Global Command and Control for the Future Operating Concept

Implications for Structural Design and Information Flow

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It appears that the end of the traditional air operations center (AOC) as we know it is within sight. Lt Gen David Deptula, USAF, retired, one of the chief planners of the Operation Desert Storm air campaign, recently stated ". . . our ability to command and control (C2) air and space forces will be affected by three major interrelated trends: emerging threats, new technologies, and the velocity of information." Air Force leaders actually described

this future C2 environment in their "Call to the Future" and the "Air Force Future Operating Concept (AFFOC)" describing the multidomain operations center (MDOC) of 2035, complete with new divisions, impressive resiliency, robust reach-back capabilities, and a smaller in-theater footprint, which left many asking, how can the Air Force get to that future state? Rapid information flow and decision making will be critical, and modern organizational structures such as matrix and edge offer possible solutions. Furthermore, network centric operations offer information-age organizations structures tailored for rapid information processing and utilization.³ The C2 of air mobility aircraft, a limited worldwide resource utilized yet split between multiple combatant commanders (CCDR), presents a particularly challenging problem set in light of these technological and organizational advances since the advent of the AOC. The purpose of this article, then, is to examine how the air mobility C2 enterprise might adapt its organizational structure to increase the speed of information flow between the globally minded 618th AOC and the regionally focused air mobility divisions (AMD). This research suggests that increasing the lateral ties between the 618th AOC and regional AOCs, while not a manpower savings, would increase the agility and information flow through the air mobility C2 enterprise as a whole. A theater-specific reach-back cell within the globally focused 618th AOC might be a first step on the road to the future operating concept's realities of 2035.

Background

The current AOC, a concept that is only a few decades old, is based on Air Force doctrine and rooted in a history of practices that have shown continual success in the crucible of combat. This organization takes a commander's guidance and intelligence and fuses it into a daily executable plan, more effectively utilizing airpower in support of theater objectives. However, the initial design of the AOC structure was somewhat limited by the technological capabilities of the time. For example, air tasking orders (ATO) were physically flown to aircraft operating locations instead of being sent electronically. Air Mobility Command's (AMC) mobility aircraft are centrally controlled through their worldwide-oriented Tanker Airlift Control Center unless these aircraft are transferred to a theater commander with an AOC able to assume that role locally as a result of a request for forces from that theater commander. In that case, they're controlled through that AOC's air mobility division, one of five specialized divisions spelled out in Air Force doctrine and under the command of the joint or combined forces air component commander in theater. This transfer normally happens when the aircraft perform tasks primarily in that one theater for typically more than a few weeks.

Due to increasing demands on air mobility aircraft, US Transportation Command (USTRANSCOM) has more recently advocated retaining operational control (OPCON) of aircraft it might have transferred to a requesting combatant command in the past. This recent approach mirrors that of similar-type civilian logistics operations that are centrally managed to maximize efficiencies by flowing resources to the point of need without having to navigate through time-consuming sourcing processes. Furthermore,

the acceleration of information availability has condensed decision timelines and changed how similar civilian organizations organize and perform, allowing them to react seemingly on a dime to changing market conditions anywhere.⁴ While retaining OPCON might help USTRANSCOM to meet the demand from multiple theaters, it also complicates command relationships and control responsibilities. This current challenge presents an opportunity to examine not necessarily changing the relationship between these entities, but the ways they pass information to assist in moving toward the predicted realities of 2035.

As early as the 1970s, organizational theorist Jay Galbraith's research anticipated the information age and sought ways to gain organizational advantages in this new domain. He proposed that the amount of information processed between decision makers is proportional to the amount of uncertainty in a task. Uncertainty limits the ability of an organization to preplan or make decisions about activities in advance of their execution. His resulting organizational information process theory (OIPT) can inform the structure of not only commercial business, but also the C2 of military aircraft. How the C2 enterprise organizes around information flow and uncertainty could play a key role in the ability of rapid global mobility to meet the nation's needs. As such, through the lens of OIPT, this research addresses the following questions related to the structure of the air mobility C2 enterprise:

- 1. What specific criteria determine the functions that can or should be performed at a central hub and which functions should be present in a regional entity to increase the speed and reach of information while decreasing equivocality?
- 2. How might the structure of the air mobility C2 personnel be leveraged more effectively in a future information-driven, integrated planning, and execution cycle to increase the organization's ability to respond to uncertainty?

Literature and Guidance on the Future of Command and Control

Joint Publication (JP) 3-30, Command and Control of Joint Air Operations, describes joint command and control practices for air operations and prescribes centralized control and decentralized execution: "Centralized control is giving one commander the responsibility and authority for planning, directing, and coordinating a military operation or group/category of operations." Further, decentralized execution delegates execution authority to subordinate commanders to keep up with the pace of operations and the uncertainty and fluidity of combat operations. JP 3-30 also notes that decentralization enables mission command, allowing for subordinates to take the initiative tactically based on clear instructions and commander's intent. This flexibility is critical for the air operations C2, unique in speed, range, and flexibility. Missions with a higher degree of uncertainty are subject to a greater degree of decentralized execution, while highly sensitive air strikes would be subject to a greater proportion of centralized control. The keys to success are clear centralized guidance and resistance to over controlling, which hampers operator initiative and effectiveness.

JP 3-17, Air Mobility Operations, recommends treating the rapid global mobility mission as a global enterprise: "Although it is not necessary for a single global organization to centrally control all air mobility forces, all commanders should envision air mobility as a global system capable of simultaneously performing intertheater and intratheater missions."8 There is a clear delineation of control regarding intra and intertheater airlift between USTRANSCOM's air C2 arm, the 618th AOC, or TACC and the theater AMDs. While these organizations differ in structure, there is a considerable overlap in function: "The AMD functions are similar to those of the 618 AOC Tanker Airlift Control Center (TACC). The AMD's theater focus is critical in teaming with the joint deployment and distribution operations center or joint movement center to coordinate and prioritize the phasing of intertheater and intratheater airlift requirements. The AMD has vast theater familiarity and is best able to assess requirements, allocate forces to meet those requirements, and when needed, seek USTRANSCOM augmentation." Interoperability is considered critical between these two entities, "Effective support of the supported CCDRs mobility requirements demands theater and continental US-based forces form a mutual partnership. This partnership must operate as an integrated force with interoperable planning, tasking, scheduling, and C2 systems."10 For this partnership to function seamlessly, there must be clear, frequent communication and interoperability between the two entities. Current and former Air Force leadership have provided an outline of what this might look like.

In September 2015, the Air Force chief of staff office published its AFFOC where "many of the mission specific functions of 2015's AOCs have merged or moved to geographically dispersed reach back cells with globally networked capabilities." Furthermore, "the AOC's divisions, benefitting from new technology and use of distributed operations, have reduced their forward-deployed footprints and reorganized." This ideal vision of the future consists of agility, increased proficiency, and change to keep pace with the realities of the information age while reducing physical vulnerabilities. It also points at using C2 organization that can keep up.

In a 2014 interview, General Deptula stated, "Advancing threats demand that we move beyond large, centralized, and static C2 facilities. Replacing them with a mobile, distributed C2 structure that can handle the same volume and diversity of information as today's regional CAOC will call for a reappraisal of how we deal with information flow." For example, today's AOCs contain stovepiped divisions that task and execute assets using different software that often does not synchronize without manual assistance. These types of artificial roadblocks in information flow seem to be a symptom borne of the traditional AOC construct. "It is time to end the segregation inherent in the current combined air operations center organizational and process design and move to a much more integrated planning and tasking function." In a constrained fiscal environment, General Deptula contends the Air Force cannot do this through the systematic AOC upgrades as originally intended by AOC creators. The Air Force must leverage its creativity to make a dramatic change in how it accomplishes C2. 15

Where Are We Headed?

The term net-centric warfare (NCW) has recently permeated the realm of military jargon. Many would classify NCW as the technology or systems linking a variety of worldwide sensors to create an integrated information network. However, according to David Alberts, a former American director of research with the Office of Assistant Secretary of Defense for Networks and Information Integration, this is not NCW, but rather what enables it in the first place. NCW is about human and organizational behavior.¹⁶ Due to the increased proliferation of information technology and sensors across the battlespace, more information confronts the C2 enterprise than ever before. The most important focus of C2 is the need to manage that information.¹⁷ It is transparent to missions, force size, and geography. Moreover, NCW does not focus on network-centric computing and communications, but rather on information flows, the nature and characteristics of battlespace entities, and how they interact.¹⁸ Because certain types of information flow differently, the type of information present in an organization, in this instance, should play a role in how an organization is structured to enable NCW. There is a theory that focuses directly on information flow within organizations.

Organizational Information Process Theory

In the midseventies, Galbraith published a theory regarding information flow called organizational information process theory. The basic proposition follows that the degree of uncertainty correlates to the amount of information that needs to be processed between decision makers to obtain a given level of performance.¹⁹ Furthermore, if the task is well-defined before execution, then much of the task can be preplanned, much like what an operational plan attempts to accomplish. Organizational structures should be designed according to an overall strategy. In hypothetical organizations, tasks are divided into subtasks that require specialists, and integrating the subtasks around the completion of the main task is crucial. To integrate subtasks, an organization creates integrating mechanisms. These include rules and programs for more predictable tasks, a hierarchy for greater uncertainty, or targets and goals for an even higher degree of uncertainty. Each has its virtues, but the ability of an organization to successfully utilize mechanisms depends on the frequency of exceptions that must be decided by the hierarchy and the capacity of the hierarchy to handle them. As uncertainty increases, an organization can either limit or increase information processing. There are two strategies for each, with the eventual goal being a reduced requirement for hierarchy intervention, assuming that the limiting factor is organizational ability to process unanticipated, consequential information.²⁰

In reducing information processing, two strategies are the inclusion of slack resources and the creation of self-contained tasks. Slack resources simply do not compliment operational agility in the employment of airpower. The second method—self-contained tasks—creates multiple suborganizations, each with its complement of specialties. The method shifts the basis of the authority structure from one based on input, resources, skill, or occupational category to one based on output or geographical categories.²¹ This approach applies to the network of regional AOCs, but the cost is the loss of utilization of economies of scale. This is also why there is

tension over the control of air mobility assets between the respective regional and global AOCs.

To increase information processing, two strategies are establishing vertical information systems and creating lateral relations. Vertical information systems create a formal language that simplifies decision making. This simplification manifests itself in the Air Force through systems such as the joint operation planning and execution system. The authors posit that if the data is formalized and quantifiable, then this strategy is viable, yet ambiguous data may prove unable to clear up confusion. The lateral relationship strategy brings decision making down to where the information exists but does not reorganize around self-contained groups. As uncertainty increases, lateral relationships can develop from simple, direct contact all the way to a matrix organization. The cost of this approach is an increased amount of personnel in integrating and managerial roles. In conclusion, when confronted with increased uncertainty, the authors state that if an organization does not choose a strategy, decreased performance will be virtually automatic.²²

Further research on Galbraith's OIPT by media richness theorists Richard L. Daft and Robert H. Lengel shows that organizations process information to eliminate uncertainty, or the lack of information and equivocality, which refers to information that is unclear or of poor quality.²³ Furthermore, researchers found that face-to-face meetings resolved equivocal data thoroughly by interpretation of nonverbal cues. With unequivocal data, an email or document was sufficient. This simple frame shows that determining the structure of an organization is more than just processing information to reduce uncertainty. Building on Galbraith's research, Daft and Lengel aimed to show that organizations can be structured to provide information with suitable richness to reduce equivocality as well as uncertainty. Information richness is defined as information with the ability to change understanding within a certain time interval. Viewed on a spectrum, group meetings provide the highest return on equivocality reduction, while offering typically only a small amount of raw information exchange. On the opposite end, rules and regulations pass large amounts of information but do little to reduce equivocality. The best blends are located in the middle of these two types of information exchange.²⁴

Differentiation, meaning the different language, goals, and culture that evolve in different groups within an organization, influences equivocality. Equivocality is highest when differentiation is great, and organizational structure should allow for discussion and resolution of conflicts between interdependent departments. That said, the characteristic that most influences uncertainty is the strength of interdependence between departments, or how much two departments depend on each other.²⁵ Departments with low interdependence experience more autonomy and stability.

In a 2011 interview, Galbraith stated that many international organizations are going to a matrix structure to contend with added complexity, and that complex organizational structures built to keep up with the demands of the world are starting to be seen as a strength. This foreshadows the world of twenty-first-century military operations, where complex coalitions and anti-access/area denial environments become more common. Furthermore, Galbraith stated that process, along with structure, is what makes complex organizations work.²⁶ The more complex the structure, the more critical the process becomes. Reflecting on the AFFOC, it seems that the

ATO cycle will become much more adaptive to rapidly updated information. Galbraith's words indicate that C2 organizational design should take a more adaptive and agile approach, but to determine just what that organizational changes might be made, it is important to determine what types of information are present now and how current organizations relate to each other.

Research Method Analysis

Semistructured interviews were chosen as a research method for this project. Upon receiving Institutional Review Board approval and obtaining conformed consent from participants, 17 interviews with C2 experts were conducted. The average length of each interview was approximately one hour. The interviews included nine participants with experience as either an AMD chief or a director of mobility forces, five with C2 experience outside the AMD, and three participants with AMD experience. Participants had experience at six different AOCs. The interviews were recorded, transcribed, coded, and analyzed for answers to the specific research questions. Not all participants were asked the same questions because, for example, certain AMD questions would not pertain to non-AMD personnel. The following is a synopsis of the responses from the research regarding the research questions:

Table. Subjects related to Organizational Information Process Theory and location

Subjects	Percentage
Success using reach-back with all AMD positions	0 percent
Success using reach-back with some AMD positions	92 percent
Success integrating entire AMD into AOC divisions	92 percent
Success keeping some AMD entity within AOC	100 percent
Leaders overloaded with information/decision requirements	0 percent
More AMD differentiation with the 618th AOC	75 percent
More AMD interdependence with the 618th AOC	41 percent
AMD deals with more equivocality than a lack of information	75 percent
Lateral relationships highly important for success	65 percent
Face-to-face interaction needed to resolve equivocality	60 percent
Face-to-face interaction not significant to resolve equivocality	20 percent

Results Related to Air Mobility Command and Control Task Location Research Question

- 1. Most participants responded that using reach-back with some AMD positions would be successful.
- 2. Regarding physical positions in the AMD, aeromedical evacuation (AE) team members needed to be near other AMD personnel due to the typical urgency of their operations. Having air mobility expertise close to the ATO integrator

was also preferred. Also, a requirements team synchronized with the strategy division would benefit contingency operations, although this didn't necessarily mean the two would be in close physical proximity. The air refueling control team (ARCT) was often located with the combat plans division already. Furthermore, no leadership interviewed proposed that the ARCT be moved, nor airlift execution.

- 3. Most participants responded that they were more likely to talk face-to-face with personnel who were located physically nearby to their position. Specifically, participants would rather walk a short distance across a building than use a phone call or email to resolve equivocality, although email was a preferred method for record keeping.
- 4. Most participants pointed out that while C2 training was imperative, experience was much more significant in increasing information flow while minimizing equivocality. Specifically, experience in a specific location assists is reducing task equivocality and lack of information, with equivocality generally more common.
- 5. Regarding reach-back or distributed operations, AMD members encountered slower support or products that were different from what they had requested, which they attributed to different schedules and the lack of accountability for geographically separated organizations.

Results Related to Organizational Structure Research Questions

- 1. Some AMD entity within the theater AOCs is essential, and integrating the entire AMD into other AOC divisions would hurt the air mobility C2 enterprise. While leaders acknowledge the value of lateral relationships, the synergies gained from having at least some air mobility experts working alongside each other outweigh potential gains of integrating the entire AMD into the remainder of the AOC. Yet gains have been realized in AOCs where air mobility leaders made the choice to embed personnel in other divisions. Strategy embeds seemed especially valuable, as AMD members were able to positively influence planning efforts earlier in the process. Defining command relationships amid these lateral moves proved difficult. Others observed success from a more complicated matrix structure.
- 2. Leaders have an appropriate balance of information/decision requirements, with the caveat that when operations moved from phase zero/one into phase two, there is a high potential for overload due to manning for phase zero/one operations. Most decisions within an AMD would occur with relevant members present in a face-to-face meeting.
- 3. Most AMD participants responded that more differentiation existed between the AMD and the 618th AOC than between the AMD and other AOC divisions. Although much of the language between the AMD and the 618th AOC was

- similar, the varied goals and timelines between the two contributed to vast differentiation. It was rare for AMD personnel to interact face-to-face with members from other divisions outside of formal planning meetings. This resulted in some unfamiliarity with the other missions being carried out in theater, but did not appear to detract from accomplishing required AMD tasks.
- 4. Only slightly more interdependence existed between the AMD and parent AOCs. AMD personnel were, however, especially dependent on the 618th AOC when performing hub and spoke airlift operations because intertheater aircraft set the timing for the operation, proving difficult due to competing theater requirement priorities and the somewhat inflexible nature of worldwide mobility requirements.
- 5. Most AMD participants responded that they usually dealt with more equivocality than the lack of information, typically from requirements and tasks from geographically separated organizations. Furthermore, most participants responded that face-to-face interaction offered media richness much higher than other forms (video teleconference, telephone, and email) when resolving equivocality.
- 6. Most participants responded that lateral relationships were highly critical to ensure mission success. Requirements usually appeared via computer software, but did not necessarily paint a comprehensive picture. AMD members preferred talking face-to-face to liaisons, but sometimes called units to clarify on more complex missions. The units—Deployment and Distribution Operations Center (DDOC) and AMD—were seldom collocated, creating equivocality. Members favored collaborative information sharing websites but sometimes felt that finding the desired information usually took too much time. The real difficulty became contacting the correct person. Forming relationships quickly was deemed of the utmost importance from all interview participants.
- 7. Many, but not all AMD members, had an understanding of how the 618th AOC functions. When acquiring information from the 618th AOC, unfamiliar members usually called a friend or a previous contact. AMD members calling the 618th AOC were often confused and handed off from person to person to get answers. AMD-specific information did not often travel far outside the division, and members repeatedly found themselves answering the exact same questions over and over. The lack of a mirror organizational structure at the 618th AOC made it difficult to interpret information flow, acquire information, or eliminate equivocality. Additionally, most participants identified slow response times from the 618th AOC to geographic AOC requests for information.
- 8. Many were concerned about inadequate resiliency at the 618th AOC under the threat of a cyber attack. This, combined with observed slower reaction speed from a geographically separated organization, was the chief, but not the only reason, why leaders and AMD members alike were skeptical of AMD reach-back.
- 9. AMD members saw no need for a traditional full AMD staff intheater. Because many AMD tasks are similar day-to-day, personnel felt that some kind of dedicated

reach-back entity in the United States might be more efficient and could serve multiple theaters if needed, as long as this reach-back entity was dedicated to the AMD it served to ensure rapid support and provided overlapping but not identical business hours for non-24-hour AMDs.

- 10. Non-AMD members felt AMD personnel were generally in sync with other divisions, but believed air mobility expertise in their division would be well utilized. This embedding of personnel is something that happens occasionally with members of other communities.
- 11. Leaders were encouraged by information sharing across different AMDs, but saw more improvement opportunities such as a weekly update or at the very least some sort of shared information exchange space.

Research Results with Respect to Models

According to the model, the need for lateral relationships is amplified at the 618th AOC due to the increased differentiation. The observed theme that the 618th AOC is generally not responsive enough to theater needs might be due to a deficiency in the amount of lateral relationships and rich media exchange between the AMDs and the 618th AOC. One might infer that, although reach-back operations to a central C2 entity might eventually yield a manpower savings, the chief motivation for such a change should be an increase in lateral relationships, such as those present at the geographic AOCs between the AMDs and their partner divisions. Such relationships could be the key to confronting increased information flow while reducing equivocality.

Conclusions

Overall, these findings suggest that increasing the lateral ties between the 618th AOC and regional AOCs would increase the agility and reduce uncertainty through the air mobility C2 enterprise as a whole by improving the flow of rich information. This study's research questions centered on physical location for air mobility C2 tasks, as well as what adjustments to the current air mobility C2 organizational structure best improve information flow to reduce uncertainty. In regard to the first research question, the results indicate that deciding which tasks should be performed in a theater AOC and which tasks could be performed via reach-back or distributed operations depends mostly on the definition of those tasks. Easily defined tasks are ideal for accomplishment via reach-back. Furthermore, those tasks that often require clarification, rapid changes, or joint and coalition interaction are best suited for the theater AOC. Interviews revealed that AMD personnel contend with more equivocality than uncertainty, and most equivocality exists between entities that are geographically separated and different, specifically the 618th AOC. Tasks between the DDOC and AOC, another source of equivocality, are delivered by an electronic vertical information system. By moving functions such as requirements and

planning, which sometimes deal with unclear information, to a reach-back entity, their ability to clarify those requirements remains virtually unchanged since they were usually separated from their DDOC in theater. Other sources of equivocality are from both a lack of familiarity with the 618th AOC and unclear information from organizations within the theater. The increased efficiency of a theater-focused reach-back cell at the 618th AOC could help eliminate equivocality between the theater AMD personnel and those at the 618th AOC, while allowing for additional manpower in the theaters for another purpose.

Regarding the second research question, interviewees from outside the AMD frequently steered toward lateral relationships between divisions inside AOCs as a factor in their success. These included air mobility personnel, eliminating much of the lack of clarity of information and smoothing the seams between divisions during operational planning. With more differentiation between the AMDs and the 618th AOC than there is between the AMDs and the other AOC divisions, a strengthened lateral relationship between the AMDs and the 618th AOC could be advantageous. A chief cause of their differentiation is their contrasting goals.

The danger here is the possible splitting of control between two Airmen. The risk to the mission will depend on the fidelity of the process developed in place of the current AMD process, and the fidelity and resiliency of the communications between the two entities. These arrangements would need to be worked out between CCDRs and AMC to ensure a single air commander in theater over mobility forces OPCON to that command.

Recommendations for Air Mobility Command and Control

The AFFOC spends considerable time expounding on both rapid global mobility and C2, including the assumption that our information-handling capacity needs to increase. Moreover, it explains that MDOC Airmen will need to be able to integrate global assets with those already in theater.²⁷ This project, while seeking to optimize information flow and organizational structure, is ultimately about a path to the projected realities of 2035.

A proposed first step in developing an optimal organizational structure could be to develop a theater-focused reach-back cell at Scott AFB, Illinois in support of theater mobility operations. These Airmen, during phase zero/one operations could perform a theater airlift requirements and planning function, along with AE functions. Tanker personnel would remain in theater due to close ties with other divisions. This reach-back division of geographic AMDs, which would essentially perform the easily defined tasks with little to no equivocality and almost no face-to-face interaction with coalition or joint members, would be led by a colonel, as other divisions in an AOC to separate this intratheater mission from the general intertheater mission of the 618th AOC. It would be highly critical that the same exercise participation at the geographic AOCs continue unaffected by this change, because such exercises establish trust for the 618th AOC as a responsive partner.

This, however, would not be planned as a manpower savings change, as any savings would be used to increase the degree of lateral relationships across the global

C2 enterprise. AMD chiefs would remain in theater along with their smaller but more integrated AMD. The mobility Airmen essential to each theater would remain in place, working on harder-to-define tasks and ensuring the success of the execution of air mobility assets in theater. The amount of personnel present in theater would need to be capable of requirements, plans, and AE functions for a short time in the case of an attack on the 618th AOC, but at a phase zero/one operations tempo.

A critical piece of this proposal is the ability to rapidly deploy elements of the reach-back cell in the case of a contingency. Such a reach-back cell would be effective and efficient in phase zero or even phase one, but once beyond that, the effectiveness of such an entity would be questionable due to rapidly changing conditions in the AOR. A theater AMD needs to be responsive to the CFACC's scheme of maneuver, and this becomes increasingly difficult to accomplish from a reach-back location during a contingency. With the lateral relationships built at the steady-state reach-back location, some members could deploy forward when needed, eliminating the increased information backlog by shifting the balance of lateral relationships to the theater.

Final Remarks

The speed and reach of information across organizations is the key to meeting future C2 needs. The C2 structure must be such that leadership is not overloaded with information and decision requirements when exceptions arise. Tasks that can be preplanned should be, but as experts predict, tasks are increasingly uncertain, requiring increased information processing capability. Differentiation leads to equivocality and can be best solved through optimized organizational structure. Complex organizational structures are better poised to confront complex information requirements, but demand enhanced processes for success.

According to the majority of research subjects, at best, most AMD tasks can be performed from a central location, and at worst, at least a few can. But should they? Interviews have shown that easily-defined tasks are the best candidates for trial in the near future. AMC and USTRANSCOM aim to solve the challenge of supporting multiple COCOMs with limited resources. The 618th AOC sought to alleviate this problem by placing a liaison in theater AOCs, but complications appear to persist. The ongoing restructure of the 618th AOC may also assist in this effort. Having a theater planning element or even a staff of theater liaisons in the 618th AOC, while not reducing the overall C2 manning requirement, could perform easily defined tasks and act as an information conduit that reduces the equivocality and differentiation between the 618th AOC and theater AOCs. This element would assist in building a more agile air mobility enterprise in support of geographic COCOMs and help the enterprise take another step into the future of airpower C2.

Notes

1. Lt Gen David A. Deptula, "A New Era for Command and Control of Aerospace Operations," Air & Space Power Journal, July/August 2014, http://www.airuniversity.af.mil/Portals/10/ASPJ/journals/Volume-28_Issue-4/SLP-Deptula.pdf.

- 2. US Air Force, "Air Force Future Operating Concept: A View of the Air Force in 2035," September 2015, http://www.af.mil/Portals/1/images/airpower/AFFOC.pdf.
- 3. David Alberts, John J. Garstka, and Frederick P. Stein, *Network Centric Warfare: Developing and Leveraging Information Superiority*, 2nd ed. (Washington, DC: Command and Control Research Project, 2003). 25.
- 4. Jay R. Galbraith, "Organization Design: An Information Processing View," *Interfaces*, 1 May 1974, 4, http://pubsonline.informs.org/doi/abs/10.1287/inte.4.3.28.
 - 5 Thid
- 6. Joint Chiefs of Staff, Joint Publication 3-30, Command and Control of Joint Air Operations, 10 February 2014, http://www.dtic.mil/doctrine/new_pubs/jp3_30.pdf, I-3.
 - 7 Ihid
- 8. Joint Chiefs of Staff, *Joint Publication* 3-17, *Air Mobility Operations*, 30 September 2013, http://www.dtic.mil/doctrine/new_pubs/jp3_17.pdf, viii.
 - 9. Ibid., I-10.
 - 10. Ibid., II-1.
 - 11. USAF, Future Operating Concept, 14.
 - 12. Ibid.
 - 13. Deptula, "A New Era."
 - 14. Ibid.
 - 15. Ibid.
 - 16. Alberts, Garstka, and Stein, Network Centric Warfare.
 - 17. Ibid.
 - 18. Ibid.
 - 19. Galbraith, "Organization Design," 4.
 - 20. Ibid.
 - 21. Ibid.
 - 22. Ibid.
- 23. Richard L. Daft and Robert H. Lengel, "Organizational Information Requirements, Media Richness, and Structural Design, *Management Science*, 32, no. 5, May 1986, https://www.researchgate.net/public ation/227445746_Organizational_Information_Requirements_Media_Richness_and_Structural_Design.
 - 24. Ibid.
 - 25. Ibid.
- 26. Amy Kates, "Organization Design: An Interview with Jay Galbraith," *People and Strategy* 34, no. 4 (2011): 14–17, http://www.riversoftware.com/resources/HRPS PS34.4 Perspectives.pdf.
 - 27. USAF, Future Operating Concept.



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