisis Response-EUCOM deployed as the lead element into the area of operations in order to blunt the Russian advance while surge forces were mobilized. Unfortunately, the Marine Corps failed to change how it exerted command and control (C2) across the battlefield in response to emerging threats in the electromagnetic spectrum (EMS). This set the SPMAGTF up to learn a terribly painful lesson.

Transmissions systems radiated at full power using omni-directional propagation and exercised no emission control, illuminating the unit's approach even before it crossed the line of departure. Predictably, radio checks were made at the top and bottom of the hour, providing Russian electronic warfare (EW) teams with updates on the unit's location and progress. Network on the move, adaptive networking wideband waveform, and other digital interoperability systems that provided an abundance of situational awareness to friendly commanders also broadcast Marine position location information directly into the Russian common operational picture. The battle staff's reliance on unclassified email acted like a sieve, pouring information into the hands of Russian cyber operators. This allowed them to aggregate the information and rebuild the SPMAGTF's plan, thus em-

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powering the Russians to counter every move the Marines made.

At nearly every step toward the objective area, the SPMAGTF was easily detected and targeted with precision. GPS was spoofed and radio nets were jammed; units unused to such tactics struggled to shift to radio nets using spectrum untargeted by electronic attack. As the commander's situational awareness crumbled, he lost tempo, allowing the enemy to outpace him

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and pound away at the SPMAGTF until it could no longer fight as a cohesive unit. The Marine Corps was forced to "attack in a different direction" once more, retreating from the fight, while the Russian division seized Kherson and reinforced its position.

How We Got Here

The *38th Commandant's Planning Guidance* (CPG), on its first page, concurs with the assessment of the *Marine Corps Operating Concept* (MOC) that the MAGTF is not prepared to fight and win tomorrow's wars.[1] The CPG outlines several critical initiatives that

the Service must pursue to alleviate this problem, and there is a lot of goodness happening in many corners of the Corps to see the CPG's vision realized. But it is not enough, with the most grievous shortcoming residing within how we conduct C2. Though our most senior leadership has issued the clarion call for change, we still are not there. Why not?

Quite simply, the culture of C2 does not adequately account for the enemy and prioritizes control over command, hampering our ability to complete one of the CPG's goals: exert C2 in a degraded environment.[2] Commanders and staffs have grown up in a C2 culture where they enjoyed a plethora of C2 systems that gave them incredible situational awareness and control over subordinate units while fighting an adversary with no EW capability. With greater access to more information, we have demanded more frequent and elaborate reporting, placing tighter and tighter control over our subordinate units. We have come to expect ubiquitous access to connectivity and data services that replicate what we enjoy in the civilian world, to the extent that a video teleconference is a baseline standard by which to communicate even among major subordinate elements. We have gone so far as to adopt industry standards of information technology certification for our Marines.

The problem with all of this is that the industry and the civilian world do not have to account for the enemy. We as a Service have been able to get away with these excesses because we have grown used to fighting non-state actors without the capability to punish us for being lazy in the EMS. This has created bad habits and systemic obstacles to the application

of our maneuver warfare philosophy. Rather than building fluid C2 structures that are informed by the operational environment that can dynamically shift systems based off of enemy capabilities, we erroneously recreate cumbersome, vulnerable, identical C2 architectures for every operation and exercise—regardless of the enemy threat.

Without a radical reappraisal of how we as a Service enable and practice C2, we will be setting ourselves up for a costly failure similar to that described in the opening vignette. We will fail to accomplish our mission and see our Marines pay an unnecessary cost in blood. We can embrace change now, using information we already have, or be forced to change later—after we pay the butcher's bill.

Bad C2 Habits, Good C2 Doctrine

Talk to the evaluators of integration training exercises. Reach out to those who have participated in force-on-force free-play exercises. Talk to experienced and honest S-2, S-3, and S-6 officers and chiefs in a non-disclosure environment. Though much of the self-reporting that we as a Corps make public is self-congratulatory and consistently positive, those on the ground will tell you a different story. The C2 problem is both real and endemic.

The luxury of an uncontested EMS and unimpeded situational awareness has created a number of challenges. We fail to apply signature management, thus giving away our positions and intentions by how indiscriminately we employ transmissions systems. Many commanders and staffs are visibly uncomfortable exercising C2 over radio nets. When denied the ability to use email, we grow frustrated and claim that we cannot send required reports. When bandwidth limitations restrain us from sending massive power-point files, we fail to convey the information in a meaningful way. Because our previous adversaries did not try to contest the EMS, we expected that the S-6 would always be able to "lay the pipes" to support any concept of operations (CONOPS) and make the plan work, so we never invited him into the room during problem framing or challenged

Effective C2 faces several challenges. *(Photo by PFC Ulises Salgado.)*

him to plan for a contested environment if we did.

The irony is that we already have the answer to this dilemma. Principles for effective C2, despite the rapid technological changes that have seemingly revolutionized the way future wars will be fought, exist in *MCDP 6, Command and Control.*

How do we define effective C2? "Since war is a conflict between opposing wills, we can measure the effectiveness of C2 only in relation to the enemy."[3] Effective C2 is not necessarily email and the video teleconference—though it could be if the situation warrants it. Effective C2 is whatever enables us to beat the enemy. If semaphore and Morse code allow us to perform at a greater tempo than the enemy and destroy his cohesion, then we have succeeded.

The expectation of constant access to full spectrum C2, inclusive of all forms of video, voice, and data, naturally creates a greater appetite for more information, even when it cannot meaningfully contribute to our decision-making process.[4] When commanders can get more, they ask for more, even when the bias for more information puts them at risk of information paralysis.[5] *MCDP 6* warns against this: "We should accept that the proper object of C2 is not to be thoroughly and precisely in

control. The turbulence of modern war suggests a need for a looser form of influence."[6] This warning becomes even more prescient when we recall that the most current edition of *MCDP 6* was written in 1996. The problem described remains the same, despite the exponential changes that have occurred in C2 systems in the last 24 years. So how do we overcome these obstacles?

Creating Effective C2

Again, *MCDP 6* tells us what concepts must be applied to achieve effective C2, despite the technologies involved. Mission type orders, low-level initiative, commander's intent, mutual trust, implicit understanding, and other fundamentals of our maneuver warfare philosophy are prerequisites for effective C2.[7] But if it were that easy, we would be there already, and the defeat described in the opening scenario could never play out. What follows, then, are critical cultural changes that must occur within our organization if we hope to avoid such an outcome. It is nothing short of cultural because we are not thinking of or practicing C2 as it is described in our doctrine because we, as a Service, have not needed or wanted to.

Information trumps the medium, and sometimes less is more. Do you really need a video teleconference to conduct a meeting, or would a conference call

work instead? Is a 50-slide PowerPoint presentation with high fidelity pictures needed for your daily submission for the commander's update brief, or can you convey the same information with bullet points sent via text over a radio? If you just communicated with a subordinate unit on the radio, must you still conduct a radio check in ten minutes because it will be the top of the hour, or have you just validated that the net is up? Do you really need to emit signal with constant checkpoint updates on the net as you move to the assault position, or can you wait to give away your position in the spectrum until you need to coordinate fires on the objective and must give up your position anyway?

The situation will dictate, but ultimately the need to get information to the right people trumps the medium over which you pass that information. Commanders should set this expectation at every level, staff members should get comfortable operating this way, and C2 planners should employ the most reliable system appropriate to the threat, rather than always defaulting to building the most complex and fragile C2 structure they can.

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Embrace the contested electromagnetic spectrum and make threat informed C2 plans. Our adversaries can contest the EMS, and many of their capabilities are public knowledge. For example, the table of organization for the Radio Electronic Battery, which is organic to the Russian brigade, describes systems that are layered to contest SATCOM, GPS, cellular, and other signals at the tactical level.[8] Their threat ranges are known and can be planned for now. In some instances, how we have grown up employing C2 systems is akin to a rifleman on a night patrol lighting a cigarette. In other cases, it is like setting

a bonfire in the dark. In both cases, we present a target indicator and invite the enemy to shoot us.

Planning for this reality should be SOP for every unit at the battalion level and higher. The S-6 and S-2 should develop a modified combined obstacle overlay (MCOO) that incorporates C2 in a C2-modified combined obstacle overlay (C-MCOO) that informs the commander when and where the adversary can detect or target his C2 systems. The S-2, S-3, and S-6 should develop C2 plans that allow the battle staff to shift fires from one C2 system to another depending on what is being contested and what threat is being presented. Commanders should set the expectation that their staffs can continue to operate in a contested environment, using less than ideal mediums for information exchange. Primary, alternate, contingency, and emergency (PACE) plans must account for all information exchange requirements, and not just for the video, voice, and data (i.e., the Advanced Field Artillery Tactical Data System). C2 planners must become as familiar with enemy EW systems as they are with their own C2 systems

and also make clear, meaningful recommendations on a C2 architecture that accounts for the environment and the threat.

Operate a PACE plan, even in garrison. PACE plans are briefed and practiced in a tactical environment, but they are difficult to execute smoothly because staffs are not used to executing them. Not only because the EMS was not contested in Iraq and Afghanistan, but also because we only think about a PACE plan when we are in an exercise or operational environment. When we are in garrison and the network goes down, it is not uncommon for those with infor-

mation exchange requirements to pack up, go home, and continue working over commercial Internet.

Commands, at the battalion level and higher, should have a PACE plan for their garrison network, and it should be published and executed as the norm. You might not be able to send your product on an email, but you can burn it to disk, hand it off to someone with a vehicle, and run it to the command post. Personally traveling to your subordinate leaders for a face to face conversation is a very powerful form of the C2 cycle because you get immediate feedback—the "control" in the C2 feedback loop—based off the subordinate's reaction to your commands. Perhaps going home and using commercial Internet *is* part of the PACE plan—but this should be a deliberate, planned choice, and not something that occurs incidentally. Commanders should demand that a garrison PACE plan be used as SOP. C2 planners should build meaningful PACE plans that cover every form of alternate garrison C2 system, inclusive of DSN phones, burning files to disk, messengers, personal conveyance, and anything else that gets the job done.

Employ the S-6 as a C2 officer, not a communications officer. What's in a name? An awful lot, and it shapes how commanders and staffs employ the S-6. As a communications officer, the S-6 is not tied directly to a warfighting function. Compounded by the fact that the table of organization has the S-6 as one of the most junior members on any staff, he is rarely seen as anything more than a network pipe-layer who builds architecture to the specifications of the CONOPS. However, this robs the commander of a subject matter expert who can help shape the CONOPS, especially in EMS contested environments. That same S-6 should also know the signature that his systems emit, the ability of adversaries to detect friendly forces based on how those systems propagate their signals, and how to advise the commander to use C2 systems to minimize detection, targeting, and destruction.

Redesignate the 0602 from a "Communications Officer" to a "C2 Officer,"

Train our Marines to account for C2 in a contested environment. *(Photo by Sgt Conner Robbins.)*

and plug that staff officer into the warfighting function of C2. Demand that your S-6 master the EW threat to the C2 capabilities he provides the commander. Expect the S-6 to team with the S-2 to become an expert in adversary EW. Direct the S-6 to work with the S-3 to make C2 plans that account for adversary threats, even (and especially) if those plans have significant impact on the concept of operations, because they can and they will. Turn the S-6 into a C2 tactician and enable him to rise to that task with how he is employed. Make the sacrifice in time to send your S-6 to the MAGTF Communications Planners Course where he will learn to be the C2 tactician he needs to be to succeed in the future fight.

Start the change at the entry level and maintain it at follow-on training. Learning to adjust the C2 method to the environment and the threat cannot wait until after leaders have spent over a decade learning bad habits; changing your fundamental outlook on warfighting when you are closer to retirement than not is a tall order. It is as unfair as it is unrealistic, but ultimately it is dangerous. This training must begin at the entry level and be sustained throughout the career-long training continuum.[9]

Lieutenants need to be taught at The Basic School how to account for C2 in a contested environment and how it

will affect how they can expect to employ C2 systems. Infantrymen need to learn this at the School of Infantry, and Transmissions Systems Operators need to train to these tactics at Marine Corps Communications Electronics School. Incorporate planning and supervision tasks for this threat at follow-on schools, including Small Unit Leader's Course, Transmissions Chief's Course, and Expeditionary Warfare School. Criti-

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cally, incorporate C2 planning against pacing threat EW capabilities into the curricula offered by the Marine Corps Tactics and Operations Group as this will provide training to future CGE operations officers and chiefs.

Revolutionize the C2 Culture

For too long, we as a warfighting organization have become sloppy in how we practice C2. Decades of war against

adversaries with no capability to contest the EMS, combined with increasingly complex C2 systems that offer bountiful situational awareness, have turned us into gluttons for information. The demand for greater control is a detriment to effective command. This prevents us from realizing the vision of the CPG and impedes our ability to win a conflict against our pacing threat.

By applying the fundamentals of our C2 doctrine to the current threat, we can turn this ship around. The methods to do this are varied, but they ultimately require a radical change in the culture of how we conduct C2 across the Marine Corps. Leaders at every level must embrace this change today, so we can win the fight tomorrow.

Notes

1. Headquarters, Marine Corps, *38th Commandant's Planning Guidance*, (Washington, DC: 2019).

2. Ibid.

3. Headquarters Marine Corps, *MCDP 6, Command and Control*, (Washington, DC: 1996).

4. Jonathan Baron, *Thinking and Deciding, 2nd edition,* (Cambridge, UK: Cambridge University Press, 1994).

5. Lon Roberts, *"Analysis Paralysis: A Case of Terminological Inexactitude," Defense AT&L*, (Fort Belvoir, VA: Defense Acquisition University, January-February 2010).

6. Ibid.

7. *MCDP 6, Command and Control.*

8. Asymmetric Warfare Group, *Russian New Generation Warfare Version 2.1*, (Fort Meade, MD: Asymmetric Warfare Group, 2016).

9. Christopher Paul, et al., *Situational Awareness for Operations in and Through the Information Environment*, (Santo Monica, CA: RAND Corporation, 2018).

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