NEWS FROM THE FRONT

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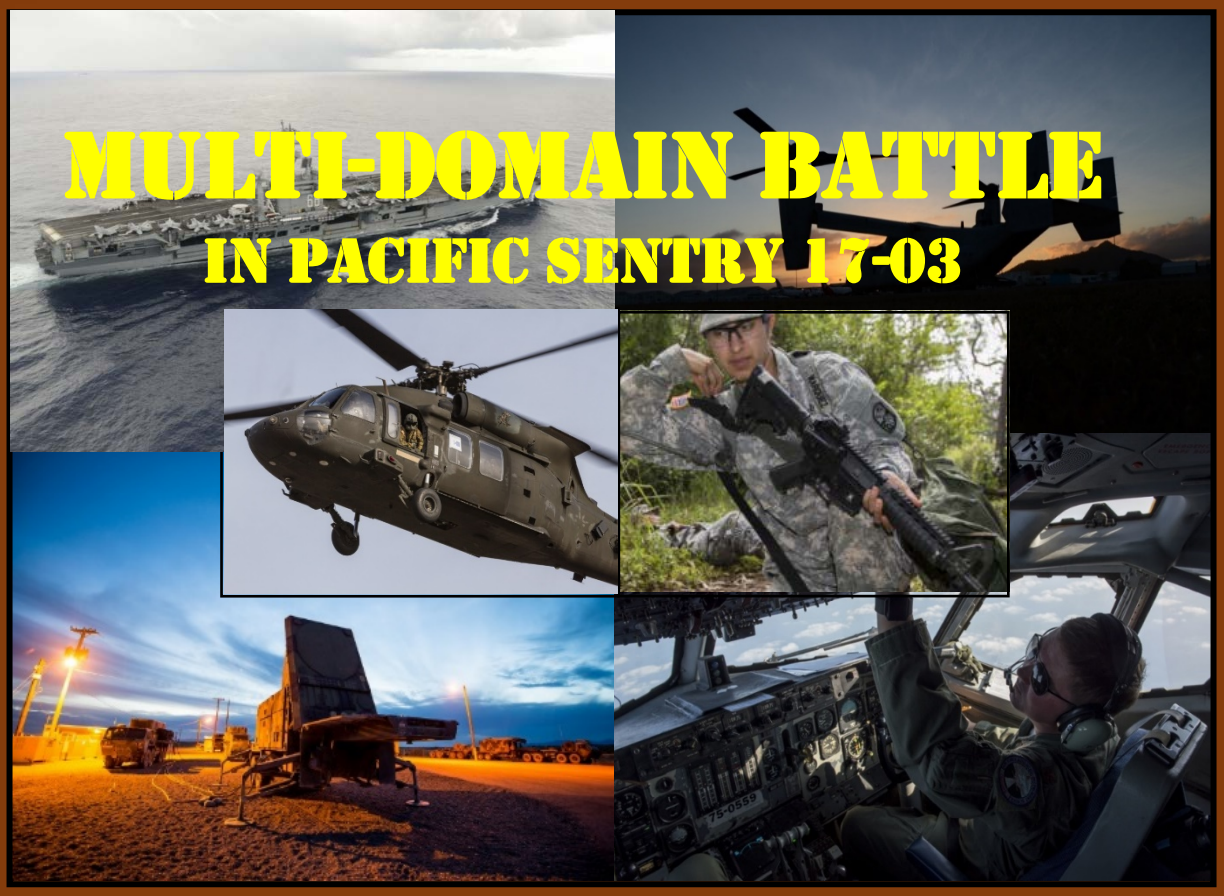

Mr. Martin Braun and Mr. Ralph Nichols, Strategic Analysis Branch, Center for Army Lessons Learned (CALL),
Mr. John Hansen, CALL Analyst to U.S. Army Pacific (CALL Analyst at USARPAC)

"I believe the future security environment will require the Services to exert influence in non-traditional domains as these domains converge and become more complex, especially if our combatant commands are to achieve dominance across those domains [that] means the Army's got to be able to sink ships, neutralize satellites, shoot down missiles and deny the enemy the ability to command and control its forces."

-- Harry B. Harris, Jr., COMMANDER, U.S. PACIFIC COMMAND
AUSA Institute of Land Warfare LANPAC 2016

Introduction

This *News From The Front* presents key leader insights, lessons, and best practices in operationalizing the concept of multi-domain battle (MDB) during exercise Pacific Sentry 17-03 as described by U.S., joint, and allied leadership and exercise participants. It provides insights from U.S. Army Pacific (USARPAC), Pacific Air Forces (PACAF), and a multinational partners' perspective (Australia [AUS]). It is the first in a series of publications focused on MDB throughout the Asia-Pacific region that will be used to inform a Center for Army Lessons Learned (CALL) Multi-Domain Battle Special Study.

Pacific Sentry 17-03 Purpose, Objectives, and Collection Background

Pacific Sentry 17-03 Purpose: U.S. Pacific Command (USPACOM) executes Pacific Sentry (PS) 17-03 as an annual exercise that trains USPACOM forces involving a combined task force (CTF) in a high-end, mid-intensity warfighting exercise in a command post exercise (CPX) format. As a supporting command, USARPAC plans for and executes PS 17-03 CPX by performing its Title 10[1], Task Force Homeland (TF HL), and Theater Joint Force Land Component Commander (TJFLCC) functions in support of the commander, USPACOM.

USARPAC Exercise Objectives for PS 17-03:

- Exercise Mission Command.
- Exercise the Land Operations Center (LOC) as the TJFLCC HQs.
- Experiment with MDB concepts.
- Exercise Homeland Defense.
- Implement Lessons Learned from PS 17-02.

Collection Background: U.S. Army and joint military MDB concepts and doctrine are currently in development, with USARPAC as the lead Service component in USPACOM to develop MDB concepts. The benefit of continuing to collect and analyze MDB capabilities is to mature its associated doctrinal foundation[2], and add additional context, lessons, and best practices as MDB doctrine expands from the Service Component Command level to the lowest echelons in the Operating Force.

[1] TITLE 10, UNITED STATES CODE: ARMED FORCES

[2] ADP, ADRP, and FM 3-0 Operations were published on 6 Oct 17. FM 3-0 provides an in-depth (3-page) description of MDB. ADRP 3-0 introduces the multi-domain term.

Collections and interviews were conducted at USARPAC headquarters, Ft. Shafter, HI; the LOC, Ft. Shafter, HI; the air operations center (AOC), Joint Base Pearl Harbor–Hickam, HI; the Pacific Warfighting Center (PWC), Ford Island, HI; and at TF HL, Ft. Shafter, HI.

Key Leader Insights and Observations from PS 17-03

Multi-Domain Battle

- Expanding domains provides new maneuver space for 21st Century contested warfare; beyond air, land, and sea, new mediums for war include cyber, space, information, electromagnetic, and *cognitive dimension*.
- Emerging concepts such as MDB are linked to capabilities. We must adjust doctrine for the new way we will have to fight.
- The focus of MDB needs to be on what we have, not capability gaps.
- If you combine a mission command model embedded at tactical echelons with affordable, in-depth weapons systems for offensive and defensive [operations], it creates a cheap, layered defense that facilitates a rapid response on the offensive side.
- Service integration begins with thorough planning and all of the domains (air, land, maritime, cyber, and space) can be integrated into mission threads/execution.

Organization

- In the future, the greatest gains in multi-domain battle are going to be with organizational adaptations we are making, not technology.
- We need to guard against relying on organizations we are comfortable with today, as they are not the organizations we need for tomorrow.
- The U.S. Army is still organized as a modulari force in a brigade-centric army. We are trying to make the transition back to a division-centric army that operates in a joint or combined environment.
- What we seek from the multi-domain task force is to create organizational flexibility and agility that results in speed.
- Cyber and electronic warfare (EW) are currently placed under information operations (IO) in the AOC. This creates a "loose relationship" because there are not solid ties or similarities between non-kinetic assets and space.

Sustainment

- Getting a task force into the joint operating area (JOA) rapidly is one thing, but sustaining that infrastructure once it is there is another.
- The U.S. needs a logistics buildup in the USPACOM theater to help mitigate the "tyranny of time and distance" by pre-positioning supplies and identifying alternative landing zones.
- Logistics support hubs have to be moved – assets must "launch to survive" ahead of the enemy's decision cycle or ability to attack.
- For "adaptive basing" the first wave of the expeditionary operations is responsible for entry and establishing a foothold with an airfield or port. The second wave involves USAF Air Mobility Command (AMC), which establishes and expands the logistics base.
- Planning factors for logistics are vast. Planners must consider many more issues related to adaptive basing in order to be successful.
- The ability to rapidly conduct mobility displacement enhances survivability.

Key Leader Interview Highlights

An Interview Summary with RADM Mark Montgomery, Director of Operations (J-3) PACOM

Q: What is the benefit of Pacific Sentry to USPACOM and its Components?

Pacific Sentry 17-02 (18-22 May 2017) enabled USPACOM to work through some of its operational design issues in a modeling environment (constructive, simulated environment) but the exercise highlighted that if USPACOM does not get better at offensive fires, it will have a significant impact in future conflicts with peer and near-peer opponents. Offensive fires must be fast, survivable, and efficient (low cost).

To be effective in the future, USPACOM needs to be effective in three key areas: offensive fires, defensive fires, and subsurface warfare.

Only the Army and the Navy provide defensive fires. The Navy has been working to counter anti-missile defensive fires at the tactical level which is being driven by the so called *carrier killer* missiles. These missiles are not only a threat to carriers, they are also a threat to key airfields, ports, and strategic assets (ground based).

Q: What is the Army's role in MDB?

It is not the Army of the last 17 years, it is the joint integration of networks, sensors, and missiles that will allow USPACOM assets to execute both offensive and defensive fires, and there is plenty of room for the Army throughout, particularly in the integration of medium-range sensors and missiles.

An Interview Summary with MG Charles Flynn[3], Deputy Commanding General – South, USARPAC

Q: What is your concept of multi-domain battle and your thoughts on how it relates to USARPAC? What is needed to make multi-domain battle work?

There are three dimensions that USARPAC has to operate within:

1. The joint operating area [JOA].
2. The dimension of homeland defense, which are the territories and the state of Hawaii.
3. Setting the [Pacific] theater.

Setting the theater [is accomplished] through the foundational capabilities that only the Army provides [to] the joint force commander. This is primarily done through the USARPAC theater-enabling commands. Sustained operations for the joint force is accomplished in campaign quality form by the JFLCC, providing the enabling capabilities.

Within the three dimensions [i.e., the JOA, homeland defense, and setting the Pacific theater], and the domains inside of each one of those dimensions of the fight in the JOA, there is a multi-domain fight. In the homeland defense JOA (for lack of a better term) there is a multi-domain fight. In the theater there is a multi-domain fight.

Add in the framework of a close fight, a deep fight, and the support fight or zone. Layer in all of the domains in each of those dimensions; that is the degree of the complexity related to MDB. There is such an opportunity in the Pacific to learn, develop, discover, grow, succeed, fail because we are not going to do everything right. That is the power of being able to put the MDB pilot into action here in the Pacific.

The complexity of weapons systems, whether lethal or non-lethal, and messaging operations are not limited by a terrain feature or areas of operation.

Everything the Army does in the Pacific is either affecting or integrating with some other entity — whether it is the designated Army corps or another Service component or coalition that are enabling things. This puts a significant load on a staff at the tactical headquarters and across the joint force. It forces USARPAC to think in ways that it has not over the past 20 years.

There are some elements of MDB that relate to joint integration in a high intensity conflict. How do we take new technologies and new ways of doing things differently to enable a

[3] Other participants at this interview included COL Charles Rambo and LTC John Miller (Misson Command Training Program Operations Group Alpha), COL Bruce Vitor (USARPAC Strategy and Innovation Division), COL Richard Butler (USARPAC Assistant Chief of Staff [ACOS] G-5), MAJ Joshua Powers (USARPAC G-5) and CALL analysts.

commander to be successful where the tempo of war is significantly faster than it has been? The answer to this question resides in concepts linked to capabilities that do not currently exist; some of those capabilities may already exist but are going to be used in different ways. The Army will do this by linking the capabilities to doctrine (that is a motion of change) and linking them to new ways to fight based on the interactions of human beings that are happening in different ways.

What did you learn during this iteration of Pacific Sentry?

Army Service Component Command (ASCC) headquarters do not get the training rigor that Corps and Divisions get with Warfighters. We learned a lot in this exercise from an operational staff perspective. We needed more rigor in how to do that. We learned to be able to shift quickly. There are going to be a lot of decisions made in USPACOM that were directed from Washington, D.C., that are going to happen in a 30-day period before there is any other support that comes to this theater.

The greatest chance and greatest opportunity for all of the Services, to include the Army and joint force, to learn is in the Pacific. The tension that the environment and all of the variables create for weapons and ranges and threats to pick our way through — from China, to Russia, to North Korea, to violent extremists, to governments that fully support the U.S. to governments that do not fully support the U.S. — are all present in USPACOM; all of the domains that need to be considered and apply capabilities inside are present in the theater.

In this exercise (Pacific Sentry 17-030 you can see that we actually need MDB capabilities now to execute the fight against adversaries (or combination of adversaries). We are not organized to conduct these type of fights.

We are still organized as a modularized force in a brigade-centric army. We are trying to make the transition back to a division-centric army that operates in a joint or combined environment. We need the organizational adaption to be able to confuse and create dilemmas for the adversary so that we can gain positions of advantage. Creating confusion through the application of multi-domain capabilities [will occur] through an organization that is adaptive and can adjust.

In the future, the greatest gains in multi-domain battle are going to be with organizational adaptions we are making and not technology.

The solution for MDB is not a doctrine, training, materiel, leadership, people or facilities solution. It is the organization, the "O" in DOTMLPF[4], which is most important and USARPAC

[4] DOTMLPF-P is the DOD acronym that pertains to the eight possible non-materiel elements involved in solving warfighting capability gaps. They are Doctrine, Organization, Training, materiel, Leadership, Facilities, and Policy. DOTMLPF-P is cited in CJCSI 3170.01, *Joint Capabilities Integration and Development System* (JCIDS), and described in detail in the JCIDS Manual. Find more at Defense Acquisition University: https://dap.dau.mil/acquipedia/Pages/ArticleDetails.aspx?aid=d11b6afa-a16e-43cc-b3bb-ff8c9eb3e6f2

needs to create adaptive organizations that can make rapid organizational adjustments to give the advantage that is needed.

The technology is going to happen anyway. Three years from now any technology we get [today] is already going to be outdated. We need to learn to adapt our organizations where they have access to the multi-domain capabilities and they can create disruption, confusion, and distortion in order to sow the seeds of doubt or confusion in the minds of adversarial decision-makers.

What we seek from the multi-domain task force is to create organizational flexibility and agility that results in speed.

Speed of action, speed of decision, and speed of recognition. Speed relative to the adversary and the environment. The "tug" [i.e., point of friction] is that we are an Army that also needs to sustain campaign quality in an extended fight. That inherently is slow.

The multi-domain task force should be equated to "150, 150, and 150." In the AOC, in the JFACC, they're doing JFACC operations all day, all night, 24 hours a day, 7 days a week, 365 days a year. They mission command air, space, cyber, and integrated air and missile defense. Those are the domains they are operating in all of the time. They do that with 150 people, three shifts a day, and 24 hours a day. They're in a built-up, mature facility that has access [to mission command systems]. If we can take and replicate the power that the AOC has in those domains, and add land and maritime, [we] get a capability in the multi-domain task force that has 25 people per shift. That would be the equivalent of 75 folks versus 450 folks. Now you have a task force that is much smaller. You have less need for sustainment and all of the other types of support. If the MDB task force had access to the same capability — same data, at the same speed, to the same missile defense, radars, anti-ship, surface to air, surface to ship, special operations forces, cyber, and space — that should be the goal that we are trying to achieve (a headquarters that can do what they do at Hickam in an AOC). These 75 people can pick up suitcases, get in the back of an airplane, go somewhere, set up and be operating in literally minutes and they can pick up and go to another location after their signature is identified … or maybe they can screen, or guard, or have some sort of MILDEC [military deception] capability where their signature is not locatable.

[If] this thing [the multi-domain task force] needs to be the standard 1,500 to 4,000 people, then there may be capabilities you hang on the headquarters that build it up that high, but it doesn't need to all be in one spot. The MDB task force needs to have the access or the ability to enter into the U.S. fighting network [so] that capabilities can be applied to achieve the desired effect.

In typical bureaucratic form, we [need to guard against] relying on organizations we are comfortable with today; they are not the organizations we need for tomorrow.

Multi-Domain Battle Insights

The focus of MDB needs to be on what we have, not capability gaps.

The Army Air and Missile Defense [AAMD] community needs to go to war with the systems we have right now. They can validate using existing systems in new ways and then acquire new systems in the future. The focus needs to be on what we have, not capability gaps.
-- *BG Sean Gainey, Commanding General, 94th Army Air and Missile Defense Command (AAMDC)*

The end state of MDB is achieving the "best sensor to best shooter."

The end state of MDB is achieving the "best sensor to best shooter." The "best shooter" (tactical, theater, or CONUS) is used to deliver the desired effect.
-- *BG Sean Gainey, Commanding General, 94th Army Air and Missile Defense Command (AAMDC)*

The U.S. needs a logistics buildup in the USPACOM theater to help mitigate the "tyranny of time and distance."

The "tyranny of time and distance" can be mitigated by pre-positioning supplies and identifying alternative landing zones in case of non-availability during a possible conflict with a peer and/or a near-peer adversary.
-- *Brig. Gen. Steve Bullard, Director of Mobility Forces (DIRMOBFOR), PACAF*

The ability to rapidly conduct mobility displacement enhances survivability.

"Adaptive basing" is the practice of moving transportation assets around theater (to "lily pads") to decrease exposure and risk. This concept is applied when in a fight against a near-peer or when the enemy has superiority (overmatch) and airfields are threatened or denied. Logistics support hubs have to be moved – assets must "launch to survive" ahead of the enemy's decision cycle or ability to attack. This causes air mobility platforms to have to move rapidly to alternate locations for protection/survivability. Of key concern is the limited time frame that may or may not be available to plan and execute this type of mission.
-- *Brig. Gen. Steve Bullard, Director of Mobility Forces (DIRMOBFOR), PACAF*

We need to re-learn how to fight a near-peer opponent.

Emerging concepts such as MDB are linked to capabilities. We must adjust doctrine for the new way we will have to fight. We need more rigor in exercises that feature time-compressed decision cycles. The U.S. has to extend lines of communication to provide MDB support.
– COL Richard Butler, USARPAC ACOS G-5

Targeting nodes should be embedded at the tactical echelons.

The challenge will be when we go against a peer or near-peer adversary we are going to be "targeting resource drawn." The MOC [Maritime Operations Center] or the AOC [Air Operations Center] are built to be centralized targeting nodes for release coordination. When you are going against a third-rate power or VEO [violent extremist organization] node that will work because you have conductivity of communications and command and control. That does not happen against an adversary who can jam your communications. That does not happen for time-sensitive targets. So you have to move to the type of model that is embedded at the tactical echelons. That is kind of an old school model adapted to the 21st Century. If you combine that with weapons systems that are affordable, and in-depth for offensive and defense [operations], that allows for a cheap, layered defense that facilitates a rapid response on the offensive side. It changes the priority of investment, and it changes the way that we fight.
-- COL Bruce Vitor, Strategy and Innovation Division Chief, USARPAC

Planning factors for logistics are vast.

AMC has units throughout the globe to help with throughput sustainment and to support expeditionary operations capability for the joint force.

Joint Task Force Port Opening (JTF-PO): One of AMC's Contingency Response Groups (CRG), a U.S. Army Rapid Port Opening Element (RPOE), and a DLA (Defense Logistics Agency) team combine to make JTF-PO. This task force provides a larger spectrum of the distribution chain, opening the airfield, downloading cargo from aircraft and transporting it via ground to forward nodes. USTRANSCOM always maintain one JTF-PO on 12-hour alert. JTF-PO operates under TRANSCOM and is manned by AMC and SDDC [U.S. Army Military Surface Deployment and Distribution Command].

For "adaptive basing" the first wave of the expeditionary operations is responsible for entry and establishing a foothold with airfield or port. The second wave involves AMC, which establishes and expands the logistics base.

Considerations for Adaptive Basing

- There is a requirement to develop a more comprehensive system to communicate effectively with U.S. coalition partners and to ensure that everyone has visibility (i.e., common operational picture) on sustainment. For example, AMC uses GDSS (Global Decision Support System) which does not automatically feed into the systems PACAF's AOC uses, and in some cases may not be releasable to international partners.
- We need satellite communications and software capabilities to ensure that ITV [in-transit visibility] works properly.

Pacific Sentry 17-3 logistics insights include the following:

- A fundamental, accurate transportation and sustainment exercise needs to be done in the PACOM AOR [area of responsibility] to capture a true baseline for logistics capabilities. Recent exercises apply untested/un-validated assumptions with regard to transportation and sustainment.
- Users do not understand how to input logistics requirements into the tasking system. Without valid requirements in the queue during the exercise, it gives a false impression, providing exercise participants and leaders an unrealistic expectation of airlift capacity and responsiveness (i.e., supply was higher than demand).
- Planning factors for logistics are vast. Planners must consider many more issues related to adaptive basing in order to be as successful … We must exercise this concept to fully understand its advantages and disadvantages.

-- *Col. Joel Safranek, Deputy Director of Mobility Forces (DEPDIRMOBFOR), PACAF Air Operations Center (AOC)*

The U.S. has the ability to [simultaneously] address multiple problems due to our culture.

Expanding domains provides new maneuver space for 21st century contested warfare; beyond air, land, and sea, new mediums for war include cyber, space, information, electromagnetic, and a *cognitive dimension*. The cognitive dimension is the cognitive domain, the information domain. It is superior leaders, adaptive leaders, mission command, and thinking and moving formations. While our adversaries do not have the ability to address multiple crises due to culture and education, the U.S. has the ability to address multiple problems due to our culture.

Challenges associated with implementing MDB include, but are not limited to, the following:

- Countering or mitigating the effects of anti-access and area denial (A2AD).
- Ensuring joint interoperability with increased joint-level integration.
- With regard to the human dimension, the force needs adaptive leaders.
- Quicker decision-making will be required on many levels nearly simultaneously against peer and near-peer opponents.
- The ability to conduct faster targeting.
- Maintaining a U.S. and coalition common operational picture [when operating with multinational partners].
- Expanding Link 16 access to multinational partnered operations.
- Effectively integrating with joint and coalition communities.
- Efficiently leveraging a limited number of sensors, while obtaining more redundancy

-- LTC Jeff Lakey, Deputy Chief, Strategy and Innovation Division, USARPAC

The DIRSPACE has the responsibility for theater space assets without the authority to direct space assets.

Spectrum management is very important in the space domain.

For strategic (space) assets, U.S. Strategic Command (USSTRATCOM) has not delegated authority down to the theater level (STRATCOM manages *strategic* space assets). The DIRSPACE has the responsibility for theater space assets without the authority to direct all space assets. The space (both strategic and theater) authorities issue could be resolved if the Joint Space Operations Center[5] (JSpOC) delegated its authorities to the CFACC then the CFACC could direct space assets operating in support of the theater (or a designated coalition joint area of responsibility). The AOC space element does not have tasking authorities.

The issues associated with space are not related to a question of integration (elements are integrated), it is an authorities issues. Early, good planning can help mitigate space element issues (i.e., employing space assets during Phase 0 vice waiting until Phase 3 in a reactive mode to enemy space threats).

Cyber and EW are [currently] placed under information operations (IO) in the AOC. This creates a “loose relationship” [because] there are not solid ties or similarities between non-kinetic assets and space. Placing space under IO causes difficulties and space should be placed in the

[5] STRATCOM's Joint Functional Component Command for Space, through the Joint Space Operations Center (JSpOC), detects, tracks, and identifies all artificial objects in Earth orbit. The JSpOC is a synergistic command and control weapon system focused on planning and executing the JFCC Space mission. Its purpose is to provide a focal point for the operational employment of worldwide joint space forces, and enable the JFCC Space commander to integrate space power into global military operations.

"strike shop" (fires). Placing all non-kinetic capabilities in IO is akin to saying that all aircraft are airlift aircraft. Assets should be organized by their effects.

Pacific Sentry 17-3 space domain insights include the following:

- Exercise injects lend to artificiality if not incorrect lessons. The exercise is focused on Phase 3 when non-kinetic activities occur during Phase 0 and Phase 1.
- Cultural awareness of contested space domain is lacking. Often forces are not aware there is a problem with degraded and/or denied capabilities until it is too late.
- The U.S. and AUS, along with other Pacific Rim coalition allies may not have space superiority at times. This represents a paradigm shift.

-- *Wing Commander Darren "Fish" Lovett, AUS AF Division Chief for Space and Non-Kinetic Effects*

The AUS Services are structured to fight in a MDB and cross-domain fire fashion

Even though it is not called "MDB" in the AUS military, the Services are structured to fight in a MDB and cross-domain fire fashion. The Services are unable, by design, to fight separately as a Service.

The Australians have three military Services: Army, Navy, and Air Force. These Services are each led by three-star commanders. The Joint Operations Command (JOC), also a three-star billet, oversees all joint operations. When they go to war, the JOC goes to war and the Services raise, train, and sustain the forces. Every AUS operation is a joint operation. The JOC has an air, land, and maritime (Navy) sub-component commands.

AUS joint operations are still evolving. The AUS military has a Joint Capability Group that is an organization that oversees joint acquisition and looks at solving interoperability gaps. They published the "First Principles Review of Defence"[6] in 2015 that provided recommendations on joint acquisitions.

-- *Wing Commander Ashley Joslen, Chief Combat Operations (OPS), Air OPS Center, PACAF*

[6] The review was commissioned in August 2014 to ensure that Defence is fit for purpose and is able to deliver against its strategy with the minimum resources necessary. Australian government, Department of Defence at http://www.defence.gov.au/publications/reviews/firstprinciples/

Multi-Domain Command and Control (MDC2) is a clearing house for effects.

The Chief of Staff of the Air Force (CSAF)[7] is pushing transparency between the Services to identify who has the ability to effect the battleground. If one effect is denied, then a Service that has an alternative capability should provide a similar effect on the same target – so Multi-Domain Command and Control (MDC2) becomes a clearing house for effects.

HQ USAF is – first and foremost – emphasizing the mastery of MDC2 among USAF capabilities. The integration of those capabilities with those of other Services, while critical, is a job for joint agencies.

MDC2 is an attempt to get all of the Services, with their individual stovepipes or "rice bowls" working together, but it is not necessarily a way of determining how an Army capability supports a USAF capability. Said another way, the CFLCC should know what the JFMCC (joint force maritime component command) and JFACC [joint force air component command] have, but not determine what tools the JFMCC and JFACC bring to the fight. It should not unduly influence the acquisition and POM [program objective memorandum] processes.

MDC2 is a process that assists the USAF in providing support to ground forces as part of the overall USAF mission. The joint community needs to improve the integration of lethal and non-lethal planning and targeting in joint operations.

[Service] integration begins with thorough planning and all of the domains (air, land, maritime, cyber, and space) can be integrated into mission threads/execution. The current air tasking order (ATO) process works effectively. The answer to "How are all of the disparate effects being used efficiently and effectively?" is to integrate at the planning level. It could be a design issue like putting the AOC (or MDTF) in a SCIF [sensitive compartmented information facility] and giving everyone JWICS [Joint Worldwide Intelligence Communications System] access to coordinate the ATO with cyber, with space, with ground, and maritime assets.
-- *Mr. James "J.J." Jordan, Combat Ops Observer Trainer, USAF Operational Command Training Program and Mr. Groeninger, USAF Operational Command Training Program, Team Lead*

USARPAC is responsible for prioritizing staff requirements without the benefit of a table of distribution and allowances (TDA).

There is a lack of [staff] depth at the ground component command (GCC) (JFLCC) level. The GCC has delegated staff duties to the ASCC. The ASCC, in this case USARPAC, is responsible for prioritizing ASCC staff requirements without the benefit of a table of distribution and

[7] Mr. Jordan and Mr. Groeninger stated that the opinions provided are their own and are not intended to be counter to any current official USAF views.

allowances (TDA) that is able to perform all of the GCC's delegated missions (due to a lack of resources).

Critical asset processes. USARPAC identified existing restrictive processes when requesting replacement of critical assets. A recent Department of Army (DA) execution order (EXORD) directs that critical asset replacement requests must include the staffing of an Operational Needs Statement (ONS) to validate the requirement for a replacement. This is the current procedure/requirement employed for replacing critical assets in Operation Inherent Resolve (OIR). The DA process prohibits the rapid movement of the critical replacement. Instead of taking hours to initiate the movement of the critical asset into Theater, it currently takes days (*or more*) to staff the request and obtain the appropriate approvals. The Joint Urgent Operational Needs (JUON) statement (in the Joint Capabilities Integration Development System) was developed for U.S. Central Command (USCENTCOM) to address the problem described. USPACOM, on behalf of USARPAC, does not have the same record of success as USCENTCOM.
-- *Mr. Wallace "Al" Price, USARPAC Financial Management*

Connecting back to the sustainment structure presents challenges

Getting a task force into the JOA rapidly is one thing, but sustaining that infrastructure once it is there is another. We can move a force in conjunction with the maritime domain, but to resupply that force with a maritime and air threat is difficult. That ability to connect back to the sustainment structure presents challenges.
-- *MAJ Joshua Powers, Exercise Planner, USARPAC G-5*

Conclusion

The bottom line is that MDB continues to evolve through exercises like Pacific Sentry 17-03. The greatest gains in operationalizing MDB will come through changes in organizations, and as the MDB concept develops there will be challenges in mission areas such as sustainment and space.

As MG Flynn stated, "The Army will do this by linking the capabilities to doctrine (that is a motion of change) and linking them to new ways to fight based on the interactions of human beings that are happening in different ways."

The interactions of humans is a cognitive process. LTC Lakey points out that the cognitive dimension is in the information domain and it demands superior leaders, adaptive leaders, mission command, and thinking and moving formations to successfully maneuver in the cognitive battlespace. While our adversaries do not have the ability to address multiple crises due to culture and education, the U.S. has the ability to address multiple problems due to our culture.

U.S. Army, as it works through the development of MDB, can leverage the MDB insights gained from PS 17-03 and exercises such as Yama Sakura, RIMPAC, Vigilant Shield, and Talisman Saber to inform doctrine. MDB insights gained from PS 17-03 compel the Army to contine to collect and analyze operations within this framework, in order to facilitate its maturity and proliferation throughout the force.

As the MDB concept continues to evolve and proliferate beyond the Army and into joint doctrine, CALL will continue to capture insights, lessons and best practices to inform that doctrine. Look for our next edition in June 2018 when CALL releases the third of five in a series of publications focused on MDB throughout the Asia-Pacific region.