

Common and Control (C2)—The Truth

Lt Col Byron Dodgen

PRELUDE AND CAVEAT:

I initially wrote this article in April of 1997, following a week of frustration dealing with command and control systems acquisition. Since that time, Air Force leadership has established the Air and Space (soon to be Aerospace) Command and Control Agency (ASC2A). Although under Air Combat Command, the ASC2A is chartered to rectify many of the "broken" areas of command and control. In addition, the organization I belong to, the 505th Command and Control Evaluation Group at Hurlburt Field, became the Command and Control Training and Innovation Center, a field unit of the ASC2A.

There have been advances in the arena of command and control, but we still have a long way to go. Even now, the ASC2A has been tasked to oversee future Intelligence, Surveillance, and Reconnaissance (ISR) issues, and is thinking of a name change. However, we went to C2 a few years ago because no one could figure out whether it was C4I, BMC4ISR, C4ISR, etc. New players? As I retire from the Air Force, I do not want these thoughts to fade away unheard.

COMMAND AND CONTROL (C2) – THE TRUTH

The purpose of this paper will be to express some personal observations/opinions concerning the current thrash over command and control (formerly C4I, BMC4I, C4ISR, etc., etc.). I have spent nine years of a 22-year career around the issues. This author has worked in C2 nodes (17 AF/ATOC Sembach; 13 AF, PACOM JFACC training team) as a captain, major, and lieutenant colonel. I have seen the "training" available through two years at the Battlestaff Training School, and have observed the truly out-of-control acquisition system as a test squadron commander for 19 months. What I say in this paper may not be universally-held opinion, especially by those members of staff who have never served in an Air Operations Center (AOC) environment, but ask anyone in the community. Likewise, some of these comments may be critical of the Air Force, but sometimes the truth hurts.

RHETORIC VERSUS ACTION

One of the most frustrating truths in today's environment is the lack of action on critical command and control issues. General officers attend summits and conferences, major command staffs and the air staff hire contractors and devote endless hours working issues—but nothing seems to get done. Why? Why has it taken so lone for (1) someone to become interested in C2 and (2) someone to actually do something about it? Read on.

THE AIR FORCE PARADIGM

At the root of the C2 issue is a basic personnel problem. Why can't one find enough AOC-smart people to man a battlelab? Why are there so few AOC-smart people on key staffs? Why doesn't leadership understand the process, and hence, the real issues?

The answer is a Catch-22. Look around and find any colonel or above who served in a TACC/AOC as a company or field grade officer (prior to becoming an O-6). The reason you will not find any of these types is a Catch-22 that exists in the Air Force. If you serve in a C2 position, your career is usually dead-ended. Many fine officers find themselves in a non-advancement situation and retire. Those who manage to escape back to a cockpit or another promising job immediately begin to hide the fact that they ever existed in the C2 world because they darned sure don't want to go back. AOCs are not full of deadheads—the Air Force just thinks they are. So now comes the Catch-22. Who has to make the key decisions and take the

key actions to fix the problem? You guessed it—a lot of senior leaders who have never served in the mission area. They wouldn't be senior officers if they had!

Flying airplanes is where it's at. It always has been and will be until we go to uninhabited vehicles. However, losing one \$20 million aircraft because we didn't spend \$5 million to properly address the problems dealing with the command and control unit which sent that aircraft into harm's way is silly. A lot of rhetoric, but where's the beef? An excellent theater air control system can save a heckuva lot of dollars in the end, but the culture of the Air Force does not spend money on C2 initiatives when it can buy more weapons. The AOC is a weapons system too.

LET'S JUST CALL IT THE AOC PROBLEM

Many decision makers refer to the "C2" problem. Let's just call it the AOC problem. While it is true that there are problems at other command and control levels, the AOC is the key. After all, the AOC is the pinnacle of the Theater Air Control System (TACS). Other levels (AWACS, CRC, ASOC, CRE, TACP) all have champions on the staffs responsible for working the key issues, but go to ACC, ESC, or the ASC2A and ask someone where the AOC division is. And if you find someone who claims to represent AOC issues, ask them what qualifies them to do so, what is their AOC background?

I mentioned that the AOC is a weapons system. New rhetoric, I know. However, imagine the AOC as an Air Force capability. During course of action development in a non-deliberate plan situation, Air Force planners offer up a menu of capabilities and a suggested course of action which satisfies national objectives. Just like an air-to-air squadron of F-15s provides a certain capability, the AOC provides the capability to plan and execute theater air warfare. Some would say that the AOC is inextricably tied to the numbered air force. Why? What precludes a joint force commander from employing an Air Force AOC core staff aboard a navy vessel with a navy Joint Force Air Component Commander (JFACC)?

Why do people have such a hard time with this concept? And why does everyone think they own an AOC? Because the AOC weapons system is ill-defined and not championed. Who is the AOC program executive officer (PEO)? And is there a systems program office (SPO) to oversee needs and acquisition for the AOC? We all know the answer—no! Does the AOC have a regulated training requirement? What qualifies someone to be part of an AOC core staff? What is the standard configuration and optional loads for the AOC? What AFSC do the AOC personnel hold? What volume of MCM 3-1 addresses the AOC (other than volume 26, Ground TACS)? What manual prescribes the normal methodology to accomplish AOC processes? What is the DOC for an AOC? What office at ACC manages AOC requirements? The reason one can't answer these questions is because the weapons system known as the AOC has never been championed. And it still isn't, despite the rhetoric—that's the truth.

NOTE: Since April 1997, the C2TIC at Hurlburt has championed writing a DOC, SORTs criteria, training and process documentation for the AOC—they have not yet been published, but are in work.

Air Combat Command has separated "sensors" from "C2".. The E-3 is no longer considered command and control?? The radar that is employed by the Ground TACS is no longer part of C2??? Imagine separating the radar from the F-15C, and saying that the F-15C does air defense, but the radar is just a sensor---good logic?? We are struggling to establish the AOC as a weapons system and consolidate the "system of systems".. Meanwhile, we are breaking other weapons systems which were not broken.

Some will argue that the AOCs work for the CINC. I don't think so. Again, they are an Air Force capability. Sure, they will work for the CINC in a given crisis or war, but in peacetime they are organized, trained, and equipped by their service component—the United States Air Force. The "every CINC should have his own AOC" argument has been made many times, but last I heard it has not come about.

THE 13B MYTH

The 13BXX community is sometimes touted as the command and control expertise in the Air Force. Their AFSC does read "battle management".. While at the execution level of the TACS this is true, the 13B community is not the resident expertise in the AOC arena. Consequently, setting up staffs to work C2 issues (read AOC) with 13Bs does not really answer the mail. Don't get me wrong, the 13B community contains some of the finest battle managers in the world, but the AOC is a mixture of 11s, 12s, 13s, 14s, 33s, and host of other officer and enlisted AFSCs. In fact, it would behoove the Air Force to reconsider awarding unique AFSCs for AOC duty. Maybe then we could track where the expertise went. And besides, why can't a 13B be the AOC director, or chief of combat ops? For that matter, why can't an intelligence or communications officer become the AOC director? They all operate the same weapons system.

THE "FASTER IS BETTER" MYTH

Even though we have the technology to advance aviation by 20 years, we don't. Why? Because there is a structure to the acquisition process, driven primarily by the almighty dollar. And besides, we have a cadre of trained operators flying some of the most sophisticated aircraft in the world. Why does leadership believe then that we must replace the existing AOC equipment every year because "we have to keep up with technology"? Imagine training an F-15 pilot, then have them fly for a year, then give them a new aircraft to master, then PSC them to another job where they fly F-15s, but not quite the same as they originally flew.

When a newcomer arrives at his/her AOC job, he/she is trained on the equipment they will be using to automate the processes which they are responsible for. Unfortunately, that equipment may or may not be the same as the AOC at another location uses. Then the system imposes upon them to learn new equipment before they have even mastered the basic automated tools. Why? Many readers can relate on a lesser scale with the constant upgrades to your computer networks. How many of you have really mastered all the new features of the latest version of Word, Powerpoint, and Excel? How many of you suffer from Office '95 to '97 compatibility?

What senior leaders don't understand, or refuse to acknowledge, is that automated equipment is just a tool to do basic processes faster and smarter. Yet no one pays any attention to standardizing the processes---how can we expect to standardize the equipment? The point here is that the ATO and targeting cycle processes are what's important. The automation are just TOOLS to assist the process. And the process will ALWAYS have human decision makers in the loop! So why do we have staffs who work the procurement of tools such as TBMCS and CTAPS, yet no staffs dedicated to perfecting the processes?

Faster is not necessarily better. Acquiring new technology is not always the right answer. Take for example the case of Fragworks, a simple PC-based software program for producing air tasking orders (ATOs). The Air Force abandoned Fragworks in favor of CTAPS, yet in some situations this small, portable, easy-to-learn system may be perfect. In fact, what actually happens in today's world is contractors are developing new "stuff" to make processes (which they know little about) easier, and we are buying it! To make matters worse, nobody asked for it!

THE BROKEN ACQUISITION PROCESS

In today's Air Force, we continue to buy untested C2 equipment because it's the "latest technology". No identified mission need, no operational requirements document—just new stuff which automates processes which the purchasers don't know much about. As a taxpayer we ought to all be angry at this prospect. As a military concerned with C2, we should be incensed. The current billions of dollars being spent in DoD on command and control often buys redundant capability.

In case those reading doubt what I am saying, consider this—at the current time there are more than six different battlefield situation displays advertised for the AOC. None are the agreed upon standard, none are tested, and none are in the formal acquisition pipeline. It is not an issue of whether or not the AOC needs a display which accomplishes various functionality, but more one of other agencies and decision makers who have deemed that certain systems be bought without a bona fide, defined need. The analogy

would be buying six different heads-up displays for the F-15 without asking for operator input—and then allowing different squadrons to use different pieces of equipment. This type of non-standardization defeats any sensible training or logistics concept. Oh, by the way, I mentioned there are currently more than six different situation displays. Well at Roving Sands '97 I saw a newer display being demonstrated by the Space Warfare Center. Who is the sponsor? Who asked for it? Where will it be used? Why is the American taxpayer paying for it? Why are we, the Air Force, spending money for redundant capability? Don't we have a budget crisis going on? Couldn't we use the money to "fix" C2? I am not trying to sensationalize—this is the truth.

NOTE: Since I initially wrote this article, my squadron, the 605 Test Squadron of the C2TIC has endeavored to implement configuration control of the AOC, in that no new system should go to the field until it comes through Hurlburt Field and the C2TIC for operational testing.

RECOMMENDATIONS

A long time ago, I heard the saying "Don't be a brickthrower, be a bricklayer." Consequently, the following recommendations are my humble opinion of what needs to occur to fix the AOC problem:

1. Treat the AOC like a weapons system—establish a SPO for overall management of the myriad of sub-systems which go into automating the processes in the AOC. Nothing should be forwarded for evaluation prior to fielding which isn't sponsored by the AOC program office. Managing independent entities/systems such as TBMCS won't work. The "system of systems" needs overarching management.
2. Establish program offices and staffs to manage AOC issues at the MAJCOM level. Man these offices with people who have AOC experience. Many organizations in today's Air Force purport an AOC capability which they just don't have. By the same token, many offices try to fix AOC problems with people who have never served on an AOC core staff (except maybe at Blue Flag or some other exercise). Let me ask this—would you hire a finance officer to solve the problems of air base defense? Would you hire a C-130 driver to establish and manage the F-15 weapon system? Assuming the answer is no, then why does the Air Force insist on tasking non-AOC experienced people to solve AOC problems?

a. Issues that should be worked regarding the AOC (not all inclusive):

1. Standardization of equipment
2. Standardized training
3. Standardized processes
4. AOC AFSC
5. Configuration control for new software/hardware
6. DOC statement
7. Deployment packages
8. Training
9. Manning
10. SORTS reporting

NOTE: Many of these issues are now being worked through the C2TIC at Hurlburt.

O Put our money where our mouth is. If it's important enough to hold 4-star conferences about, why not spend a few dollars and establish an infrastructure (made up of AOC-smart folks) to solve the problems. Re-organizing the air staff and MAJCOM staffs with the same non-AOC smart folks won't work. Tasking non-AOC smart organizations to fix things they don't know a lot about won't work either. If you want to fix the problem, dedicate the assets to do it.

1 Quit encouraging the purchase of software which is not responsive to a mission need.

2 Don't break things which are not broken. AWACS and the CRC have been part of the TACS for a long time. Why split them apart and call parts non-C2? This action will break weapon systems which were not previously broken. They are all part of the overall C2 system, and are independent weapons systems. Just as the AOC is an independent weapons system. Focus on it, and a lot of the "C2 problems" will go away.

Recent events have indicated a desire on the part of Air Force leadership to seriously attack the C2 issues. But who is deciding the course correction? And what is the focus (see "Let's just call it the AOC problem abovelquote)? Definitely a move away from rhetoric and towards action, but who is working the issues? Are they AOC folks? Or are they O-6s and above (see Catch-22 above)?

Regardless of the outcome, all good soldiers will salute smartly and press to implement the direction given by senior leadership—that's our job. However, take a moment to consider some of the points made in the paper. I am not venting frustration or degrading the Air Force—I love the Air Force. But I am trying to articulate the truth about command and control. We have an opportunity to put some things straight—let's do it right.

Disclaimer

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