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14. ABSTRACT

It has been ten years since the Goldwater-Nichols DOD Reorganization Act was signed into law. The resultant dramatic change in the relationship between the joint staff and the service staffs is most obvious in the ever-expanding responsibilities and importance of the Joint Requirements Oversight Council (JROC). During the January 1997 Air Staff reorganization, the Director for Joint Matters (XOJ) position was created in partial response to this power shift. Among XOJ's responsibilities are controlling and coordinating USAF interface with the Joint Warfighting Capabilities Assessment (JWCA) teams, the JROC's assessment arm. This thesis analyzes the new USAF organizational structure for its capacity to meet JWCA support requirements and to determine whether other options might do so better. To analyze the USAF-JWCA Support Structure this study first describes the JWCA process functionality and influence. It then develops objectives and tasks for a USAF organizational structure to support the JWCA Process. The resulting responsibilities are consistent with existing ones except for an added requirement to perform JWCA-like assessments at the service level. These assessments are designed to guarantee existing and future USAF capabilities enhance joint warfighting capabilities and requirements. Analysis of the existing support structure found it to be sub-optimized for meeting both existing responsibilities and the added assessment function. As such, three new options were developed and analyzed. Option 1 created a Deputy Chief of Staff (DCS) for Joint Matters. Option 2 created a Direct Reporting Unit (DRU) with responsibility for JWCA interface, and coordinating USAF requirements development. Finally, Option 3 reassigned JWCA interface and requirements development tasks to the DCS for Plans and Programs (XP). Option 2 proved the most viable option and is recommended for implementation. It improved coordination and communication lines while providing the most optimal environment for independent assessments. However, it suffers from being the most radical option and may prove difficult to sell to Air Staff decision makers. Option 1 was inadequate because it created an overly small DCS with insufficient influence to interact evenly with the other deputies. Option 3, even though it had an established advocacy on the Air Staff, suffered from over-consolidation of responsibilities in one DCS. Although Option 2 proved to be the best option, it may prove difficult to change from the existing structure. The existing organization in place is new with most of its creators still in place, so there may be some resistance to change. Despite the concerns, the improvements made by implementing Option 2 outweigh any shortcomings. The study also identified several personnel issues. The most significant recommendations were assigning experienced action officers to the USAF-JWCA Support Structure and requesting Congress grant joint duty credit to those service members directly involved to improve recruiting.

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THE WILD BLUE YONDER IN A PURPLE WORLD: IMPROVING USAF
INTERACTION WITH THE JOINT WARFIGHTING CAPABILITIES ASSESSMENT
PROCESS

BY

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About The Author

Maj Samuel J. McCraw was a member of Class VI of the School of Advanced Airpower Studies (SAAS), Air University, Maxwell Air Force Base (AFB), Alabama. He graduated in 1983 from Parks College of Saint Louis University with a bachelor of science degree in aerospace engineering and was commissioned a second lieutenant in the United States Air Force through the Reserve Officer Training Corp. He also earned a master of science degree in aeronautical engineering from the University of Dayton in 1988.

Maj McCraw spent his first tour of active duty assigned to Wright-Patterson AFB, initially as a Structural Dynamics Engineer and later as a Systems Engineer for the Aeronautical Systems Division, Air Force Systems Command on the Tacit Rainbow and Seek Spinner acquisition programs. In 1989, Maj McCraw was reassigned to Edwards AFB, California, as Chief of the Performance Branch for operational testing of the Advanced Cruise Missile (AGM-129) for the 31st Test and Evaluation Squadron, Strategic Air Command. In 1990, he was selected to attend the USAF Test Pilot School as a student in the Flight Test Engineer Course. Upon graduation, he was assigned to the 3247th, later the 40th, Flight Test Squadron, Eglin AFB, Florida, as the Lead Engineer for F-111 weapons development testing. In 1994, Maj McCraw was selected under the Air Force Institute of Technology sponsored Industrial Development Education in Acquisition (IDEA) Program for a six month exchange tour with the Pratt and Whitney

(P&W) Corporation as a Jet Engine Systems Engineer for the F100 family of military jet engines. Finally, in 1995, Maj McCraw attended Air Command and Staff College, and after graduation, the School of Advanced Airpower Studies. Upon graduation from SAAS in June of 1997, he will be assigned to the Air Force Space Command, Peterson AFB, Colorado. Maj McCraw is married to the former Elizabeth Russell of Pensacola, Florida.

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Finally, none of my efforts this past year, or any of the years of our marriage, would have been possible without the constant love and support of my wife, Beth. She has encouraged and even pushed me to pursue my dreams despite the difficulties such pursuits sometimes entailed. I am forever indebted.

Abstract

It has been ten years since the Goldwater-Nichols DOD Reorganization Act was signed into law. The resultant dramatic change in the relationship between the joint staff and the service staffs is most obvious in the ever-expanding responsibilities and importance of the Joint Requirements Oversight Council (JROC). During the January 1997 Air Staff reorganization, the Director for Joint Matters (XOJ) position was created in partial response to this power shift. Among XOJ's responsibilities are controlling and coordinating USAF interface with the Joint Warfighting Capabilities Assessment (JWCA) teams, the JROC's assessment arm. This thesis analyzes the new USAF organizational structure for its' capacity to meet JWCA support requirements and to determine whether other options might do so better.

To analyze the USAF-JWCA Support Structure this study first describes the JWCA process functionality and influence. It then develops objectives and tasks for a USAF organizational structure to support the JWCA Process. The resulting responsibilities are consistent with existing ones except for an added requirement to perform JWCA-like assessments at the service level. These assessments are designed to guarantee existing and future USAF capabilities enhance joint warfighting capabilities and requirements.

Analysis of the existing support structure found it to be sub-optimized for meeting both existing responsibilities and the added assessment function. As such, three new options were developed and analyzed. Option 1 created a Deputy Chief of Staff (DCS) for Joint Matters. Option 2 created a Direct Reporting Unit (DRU) with responsibility for JWCA interface, and coordinating USAF requirements development. Finally, Option 3

reassigned JWCA interface and requirements development tasks to the DCS for Plans and Programs (XP).

Option 2 proved the most viable option and is recommended for implementation. It improved coordination and communication lines while providing the most optimal environment for independent assessments. However, it suffers from being the most radical option and may prove difficult to sell to Air Staff decision makers. Option 1 was inadequate because it created an overly small DCS with insufficient influence to interact evenly with the other deputies. Option 3, even though it had an established advocacy on the Air Staff, suffered from over-consolidation of responsibilities in one DCS.

Although Option 2 proved to be the best option, it may prove difficult to change from the existing structure. The existing organization in place is new with most of its' creators still in place, so there may be some resistance to change. Despite the concerns, the improvements made by implementing Option 2 outweigh any shortcomings.

The study also identified several personnel issues. The most significant recommendations were assigning experienced action officers to the USAF-JWCA Support Structure and requesting Congress grant joint duty credit to those service members directly involved to improve recruiting.

Chapter 1

Overview

“The standards against which the naval force programs were to be ranked went beyond a parochial Navy vocabulary and focus. The assessment process required its participants to demonstrate the importance of their programs in terms of how they would contribute to joint military operations.”

—Admiral William C. Owens¹

“We pay the CINCs primarily to fight the war this afternoon. They also have expertise that they can bring to bear on the future. The military services are the exact opposite. The JROC is the bridge between the two cultures.”

—General Joseph W. Ralston²

Notes

¹Admiral William A. Owens, *High Seas: The Naval Passage to an Uncharted World* (Annapolis: Naval Institute Press, 1995), 129. Admiral Owens is considered the architect of the JWCA process but as his book discusses, he first developed the assessment process while serving on the Navy Staff. This “practice run” on the Navy Staff provided the baseline assessment process now called the JWCA.

In the ten years since the Goldwater-Nichols DOD Reorganization Act was signed into law, joint and service staff relations can be characterized by continual change and “increasing strength of the joint staff at the expense of the service staff.”³ Nowhere is this more obvious than the ever-expanding responsibilities of the Joint Requirements Oversight Council (JROC). This increased importance of joint issues, and the power shift to the JROC, provided at least part of the impetus for the recent Air Staff reorganization.

The Air Force’s Director for Joint Matters (XOJ) was formed to ensure the Air Staff was well represented in the joint arena and to overcome what General Ronald R. Fogleman characterized as an “ad hoc” approach to dealing with the JROC.⁴ Created in the 1 January 1997 Air Staff reorganization, one XOJ division was specifically tasked to control and coordinate the USAF interface with the Joint Warfighting Capabilities Assessment (JWCA) teams, the warfighting assessment arm of the JROC. The purpose of this thesis is to analyze the ability of this new USAF-JWCA Support Structure⁵ to complete the assigned task and to determine whether other options might do better.

To analyze the existing USAF-JWCA Support Structure and compare it to other options, this study first determines whether the JWCA process warrants the effort for further change, and defines the process at the joint staff level. What then follows is a

Notes

²Robert Holzer, “One on One: USAF Gen. Joseph Ralston,” *Defense News*, 23-29 September 1996, 46.

³Gen Ronald R. Fogleman, United States Air Force Chief of Staff, *Commander’s Call-Global Engagement*, Pentagon:Headquarters USAF TV Center, 1 hour and 51 minutes, 31 January 1997, videocassette.

⁴Ibid.

⁵USAF-JWCA Support Structure is a term developed by the author to include all levels of USAF staff support for interaction with the JWCA process.

development of objectives and tasks for the support structure that leads into a discussion of parameters for success for organizational options. Next is a description and analysis of the existing structure followed by development and analysis of optional structures. Finally, conclusions and recommendations are drawn from the analysis results.

This study makes two assumptions. First, the JWCA process is a fixture in service relations with the Joint Staff for the foreseeable future. Second, the process will continue to evolve. The ramification of the former is if the process is proven important, then it is worthwhile to improve USAF interface. The latter assumption means that any recommendations made have to consider the inherent potential for changes in the process.

It is important to understand that this paper is not a critique of the Goldwater-Nichols Act, nor the JROC/JWCA process at the joint level since others do both.⁶ Both are discussed only as needed to better analyze USAF interaction with the JWCA process.

Notes

⁶For example, the entire issue of *Joint Force Quarterly*, no. 13 (Autumn 96), evaluates Goldwater-Nichols ten years after passage. Also see Maj J. Scott Chesnut, *Organizing to Fight: Goldwater-Nichols and the Military Strategist* (master's thesis, School of Advanced Airpower studies, June 1997).

Chapter 2

Introducing the JWCA

“The first qualification for judging any piece of workmanship, from a corkscrew to a cathedral, is to know what it is, what it was intended to do, and how it is meant to be used.

—C.S. Lewis¹

While this paper deals specifically with the USAF interaction with the JWCA Process, such a study requires a strong understanding of how the process works at the joint level. To develop a basic understanding, this chapter covers the purpose, influence, and functionality of the JWCA process.

Function

The JWCA process revolves around the actions of eleven teams who serve primarily as information gatherers, assessors, and conduits for the Joint Requirements Oversight Council (JROC). The JROC consists of the Vice Chairman of the Joint Chiefs of Staff (VCJCS) and the four Service Vice Chiefs and has a wide expanse of responsibilities

Notes

¹C. S. Lewis, *A Preface to Paradise Lost* (1942; reprint, London: Oxford University Press, 1961), 1.

discussed in greater detail later. As head of the JROC, then VCJCS Admiral William C. Owens, created the JWCA process in 1994 to “assess the four services’ warfighting capabilities and requirements and develop effective, efficient and affordable warfighting options.”² The 1996 JWCA charter document defined its mission as: “JWCA teams, each sponsored by a director of a Joint Staff directorate, examine key relationships and interactions among joint warfighting capabilities and identify opportunities for improving warfighting effectiveness.”³

JWCA teams (commonly referred to as “JWCAs”) have also served in other capacities. The teams provided data gathering and assessment for such endeavors as the Deep Attack Weapons Mix Study (DAWMS) and the congressionally mandated Quadrennial Defense Review (QDR). This reflects Admiral Owens’ desire for flexibility in the teams. He did not view the JWCA teams as decision makers but instead as facilitators of knowledge. His vision is reflected in Joint Staff publications.

“JWCAs are not expected to provide fully staffed (and therefore anodyne) recommendations. Nor are they supposed to work out a bureaucratically approved solution for members of the JROC simply to authenticate later. Their primary job is to help stimulate discussion in the JROC, and to provide analytic support for the debates that take place there.”⁴

Notes

²“J-8: Shaping The Force For A Dynamic World,” *Defense* 1996 96, no. 2 (March/April 1996): 39.

³Chairman of the Joint Chiefs of Staff Instruction: CJCSI 3137.01, *The Joint Warfighting Capabilities Assessment Process*, 22 February 1996, 2.

⁴Office of the Vice Chairman of the Joint Chiefs of Staff, *JROC: Planning in a Revolutionary Era*, 1996, 18.

In summary, the JWCA teams are flexible, independent review teams organized to study a wide variety of issues from present day warfighting capabilities, to budget implications of decisions, to long range plans across the entire US military, and feed their results to the JROC. They include people from all aspects of the US military. Their flexibility has proven useful in responding to added taskings such as the QDR and the DAWMS. Given this purpose, what level of influence do these teams have?

Influence

The influence and importance of the JWCA's are directly related to the status of their sponsor, the Joint Requirements Oversight Council (JROC). With the encouragement of Chairman of the Joint Chiefs of Staff (CJCS) General John Shalikashvili and under the impetus and leadership of Admiral Owens, the JROC has grown in influence in recent years. Prior to 1994, the JROC existed as the primary administrators for approving performance goals and baselines for all major acquisition programs at successive milestones while also providing "the joint uniformed military's input on the development of material solutions for modernizing, replacing, and achieving commonality for equipment across our joint force structure."⁵ With the publication of an updated JROC charter in 1995, and with codification of the council in the 1996 Defense Authorization Act, JROC authority has increased considerably. General Joseph W. Ralston, the current VCJCS and chairman of the JROC, summarized both documents when speaking before

Notes

⁵General Joseph W. Ralston, United States Air Force, Chairman, Joint Requirements Oversight Council, *Statement Before the House Committee on National Security*, 27 March 1996, 13.

the House Committee on National Security in March of 1996. He explained the JROC was to assist the CJCS by prioritizing joint military requirements, considering alternatives, overseeing the JWCA, and ensuring the CINCs needs are met while reducing redundancies in the services.⁶

The most obvious sign of JWCA influence is through the use of their findings and recommendations via the JROC to develop the Chairman's Program Recommendation (CPR) and the Chairman's Program Assessment (CPA). Developed primarily with JWCA data, both documents are the Chairman's response to meeting statutory requirements to provide advice to the Secretary of Defense (SECDEF) regarding program recommendations and budget proposals.⁷ The Chairman uses the CPR to state his preferences for the Defense Budget in order to influence the SECDEF's budgetary guidance.⁸ The CPA is basically the Chairman's report card on the service and defense agencies' budgets to the Secretary.⁹ Both the CPA and CPR have tremendous influence since they allow the Chairman to provide the final input on programming issues to the SECDEF.¹⁰

In performing assessments, the JWCA have dealt with a number of significant issues, including the size of the B-2 and C-17 buys, the future of the Army's Hunter

Notes

⁶Ibid.

⁷CJCSI 3137.01, 2.

⁸Ibid.

⁹Ibid., 3.

¹⁰Glenn W. Goodman, Jr. "JROC Guru: An Interview with Admiral William A. Owens," *Armed Forces Journal International*, February 1995, 36.

unmanned air vehicle program, the future of the EF-111, quality of life issues, the Joint Standoff Attack Missile, the Joint Direct Attack Missile.¹¹ Given the new statutory authority of the JROC, it is logical to conclude, the JWCA's will continue to grow in influence.

Process Description

The JWCA process is multi-dimensional--a mixture of official and unofficial functions, of short and long term tasks, and of varying approaches to similar tasks. Webster's defines process as "a particular method of doing something, generally involving a number of steps or operations."¹² The JWCA process only partially meets Webster's definition since the methodology varies greatly. Any attempt to improve interaction with the process has to consider this variability.

In simple terms, the official JWCA line of authority starts with the VCJCS, then falls to the Joint Requirements Oversight Council (JROC) then flows down to the Joint Requirements Board (JRB) then to the JWCA teams and finally to the myriad of supporting actors. Figure 1 provides a visual representation of the organizational structure of the JWCA process. The JROC consists of the VCJCS and the service Vice Chiefs and is tasked with oversight of the JWCA's. The Joint Requirements Board (JRB)

Notes

¹¹David A. Fulghum, "Ralston Tackles Acquisition Boost," *Aviation Week and Space Technology* 144, no. 6 (5 February 1996): 29; and Robert Holzer, "Officials want more clout for joint oversight council," *Army Times* 56, no. 41 (6 May 1996): 26.

¹²David B. Guralnik, ed., *Webster's New World Dictionary of the American Language, Second College Edition* (New York: Simon and Schuster, 1984), 1133.

is a recent creation of General Ralston to screen issues and assessments from the JWCA's before reaching the JROC. It consists of a major general/rear admiral equivalent from each service. The pre-JROC is a team of O-6s from each service that serves as a filter for service staff inputs up to the JRB. The JWCA teams perform the assessments and staff work that are the primary output of the process. These teams are described in further detail below.

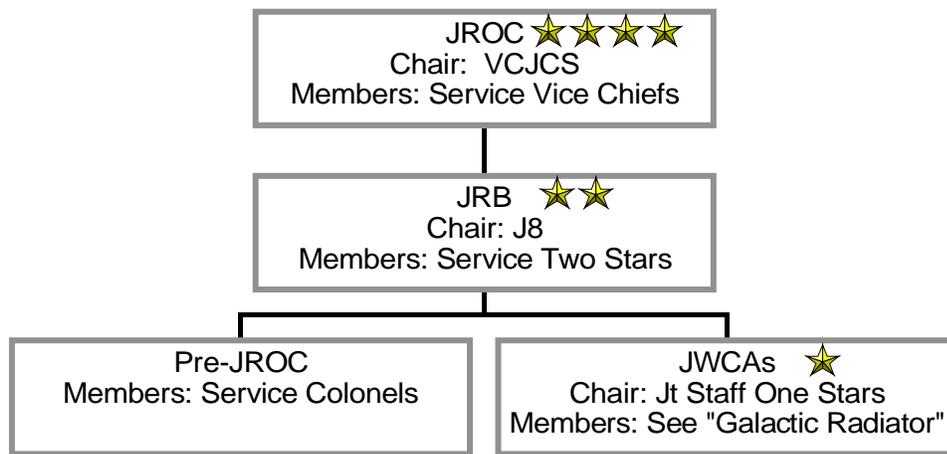


Figure 1: JWCA Command Structure

JWCA Teams Organization and Functionality

The JWCA teams function primarily as information conduits for the JROC. As such, the process and the teams have proven very flexible with respect to mission and organization in their four years of existence. Presently, the eleven JWCA teams with a broad spectrum of players are purposefully set up to develop a cross-service perspective.

involved personnel cuts across normal functional responsibilities to improve staffing of JWCA issues.¹⁴ The primary assessment players are the JWCA sponsors.

“Functions of the JWCA Sponsors include:

- (1) Identify critical deficiencies and strengths in Joint Warfare capabilities.
- (2) Provide the JROC with assessment methodologies, findings and recommendations to satisfy warfighting requirements and provide operational efficiencies.
- (3) Establish JWCA teams to conduct assessments. Team membership will vary depending on the issues.”¹⁵

To prioritize JWCA efforts, each team is assigned a JROC approved, rank-ordered issues list, called the JWCA contracts, developed and updated on a six month cycle. For the 1996 taskings, the list started with each team providing preliminary inputs to the JRB based on feedback from the unified commanders, service staffs, other team members, remaining issues from previous contracts, personal experiences and any number of other sources. In the past, the JRB would screen the list and then provide it to the JROC who would finalize and prioritize the contracts and divide the tasks among the appropriate JWCA teams. Contract development changed this year to allow for the increased

Notes

¹⁴ *JROC: Planning in a Revolutionary Era*, 17.

¹⁵ Admiral William A. Owens, Vice Chairman of the Joint Chiefs of Staff, Memorandum MCM-14-95U, subject: Charter of the Joint Requirements Oversight Council, 7 February 1995, 4-5.

workload to support the QDR, and increase integration with both the Planning, Programming and Budgeting System (PPBS), and the tenets of Joint Vision 2010 (JV 2010). During a review called the Front End Assessment, the Joint Staff invited personnel from the PPBS process, modeling and simulations, the joint monthly readiness reviews (JMRR), service requirements, and service strategic planning to develop an initial issues list. Their list of 400 issues was prioritized by the JRB and then partitioned out to the JWCA's.¹⁶

Issues run the full range of operational, fiscal and schedule concerns and are pursued in any number of ways. For example, recent JWCA issues include Department of Defense tactical aviation recapitalization as well as attempting to standardize personal computer software for the unified commanders staff offices. Once the contract issues are divided among the JWCA teams, there is minimal consistency in issues resolution between the teams. As several participants in the process pointed out, each team does things differently.¹⁷

The overall organization and function of the JWCA's are also in a constant state of change. The process is continually modified, a reflection of changes in the VCJCS and also the normal cycle of military personnel rotation. General Ralston created the JRB and

Notes

¹⁶Lt Col Suzanne Vautrinot, Requirements, Assessment and Integration Division, Director of Force Structure, Resources and Assessment (J8/RAID), interviewed by author, 15 January 1997; and Maj Gen Gregory S. Martin, Director of Operational Requirements (AF/XOR), letter, subject: The JWCA Process Today and Tomorrow, n.d., received January 1997, 1.

¹⁷ Lt Col Robert Dorsey, Assistant Division Chief for JROC Issues and Actions (XOJR), interviewed by author, 16 January 1997 and 27 January 1997.

seems to prefer using existing internal staffing procedures to close out as many issues as possible before reaching the JROC. Admiral Owens preferred dealing with the issues at the JROC level as much as possible to reduce the use of the “iron majors” to resolve all of the issues.¹⁸ General Ralston modified the JWCA deliverables schedule to allow release of the CPA and CPR to match up with the PPBS process.¹⁹

Overall, the conclusion the reader should draw is that each JWCA issue is unique and interaction with the process requires a great deal of flexibility.

It is now time to transition to studying the USAF interaction with the JWCA process. By design, JWCA teams are kept small and rely on significant amounts of assistance from the military staffs. This reliance is encouraged to prevent the loss of service identity or override service Title X responsibilities.²⁰ Before studying USAF support though, it is

Notes

¹⁸Admiral William A. Owens, “Understanding the JWCA Process: Bringing a Better Joint Warfighting Perspective to Bear on Resource Allocation,” *Armed Forces Journal International*, May 1996, 14.

¹⁹Robert Holzer, “One on One: USAF Gen. Joseph Ralston,” *Defense News*, 23-29 September 1996, 46; and Lt Col Suzanne Vautrinot, Requirements, Assessment and Integration Division, Director of Force Structure, Resources and Assessment (J8/RAID), interviewed by author, 25 November 1996.

²⁰*JROC: Planning in a Revolutionary Era*, 27-8.

necessary to develop a list of objectives and tasks for the USAF-JWCA Support Structure, as well as a construct for analyzing the existing structure and potential options.

Chapter 3

Objectives, Tasks and Analysis Criteria

Thus far, this paper includes a description of the JWCA process and its' influence in military affairs. Analysis of the existing structure and development of options will follow a five step process that highlights the establishment of a USAF-JWCA Support Structure.¹

Step 1) Define Structure Objectives: These broad objectives are defined in this chapter and apply equally to all the options developed in this study.

Step 2) Determine Support Structure Tasks: This step is an extension of Step 1. The previously developed objectives are defined by subordinated tasks.

Notes

¹Jay R. Galbraith, *Designing Organizations: An Executive Briefing on Strategy, Structure, and Process* (San Francisco: Jossey-Bass Publishers, 1995), 11-6. I patterned my five development steps after Galbraith's organizational structure development process, though he used a slightly different process. His steps were to develop the organizational strategy, then the structure, then process development, then the personnel requirements and finally the rewards systems. I modified the first two, combined structure and processes and deleted the last since rewards are beyond the scope of this thesis.

Step 3) Develop Criteria for Analyzing Structure Options: A set of organizational effectiveness criteria is developed to allow comparison and contrast of the organizational structure options.

Step 4) Develop Organizational Structure Options: This step develops and analyzes various USAF organizational structure options including the existing structure using the effectiveness criteria developed in Step 3. Each option includes the location of decision makers, department compositions, interaction with other organizations, and task assignments. Step 4 is covered in Chapters 4 and 5.

Step 5) Develop Personnel Requirements: Finally, in Chapter 6, the skills required for the USAF Action Officers (AOs) assigned with day to day interface in the JWCA process are investigated. Areas covered include training and experience prerequisites, assignment policies, and developing recommendations applicable to all of the organization options.

Defining USAF-JWCA Support Structure Objectives

As discussed above, this step consists of defining the objectives of the USAF structure to support the JWCA process. Recall, the JWCA exist primarily to assess warfighting capabilities of the US military and provide recommendations for improvement of those capabilities to the JROC. The USAF-JWCA Support Structure will serve as the focal point for USAF inputs into JWCA team assessments. In addition, the structure should have primary responsibility for ensuring the USAF has the proper capabilities, strategy, and doctrine for gaining and maintaining a seat at the table of joint operations. It must ensure the capabilities encompassed in meeting the defined long

range vision also match joint needs and provide the bridge between JWCA objectives and USAF capabilities. This is more involved than just serving as information conduits to the joint and service staff. Given these functions, USAF-JWCA Support Structure must meet the following objectives:

Objective 1) Ensure USAF capabilities, strategy, and doctrine are accurately represented in the JWCA process.

Objective 2) Provide USAF leaders tasked with direct interface in the JWCA/JROC process with sufficient information to meet their JRB and JROC responsibilities.

Objective 3) Guarantee existing and future USAF capabilities enhance joint warfighting capabilities and requirements.

While Objectives 1 and 2 are accurate depictions of the objectives for the existing structure,² Objective 3 is an expansion of responsibilities that will prove controversial and hardest to meet. It implies the JWCA Support Structure should also ensure the USAF fits into and enhances the overall US military as an integrated joint warfighting machine--to review and assess USAF capabilities as an integrated “system of systems” and determine how it fits into an overall joint “system of systems.”³ In addition, meeting Objective 3 provides a preemptive assessment of USAF capabilities, setting the stage for more favorable JWCA assessments.

It is important to realize the different implications between the first two objectives and the third with respect to organizational structure. The first two are heavily dependent

Notes

²Based on multiple interviews by the author.

³Admiral William A. Owens, “The American Revolution in Military Affairs,” *Joint Force Quarterly*, no. 11 (Winter 1995-96): 37.

on the day to day information flow of a staffing process that requires accurate and timely communication--typically improved by simplified coordination lines and chains of command. The third goes much deeper to determining warfighting requirements, assessing capabilities, and verifying these match up with future investments. It means ensuring that all involved are working from the same vision. Doing so is not as dependent on day to day communications, but with long range clarity of direction to all involved. Meeting Objective 3 requires an organization that allows this strategic vision to permeate, clearly, throughout the organization. There is no guarantee that a structure meeting one objective will also meet the other two.

Defining Support Structure Tasks

As discussed above, tasks are the distinct duties which flow from the overall objectives and are assigned to particular organizations in the structure. The following tasks are defined for the USAF-JWCA support structure.⁴

Task 1) Prepare the VCSAF for JROC meetings.

Task 2) Prepare the USAF JRB representative (presently the XOJ) for JRB meetings. The JRB can resolve an issue, recommend it go forward to the JROC, or send it back to be further staffed by the action officers.

Task 3) Develop, coordinate, and respond to requests for information from the JWCA teams.

Notes

⁴Tasks 1-4 were confirmed as tasks for the existing USAF-JWCA Support Structure through multiple interviews with Air Staff and Joint Staff personnel. Tasks 5 and 6 are an expansion, as described in the text.

Task 4) Communicate JROC results and trends to the Air Staff, USAF leadership, and appropriate USAF officers at the MAJCOMs and CINC staffs. This means maintaining highly functional communication links to all the players. While communicating decisions is self explanatory, communicating trends is not. As an example, if a specific performance parameter⁵ was mandated by the JROC to apply to the Joint Standoff Weapon, the Joint Standoff Attack Missile, and the Joint Direct Attack Missile, it will most likely be applied to all future new tactical weapons requirements also. This is similar to a Supreme Court ruling that filters down to influence all lower court rulings.⁶

Task 5) Assess the USAF warfighting capability, planning, programming, doctrine and strategy with respect to ability to support joint warfighting requirements, both present and future. This task provides a JWCA-like capacity for an “independent” assessment. The task is made difficult just by the large number of organizations directly and indirectly involved plus the multiple joint and service processes interleaved together. The task for the USAF-JWCA Support Structure is to assess USAF warfighting from a top level perspective while taking all this swirling mass of activity into account.

Task 6) Develop USAF capabilities to meet future Joint Staff initiatives. The Joint Staff has increasingly used the JWCA teams to support other efforts such as the QDR

Notes

⁵The official term is Key Performance Parameter (KPP), those parameters a system must meet to be considered ready to pass from one acquisition phase to another.

⁶Lt Col Robert Dorsey, Assistant Division Chief for JROC Issues and Actions (XOJR), interviewed by author, 17 Mar 1997.

and DAWMS. The USAF-JWCA Support Structure should have the same responsiveness as the Joint Staff to support these efforts, and even be able to perform similar functions for USAF only efforts.

Tasks 5 and 6 are new for the USAF-JWCA support structure, but not new to the Air Force. Assigning these tasks to the support structure is critical to meeting Objective 3-- Ensure existing and future USAF capabilities enhance joint warfighting capabilities and requirements. Such a structure would be used to better synthesize support of joint requirements while reflecting a belief in the need for an Air Force level assessment on par with the JWCA's. At present, this internal assessment process is disjointed; mostly separated between the MAJCOMs, XP and XO.

With the objectives and tasks developed, it is now necessary to develop effectiveness criteria for evaluating organizational structure options. The existing structure will be evaluated with the developed criteria then used as a baseline for comparison to new options.

Organizational Structure Effectiveness Criteria

For this paper I will use a framework based loosely on Paul E. Mott's construct where he measures effectiveness of an organization by three standards: productivity, adaptability and flexibility.⁷ Mott's standards are used as a framework to develop criteria for measuring effectiveness of the proposed options.

Notes

⁷Paul E. Mott, *The Characteristics of Effective Organizations* (New York: Harper & Row, Publishers Inc., 1972): 20. Mott's construct was used since it was specifically developed for designing new organizations for increased productivity. For Mott, organizational productivity is determined by how efficiently an

Criterion 1) Does the option enhance the USAF-JWCA Support Structure AO's access to the VCSAF and the XOJ to coordinate issue responses, prepare each for their respective meetings and get their inputs on upcoming issues? No matter what is fed to the Joint Staff through the JWCA process, these two flag officers are the most powerful USAF representatives in the process, so assured access to both will improve preparations.⁸

Criterion 2) Does the option improve the ability of the USAF-JWCA Support Structure AOs to coordinate staffing issues, responses and results with the Air Staff, Secretariat, Joint Staff and MAJCOMs? The staffing process depends on simplified lines of communication and coordination. It also works better when AOs have sufficient leverage (directly or indirectly) to ensure others respond to taskings in a timely fashion. Meeting the criteria requires the AOs be positioned to optimize communication links, or even better, to enhance their influence in the Joint Staff decision process.

Criterion 3) Is the USAF-JWCA Support Structure better able to coordinate the results of their efforts with other major initiatives and processes? The direction of

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organization turns out a product. Criteria 1 and 2 are my measures for productivity. Mott defined adaptability as an organizational characteristic related to how well the structure can adapt to new tasks. I developed Criteria 3 and 4 as measures of adaptability. Finally, Mott perceives a flexible organization as one that can handle sudden workload increases. I developed Criterion 5 as my measure of flexibility.

⁸There is an inherent implication in this criteria that direct access is better. This implication is reasonable since the existing process already allows the AO to bypass the chain of command to go direct to the VCSAF and XOJ, with backbriefs to the lower commanders after the fact. The criteria is set up to determine if the existing ad hoc process can be organizationally solidified.

the Air Force will remain in a state of constant flux for the foreseeable future. At present, an AO has to consider the effects of Joint Vision 2010, the USAF Vision of Global Engagement, the on-going QDR, the Long Range Plan, and various other processes for guidance. This criteria is designed to allow determination of whether the organizational structure being evaluated is better set up for gathering and maintaining insight into these on-going shifts in direction.

Criterion 4) Does the option improve the USAF's ability to comprehensively assess effectiveness of USAF warfighting capabilities? To be useful, the assessment needs to be independent of functional biases, and capable of considering the integration of USAF capabilities with other services' systems and doctrine. The assessment also needs to consider both present and future capabilities and have sufficient access to decision makers to ensure results carry suitable leverage.

Criterion 5) Is the USAF-JWCA structure better able to anticipate, participate, and influence major joint initiatives? Major initiatives such as the QDR and DAWMS appear to be the norm for at least the near future. Given their joint interface, the USAF-JWCA support AOs have a unique view and provide a valuable resource for the initial stages of supporting a new initiative.

Table 1 provides a summary of taskings and effectiveness criteria and how the two are related to each other. As the table shows, the first three criteria measure the ability to complete Tasks 1 through 4--how productive the structural option will be. Criterion 4 measures the adaptability of the option in completing Task 5. Criterion 5 is designed to measure the flexibility of the organization in order to be proactive and complete Task 6.

Table 1: Task To Criteria Summary

USAF-JWCA Support Structure Tasks	Applicable Effectiveness Criteria
<p>Task 1: Prep the VCSAF</p> <p>Task 2: Prep the Director for Joint Matters</p> <p>Task 3: Respond to JWCA requests for information.</p> <p>Task 4: Communicate results</p>	<p>Criterion 1: Does the option enhance the USAF-JWCA Support Structure AO's access to the VCSAF and the XOJ to coordinate issue responses, prepare each for their respective meetings and get their inputs on upcoming issues?</p> <p>Criterion 2: Does the option refine the ability of the USAF-JWCA Support Structure AOs to coordinate staffing issues, responses and results with the Air Staff, Secretariat, Joint Staff and MAJCOMs?</p> <p>Criterion 3: Is the USAF-JWCA Support Structure better able to coordinate the results of their efforts with major initiatives and processes?</p>
<p>Task 5: Assess USAF capabilities</p>	<p>Criterion 4: Does the option improve USAF ability to comprehensively assess effectiveness of USAF warfighting capabilities?</p>
<p>Task 6: Be proactive to joint initiatives</p>	<p>Criterion 5: Is the USAF-JWCA structure better able to look long range and anticipate major joint initiatives, participate in the increased workload without negative effect on day to day operations, and influence the direction of the initiative?</p>

With the criteria developed for comparing organizational structure options, it is now time to analyze the options. The following chapter will describe and analyze the existing

USAF-JWCA Support Structure. The chapter after will then develop new options and compare those to the existing structure.

Chapter 4

Existing USAF-JWCA Support Structure

Confluence (kän' floo ans): a coming together as of people; crowd; throng¹

Given the JWCA's act as an information conduit for the JROC, then the USAF AOs charged with interacting with the Joint Staff are the information conduits between the JWCA teams and the rest of the Air Staff. This role requires coordinating and consolidating inputs from a large number of organizations, a task that is neither simple nor orderly. This chapter describes and analyzes the existing structure and sets the stage for developing other structure options.

Before delving too deep into the Air Force Support Structure it is important to realize how interconnected the JWCA process and the Support Structure is to a number of other processes. The USAF-JWCA Support Structure exists at the confluence of many processes, communications lines, and coordination efforts. At the Air Staff level, the JWCA Support Structure has ties into the Joint Strategic Planning Systems (JSPS), the

Notes

¹David B. Guralnik, ed., *Webster's New World Dictionary of the American Language, Second College Edition* (New York: Simon and Schuster, 1984), 298.

Planning, Programming and Budgeting System (PPBS), the Modernization Planning Process (MPP), Long Range Planning (LRP), the Air Force Corporate Structure (AFCS), and support to the “Tank” sessions with the Joint Chiefs of Staff.² This interconnectedness greatly complicates any support structure developed.

Existing Support Structure Description

Air Staff JWCA inputs were, until recently, coordinated by the Joint Requirements Oversight Council Division of the Directorate of Operational Requirements (AF/XORJ). With the Air Staff reorganization, effective 1 January 1997, this function has been transferred to the newly formed Joint Matters Division (AF/XOJ) under the command of Major General Charles J. Wax. Figure 3 shows the old Air Staff organization while Figure 4 shows the new structure.³

Notes

²To limit the scope of this paper, it is assumed the reader has a working knowledge of the JSPS and the PPBS since both these DoD wide processes and information is readily available. The same is assumed for the MPP since it is an Air Force-wide process. For a complete description into the history and status of the LRP, see Maj Jerry L. Gandy, *The Air Force Long Range Planning Organization: Speaking With One Voice?* (master’s thesis, School of Advanced Airpower studies, June 1997). Finally, since the AFCS is primarily an Air Staff process, a limited description is provided in Appendix A.

³“Air Staff Reorganization,” *Airman* 41, no. 1 (January 1997): 46-7.

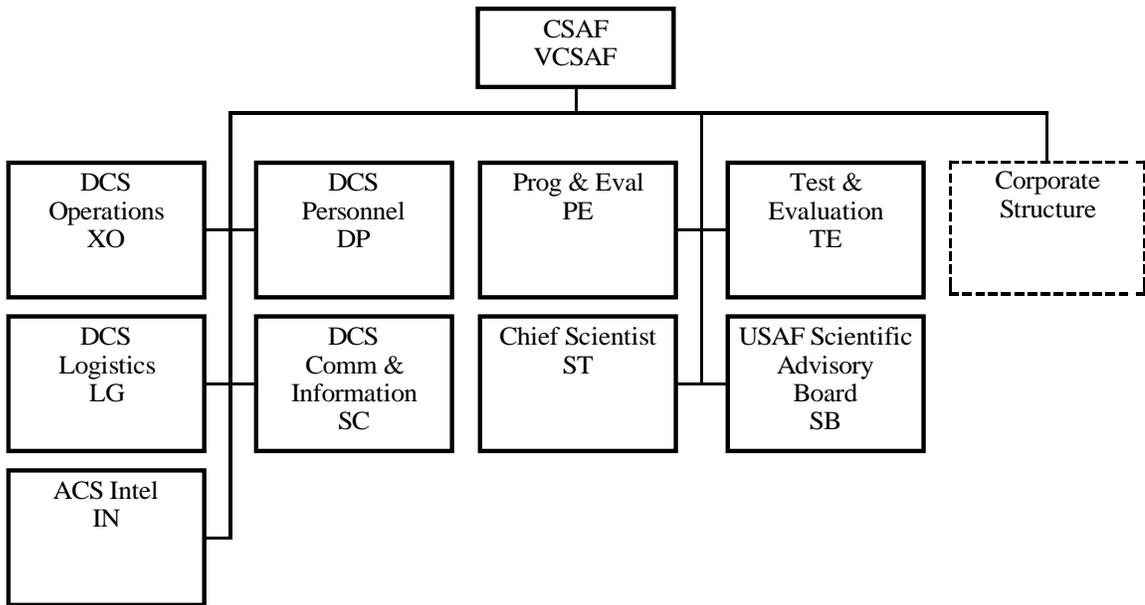


Figure 3: Previous Air Staff Organizational Structure

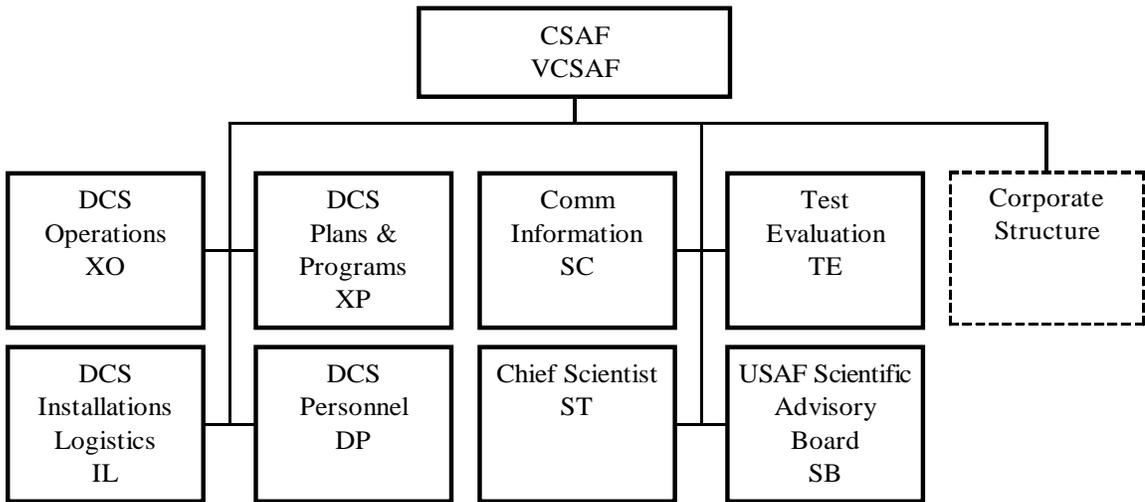


Figure 4: New Air Staff Organizational Structure (as of 1 Jan 97)

The most significant changes with respect to the Air Force interface in the JWCA process was the reorganization of the Deputy Chief of Staff for Operations (AF/XO).⁴ Figure 5 shows the new XO organization, including the breakout of XOJ. As shown, XOJR, headed by a full Colonel, coordinates responses to JWCA issue questions for the Air Force, as well as transmitting JROC data to the Air Staff. Only XOJR is specifically tasked with JWCA and JROC issue resolution within the Air Force. The Director of Joint Matters (XOJ) is the primary point of contact for resolving all joint matters ranging from JWCA issues to decisions in the “Tank.”⁵ This makes it easy to see the Air Staff changes with respect to joint matters. Previously, JROC/JWCA support fell under the Director of Operational Requirements (XOR), tasked primarily with requirements development while “Tank” support fell under the Director of Operational Plans (XOX). To bolster Air Staff focus on joint matters, XOJ was broken into two divisions; XOJP, supporting “Tank” inputs, and XOJR, supporting JROC and JWCA efforts. As General Gregory S. Martin, commander of XOR at the time of the reorganization stated;

Notes

⁴In the language of the Pentagon, the general in charge of XO, the Deputy Chief of Staff for Operations (DCS OPS), is called the “dcss-ops.” Each of the services have a designated DCS OPS, with one consistent task, to serve as the service representative to the DCS OPS Group, the board tasked with filtering issues for the Joint Chiefs of Staff. The JRB is patterned after this group.

⁵Perry M. Smith, *Assignment Pentagon--The Insider's Guide to the Potomac Puzzle Palace* (McLean, Va: Brassey's, 1993): 122. “The Tank is actually a room where the Joint Chiefs of Staff meet. According to folklore, the name ‘Tank’ originated during World War II. At that time, a forerunner of the JCS, the Combined Chiefs, met in the basement of the Public Health building. While entering through a narrow hallway with hanging lights, one of the generals said he felt like he was entering a tank. The name stuck.”

“As we begin to refocus our approach to working Air Force requirements, we are also working to maintain our focus on Joint requirements through the transition. A new directorate for Joint Matters (XOJ) is being formed for the express purpose of catering to the many and varied joint functions and forums which are beginning to proliferate throughout the Pentagon and outside the beltway.”⁶

He goes on to provide a more complete description of XOJ functions:

“It will be the primary function of the new XOJ to function as the Air Force voice in these Joint forums, maintaining the link not only to Air Force requirements, but to other key elements - policy, operations, plans, and budgeting - to help the Air Force maintain a balanced perspective on USAF needs in the joint environment of the JROC.”⁷

Notes

⁶Maj Gen Gregory S. Martin, Director of Operational Requirements (AF/XOR), letter, subject: The JWCA Process Today and Tomorrow, n.d., received January 1997, 1.

⁷Maj Gen Gregory S. Martin, Director of Operational Requirements (AF/XOR), letter, subject: The JWCA Process Today and Tomorrow, n.d., received January 1997, 2.

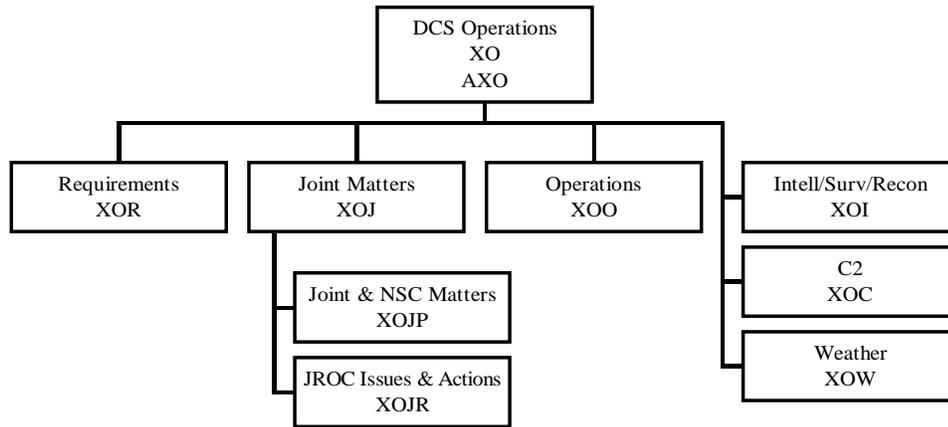


Figure 5: New DCS for Operations Organizational Structure

The reorganization changed the location and identity of several USAF actors tasked with various levels of interaction in the JWCA process. Figure 6 shows the existing USAF-JWCA Support Structure including the offices directly involved in the USAF-JWCA interface, as well as command and information links between all of the players. The decision makers are the VCSAF as the USAF representative on the JROC and the XOJ as the JRB representative. XOJR AOs receive and transmit information in their command structure, the Joint Staff, and throughout the Air Staff and Secretariat. It is worth noting that the Secretariat primarily enters this process at the AO level.

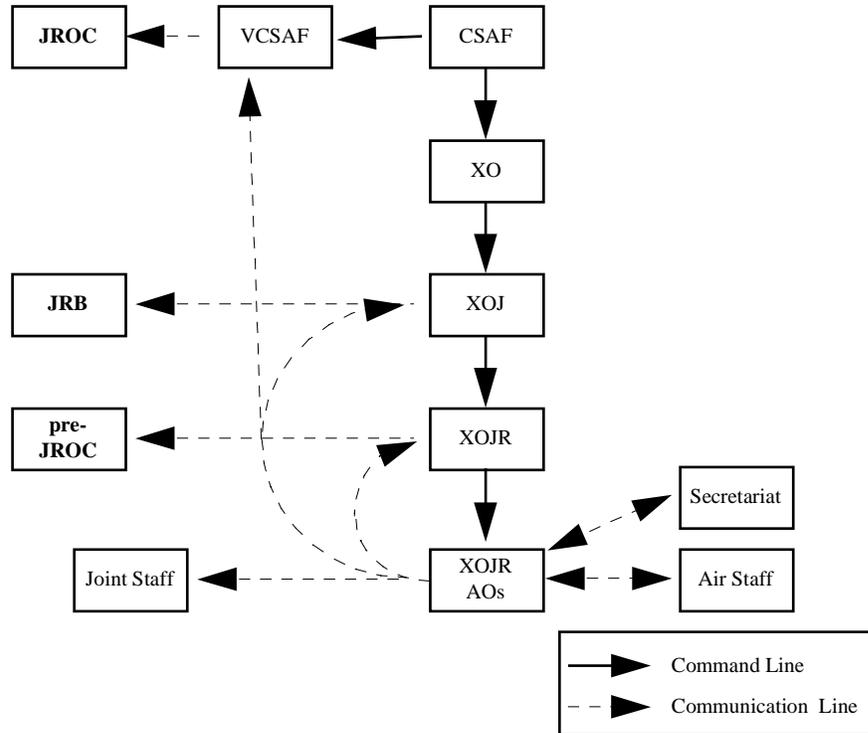


Figure 6: Communication and Command Lines for JWCA Interface

The assignment of XOJ under the Deputy Chief of Staff for Operations (XO) can be traced to two primary reasons:⁸

- 1) To maintain a close relationship between XOJ and the Director for Requirements (XOR) by keeping the two organizations under the same deputy. USAF requirements development and validation is coordinated by XOR.⁹
- 2) To keep all major Joint Staff interaction under the same deputy. Support for the CSAF for “Tank” meetings funnels through the XO, the USAF representative on the

Notes

⁸Maj Gen (sel) Charles J. Wax, Director of Joint Matters (XOJ), interviewed by author, 28 January 1997; and, Lt Col Robert Dorsey, Assistant Division Chief for JROC Issues and Actions (XOJR), interviewed by author, 27 January 1997.

⁹“Air Staff Reorganization,” *Airman* 41, no. 1 (January 1997): 46.

Operations Deputies (DCS OPS) Group. Since the new XOJ division includes the AOs supporting both processes, keeping the two together improves coordination between both information chains.

Each AO assigned to XOJR represents the Air Staff on at least one JWCA team, and have three primary duties: develop responses to JWCA team requests, prepare the XOJ and the VCSAF for JRB and JROC meetings respectively, and keep the Air Staff informed of JROC actions. Both the JROC and JRB meet twice per week for approximately four hours and both also visit the unified commands twice per year to discuss issues.¹⁰ For these three functions, the AO has to seek out responses from a myriad of Air Force organizations and then integrate those responses into a single, coherent USAF position.

The AOs primary interface with the rest of the Air Staff and Secretariat is through the USAF version of the JWCA teams, what will be referred to as the USAF-JWCA support teams. Each team is headed by an O-6, the JWCA team chief, from one of several Air Staff or Secretariat directorates. Figure 7 shows the nominal set up of a USAF-JWCA support team. As portrayed, the AOs deal with multiple two and three letters, as well as the Secretariat, primarily SAF/AQ and SAF/FM. The team chief is responsible for ensuring the XOJR AO gets the support needed for meeting JWCA support tasks. Support by the team chief to the AO has proven heavily dependent on the team chief's

Notes

¹⁰These trips were curtailed for the most recent semi-annual round due to QDR efforts taking so much emphasis. Lt Col Suzanne Vautrinot, J8/RAID, interviewed by author, 8 January 1997; and Maj Stephen Tanous, AO for XOJR, interviewed by author, 17 March 1997.

whims. Some are more involved than others.¹¹ Interaction with the Corporate Structure is limited at the AO level though some of the team leaders are also panel and Integrated Product Team (IPT) members.¹²

Notes

¹¹Maj David Bellamy, XOJR AO, interviewed by author, 28 March 1997; and Maj Christopher Jones, ACSC student and former XORJ AO, interviewed by author, 18 November 1996; and Brig Gen Ronald Henderson, Deputy Director of Operational Requirements, briefing for Corona '96, subject: Joint Requirements Oversight Council (JROC)--Corona Top '96, 20 April 1996.

¹² Lt Col Robert Dorsey, Assistant Division Chief for JROC Issues and Actions (XOJR) , interviewed by author, 29 January 1997; and Mr. Jake Henry, Associate Director of Programs and Evaluation (XP), interviewed by author, 29 January 1997; and Maj Fran Keenan, Programmer in XPX, interviewed by author, 26 March 1997; and Maj Denise Ridgeway, Programmer in XPXP, interviewed by author, 26 March 1997; and Brig Gen Ronald Henderson, Deputy Director of Operational Requirements, briefing for Corona '96, subject: Joint Requirements Oversight Council (JROC)--Corona Top '96, 20 April 1996. There were significant differences of opinion as to the level of interface between the JWCA-Support process and the Air Force Corporate Structure (AFCS). At the action officer level, Lt Col Dorsey pointed out that they had almost no interface with the AFCS. Majors Keenan and Ridgeway confirm the programming link to the joint process was also limited. Mr. Henry on the other hand, thought such ties were considerable and on-going, while Brig Gen Henderson's slides also showed a strong tie between the IPTs and the JWCA Points of Contact.

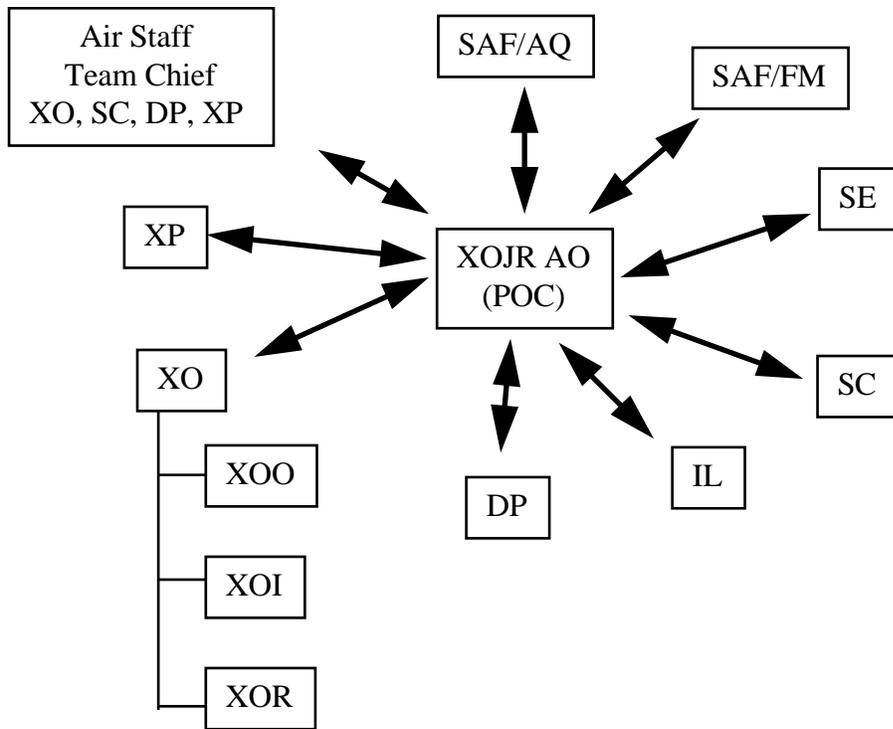


Figure 7: XOJR Interface with the Air Staff and the Secretariat

Preparation for JRB and JROC meetings typically requires developing an issues book with short (1-2 page) papers covering background, USAF position, other services' positions, significant disagreements, and anything else useful to the general officer representing the Air Force. The final step may be face-to-face meetings with the general to pre-brief him on the issues. Many issues also require pre-briefs to each colonel in the chain of command. Typically, the responsible XOJR AO will attend all applicable issues related meetings, taking other Air Staff points of contact as required. Appendix B includes a description of an existing program and a summary of XOJR actions to support that program over the past year.

This existing structure as defined above, can now be analyzed with respect to the effectiveness criteria.

Analysis of Existing Support Structure

For Criterion 1, the answer is mixed. This existing structure works well at providing the XOJR AOs access to the VCSAF and the JRB representative but suffers from too many layers of management between the AO and the JRB representative (2), and the VCSAF (4). So far, access to both by the AOs has been excellent though this may be due more to the personality of the VCSAF than a strength of the organizational structure. Assignment of a Major General full time to resolve joint issues is a strong plus and should remain for all options.

For Criterion 2, how well are the AOs able to develop and coordinate responses to JWCA issues, the answer is similar to the first criterion--mixed. The communications lines are complicated. You might expect the primary interaction for XOJR to be with the XO staff given their placement in this organization, but the XOJR AOs are constantly working with personnel all over the Air Staff, the Secretariat and the Joint Staff. Therefore, the existing structure leads to complex coordination requirements for the AOs, an obvious problem. However, several interviews pointed out XOJR's efforts are eased by the clout gained from two factors--most of their output ends up in front of the VCSAF, and they now have a Major General dedicated to joint matters. The former is inherent to the process and not to the structure while the latter has already been noted as a strong plus. XOJR also includes three O-6s, two added during the recent reorganization. The responsibilities of the added two, currently titled the JROC Integrator and the JWCA Integrator, are still undefined, so they could either provide added strength to the office or end up being another management layer.

Criterion 3 evaluates whether the XOJR AO can include the effects of major initiatives in their JWCA process inputs or when performing assessments. Past experience suggests this option will not meet the criteria. XOJR is insufficiently manned to spend sufficient time considering external factors such as doctrine changes, planning updates and others. In addition, the overlapping requirements definition responsibilities between XO and XP, the fluid interface with the Air Force Corporate Structure, and the recent USAF long range planning efforts, all lead to conflicting guidance for even a sufficiently manned JWCA support structure.

The present organizational structure is not capable of performing independent assessments (Criterion 4). XOJR does not have the personnel to do so, nor the organizational structure. To complete the assessments properly, XOJR would need to be neutral, while gaining access to all aspects of the Air Staff, Secretariat, and MAJCOMs. Using the Corporate Structure would take advantage of its' extensive interaction with a large portion of the Air Force, however, XOJR ties to the AFCS are nearly non-existent. Increasing such ties are feasible, but the cross-organizational inputs are still sub-optimized since XOJR would still be located in a deputation with only partial responsibility for the areas an assessment would cover.

This option also does not meet Criterion 5. The current organizational structure is almost entirely reactive at the AO level to requests from the Joint Staff, and insufficiently manned to handle any workload increases. Preparations for two JRB and two JROC meetings per week allow little room for proactive planning. The saving grace for this structure is, at least for the current six month cycle, the Joint Staff is so focused on the QDR that all JWCA work has nearly ground to a halt. Increasing the number of XOJR

personnel might improve ability to plan ahead but organization placement is still weak for the same reasons as discussed for Criterion 4.

In summary, the recent reorganization took a simplistic, but inadequate, approach to improving USAF interface with joint processes by standing up a new division under a pre-existing deputy. The primary advantage of this new structure was inclusion of a Major General to control all USAF inputs to major joint issues. However, he still resides in an organization with vastly diverse taskings and is assigned responsibilities that go well beyond his deputation. With the decreasing defense budget and increasing emphasis on jointness, USAF-JWCA support requires a much more radical organizational change to decrease structure oversight while improving flexibility and responsiveness.

Chapter 5

Development of Organizational Structure Options

As shown earlier, the Air Staff reorganization of 1 January 1997 left room for improvement in the USAF-JWCA Support Structure. Three options for modifying the existing structure were developed for this study. Option 1 creates a Deputy Chief of Staff (DCS) for Joint Matters. Option 2 established a Direct Reporting Unit with responsibility for JROC and JWCA interface, as well as coordinating USAF requirements development. Finally, Option 3 reassigned the JROC and JWCA interface efforts and the requirements development tasks to the Deputy Chief of Staff for Plans and Programs (XP). Each is described and analyzed using the existing structure as a comparison baseline.¹

Option 1: Create Deputy Chief of Staff for Joint Matters (XJ)

This option creates a DCS for Joint Matters (XJ) and disbands the Director for Joint Matters (XOJ). The Deputy will remain a Major General and continue as the USAF representative to the JRB. The new organization retains the present responsibilities

Notes

¹These options were primarily developed by the author, though Options 1 and 3 have been at least minimally studied by the Air Staff during the recent reorganization.

entrusted to XOJR for day to day interface with the JWCA process. However, XOJP “Tank” support will be split off to remain within XO. Figure 8 shows the organizational makeup of the Air Staff with the addition of the new DCS.

One new function assigned to the organization centers around developing an independent assessment capability for the Air Staff. This new organization must have sufficient manpower to perform assessments under direct control of the Air Force Council. It also requires sufficient personnel to assign an AO to each Air Force Corporate Structure panel in order to use the IPTs and panels for coordinating USAF inputs to the JWCA.

The assessment function is not new, similar functions are carried out in various organizations all over the Air Staff and Secretariat. The idea is to do the assessments independent of other functional organizations. Assessment teams will be tasked by the Air Force Council, much like the JWCA tasking process, to assess strictly defined issues that can be either internal or external to the USAF. Issues are not limited to JWCA taskings but can be anything the Council wants studied from the purview of the Air Force mission, capabilities, core competencies, and future plans. Assessment teams will deal directly with the Air Force Corporate Structure panels to mirror the panel mission area focus.

Finally, the new deputate will serve as a quick response team for “out of the ordinary” initiatives such as future QDRs or DAWMs until a full up team is created for the long term effort.

Several areas will not change. The existing functions and responsibilities of XP and XO, except for XOJ, stay the same. Functioning of the Modernization Planning Process,

the Corporate Board, planning and programming efforts, and the requirements process will also not change. The major shift though, is the Air Force Council now has the ability to perform separate assessments of the various process outputs to gain an alternate view. This capability is similar to the service the JWCA teams provides for the JROC.

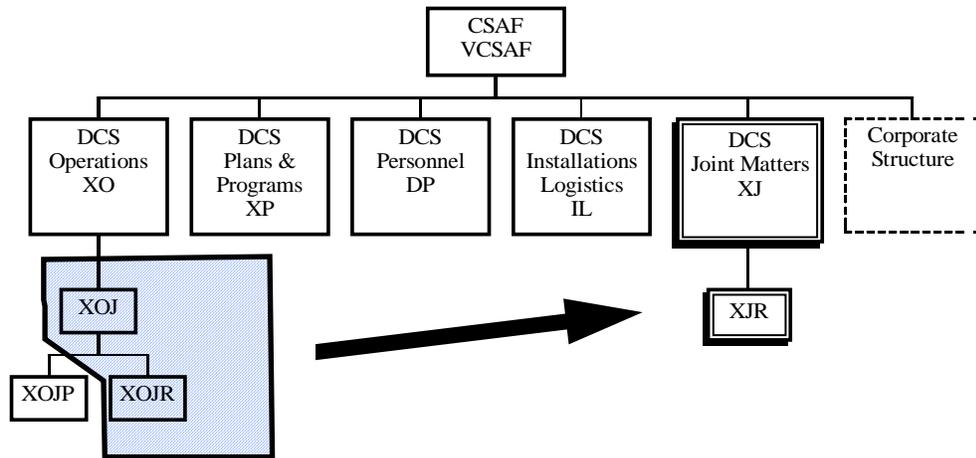


Figure 8: Option 1 Organizational Structure

Analysis of Option 1

Chapter 4 described two reasons for assigning XOJ to the XO; the desire to maintain JROC support and the AF requirements process under the same DCS and a desire to keep the “Tank” support AOs and the JWCA support AOs under the same DCS. While both are valid, they are not absolute. Interface between XOJ and XOR is not extensive. The same applies to interaction between XOJP, the office tasked with coordinating “Tank” responses and XOJR, the one tasked with coordinating JWCA responses. While maintaining XOJP functions under the XO seems necessary, the case for XOJR is not as strong. The difference between the two processes is considerable and overlap between

the “Tank” and the JROC appears small. One source close to the JWCA process suggested it was at most ten percent.² Splitting apart these two organizations may cause a loss of synergy on those few overlapping areas, but were XOJR moved it appears unlikely that either relationship would significantly change. One important consideration though, is that any significant organizational changes would further disturb an already perturbed system.³

With respect to Criterion 1, at least in the case of preparing the Vice Chief, this option is an improvement over Option 1 since the number of management layers is decreased by one. As mentioned before, the AOs in XOJR believe they already have sufficient access to the Vice Chief with the existing organization. Apparently they bypass the XO for routine matters to the Vice Chief, and backbrief the XO after the fact. So, Option 1 may only reduce the amount of backbriefs. On the other hand, the amount of latitude given to the XOJR AOs is dependent on the XO and subject to change with his replacement.

For Criterion 2, whether the XOJR Action Officers are better able to coordinate responses to JWCA issues, the answer is a qualified yes. The promotion of XOJ to directorate level status should provide the organization with enhanced clout. It would

Notes

²Lt Gen David McCloud, Director for Force Structure, Resources and Assessment (J8), interviewed by author, 17 January 1997; and Lt Col Suzanne Vautrinot, J8/RAID, interviewed by author, 29 January 1997; and Lt Col Robert Dorsey, Assistant Division Chief for JROC Issues and Actions, interviewed by author, 29 January 1997.

³Multiple interviews with XOJR, XORD, XP personnel confirm that new relationships, coordination processes, and communications lines are still in transition.

also place the JWCA Support Structure in an organization devoted specifically to such actions. The down side is the move away from XO is also away from the JWCA team leaders and the requirements process. The former is not a major issue since interaction with team leaders is sporadic and unstructured. For the latter, interface with the USAF requirements process is more important but still somewhat sporadic. In addition, the increased manning will improve interaction with the Corporate Structure resulting in a better understanding of the requirements, planning and programming processes.

Criterion 3 involves the organizational structure's ability to consider ongoing major USAF efforts for JWCA support and assessments. In this aspect, Option 1 garners its strongest advantage. By moving away from the current operations focus of the XO, the JWCA Support Structure AOs should gain an increased ability to balance short term concerns with the Long Range Planning process specifically, but also with inputs from the other Air Staff and Secretariat directorates. However, it is possible that XOJR personnel would be even more out of the "loop" since they no longer have direct access to the XO organization. Yet, communication with XP should improve through stronger ties to the Corporate Structure, while communications with XO may prove less complicated by the simplified organizational structure.

This option appears to be a significant improvement over the existing structure in the ability to assess USAF warfighting capabilities (Criterion 4). By setting up a separate organization, assessments performed by XJ are more likely to be independent and unbiased. This organizational structure is also more conducive to participating in both the requirements process run by XOR, and the Corporate Structure run by XP, since XJ will not report to either.

Whether the new organization is more proactive to major initiatives (Criterion 5) is determined by the final structure and manning of the organization. As proposed, the additional personnel make success more likely, but even more so, the increased independence of the deputate, the emphasis on interaction in the Corporate Structure, and the improved ability to perform assessments and thereby gain further insight, all allow increased ability to be proactive.

To summarize, this option allows three major things to happen. By cleaning up the communications and coordination lines, day to day staffing for the JWCA Support Structure is improved. Increased independence of the organization allows better, more unbiased assessments. Finally, improved effectiveness of the AOs increases situational awareness of those involved, greatly improving their ability to consider external initiatives and see the big picture.

Option 2: Designate the Joint Matters Direct Reporting Unit

This option is designed to consolidate the USAF requirements process controlled by XOR, and the USAF-JWCA support efforts of XOJ. Both XOR and XOJ will be moved out of the XO to form a Direct Reporting Unit (DRU) reporting to the Air Force Council. Figure 9 shows the organizational setup. The DRU is commanded by a Major General who is also the JRB representative. It will be broken into divisions by core competencies, a mission oriented split. JWCA interface is divided among the divisions. The USAF-JWCA support team chiefs responsibilities will transfer to the new organization.

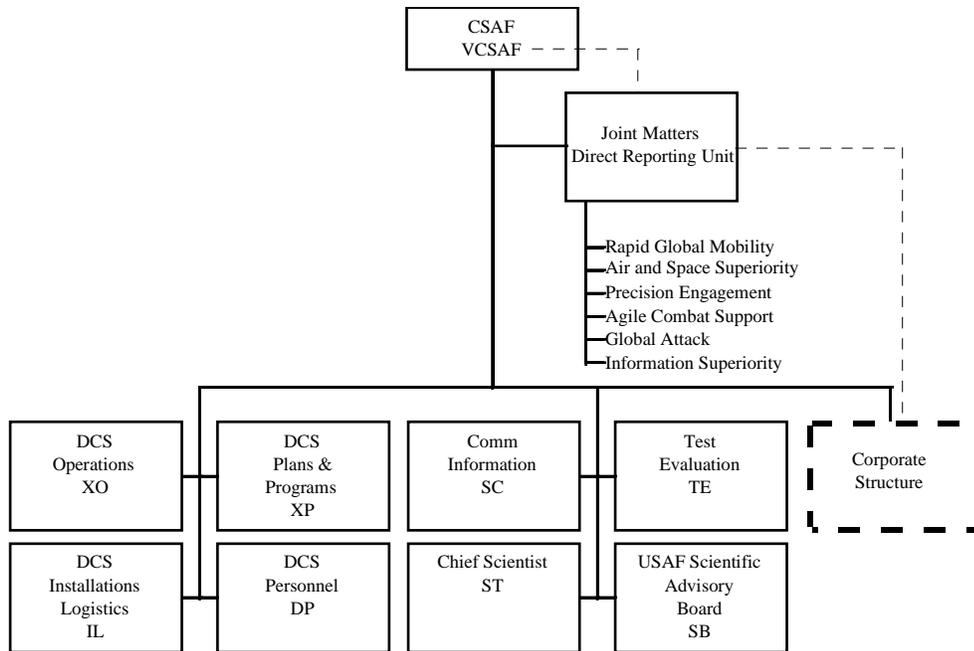


Figure 9: Option 2 Organizational Structure

In addition, the Air Force Corporate Structure panels will be headed by Colonels from this new organization. The primary change to the MPP will be the use of the panels as the primary interface point for the MAJCOMs and their Mission Area Plans. In addition, the organization will be sufficiently staffed to perform independent assessments as discussed above in Option 1 and will task the IPTs and Panels for support as required.

Several areas will not change. The “Tank” support functions of XOJP will remain in XOR while Planning and Programming will remain in XP.

Analysis of Option 2

This option is designed to take advantage of similarities between the USAF requirements process and the JWCA Support Structure by consolidating both under one commander. First, the two processes involve the same organizations. The requirements

process coordinates requirements through the JROC as required. The USAF-JWCA Support Structure answers JWCA questions about requirements and capabilities which then go to the JROC. Both work with similar organizations on the Air Staff, the Secretariat, the Joint Staff, and the MAJCOMs. While this overlap is neither day to day nor item for item, it is significant enough to pull the two processes together.

Second, both processes are similar. The MAJCOMs, as the user of the end product, are the primary sources in developing requirements for warfighting deficiencies.⁴ However, the requirements process is a continual loop that also encompasses long, medium, and short-term planning, programming, current operations, and Joint Staff inputs. If satisfying a requirement costs more than a certain amount, the decision to proceed is made by the JROC, much like contentious JWCA issues are passed on by the JRB.

Finally, there is an added benefit to cleaning up the present staffing processes. At present, developing USAF requirements documents is hampered by redundant inputs. While XOR is tasked with controlling the USAF requirements process, XP is the steward of the Corporate Structure as well as responsible for developing long range plans and POM inputs. This requires coordination. Consolidating these functions with dual control by senior Air Staff and Secretariat leaders should make balancing more feasible.

This option has the same advantages and disadvantages as Option 1 in removing XOJR from XO. The primary differences between this option and the last one involves

Notes

⁴DOD 5000.2-R, *Mandatory Procedures for Major Defense Acquisition Programs (MDAPS) and Major Automated Information Systems (MAIS) Acquisition Programs*, 15 March, 1996; CD-ROM, Defense Acquisition Deskbook, September 1996.

removing the requirements verification and validation process from XO. These differences are emphasized in the discussion below.

For Criterion 1, this option is an improvement over the existing system and Option 1 since the AOs for JWCA and JROC inputs now report directly to the VCSAF, head of the Air Force Council. The coordination requirements for Criterion 2 are also improved over both the previous structures. The increased clout of the XOJR AOs, the cleaner communication lines with the Air Staff and the Secretariat, and the improved access to the Corporate Structure should make up for any loss of access to XO.

Criterion 3 should also be positive as the new structure is located at the cross-roads of many of the other processes. Being a major actor in the MPP, the Corporate Structure, the requirements process, the JROC interface, as well as gaining improved access to the Air Force Board and the VCSAF, this new structure will have improved insight into all the involved players. This is a key point to Option 3. Having more personnel to do better staffing or attend more meetings could be implemented for any of the options. However, taking those same personnel and placing them in an organizational structure at the confluence of so many important processes dramatically improves their ability to study, provide inputs, influence, assess, and consider all these ongoing initiatives and processes. The result should be a much more integrated and synergistic JWCA interface and USAF requirements process.

Integration of the requirements process with JWCA support should substantially improve this new organization's ability to assess Air Force warfighting capabilities (Criterion 4). The new organization is well situated for direct access to the VCSAF, the Corporate Structure, the Air Staff and the Secretariat while maintaining significant

independence. The existing requirements process and the Corporate Structure both include extensive interface with the MAJCOMs, vital to the success of any assessment process.

As discussed above, the placement of this organization will enhance its ability to keep a finger on the pulse of all the major processes that pass through the Air Staff and Secretariat, while working with the Joint Staff on a daily basis. By the nature of such placement, this organization will be much better placed to be proactive in their work efforts (Criterion 5).

Option 3: Move XOJ & XOR to XP

This option is very simply to move the JWCA responsibilities of XOJ and the requirements responsibilities of XOR to XP (see Figure 10). The idea is to consolidate planning, programming, requirements development and joint requirements interface under one organization. The existing requirements interface with the MAJCOMs will transition to match up with the MPP to provide a single process. The USAF-JWCA Support Structure team chiefs will all be XP Colonels. The XO will retain DCS OPS responsibilities and retain control of XOJP for “Tank” support functions. The assessment function will be performed as discussed in Option 2, only now by the expanded XP Deputate.

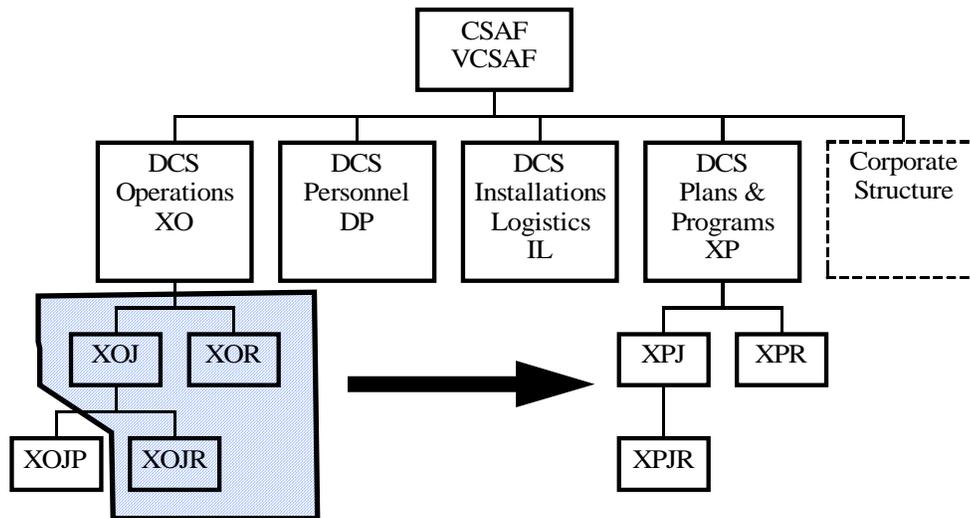


Figure 10: Option 3 Organizational Structure

Analysis of Option 3

This option shows a great deal of potential for bringing together several processes that are presently divided; the requirements process, stewardship of the Corporate Structure, the JWCA support process, and plans and programs. A review of the criteria shows, there are many benefits gained though some apparent weaknesses from the current structure remain. A major concern is the dramatic increase in XP responsibilities could create a superpower on the Air Staff that not only overwhelms the other deputates but also bogs down by being unfocused. It is difficult to predict how well this option would

work but overtasking of the XO was a major factor in the creation of XP during the last reorganization.⁵

This option is neutral with respect to Criterion 1. The number of layers of management to the now XPJ and the VCSAF have not changed. However, it is possible that improved access to the Corporate Structure may lead to wider discussion on JWCA issues resulting in easier coordination with decision makers.

Criterion 2 is also mixed, tending towards positive. Coordination between the requirements process, the Corporate Structure, and Plans and Programs should improve. But there is only slight improvement in coordination with the rest of the Air Staff and the Secretariat and a net loss with the current operations of XO. The negative aspects do not seem to outweigh the positives when compared to the existing structure of Option 1.

This option is a strong improvement in considering other processes and initiatives (Criterion 3). By being placed in an organization that controls so many of the other processes, consideration of those processes should improve. The ability to communicate and coordinate with many of the primary actors should get simpler and quicker.

Assessing USAF warfighting capabilities (Criterion 4) is not changed with respect to the existing structure so no improvement can be expected. Of particular concern is attempting to independently assess areas that are such an intimate part of their organization.

Notes

⁵Gen Ronald R. Fogleman, United States Air Force Chief of Staff, *Commander's Call-Global Engagement*, Pentagon:Headquarters USAF TV Center, 1 hour and 51 minutes, 31 January 1997, videocassette; and Maj Gen John W. Handy, Director of Plans and Programs (XP), interviewed by author, 23 January 1997.

Coordinating, anticipating and participating in major initiatives (Criterion 5) should improve with respect to the existing structure. As discussed above, this organization would control, heavily influence, or at least actively observe the bulk of the major processes. This should increase their ability to be proactive in anticipating changes and new initiatives. The downside is XP could turn out to have its' organizational fingers in too many pies and lose focus, much as XO was accused of before the last reorganization. Also, it could become so insulated from the rest of the Air Staff that interaction with other organizations completely breaks down.

In closing, this option gains a number of advantages over the existing structure by consolidating control of the Air Staff interaction with several major processes. Unfortunately, this level of consolidation may create an extremely large depute with overly expansive responsibilities.

Summary of Organizational Structure Analysis

The existing organizational structure was used as the baseline for comparison and evaluating Options 1-3. The table below provides a qualitative summary of each option with respect to the criteria. The existing structure is given all neutral ratings, then the others are given neutral marks (\leftrightarrow) if considered no change, positive marks (+) if considered better, or negative marks (-) if considered worse.

Table 2: Summary of Options Analysis

	<u>Baseline</u> Existing Organization	<u>Option 1</u> XJ	<u>Option 2</u> DRU= XOJ + XOR	<u>Option 3</u> XPJ & XPR
Criterion 1	↔	+	++	↔
Criterion 2	↔	+	+	+
Criterion 3	↔	++	+	+
Criterion 4	↔	++	+++	↔
Criterion 5	↔	+	+	+

All of the options presented are improvements in some areas with respect to the existing structure. Option 2 shows the greatest improvement, with particular emphasis on access to the VCSAF and ability to assess USAF warfighting capabilities. The primary advantage gained by Option 2 comes from the direct interface with the VCSAF through the Corporate Structure which also gives improved access to most of the major processes on-going at the Air Staff and Secretariat. Also, the combination of the JWCA Support Structure with the USAF requirements development process improves both. However, Option 2 is the most radical, reducing its chances for acceptance.

Option 1 increases the CSAF's span of control though not any great amount. Of more concern is the potential for creating a rump DCS. With a two star in charge of a small deputate, there is a potential for being steamrolled by the more powerful deputies.

Some of this concern should be overcome by XJ's considerable interaction with high ranking officers and the independence of their efforts.

Option 3 is the most conservative change, and has already been kicked around on the Air Staff. If an independent assessment is deemed unnecessary, this option becomes more attractive. However, it still suffers from creating an extremely large and powerful deputy with overly expansive responsibilities.

This chapter analyzed three options for modifying the USAF-JWCA Support Structure using the existing structure for a baseline to compare against. The following chapter covers personnel issues for the USAF-JWCA Support Structure.

Chapter 6

Personnel Requirements

“Without a doubt, the action officer is the most important actor on the Pentagon scene.”

—Major General Perry Smith¹

This chapter completes the five step organizational structure development process by defining personnel requirements for those assigned to the USAF-JWCA Support Structure. It concentrates on making recommendations as to how to staff the XOJR equivalent organization with AOs having the necessary skills, training and experience to complete assigned tasks. As before, the term XOJR is used generically to apply to the office staffed by the AOs with primary responsibility for JWCA and JROC interface. The recommendations made will be applicable to any of the organizational structure options previously defined.

Since this chapter deals exclusively with the XOJR AOs, I will briefly review their function in the USAF-JWCA support process. They are almost entirely information conduits, taking requests for information from multiple sources, and transmitting

Notes

¹ Smith, *Assignment Pentagon*, 73.

information to multiple sources. The AOs work extensively with the Joint Staff, with one XOJR AO estimating that 90% of his meetings were joint.² The addition of the assessment function is, for the most part, an expansion of this information conduit function, only with increased independence in gathering information. The following is a list of subject areas the XOJR AO needs to be familiar with.³

1. The Air Staff and Secretariat staffing process (having a previously developed list of contacts and information sources would help),
2. The JWCA Process, to include how to interact with the Joint Staff, the MAJCOM and CINC staffs, other service staffs, and any of the others in the myriad of players in the JWCA process,
3. The requirements development process,
4. The Planning Programming and Budgeting System (PPBS),
5. The Modernization Planning Process (MPP),
6. The Joint Strategic Planning System (JSPS),
7. USAF, joint, and other services' long range plans and planning efforts,
8. USAF and other services' equipment, especially the interaction of the equipment (what Admiral Owens would call the "System of Systems"),
9. USAF, joint, and other services' doctrine.

The question then is how does the Air Force staff the future XOJR equivalent office with AOs possessing the skills, knowledge and contacts required for successful interaction in the JWCA process?

Previous Experience

The importance of the JWCA process, and the extensive interface with the Joint Staff, make it imperative that XOJR AOs possess at least some of the knowledge base

Notes

²Major Jeffrey Lofgren, Air Command and Staff College Student and former XORJ AO, interviewed by author, 20 November 1996.

³Lt Col Robert Dorsey, Assistant Division Chief for JROC Issues and Actions, interviewed by author, 27 January 1997.

required for the job prior to starting in the position. Presently, most action officer positions require no previous experience, however, the XOJR positions should be filled only by officers who have experience in one or more of the above listed areas. Of prime importance is staff officer experience, very strongly preferably within the Pentagon. As one general officer told me, “I don’t have time to show someone how to find the bathrooms.”⁴ The ability to negotiate through the Pentagon staffing process is not a skill easily mastered and given the importance of the JWCA support process, cannot be trusted to a novice staffer.⁵

Training

No particular education will specifically ensure a better XOJ officer, but several courses would help. Completion of the Joint Officer Phase I Professional Military Education (PME) Course would provide practical exposure to the Joint Planning Process. Several of the Defense Systems Management Courses on the acquisition process would provide an understanding of the PPBS process.⁶ However, none of these courses need be mandatory.

Notes

⁴Maj Gen (sel) Charles J. Wax, Director for Joint Matters, interviewed by author, 28 January 1997.

⁵There was considerable consistency with this recommendation by the people interviewed by the author, including some who had no previous experience and therefore would not have been allowed into their present job.

⁶For more information on available DSMC courses, visit website <http://www.dsmc.dsm/courses>

Recruiting

Several senior officers discussed the effects Goldwater-Nichols is having on the ability to recruit for the Air Staff. Since the emphasis on joint experience has increased dramatically, the air staff is not necessarily getting first pick of officers coming into the Pentagon. With the extreme level of Joint Staff interface, it is beneficial to press for Congressional approval for awarding joint credit (or at least half credit) for selected Headquarters USAF jobs such as those in XOJR. The result would be an increased incentive to come to this organization while improving USAF support of the joint process. In the long run, the Joint Staff would also be strengthened since many of these experienced AOs leave to work on the Joint Staff after one or two years on the Air Staff.

Civilians and Contractors

Presently, the air staff is populated by officers on a 2-3 year tours, though typically AOs are moved after 24 months if for no other reason than burn-out. Several officers mentioned the first 6 months is primarily a learning process. As discussed above, for those whose primary job involves heavy interaction with the Joint Staff, the required knowledge level is even higher. Use of civilians and contractors could provide increased staff continuity particularly in the crucial knowledge of how the staff process works, and who to call for information and coordination. There are pluses and minuses to the use of civilians in any military related job, the discussion of which is beyond the scope of this paper. However, it is worthwhile to at least analyze the utility of increased use of civilians as AOs.

Pentagon Tours of Duty

The need for exposure of our best and brightest to the Pentagon and the staff process can not be overemphasized. The level of decisions and discussions that go on in the day to day operations at the Pentagon can not be duplicated on any other staff. The Air Force has a reputation for encouraging its officers to come to the Pentagon to be involved in the process first hand. This encouragement needs to be continued and emphasized.

Chapter 7

Conclusions and Recommendations

The stated purpose of this paper was to analyze the effectiveness of the existing USAF-JWCA Support Structure to meet defined objectives, and determine whether other options might prove more effective. The Support Structure's assigned objectives and tasks developed were consistent with the present responsibilities except for a requirement to perform USAF-level assessments of service capacity to enhance joint warfighting capabilities.

Before any analysis was feasible, it was important to understand the intricate context in which the Support Structure existed. The JWCA process, as a reflection of its' JROC sponsor, is complex, dynamic and powerful. It involves actors from throughout the DOD. USAF-level support is caught in a confluence of many other processes, not the least of which include development of the budget and of service requirements. The resultant complexity increases the difficulty of solely separating the JWCA Support Structure out for analysis.

Analysis of the existing USAF-JWCA Support Structure found it to be sub-optimal with respect to Action Officer placement to meet both existing responsibilities and the added assessment function. However, there are some inherent problems with changing

from the existing structure. One, it appears to be working, even if sub-optimally. Two, it was only recently created and most of the creators are still in place, so there may be some resistance to change. Finally, three, the Air Staff reorganization is new, and the modified organizational relationships and staffing procedures are still being worked out, so any new changes will disrupt an already perturbed system. However, other options proved more effective.

Option 1, the creation of a Deputy Chief of Staff for Joint Matters (XJ), proved more functional than the existing structure by cleaning up communications and coordination lines. It also increased the independence of the organization to allow better, more unbiased assessments. But, there was a danger of creating a small deputation with insufficient clout to overcome its lack of authority.

Option 2, the inclusion of the JROC/JWCA interface (XOJ) and coordination of requirements development (XOR) into a Direct Reporting Unit (DRU) with strong ties to the AFCS, proved the most viable. It improved coordination and communication lines while providing an environment for independent assessments. It suffers, though, from being the most radical of the options. As such it may prove difficult to sell to Air Staff decision makers.

Option 3, moving XOJ and XOR functions to XP, has the advantage of an established advocacy group on the Air Staff while greatly consolidating many of the Air Staff processes. The main drawback is the creation of a super-organization that could bog down with control of too many processes, much as XO did prior to the reorganization.

Despite the inherent strong support for both the existing structure and for Option 3, Option 2 is the most effective alternative.

Recommendation 1: Create a Direct Reporting Unit with responsibility for controlling the JROC/JWCA support and coordinating the development of USAF requirements.

Success of any of the options is heavily dependent on the quality of the personnel, as is it is for any organization. However, given the increasing power and importance of the JROC/JWCA processes and the complexity of the interface, the USAF must pay special attention to staffing the responsible offices with high quality and experienced personnel.

Recommendation 2: Assign only Action Officers with previous Pentagon staff experience to the USAF-JWCA support office.

No specific training requirements are needed for the AOs but given the importance of the work, and the extensive interaction with the Joint Staff, the USAF should press for Congressional approval of joint staff credit for the officers directly involved in the JWCA process.

Recommendation 3: Request congressional approval for joint staff credit for those personnel directly assigned to the USAF-JWCA Support Structure.

It is difficult to maintain the experience base for supporting this process due to normal military assignments rotation. Full discussion of the use of civilians and contractors as AOs in this process is beyond the scope of this paper, but should be further studied.

Recommendation 4: Explore the use of civilians and contractors as AOs in the USAF-JWCA Support Structure.

The USAF has a strong record of encouraging its' officers to take staff assignments to the Pentagon. The result is a stronger staff and officers with expanded insight into the bigger world of DOD. This encouragement should be continued.

Recommendation 5: Continue to encourage officers to take assignments to the Pentagon staffs.

In summary, while several personnel issues are discussed, the most profound recommendation is the need to break out the requirements process and the JROC/JWCA support from the present structure. With the formation of a Direct Reporting Unit, the Air Force gains an organization more responsive to the multiple processes and initiatives which will drive joint support and requirements development. The new organization also now provides the Air Force Corporate Structure with an ability to independently assess and analyze the Air Force as a whole, much as the JWCA's do for the JROC. This capability will prove valuable in the coming years of decreasing budgets and increasing service interaction.

Appendix A

Air Force Corporate Structure¹

The Air Force Corporate Structure (AFCS) is designed to provide the Air Force with a corporate view for decisions concerning policy and funding issues by horizontally integrating inputs.² In Figure 11, the highlighted AFCS appears as just another suborganization on the Air Staff. However, this figure does not accurately represent the intended AFCS function. It is envisioned not as a standing stovepipe organization, but as a integrative organization for the Air Force. The AFCS involves people from all Air Force levels and provides senior leaders with “corporate” positions on issues.

Notes

¹The author is grateful to Maj Jerry R. Gandy for providing a draft of this appendix from his School of Advanced Airpower Studies master’s thesis. Unless otherwise noted, this appendix is based on Gen Ronald R. Fogleman, Chief of Staff of the Air Force, and The Honorable Sheila A. Widnall, Secretary of the Air Force, *The Enhanced Air Force Corporate Structure: Implementation Plan*, 1 November 1995, 1-25.

²Maj Gen John W. Handy, Director of Plans and Programs (XP), interviewed by author, 23 January 1997.

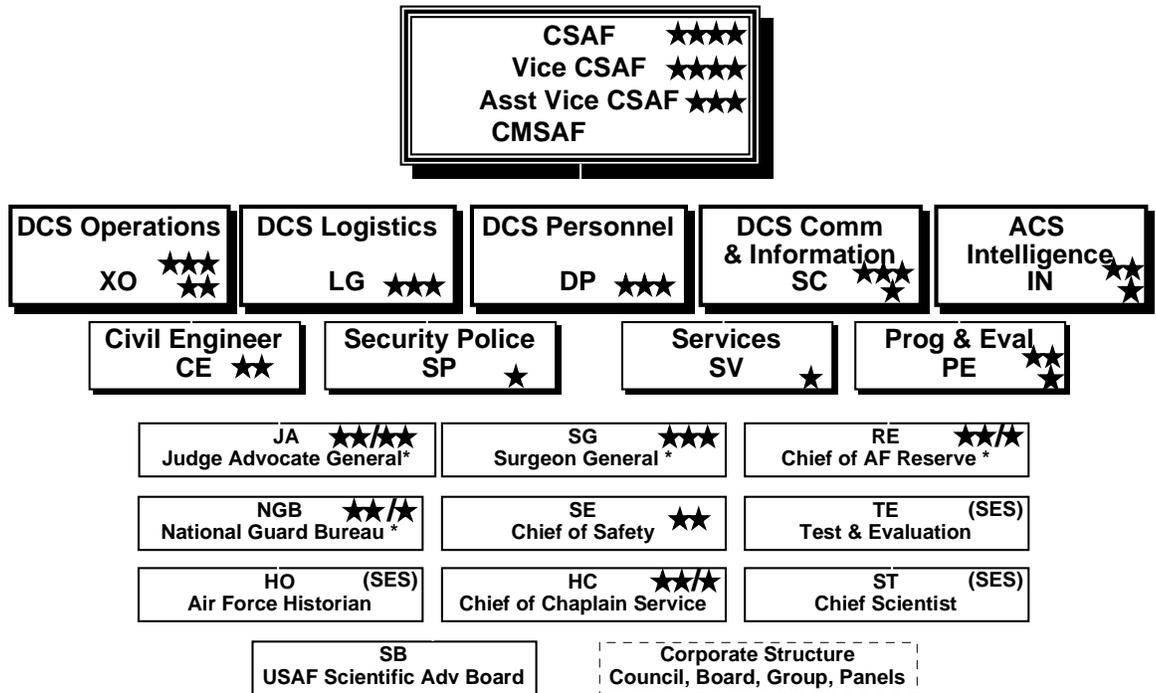


Figure 11: Air Staff Organizational Chart

As structured, the AFCS is a multi-layered system that embraces the analysis and synthesis approach to decision making. There are five layers to the structure (Figure 12). At the top is the Air Force Council, “the final senior forum for corporate review and deliberation of HQ USAF issues.”³

Notes

³ Fogleman and Widnall, *The Enhanced Air Force Corporate Structure: Implementation Plan*, 1 November 1995, 2.

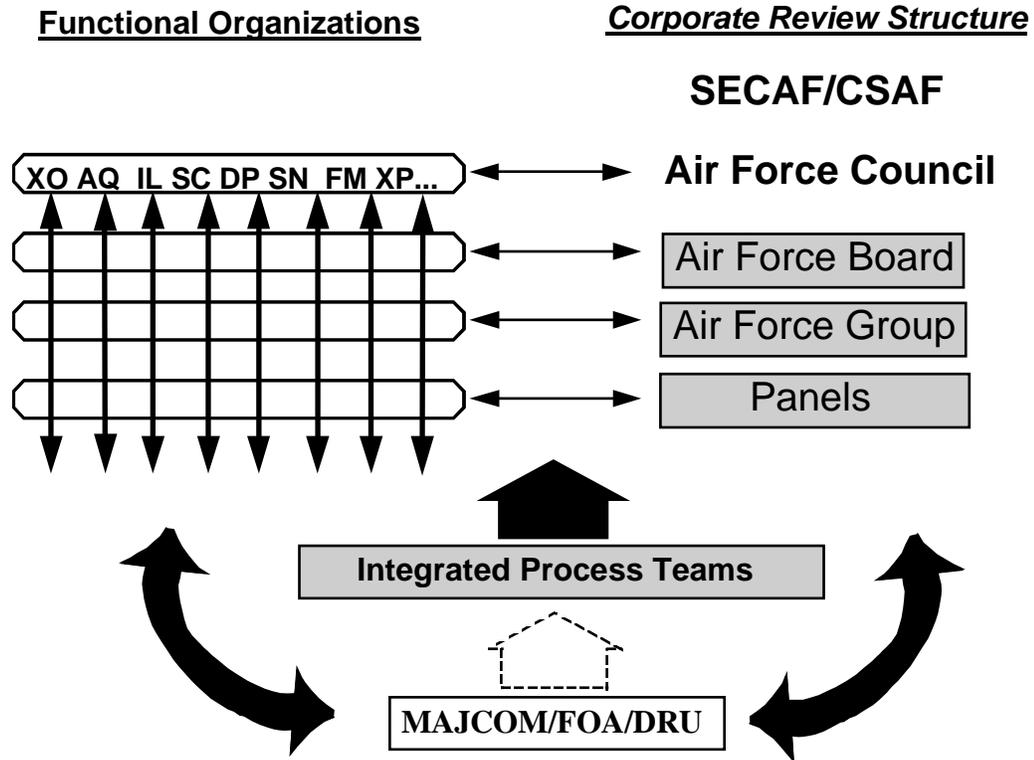


Figure 12: AFCS Process and Structure Chart

The Air Force Board (AFB) is a forum for the senior leadership to make decisions on major program objectives and problems. It integrates the corporate reviews with its collective judgment and experience to enhance the decision making process.

The Air Force Group (AFG) serves the senior leadership as the first corporate integrated review and evaluation of the programs and issues. They enhance the decision making process by doing much of the preliminary screening prior to issues going to the AFB. The AFG's has two main information gathering mechanisms. They are able to gather information by tasking Panels and Integrated Process Teams (IPT) to develop options. The goal of the AFG is to provide a thorough review and evaluation of programs

presented by the Panels enroute to the AFB. Members of the AFG are Colonels and civil servant equivalents, and is chaired by the Deputy, Air Force Programs and Evaluations.

The Panels are responsible for the development of programs and proposal evaluations for presentation to the AFG. They are considered a “center of expertise” at SAF and HQ USAF for a unique mission or support area. The breakout of the mission and support panels is shown in Figures 13 and 14. Panels have to balance a role as the “advocate” for their respective area with developing balance reviews. They do so by tasking IPTs for information and interacting with the other panels.

Air Superiority	Power Projection	Global Mobility	Information Dominance	Space Superiority
<ul style="list-style-type: none"> - F-22 - F-15 - AGGR - TMD - AIM-9X - etc. 	<ul style="list-style-type: none"> - B-2 - F-16 - F-15E - F-117 - JAST/NGAF - JDAM - JSOW - etc. 	<ul style="list-style-type: none"> - C-17 - C-5 - C-141 - C-130 - 60K LDR - KC-10/135 - etc. 	<ul style="list-style-type: none"> - Info Warfare - EW - AWACS - C2 - Recce - etc. 	<ul style="list-style-type: none"> - Milstar - Polar - EELV - SBIRS - GPS - DMSP - MMIII - etc.

Figure 13: Mission Panels

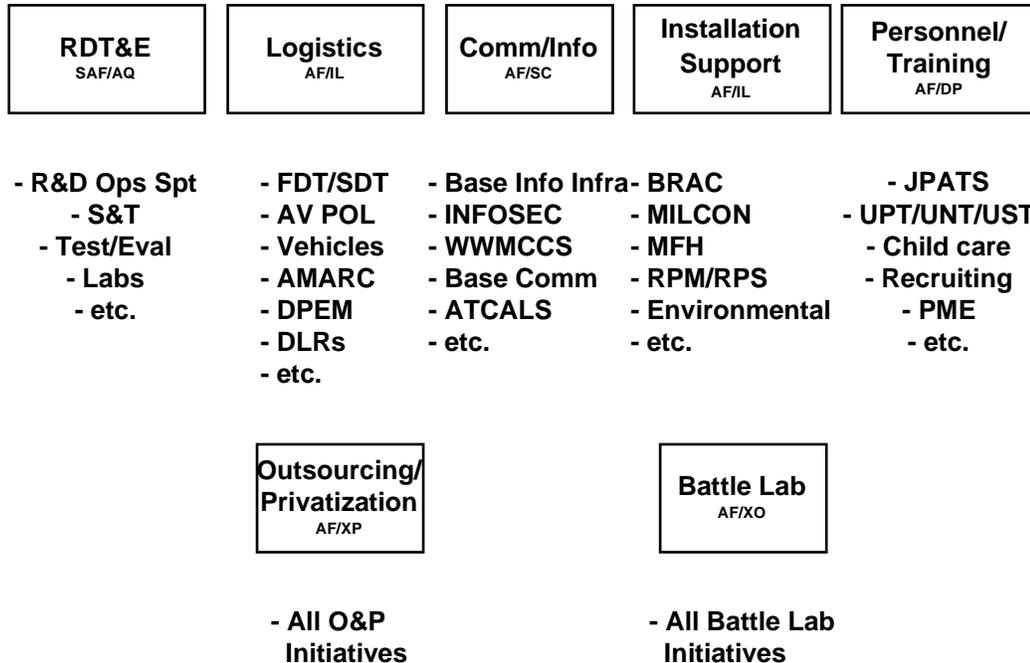


Figure 14: Mission Support Panels

The Integrated Process Teams (IPTs) are empowered to receive, review and make recommendations on AF corporate programs and issues. IPTs are the single point of contact to the MAJCOMs for specific programs and interface with the corporate structure primarily through the panels. They “formalize” the informal networks that exist across the HQ USAF staff. The teams consist of people responsible for Program Elements (PE), representatives from key functional organizations, and external agencies as required. The IPT Chief is the designated Lead Program Monitor. The ultimate goal of the IPT is to improve the horizontal flow of information across the entire staff and to become a single point of contact for customers. A sample IPT membership is shown in Figure 15.

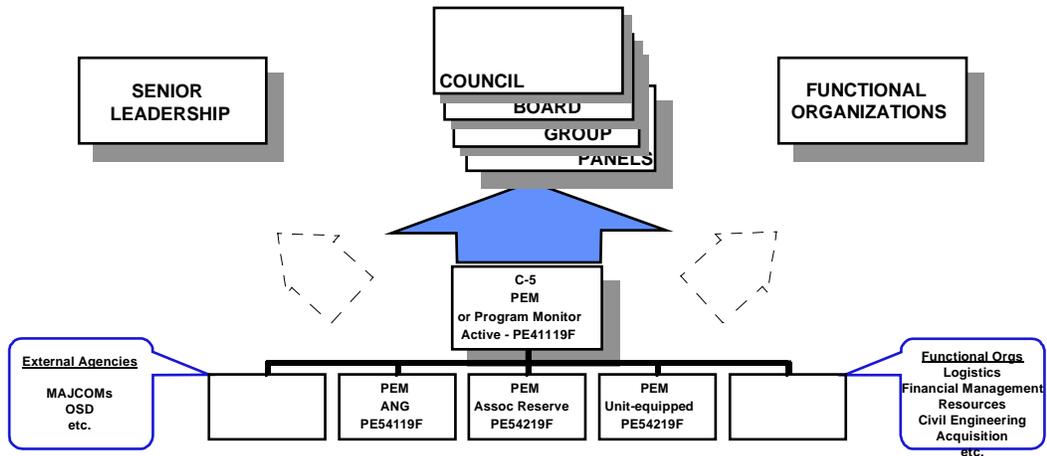


Figure 15: Sample IPT Membership

Appendix B

Global Broadcast System¹

The Global Broadcast Service (GBS) system is proposed as a satellite-based broadcast capability to augment and interface with other communications systems and provide a continuous, high-speed, one-way flow of high volume information to deployed, on the move, or garrisoned forces. The broadcast signals will be transmitted to a large inventory of user receive units within the CINCs' Area of Responsibility (AOR). The basic capability will provide a high data rate bit stream of video, data, imagery, and other information from high powered broadcast satellites to a large section of the force structure and numerous warfighting platforms. The satellites will eventually be required to provide continuous and simultaneous coverage to broad regions of the earth's surface in support of widely dispersed forces. The high data rate bit stream will be transmitted from a limited number of fixed and deployable terminals and controlled by the CINCs, and managed by the broadcast management segment in each satellite field of view.

Notes

¹Maj Stephen Tanous, AO for AF/XOJR, Electronic mail to author, Subject: GBS Information Request, 12 May 1997. This entire appendix is based on a response from Maj Steve Tanous of XOJR to a series of questions from the author.

GBS will support routine operations, training and military exercises, special activities, crisis, situational awareness, weapons targeting, intelligence, and the transition to and conduct of opposed operations short of nuclear war. GBS will provide the capability to quickly disseminate large information products to various joint and small user platforms. Coverage will be worldwide. The information being transmitted is envisioned to have been received from a myriad of sources and packaged for the high data rate bit stream by the Satellite Broadcast Manager (SBM) at the direction of the CINCs. The CINCs theater information manager is concerned with establishing CINC priorities, authorizing user access, coordinating broadcast schedules, and allocating resources. The system will take maximum advantage of commercial products, technologies, and non-developmental items.

The Global Broadcast Service was designated as a joint program on 27 March 1996, by direction of the Under Secretary of Defense for Acquisition and Technology (USD(A&T)). A number of decisions were embedded in the formal program designation and have also been approved by the Congress. A major decision was made to place a limited capability GBS payload onboard the last three UHF Follow-On (UFO) spacecraft (UFO 8, 9, and 10). The major performance features of the UFO GBS payload were briefed to and endorsed by the Joint Requirements Oversight Council (JROC) and the Expanded Defense Resources Board (EDRB). Due to the decision regarding the UHF Follow-On spacecraft GBS capability, the space segment assets will have at least three distinct phases of fielded capability. The three phases are described below:

Phase 1 (FY96 - FY98): Limited leased commercial satellite services operating at Ku-band for concept of operations development, demonstrations, and limited operational support.

Phase 2 (FY98 - FY06+): Payload packages hosted on UHF Follow-On satellites 8, 9, and 10 with the downlink broadcast operating at 20.2-21.2 GHz (Ka-band). As only three UHF Follow-On satellites will be equipped with the GBS Ka-band payloads, the continued lease of commercial satellite services at Ku-band will be required to augment UFO GBS where coverage gaps exist and may be required to complement the UFO GBS limited number and size of downlink beams.

Phase 3 (FY06+): The objective GBS on-orbit capability will provide increased capacity, worldwide coverage, and the capability to broadcast near continuous or time critical information to broadly dispersed users.

The following is a list of answers to specific questions posed by the author about the GBS program to Major Stephen Tanous, the XOJR AO for the GBS program.

Question: What in general was the Joint Staff looking for from you at various times?

Response: "From XOJR, the Joint Staff is looking for inputs on the Operational Requirements Document (ORD). Since this was not an AF ORD, but the AF is executive agent for the space segment in Phase 3, we had a significant concerns on the requirements in general and the Key Performance Parameters (KPPs) in particular. Since the KPPs can make or break a program, we try to identify those requirements we're willing to fall on our sword over. We provided inputs at the O-6 level on the first review, O-8 level on the second. The Air Staff experts look at the details. As the XOJR POC, I look primarily at the KPPs and play devil's advocate so we can gauge the response of the other Services to

our comments. I was part of the AF group playing in the working group to hammer out the details on the final ORD, and made sure the KPPs were changed to represent my view of the current emphasis on coverage and capacity in MILSATCOM systems.”

Question: Who all did you have to deal with to get the information you needed (types of information, types of communications, Air Staff, Secretariat, etc.)?

Response: “Types of information we need is primarily related to issues between the Services and Joint Staff and the Air Staff. I try to head these off or identify them to our Pre-JROC, JRB, and JROC principals (XOJR - Col North, XOJ- Gen Wax, and CV- Gen Moorman, respectively) so they know what to expect and we can develop a response from our collective Air Staff wisdom prior to the actual meetings. In this case, I looked to J-8 to highlight issues the other Services had identified as problems; I dealt with SAF/AQSS on schedule, money issues, since they are the Program Element Monitor (PEM) for the program on the AF side; AF/XORBR on requirements and concept of operations (CONOPS) issues, since they are the operations requirements gurus for the AF on the program; and AF/SCMI, since they are nominally our ‘big picture’ communications/MILSATCOM guys. AF/SC has ‘gone away’ under the reorganization, and most of the offices are now part of a new DRU, the Air Force Communications Information Center (AFCIC). I don't know exactly how they fit anymore - they're still figuring it out themselves, I believe.² I try to keep them in the loop until I figure it out. I try to do most of my dealings face-to-face, but with the large amount of information

Notes

²“Air Staff Reorganization,” *Airman* 41, no. 1 (January 1997): 47. DCS/SC did not completely go away.

The 1 January reorganization also created the Air Force Communications and Information Center (AFCIC).

The commander is dual hatted as the DCS for Communications and Information.

flowing, e-mail is very common for broadcasting stuff to everyone who's a part of the process.”

Question: What interface did you have with the other services?

Response: “Primary interface for ORD issues was through J-8/RAID (Requirements, Assessment, & Integration Division), but we also dealt a lot through AO level working groups and at least once in the process supported a GBS General Officer Steering Committee (GOSC) meeting, which was intended to resolve all the last sticking points in the ORD. In this case, 4 points of contention were identified that could not be resolved at the AO level and went to the GO level for resolution prior to the JROC. This kept the technical noise to a minimum at the JROC proper, since the GOSC principals are more ‘in the know’ on technical GBS issues, and also kept the JROC principals on the same sheet of music.”

Question: What interface did you have with the various members of your chain of command (up to the Vice Chief)?

Response: “The JROC chain goes - Pre-JROC - XOJR (Col North). He represents the AF for all Pre-JROC briefs, and gets a pre-brief on all issues prior to the Pre-JROC to get the scoop on the AF position going in. JROC Review Board (JRB) - XOJ (Maj Gen (S) Wax). Represents the AF at the O-8 level for all JRB briefs. Same deal as Pre-JROC - gets pooped up, the flags AF issues during discussion for discussion/resolution at the table or forwarding to the JROC. In some cases, if the issue is likely to get forwarded, DJ-8 (LtGen McCloud) will have the disagreeing parties try to work it offline before the JROC or send the ORD back for more work and a return trip to the JRB.”

Question: Below I summarized the events and dates GBS issues were discussed this year. Is this accurate and what is there to learn from this list?

21 Feb: JRB gets overview brief, schedules presentation of ORD to JRB for 5 Mar.

25 Feb: Pre-JROC gets ORD briefing, scheduled them to return after adding a few programmatics and funding disconnects issues to briefing on 4 Mar, then go to JRB on 5 Mar, and JROC on 17 Mar.

5 Mar: JRB concurs with ORD, sends it to 3 April JROC meeting for KPP approval.

Response: Add the following:

“31 Mar: JROC meets, took the operational overview and ORD briefings. After some discussion, it was decided there were several questions still requiring answers before the JROC would validate the KPPs and approve the ORD. The Services were directed to go determine the answers and come back to the JROC.

3 Apr: JROC took the new ORD brief with answers to the specific questions posed by the JROC. Upon review of the answers, the KPPs were validated, Phase 3 requirements deferred, and ORD approval authority retained by the JROC.

Of note here is the fact that:

1. The JROC directed a comeback before validating the KPPs and approving the ORD. Although not uncommon, it is also not the standard. For contentious programs, it's more likely if there are unresolved issues before the ORD goes to the JROC. In some cases, the issues are actually resolved at the JROC (as in the case of NMD). If the issues are more technical or programmatic (vice "political") in nature, they will often be referred back for another visit when the technical answer is available and the can be laid out in 'Dick and Jane' terms so the impacts of the decision can be better discerned.

2. ORD approval authority is usually given to a Service to make program acquisition a little easier. When the JROC has ORD approval authority, it means every little change (even non-KPP) to requirements will need JROC approval. After contract award, that can be cumbersome, since it makes the whole program more bureaucratic. When a single Service has ORD approval authority, it only needs JROC approval for changes to KPPs, letting the Service work the trade space as it sees fit to keep the program on track. You can see where this leads.”

Glossary

AFCS	Air Force Corporate Structure
AFCIC	Air Force Communications and Information Center
AO	Action Officer
CINC	Commander in Chief
CJCS	Chairman of the Joint Chiefs of Staff
CPA	Chairman's Program Assessment
CPR	Chairman's Program Review
CSAF	Chief of Staff of the Air Force
DAWMS	Deep Attack Weapons Mix Study
DCS OPS	Deputy Chief of Staff for Operations
DOD	Department of Defense
DJ-8	Director for Force Structure, Resources and Assessments (J8)
DP	Deputy Chief of Staff for Personnel
DPG	Defense Planning Guidance
DRU	Direct Reporting Unit
IL	Deputy Chief of Staff for Installations and Logistics

IN	Assistant Chief of Staff for Intelligence
IPT	Integrated Product Team
JMRR	Joint Monthly Readiness Review
JRB	Joint Requirements Board
JROC	Joint Requirements Oversight Council
JSPS	Joint Strategic Planning System
JV 2010	Joint Vision 2010
JWCA	Joint Warfighting Capabilities Assessment
LRP	Long Range Plan
MAJCOM	Major Command
MPP	Modernization Planning Process
NSC	National Security Council
ORD	Operational Requirements Document
PME	Professional Military Education
POC	Point of Contact
PPBS	Planning, Programming, and Budgeting System
QDR	Quadrennial Defense Review
RAID	Requirements and Assessments Division

SAAS	School of Advanced Airpower Studies
SAF	Secretary of the Air Force
SAF/AQ	Office of the Assistant Secretary for Acquisition
SAF/FM	Office of the Assistant Secretary for Financial Management and Comptroller
SC	Directorate of Communications and Information
SE	Air Force Safety Office
SECDEF	Secretary of Defense
USAF	United States Air Force
VCJCS	Vice Chairman of the Joint Chiefs of Staff
VCSAF	Vice Chief of Staff of the Air Force
XJ	Deputy Chief of Staff for Joint Matters
XO	Deputy Chief of Staff for Air and Space Operations (also DCS OPS)
XOI	Directorate of Operations Issues
XOJ	Director for Joint Matters
XOJP	Joint and NSC Matters Division
XOJR	JROC Issues and Actions Division
XOO	Directorate of Operations
XOR	Director for Requirements
XORJ	Joint Requirements Oversight Division

XOX	Directorate of Plans
XP	Deputy Chief of Staff for Plans and Programs
XPX	Directorate of Strategic Planning
XPXP	Long Range Planning Division

Bibliography

“Air Staff Reorganization,” *Airman* 41, no. 1 (January 1997): 46-7.

Bellamy, Maj David, Action Officer, Joint Requirements Oversight Council Issues and Actions Division (XOJR), interviewed by author, 28 March 1997.

Chairman of the Joint Chiefs of Staff Instruction: CJCSI 3137.01, *The Joint Warfighting Capabilities Assessment Process*, 22 February 1996.

Chesnut, Maj J. Scott, *Organizing to Fight: Goldwater-Nichols and the Military Strategist*, Master’s thesis, School of Advanced Airpower studies, June 1997.

Defense Systems Management College course information. Available from <http://www.dsmc.dsm/courses>

DOD 5000.2-R, *Mandatory Procedures for Major Defense Acquisition Programs (MDAPS) and Major Automated Information Systems (MAIS) Acquisition Programs*, 15 March, 1996; CD-ROM, Defense Acquisition Deskbook, September 1996.

Dorsey, Lt Col Robert Assistant Division Chief for JROC Issues and Actions (XOJR), interviewed by author, 8 January 1997, 16 January 1997, 27 January 1997, 29 January 1997, 17 Mar 1997.

Fogleman, Gen Ronald R., United States Air Force Chief of Staff, *Commander’s Call-Global Engagement*, Pentagon:Headquarters USAF TV Center, 1 hour and 51 minutes, 31 January 1997, Videocassette.

- Fogleman, Gen Ronald R., United States Air Force Chief of Staff, and Sheila A. Widnall, Secretary of the Air Force, *The Enhanced Air Force Corporate Structure: Implementation Plan*, 1 November 1995.
- Fulghum, David A., "Ralston Tackles Acquisition Boost," *Aviation Week and Space Technology* 144, no. 6 (5 February 1996): 29.
- Galbraith, Jay R., *Designing Organizations: An Executive Briefing on Strategy, Structure, and Process*, San Francisco: Jossey-Bass Publishers, 1995.
- Gandy, Maj Jerry L., "The Air Force Long Range Planning Organization: Speaking With One Voice?." Master's thesis, School of Advanced Airpower studies, June 1997.
- Goodman, Glenn W., Jr., "JROC Guru: An Interview with Admiral William A. Owens," *Armed Forces Journal International*, February 1995, 36.
- Guralnik, David B., ed., *Webster's New World Dictionary of the American Language, Second College Edition* New York: Simon and Schuster, 1984.
- Henderson, Brig Gen Ronald, Deputy Director of Operational Requirements, briefing for Corona '96, subject: Joint Requirements Oversight Council (JROC)--Corona Top '96, 20 April 1996.
- Handy, Maj Gen John W., Director of Plans and Programs (XP), interviewed by author, 23 January 1997.

Henry, Jake, Associate Director of Programs and Evaluation (XP), interviewed by author,
29 January 1997.

Holzer, Robert, "Officials want more clout for joint oversight council," *Army Times* 56,
no. 41 (6 May 1996): 26.

_____. "One on One: USAF Gen. Joseph Ralston," *Defense News*, 23-29 September
1996, 46.

"J-8: Shaping The Force For A Dynamic World," *Defense* 1996 96, no. 2 (March/April
1996): 39.

Joint Force Quarterly, no. 13 (Autumn 96).

Joint Staff CINC Liaison Office Newsletter: November 1996 Edition, Unofficial
Publication, November 1996.

Jones, Maj Christopher, Air Command and Staff College student and former Joint
Matters Division (XORJ) Action Officer, interviewed by author, 18 November 1996.

Keenan, Maj Fran, Programmer, Directorate of Strategic Planning, interviewed by author,
26 March 1997.

Lewis, C. S., *A Preface to Paradise Lost* (1942; reprint, London: Oxford University
Press, 1961).

Lofgren, Major Jeffrey, Air Command and Staff College Student and former Joint
Matters Division (XORJ) Action Officer, interviewed by author, 20 November 1996.

Martin, Maj Gen Gregory S., Director of Operational Requirements (AF/XOR), Letter,
Subject: The JWCA Process Today and Tomorrow, n.d., Received January 1997.

McCloud, Lt Gen David, Director for Force Structure, Resources and Assessment (J8),
interviewed by author, 17 January 1997;

- Mott, Paul E., *The Characteristics of Effective Organizations*, New York: Harper & Row, Publishers Inc., 1972.
- Office of the Vice Chairman of the Joint Chiefs of Staff, *JROC: Planning in a Revolutionary Era*, 1996.
- Owens, Admiral William A., *High Seas: The Naval Passage to an Uncharted World*, Annapolis: Naval Institute Press, 1995.
- _____. "The American Revolution in Military Affairs," *Joint Force Quarterly*, no. 11 (Winter 1995-96): 37.
- _____. "Understanding the JWCA Process: Bringing a Better Joint Warfighting Perspective to Bear on Resource Allocation," *Armed Forces Journal International*, May 1996, 14.
- _____. Vice Chairman of the Joint Chiefs of Staff, Memorandum MCM-14-95U, Subject: Charter of the Joint Requirements Oversight Council, 7 February 1995.
- Ralston, General Joseph W., United States Air Force, Chairman, Joint Requirements Oversight Council, *Statement Before the House Committee on National Security*, 27 March 1996.
- Ridgeway, Maj Denise, Programmer, Long Range Planning Division (XPXP), interviewed by author, 26 March 1997.
- Smith, Perry M., *Assignment Pentagon--The Insider's Guide to the Potomac Puzzle Palace*, McLean, Va: Brassey's, 1993.

Tanous, Maj Stephen, Action Officer, Joint Requirements Oversight Council Issues and Actions Division (XOJR), interviewed by author, 17 March 1997

Tanous, Maj Stephen, Action Officer, Joint Requirements Oversight Council Issues and Actions Division (XOJR), Electronic mail to author, Subject: GBS Information Request, 12 May 1997.

Vautrinot, Lt Col Suzanne, Requirements, Assessment and Integration Division, Director of Force Structure, Resources and Assessment (J8/RAID), interviewed by author, 25 November 1996, 15 January 1997, and 29 January 1997.

Wax, Maj Gen (sel) Charles J., Director of Joint Matters (XOJ), interviewed by author, 28 January 1997.