

# TACTICAL CONTROL/DIRECT SUPPORT STUDY



**30 June 1997**

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## EXECUTIVE SUMMARY

### INTRODUCTION

*This report provides study results, conclusions, and recommendations addressing whether functional component commanders should have tactical control (TACON) or direct support (DS) of military forces and capabilities made available for tasking.*

This report provides study results and recommendations requested by the Vice Deputy for Operational Plans and Interoperability (Appendix A), concerning the command relationship issue of whether functional component commanders should have tactical control (TACON) or direct support (DS) of military forces and capabilities made available for tasking. Pertinent data was gathered from the joint electronic library (JEL); Joint Universal Lessons Learned System (JULLS); CJCS Instructions, Manuals, and Memorandums of Policy; standing operating procedures (SOPs); Exercise ROVING SANDS 97 observations and documentation; and interviews with key participants in Exercises ROVING SANDS 97 and COHERENT DEFENSE 97 (Part 1). Data analysis centered around the ramifications of providing military capabilities or forces to functional component commanders for tasking under DS rather than TACON. Conclusions were drawn regarding current joint doctrine effectiveness in addressing command relationships during counterair (CA) and joint fire support operations. Recommendations were made to modify approved and emerging doctrine.

### APPROVED JOINT DOCTRINE

*Command and command relationships encompass authority and responsibilities.*

Command includes the authority and responsibility for effectively using available resources and for planning the employment of, organizing, directing, coordinating, and controlling military forces for the accomplishment of assigned missions. A command relationship describes the interrelated responsibilities between commanders, as well as the authority of the commanders.

*Operational control (OPCON) normally provides full authority to organize commands and*

Operational control (OPCON) is the authority to perform those functions of command over subordinate forces involving organizing and employing commands and forces, assigning tasks,

*forces and employ those forces to accomplish assigned missions.*

designating objectives, and giving authoritative direction necessary to accomplish the mission. OPCON includes authoritative direction over all aspects of military operations and joint training necessary to accomplish missions assigned to the command.

*TACON is the command authority that is limited to the detailed and usually local direction and control of movements or maneuvers necessary to accomplish assigned missions or tasks.*

TACON provides the authority to give direction for military operations and control designated forces (e.g., ground forces, aircraft sorties, missile launches, or satellite payload management) TACON provides authority that by definition is usually limited by location, function, and time TACON is particularly well suited to the local direction and control of elements (e.g., combat or combat support aviation) capable of rapid reaction to the tactical requirements of several commanders whose forces are dispersed over a large area.

*A support relationship is established when one organization should aid, protect, complement, or sustain another force.*

The support command relationship is, by design, a somewhat vague, but very flexible arrangement. An establishing directive is normally issued to specify the purpose, the effect desired, and the scope. Support is labeled in joint doctrine as “a command authority.” Unless limited by the establishing directive, the supported commander will have the authority to exercise general direction of the supporting effort. The supporting commander determines the forces, tactics, methods, procedures, and communications to be employed. The supported commander should ensure that the supporting commander understands the assistance required. The supporting commander will coordinate with the supported commander and assist in planning the integration of the supporting portion in the supported commander’s effort. There are four categories of support (general, direct, mutual, and close). DS is a mission requiring a force to support another specific force and authorizing it to answer directly the supported force’s request.

*The “supported commander” is defined as one who prepares an operation plan, and described as one who generally directs the supporting effort.*

The DOD definition describes the “supported commander,” in the context of joint operation planning, as the commander who prepares operation plans or operation orders in response to requirements of the Chairman of the Joint Chiefs of Staff. JP 5-00.2, “Joint Task Force Planning Guidance and Procedures,” describes the supported commander as the commander who: (1) exercises the degree of authority over supporting forces and (2) exercises general direction of the supporting effort.

*The “supporting commander” is defined as one who develops a supporting plan, and described as one who prescribes the tactics, methods, communications, and procedures to be employed by the supporting force.*

The DOD definition describes the “supporting commander” as the commander who provides augmentation forces or other support to a supported commander or who develops a supporting plan. JP 5-00.2, “Joint Task Force Planning Guidance and Procedures,” describes the supporting commander as the commander who: (1) exercise OPCON over assigned and attached forces, (2) prescribe the tactics, methods, communications, and procedures to be employed by elements of the supporting force, (3) coordinates with the supported commanders and other supporting commanders, (4) keeps the supported commander informed, and (5) provides liaison personnel to the supporting commander, as necessary.

*The joint force commander (JFC) can establish functional component commands when unity of effort and command are primary considerations.*

Functional component commands are established by joint force commanders (JFCs) when forces from two or more Military Departments must operate in the same dimension or medium or when centralized direction and control of certain functions and types of operations must be provided. JFCs should strive to avoid reducing the versatility, responsiveness, and initiative of subordinate forces.

*JFCs may provide forces or military capabilities under OPCON, TACON, or in support for tasking by*

TACON is typically exercised by functional component commanders over military capability or forces made available for tasking. For example, a joint force air component commander (JFACC) is normally delegated TACON of aircraft sorties.

*functional component commanders.*

However, a special operations component commander normally exercises OPCON of forces made available for tasking. JFCs also may establish support relationships within the joint force to enhance unity of effort, emphasize or clarify priorities, provide a subordinate with an additional capability, or combine the effects of similar assets. Regardless, the JFC defines the authority and responsibilities of functional component commanders based on the concept of operations.

*The joint force air component commander (JFACC) also may be the area air defense commander (AADC) who is normally assigned overall responsibility for active theater missile defense (TMD) and joint TMD attack operations outside the other component commanders' areas of operations (AOs).*

The JFACC also may be the area air defense commander (AADC) who will normally have overall responsibility for active theater missile defense (TMD). Air defense operations must be coordinated with other tactical operations on and over both land and sea and representation from the other components involved will be provided to the AADC's headquarters. Among other things, The AADC: (1) develops and executes detailed plans for weapons control procedures and measures to disseminate launch warning and cue information to components and active defense forces for engaging incoming theater missiles, and (2) ensures the optimum effectiveness is realized from active defense weapon systems and that no unnecessary restrictions are placed upon their employment. The JFACC is normally responsible for planning and executing joint TMD attack operations outside the other component commanders' areas of operations (AOs). Inside their AOs, component commanders are normally designated as supported commanders for attack operations and active defense forces are under their OPCON. However, these forces are under the JFC approved weapons control procedures and measures established by the AADC.

*Air defense forces not assigned to the tactical combat force commander, Army corps, or Marine expeditionary force*

During Level III operations, the tactical combat force commander normally has OPCON over most base, base cluster defense, and response forces in the assigned AO, excluding air defense forces, which remain under OPCON of the AADC. Air defense units assigned to Army corps, Marine expeditionary

*(MEF) are normally under theOPCON of the AADC.*

force (MEF), or lower maneuver echelons are under the OPCON of the echelon commander, who employs the assigned units under the weapons control procedures and measures established by the AADC. Air defense assets not assigned to Army corps, MEF, or lower maneuver echelons are normally under the OPCON of the AADC.

*Positioning of surface-to-air systems is reported to the AADC .*

The AADC must be made aware of surface-to-air systems' position changes to allow appropriate adjustment of the weapons control status and airspace coordination in the area. Surface-to-air missile (SAM) and short range air defense (SHORAD) units organic to land corps and maneuver forces will be positioned by the assigned land force commander.

*Positioning of DS aviation forces should be coordinated with the supported commander. Artillery battery positions must be approved by the commander who controls the zone of action.*

Aviation forces or sorties in DS should be positioned to support the supported unit's scheme of maneuver and positioning areas should be coordinated with the supported commander. Commanders of artillery battalions control all aspects of their batteries' operations except that: Battery positions must be approved by the commander who controls the zone of action or sector in which the battery position is located.

*The JFC tasks attack helicopters to conduct close air support in support of or TACON to another component, or makes them available through the air tasking order (ATO) process.*

The JFC tasks attack helicopters to conduct close air support (CAS) for another component in two ways. In the first way, the JFC establishes a command relationship of TACON or support between the two components. Once positioned, the attack helicopters respond to mission-type orders from the supported commander. In the second way, the JFC uses the air apportionment and joint air tasking order (ATO) process to make the attack helicopters available for joint CAS.

#### LESSONS LEARNED

*Observations from the Joint Universal Lessons*

Four entries from the post-1990 JULLS database (6,121 entries) contained the following observations:

*Learned System database indicate the AADC must have a voice in positioning air defense artillery (ADA) and know when fire units and radars are being moved.*

(1) Preplanned use of attack helicopters should be included on the ATO, (2) It is fundamental that the AADC should have a major say in air defense artillery (ADA) locations and their primary target lines to provide the most effective area defense and the safest passage for friendly air forces, (3) Equally important is knowing when fire units and radars are scheduled to move, and (4) The AADC must have some say in the movement process to ensure there are no holes in air defense coverage. Joint doctrine or joint tactics, techniques, and procedures (JTTP) do not appear to adequately address this issue.

*Doctrinal discussions during Exercise COHERENT DEFENSE 97, Part 1 resulted in an agreement to provide Army air defense assets in DS of the JFACC.*

Doctrinal discussions during Exercise COHERENT DEFENSE 97, Part 1 led to an agreement that Army air defense assets apportioned by the JFC to the JFACC for CA missions will be in DS (vic TACON) to the JFACC. Appendix 20 to Annex C of the draft JTF COHERENT DEFENSE 97 operation order (OPORD) of 17 May 97 includes a table on page C-20-34 which places Army active air defense Patriot units in DS of Regional Air Defense Commander (RADC). USMC and Navy units are shown as TACON to the RADC.

*During Exercise ROVING SANDS 97, area air defense systems like Patriot and Hawk were TACON (less positioning authority) to the AADC.*

The focus of Exercise ROVING SANDS 97 was joint TMD. Annex C to the OPOD described land-based SHORAD and point air defense systems under the OPCON of their respective component commanders. The AADC was given TACON of area air defense systems (e.g., Patriot, Hawk). Positioning authority remained with the appropriate OPCON commander, however, coordination with the AADC was required prior to movement. Appendix 17 to Annex C, Missile Defense Plan, created RADCs who were responsible to the AADC for execution of the air defense plan within their assigned region. The RADCs were given TACON (less positioning authority) of all air defense units within the assigned region. It also stated that the joint force land component and maritime component commanders retain OPCON and positioning responsibilities for their respective SAM/ADA units.

Key participants indicated they liked how US Central Command (USCENTCOM) handled this issue, but believed that DS was the term to use in joint doctrine.

#### OTHER DOCUMENTATION

*In US Central Command, the AADC is normally given TACON of critical land based air defense asset.*

In the USCENTCOM TMD concept of operations, the JFACC will normally be appointed as the AADC and is responsible for the integration of the joint force air defense effort on and over the land and sea. The Commander in Chief, US Central Command will normally give the AADC TACON of critical land based air defense assets to ensure integrated air defense coverage. The AADC will issue mission-type orders to be forwarded to executing components.

*In Korea, the AADC is given OPCON less operational command of certain theater air defense resources.*

The ROK-US Combined Forces Command Air-Ground Operations Standing Operating Procedures assigns the commander, air component command, as the AADC. The AADC is given OPCON less operational command of certain theater air defense resources from the component forces. Note: OPCON less operational command is a NATO convention for granting OPCON with no authority to reassign forces.

*General Colin Powell's 1992 statement of doctrinal concepts endorses support command relationships.*

General Colin Powell's 1992 statement of doctrinal concepts explained that the supported commander should consider the accepted tactical practices of the Service of the supporting force. Normally, the supporting commander will be permitted to prescribe the tactics, methods, and procedures to be employed by elements of the supporting force.

*In December 1996, the Army and Air Force agreed that any Army forces assets apportioned by the JFC to the JFACC for counterair (CA) missions would be in DS (vice*

The Army-Air Force Warfighters Conference of December 1996 agenda included discussions on command relationships between ADA forces and the JFACC/AADC. The Army preferred a DS relationship over TACON for surface forces provided to the JFACC/AADC. They felt the DS relationship provides more flexibility while TACON limits the supporting commander's flexibility to position forces

*TACON) to the JFACC.*

to facilitate future operations and maximize capabilities. The Army and Air Force agreed “That any ARFOR assets apportioned by the JFC to the JFACC for CA missions would be in direct support (vice TACON) to the JFACC.”

*Draft joint doctrine in various stages of review and coordination uses language which endorses several alternative command relationships for specific functional situations---OPCON, TACON, DS, and support are discussed*

Draft joint doctrine in various stages of review and coordination discusses command relationships other than TACON for some specific functional situations. JP 3-01, “Joint Doctrine for Countering Air and Missile Threats,” states: “Typically for [offensive counterair] OCA, air and naval forces provide air sorties TACON, and land forces provide fire support and attack helicopters in direct support. Normally, for forces made available to the ADC for defensive CA, air sorties are provided TACON, while surface-based active defense forces are provided in direct support.” JP 3-56, “Command and Control Doctrine for Joint Operations,” says the authority of the JFACC over forces and capabilities made available is normally TACON or supporting. JP 3-05, “Doctrine for Joint Special Operations,” states: “[Special operations forces] SOF may be under the OPCON or TACON of Service or functional component commanders.” Finally, JP 3-14, “Joint Doctrine; Tactics, Techniques, and Procedures for Space Operations,” declares: “Predominantly joint space forces act in the role of a supporting force to a supported commander.”

*Service doctrine endorses the selection of firing positions by the artillery or air defense unit commander, with the caveat that approval of the local ground commander is necessary.*

Service doctrine provides models for joint concepts. For example, the selection of firing positions, assignment of fire missions, resupply, etc., are controlled by artillery commanders; however, the delivery of fires and positioning must be cleared by the appropriate ground commander who has control of that zone or sector. Further, tables from the Army and Marine Corps Integration in Joint Operations of May 1996 indicate the DS artillery commander positions his unit and the DS air defense unit commander positions his unit with approval of the local ground commander.

## ANALYSIS RESULTS

*TACON is an authority-based command relationship.*

TACON relates directly to the notion of command authority. It is limited when compared to combatant command (command authority) (COCOM) orOPCON. “Detailed and local direction and control of movement or maneuvers” can be interpreted as “positioning authority” in terms of a geographical area (region, sector) or a geographical point (air patrol station, firing position) to operate from. TACON lends itself to temporary requirements, commanders’ operations widely dispersed over a large area, or control of unit elements/functions (e.g., local direction and control of aircraft sorties or missile launches). Once the mission is accomplished, the TACON relationship can be quickly severed with no ill effects to organization, administration, and logistics.

*The thrust of a support relationship is the responsibilities of the supporting and supported commanders as specified by the establishing commander--not the authority granted to the supported commander.*

Support is described as “a command authority”; however, “command authority” is not defined and the definition of “support” relates directly to the notion that one force should assist another. The support relationship doctrine centers on actions, responsibilities, or obligations of both the supported and supporting commanders. Joint doctrine acknowledges the supported commander needs some authority, which should be specified in the establishing directive. The joint doctrine descriptions of the four categories of support (general, mutual, direct, and close) also center around the actions or mission of the supporting force. Because the supported commander is limited to general direction of the supporting effort and the supporting commander determines the tactics, methods, and procedures to be employed, it can be concluded that positioning authority belongs with the supporting commander.

*The definitions of “supported commander” and “supporting commander” do not*

The terms “supported commander” and “supporting commander” are used in the context of: (1) the joint operational planning process; and (2) the support command relationship, which is the most common.

*match the context of their use in a support command relationship.*

The definitions of both terms do not match their use in the latter case. The definitions describe the key commanders in the deliberate and crisis action planning processes, but were not amended to describe their operational use.

*Functional component commanders normally exercising TACON of forces or capabilities made available for tasking is proven guidance regarding the JFACC and air sorties.*

The “normally TACON” principle regarding functional component commanders’ authority over forces or capabilities made available for tasking was established in the context of the JFACC exercising TACON over air sorties from other joint force components. The entire concept was a compromise to resolve the need to have unity of command in certain aspects of the joint air fight while the air units remained OPCON to their Service components.

*There are exceptions to the “normally TACON” rule in approved and draft joint doctrine-- usually when forces, not capabilities, are involved.*

An exception to the “normally TACON” rule is: “a joint force special operations component commander normally has OPCON of assigned forces.” Notice that forces are involved--not elements or capabilities of a force such as sorties. Further, the option of establishing a support command relationship between a functional component commander and forces or capabilities made available for tasking is discussed in JP 3-0 “Doctrine for Joint Operations” and JP 3-03 “Doctrine for Joint Interdiction Operations.” Furthermore, to some degree draft JPs 3-01, “Joint Doctrine for Countering Air and Missile Threats,” 3-14, “Joint Doctrine; Tactics, Techniques, and Procedures for Space Operations,” and 3-56, “Command and Control Doctrine for Joint Operations,” in various stages of review and coordination propose that functional component commanders may have a support relationship with forces or capabilities provided by other components.

*Countering air and missile threats presents various situations in which TACON could be used for control of air sorties, DS for surface*

Both offensive and defensive actions by forces or capabilities made available to the JFACC/AADC are required to counter air and missile threats and provide unity of effort. The tasks could include control of aircraft sorties--TACON is the accepted choice. If attack operations require the use of an

*air defense forces, and general support for attack operations using surface forces.*

attack helicopter unit, over an extended period of time, a support command relationship may be more appropriate. If attack operations require supporting arms responses to infrequent calls for fire, a general support mission may be the best choice. Active air defense operations require surface air defense forces to engage enemy aircraft/missiles in response to AADC requests--surface air defense forces have a DS mission.

*During joint fire support, TACON or DS command relationships could be used.*

TACON should be used for aviation sorties (e.g., attack helicopters conducting preplanned CAS) which must go on the ATO. TACON or DS is used if forces are made available between land force commanders.

*The JFC can select the command relationship which best fits the situation.*

The overriding doctrinal principle is that the JFC has the authority to tailor the command relationships of the joint force to best utilize components' capabilities in any given situation. The JFC must articulate the command relationship and key features that fit the situation, mission, and component capabilities in the establishing directive.

*"Positioning authority" in TACON or support relationships is not directly addressed and the term is not defined in joint doctrine.*

It is logical to conclude that TACON includes command authority to position forces and support does not, but it is not directly addressed in the doctrinal discussions. Regardless, the JFC should specify the presence or absence of positioning authority in the establishing directive as done in the ROVING SANDS 97OPORD. Positioning authority exercised by the AADC to provide an integrated air defense system according to the JFC's guidance (e.g., defended assets list) seems appropriate. This does not necessarily mean designating positions by grid coordinate; but rather assigning regions, sectors, or points (airfield, port, population center) to defend. Experience has shown that positioning is derived from a coordinated planning effort. Lessons learned justify the AADC being made aware of repositioning of active air defense assets.

*The term “command authority” is not defined in joint doctrine.*

The undefined term “command authority” is used to describe command relationships. It is associated with the authority a commander may exercise to direct the activities of forces assigned, supporting forces, or forces and capabilities made available for tasking in the accomplishment of a mission(s).

*Draft JP 3-01, “Joint Doctrine for Countering Air and Missile Threats,” prescribes surface air defense forces in DS of the AADC--a specific category of the support relationship.*

The draft JP 3-01, “Joint Doctrine for Countering Air and Missile Threats,” language regarding forces or capabilities made available to the JFACC/AADC seems unnecessarily directive. The command relationship choices are prescribed without discussing the pros and cons of other options with respect to the situation, mission, and friendly force capabilities. This was done in JP 3-09.3, “Joint Tactics, Techniques, and Procedures for Close Air Support (CAS),” with regard to attack helicopters used for CAS. Further, CA operations (countering air and missile threats) have varied characteristics which drive the type of command relationship required.

## CONCLUSIONS

*There is no cookbook solution for command relationships.*

Approved joint doctrine gives the JFC the flexibility to choose the appropriate command relationship between a functional component commander and capabilities or forces made available for tasking. In the past, some JFCs have applied joint doctrine’s inherent flexibility by establishing OPCON, TACON, TACON (less positioning authority), and DS relationships between functional component commanders and forces and capabilities made available for countering air and missile threats. TACON of capabilities such as aircraft sorties tasked with counterair or joint fire support missions by a functional component commander is commonly used.

*A support command relationship provides flexibility during CA operations.*

The support command relationship is incorrectly labeled as “a command authority.” Support is not “command authority” in the same sense as OPCON, or TACON. This premise does not diminish the

power or status of support as a useful command relationship tool for conducting joint operations. A support relationship between the AADC and surface air defense and attack forces provides more flexibility to the supporting force without unnecessarily degrading the authority of the supported commander or jeopardizing mission accomplishment.

*The command relationships discussion in draft CA doctrine is workable, but appears too “prescriptive.”*

Draft joint doctrine regarding command relationships between the JFACC/AADC and counterair capabilities and forces made available for tasking is workable and not inconsistent with approved joint doctrine, but appears too “prescriptive.”

*The terms “supported commander” and “supporting commander” need updating.*

The terms “supported commander” and “supporting commander” should be updated with a second part to their definitions to delineate their use in the context of a support command relationship.

*The terms “command authority” and “positioning authority” should be defined.*

The term “command authority” needs to be defined to enable a better understanding of command relationships. The term “positioning authority” needs to be defined to provide JFCs with a tool to delineate the extent of authority a command relationship contains and considerations for determining who should be given the authority.

*“Positioning authority” under TACON and in support command relationships needs clarification.*

Positioning authority appears inherent in TACON while positioning is coordinated in a support relationship. This should be clarified. “Positioning authority” should be addressed as a potential element of the establishing directive.

*Appendix D has responses to the study questions.*

Specific conclusions (responses) regarding the questions raised in the study request letter are provided in Appendix D.

## RECOMMENDATIONS

*Include definitions for “command authority” and “positioning authority” in draft joint doctrine.*

1. Place definitions for “command authority” and “positioning authority,” shown on page V-1 of this report, in JP 3-56, “Command and Control Doctrine for Joint Operations,” with the intent, upon approval, to include them in the list of approved DOD terms.

*Modify approved and draft doctrine to clarify TACON and DS command relationships.*

2. Remove the statement “support is a command authority” from approved joint doctrine to clarify the focus of a support command relationship.

3. Modify specified portions of approved joint doctrine to address “positioning authority” for TACON and DS command relationships to directly address the concept and clarify the doctrine.

4. Modify the definitions of “supported commander” and “supporting commander” to describe their use in the context of a support command relationship.

5. Modify draft joint doctrine to better address command relationships during CA.

*Emphasize that the establishing directive is a tool to clarify command relationships.*

6. When discussing command relationships or command authority in joint doctrine and JTTP, always emphasize the JFC has the authority to tailor the command relationship and should establish the purpose and scope in the establishing directive.

# CHAPTER I

## INTRODUCTION

*The successful conduct of theater air defense requires the integrated operation of all available air defense weapon systems of all components .*

JP 3-52, "Doctrine for Joint Airspace Control in the Combat Zone"

### SECTION A: PURPOSE

This report provides study results and recommendations requested by the Vice Deputy for Operational Plans and Interoperability (Appendix A), concerning the command relationship issue of whether functional component commanders should have tactical control (TACON) or direct support (DS) of military forces and capabilities made available for tasking. The report also provides an assessment of the impact on approved and draft joint doctrine from this shift in command authority.

### SECTION B: METHODOLOGY

A systematic approach to the study was applied. Pertinent data was gathered and analyzed with reference to the issues identified in the study request (Appendix A). Then, conclusions were drawn and recommendations were made based on the data and analysis results.

### SECTION C: DATA COLLECTION

#### 1. Research

- a. The Joint Electronic Library was searched to identify joint and Service doctrine relevant to this study. Approved terms and definitions associated with the search are included in the Glossary.
- b. The Joint Universal Lessons Learned (JULLS) was searched for entries on TACON, support, DS, and joint force air component commander/area air defense commander (JFACC/AADC).
- c. CJCS Instructions, Manuals, and Memorandums of Policy were reviewed.
- d. Available standing operating procedures, orders, operation plans (OPLANs), and operation orders (OPORDs) from geographical combatant commands and some Service force headquarters who may become the nucleus of a joint task force were reviewed.

2. Exercise Observations. Observations and results of doctrine assessments from joint exercises such as ROVING SANDS 97 were reviewed.

3. Interviews. Informal interviews and discussions were conducted with participants of Exercise ROVING SANDS 97. The interviewees included the JFACC/AADC, the Army Air and Missile Defense Command (AAMDC/Deputy JFACC); the Chief, AAMDC Tactical Operations Center (TOC); the Battlefield Coordination Detachment (BCD) chief; and a battle commander at the combat reporting center (CRC). A telephone interview was also conducted with the Ballistic Missile Defense Organization Liaison to US Atlantic Command (USACOM).

4. Analysis, Conclusions, and Recommendations. The analysis centered around the ramifications of providing military capabilities or forces to functional component commanders for tasking under DS rather than TACON. Current joint and Service doctrine and other data on command relationships was assessed and the differences between DS and TACON were examined. Conclusions regarding the effectiveness of current joint doctrine to address command relationship issues during counterair operations and joint fire support along with the impact of proposed changes were drawn. Finally, conclusions and recommendations were made regarding the following:

- Does current joint doctrine establish the most effective command relationship?
- Should functional component commanders have TACON or DS over military capability or forces made available for countering air and missile threats and conducting other missions (e.g., joint fire support)?
- Should the functional component commander have positioning authority over military capabilities and forces made available for tasking for counterair operations?

#### SECTION D: ADMINISTRATIVE

Questions concerning this study may be addressed to the Joint Warfighting Center (JWFC) using the mailing address below or by telephone (ASN 680-6111/6407, Comm (757)726-XXXX, or FAX 680-6552.

Joint Warfighting Center  
Doctrine Division  
Fenwick Road, Bldg 96  
Fort Monroe, VA 23651-5000

## CHAPTER II

## DATA SUMMARIES

*“The primary emphasis in command relations should be to keep the chain of command short and simple so that it is clear who is in charge of what. Unity of command is the guiding principle of war in military command relationships. Experience shows liaison is a particularly important part of command, The importance of an efficient joint force command structure cannot be overstated.”*

JP 1, “Joint Warfare of the Armed Forces of the United States”

## SECTION A: APPROVED JOINT DOCTRINE

Excerpts from approved joint doctrine are provided to illustrate fundamental principles and provide definitions pertinent to this study. Highlighting with bold type is used to emphasize key sentences and/or phrases and does not duplicate that which may appear in the referenced JP.

1. Command. “command--(DOD) 1. The authority that a commander in the Armed Forces lawfully exercises over subordinates by virtue of rank or assignment. Command includes the authority and responsibility for effectively using available resources and for planning the employment of, organizing, directing, coordinating, and controlling military forces for the accomplishment of assigned missions. It also includes responsibility for health, welfare, morale, and discipline of assigned personnel. . .<sup>1</sup>.”

2. Command Relationships

a. DOD Definition. “command relationships--(DOD) The interrelated responsibilities between commanders, as well as the authority of commanders in the chain of command.”

b. Operational Control (OPCON). “OPCON . . . is the authority to perform those functions of command over subordinate forces involving organizing and employing commands and forces, assigning tasks, designating objectives, and giving authoritative direction necessary to accomplish the mission. OPCON includes authoritative direction over all aspects of military operations and joint training necessary to accomplish missions assigned to the command.<sup>3</sup>

b. TACON

(1) "TACON is the command authority over assigned or attached forces or commands, or military capability or forces made available for tasking, that is limited to the detailed and usually local direction and control of movements or maneuvers necessary to accomplish assigned missions or tasks.

a. Basic Authority. TACON may be delegated to and exercised by commanders at any echelon at or below the level of combatant command. TACON is inherent in OPCON.

b. TACON provides the authority to:

- Give direction for military operations.
- Control designated forces (e.g., ground forces, aircraft sorties, missile launches, or satellite payload management).

c. TACON provides sufficient authority for controlling and directing the application of force or tactical use of combat support assets. TACON does not provide organizational authority or authoritative direction for administrative and logistic support; the commander of the parent unit continues to exercise these authorities unless otherwise specified in the establishing directive.

(2) "TACON provides authority that by definition is usually limited by location, function, and time. It provides sufficient authority for controlling and directing the application of force or tactical use of combat support assets. It does not provide organizational authority or the authority and responsibility for administrative and logistic support, which are retained by the commander of the parent unit unless otherwise specified by the delegating authority. TACON is particularly well suited to the local direction and control of elements (e.g., combat or combat support aviation) capable of rapid reaction to the tactical requirements of several commanders whose forces are dispersed over a large area."<sup>5</sup>

c. Support

(1) "Support is a command authority. A support relationship is established by a superior commander between subordinate commanders

when one organization should aid, protect, complement, or sustain another force.

a. **Basic Authority.** Support may be exercised by commanders at any echelon at or below the level of combatant command. This includes the NCA designating a support relationship between combatant commanders as well as within a combatant command. The designation of supporting relationships is important as it conveys priorities to commanders and staffs who are planning or executing joint operations. The support command relationship is, by design, a somewhat vague, but very flexible arrangement. The establishing authority (the common superior commander) is responsible for ensuring that both the supported and supporting commander understand the degree of authority the supported commander is granted.

b. The supported commander should ensure that the supporting commander understands the assistance required. The supporting commander will then provide the assistance needed, subject to the supporting commander's existing capabilities and other assigned tasks. When the supporting commander cannot fulfill the needs of the supported commander, the establishing authority will be notified by either the supported or supporting commander. The establishing authority is responsible for determining a solution.

c. An establishing directive is normally issued to specify the purpose of the support relationship, the effect desired, and the scope of the action to be taken . It should also include:

- The forces and other resources allocated to the supporting effort.
- The time, place, level, and duration of the supporting effort.
- The relative priority of the supporting effort.
- The authority, if any, of the supporting commander to modify the supporting effort in the event of exceptional opportunity or an emergency.
- The degree of authority granted to the supported commander over the supporting effort.

d. Unless limited by the establishing directive, the supported commander will have the authority to exercise general direction of the supporting effort. General direction includes the designation and prioritization of targets or objectives, timing and duration of the

supporting action, and other instructions necessary for coordination and efficiency.

e. The supporting commander determines the forces, tactics, methods, procedures, and communications to be employed in providing this support. The supporting commander will advise and coordinate with the supported commander on matters concerning the employment and limitations (e.g., logistics) of such support, assist in planning for the integration of such support into the supported commander's effort as a whole, and ensure that support requirements are appropriately communicated into the supporting commander's organization.

f. The supporting commander has the responsibility to ascertain the needs of the supported force and take action to fulfill them within existing capabilities, consistent with priorities and requirements of other assigned tasks.

g. Several categories of support have been defined for use within a combatant command to better characterize the support that should be given. These are shown in Figure III-4.

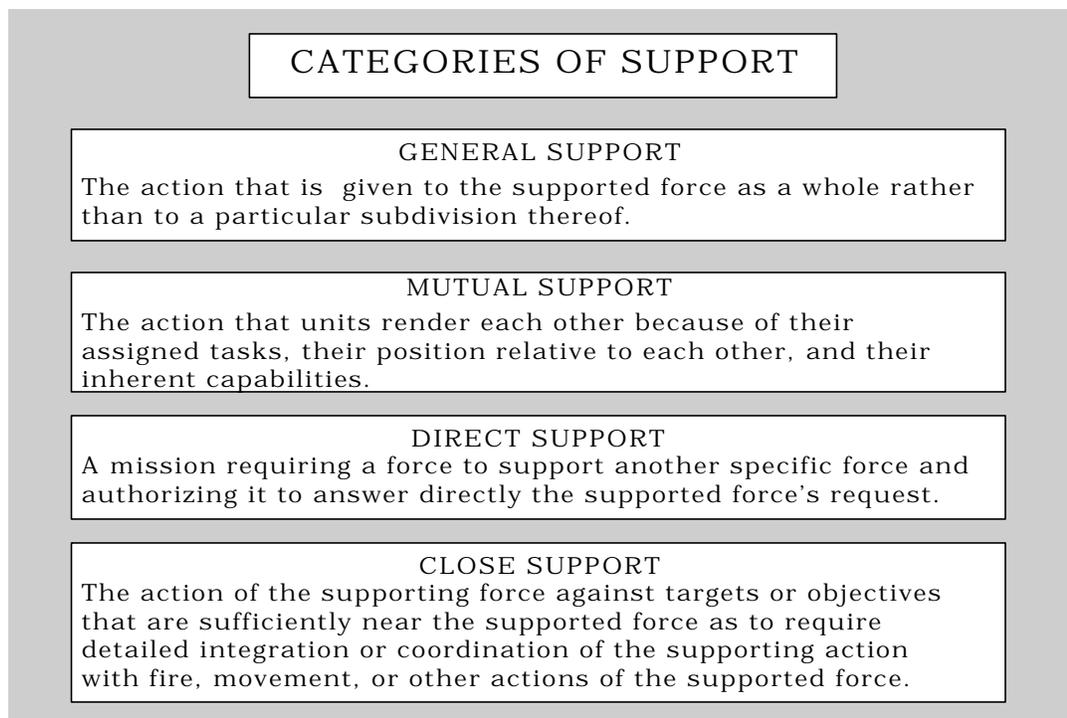


Figure III-4. Categories of Support” 6

(2) “support--(DOD) 1. The action of a force which aids, protects, complements, or sustains another force in accordance with a directive requiring such action. 2. A unit which helps another unit in battle. Aviation, artillery, or naval gunfire may be used as a support for infantry. 3. A part of any unit held back at the beginning of an attack as a reserve. 4. An element of a command which assists, protects, or supplies other forces in combat. See also close support; direct support; general support; interdepartmental/agency support; international logistic support; inter-Service support; mutual support.”

d. Supported and Supporting Commanders

(1) “supported commander--(DOD) The commander having primary responsibility for all aspects of a task assigned by the Joint Strategic Capabilities Plan or other joint operation planning authority. In the context of joint operation planning, this term refers to the commander who prepares operation plans or operation orders in response to requirements of the Chairman of the Joint Chiefs of Staff.”

(2) “Supported Commander

(1) Exercises the degree of authority over supporting forces as determined by the common superior commander.

(2) Exercises general direction of the supporting effort as outlined in Joint Pub 0-2, unless otherwise prescribed.”

(3) “supporting commander--(DOD) A commander who provides augmentation forces or other support to a supported commander or who develops a supporting plan. Includes the designated combatant commands and Defense agencies as appropriate.”

(4) “Supporting Commanders

(1) Exercise OPCON (COCOM if the supporting commander is a Combatant Commander) over assigned and attached forces .

(2) Prescribe the tactics, methods, communications, and procedures to be employed by elements of the supporting force in fulfilling objectives, timing, and duration of the supporting action within existing capabilities, consistent with priorities and requirements of other assigned tasks.

- (3) Coordinate with the supported commanders and other supporting commanders as necessary to ensure effective and efficient support.
- (4) Monitor the operational situation and, as required, keep the supported commander informed.
- (5) Provide liaison personnel to CJTF, JTF component commanders, and other supporting commanders as necessary or as directed by CJTF.<sup>11</sup>

### 3. Functional Components

- a. "functional component command . A command normally, but not necessarily, composed of forces of two or more Military Departments which may be established across the range of military operations to perform particular operational missions that may be of short duration or may extend over a period of time."<sup>2</sup>
- b. "The JFC [joint force commander] can establish functional component commands to conduct operations. Functional component commands can be appropriate when forces from two or more Military Departments must operate in the same dimension or medium or there is a need to accomplish a distinct aspect of the assigned mission."<sup>3</sup>
- c. "Functional component commanders have authority over forces or military capability made available to them. Functional component commands may be established across the range of military operations to perform operational missions that may be of short or extended duration. JFCs may elect to centralize selected functions within the joint force, but should strive to avoid reducing the versatility, responsiveness, and initiative of subordinate forces. . . .The responsibilities and authority of a functional component command must be assigned by the establishing JFC. The establishment of a functional component commander must not affect the command relationships between Service component commanders and the JFC."<sup>4</sup>
- d. "JFCs may establish functional components to provide centralized direction and control of certain functions and types of operations when it is feasible and necessary to fix responsibility for certain normal, continuing functions, or when it is appropriate and desirable to establish the authority and responsibility of a subordinate commander. These conditions apply when the scope of operations requires that the similar capabilities and functions of forces from more than one Service be directed toward

closely related objectives and unity of command and effort are primary considerations. For example, when the scope of operations is large, and JFCs need to divide their attention between major operations or phases of operations that are functionally dominated--and synchronize those operations--it may be useful to establish functionally oriented commanders responsible for the major operations. JFCs may conduct operations through functional components or employ them primarily to coordinate selected functions . . . . Functional componentency can be appropriate when forces from two or more Services operate in the same dimension or medium. A joint force land component commander (JFLCC) is one example. . . . The nature of operations, mix of Service forces, and command and control capabilities are normally primary factors in selecting the functional component commander.<sup>5</sup>

#### 4. TACON, Direct Support, and Functional Component Commanders

a. "TACON is typically exercised by functional component commanders over military capability or forces made available to the functional component for tasking ."<sup>16</sup>

b. "JFCs may establish support relationships within the joint force to enhance unity of effort for given operational tasks , emphasize or clarify priorities, provide a subordinate with an additional capability, or combine the effects of similar assets ."<sup>17</sup>

c. "The JFC must designate the military capability that will be made available for tasking by the functional component commander and the appropriate command relationship(s) the functional component commander will exercise (e.g., a joint force special operations component commander normally has OPCON of assigned forces and a joint force air component commander is normally delegated TACON of the sorties or other military capability made available )."<sup>18</sup>

d. "JFCs may also establish a supporting and/or supported relationship between components to facilitate operations. Regardless, the establishing JFC defines the authority and responsibilities of functional component commanders based on the concept of operations and may alter their authority and responsibilities during the course of an operation."<sup>19</sup>

e. "The authority and command relationships of the JFACC are established by the JFC. These typically include exercising operational control over assigned and attached forces and tactical control (TACON ) over other military capabilities and/or forces made available for tasking. However,

the JFC may decide that DS is a more appropriate command authority for certain capabilities and/or forces. . . Unless limited by the establishing directive, the supported commander will have the authority to exercise general direction of the supporting effort. General direction includes the duration of the supporting action, and other instructions necessary for coordination and efficiency. The supporting commander determines the forces, tactics, methods, procedures, and communications to be employed in providing this support.”<sup>20</sup>

f. “The commander of a functional component command is responsible for making recommendations to the establishing commander on the proper employment of the military capability made available to accomplish the assigned responsibilities.”<sup>21</sup>

## 5. JFACC/AADC Authority and Responsibilities

a. “Area Air Defense Commander. Within a unified command, subordinate unified command, or joint task force, the commander will assign overall responsibility for air defense to a single commander. Normally, this will be the component commander with the preponderance of air defense capability and the command, control, and communications capability to plan and execute integrated air defense operations. Representation from the other components involved will be provided, as appropriate, to the area air defense commander’s headquarters. Also called AADC.”<sup>22</sup>

b. “The JFACC’s responsibilities normally will include, but are not limited to, planning, coordinating, allocating, and tasking based on the JFC’s concept of operations and air apportionment decision. Because of the integrated relationship between airspace control measures and air defense operations, ACA and AADC duties normally should be performed by the same person, who may also be the JFACC.”<sup>23</sup>

c. “If appointed the AADC, the JFACC is responsible for integrating the joint force air defense effort. Air defense operations must be coordinated with other tactical operations on and over both land and sea.”<sup>24</sup>

d. “The JFC normally assigns overall responsibility for theater/ JOA air defense, to include active defense TMD [theater missile defense], to the AADC. The AADC assists the JFC in determining missions, communications priorities, and rules of engagement for active defense forces based on assessment and prioritization of forces, critical assets, and population centers to protect.”<sup>25</sup>

e. “. . . all available surface-to-air defense assets in a given land area must be incorporated into the overall area air defense plan and be subject to the integrated air defense procedures and weapons control measures of the AADC.”<sup>26</sup>

f. “The JFC will normally assign responsibility for the planning and execution of JTMD attack operations outside the other component commanders areas of operations (AOs) to the JFACC. Since the location of these AOs may change with the maneuver of forces or with changes in JFC guidance, the JFACC should also plan for and maintain visibility on the theater/joint operations area (JOA)-wide attack operations effort. This will ensure the JFACC is prepared to support the other component commanders when, for example, they request JFACC support in conducting JTMD attack operations within their AOs. Inside their AOs, component commanders are normally designated as supported commanders for attack operations.”<sup>27</sup>

g. “Specific responsibilities for the AADC include:

- Developing a data base of friendly active defense capabilities to facilitate planning the defense of prioritized assets.
- Developing and executing plans for dissemination of launch warning information to all components, allies, and HN civil authorities for population warning, as appropriate.
- Developing and executing detailed plans, including weapon control procedures and measures, to disseminate launch warning and cue information by the fastest means available to components and active defense forces for engaging incoming TMs by the fastest means available.
- Ensuring, through organization and application of appropriate procedures within the framework of other JFC air and surface operations, that the optimum effectiveness is realized from each of the various weapon systems used for active defense and that no unnecessary restrictions are placed upon their employment.
- Developing and executing plans for JTMD active defense operations and ensuring that they are included in the counterair, air defense, and space annexes for all operation plans (OPLANs) and operation plans in concept format, if necessary.<sup>28</sup>

h. "When aTCF [tactical combat force] is committed, the situation is serious enough to assign to theTCF commander a AO that encompasses a large portion of the rear area. During Level III operations, the TCF commander will normally have OPCON over most base or base cluster defense forces and response forces in the assigned AO, excluding air defense forces, which remain under OPCON of the AADC."<sup>29</sup>

i. "Some bases by their nature possess special capabilities for active air and missile defense. Bases with air defense missile units and counterair and/or anti-air warfare aircraft play important roles in the overall theater and/or joint operations area air defense. These units are subject to the weapon control procedures of the AADC and airspace control authority (ACA)."<sup>30</sup>

j. "Air defense assets not assigned to Army corps, MAF [Marine amphibious force, now Marine expeditionary force (MEF)], or lower maneuver echelons are normally under the operational control of the AADC."<sup>31</sup>

## 6. Other Component Commanders' Authority and Responsibilities

a. "Component commanders plan and execute JTMD operations as directed by the JFC and active defense in accordance with weapon control procedures and measures established by the AADC. Component commanders are responsible for planning and executing combat operations and for jointly coordinating and prioritizing their operations and needs with the JFC and with other component commanders. Inside their AOs, component commanders are normally designated as supported commanders for attack operations."<sup>32</sup>

b. "Active defense forces are under the operational control of their component commanders, who employ these forces under the weapons control procedures and measures established by the AADC and approved by the JFC."<sup>33</sup>

## 7. Positioning of Air Defense Assets

a. "Air defense units assigned to Army corps, MAF, or lower maneuver echelons are under operational control of the echelon commander, who employs the assigned units under the weapons control procedures and measures established by the AADC. Positioning of surface-to-air systems is reported to the AADC to allow appropriate adjustment of the weapons control status and airspace coordination in the area."<sup>34</sup>

- b. "SAM [surface-to-air missile] and SHORAD [short range air defense] units organic to land corps and maneuver forces will be positioned tactically by the assigned land force commander. "35
- c. "Positioning Considerations. The placement of reserves, ADA [air defense artillery] units, military police, engineers, response forces, field artillery, aviation assets, naval assets, and command posts all require special consideration of the threat to the JRA [joint rear area], the vulnerability of the JRA, and the JFC's concept of operations36"
- d. "Aviation forces or sorties in direct support should be positioned to support the supported unit's scheme of maneuver. Positioning and displacement areas should be coordinated with the supported commander. 37
- e. "Commanders of artillery battalions control all aspects of their batteries' operations except that : . . . Battery positions must be approved by the commander who controls the zone of action or sector in which the battery position is located . Battalion commanders control, among other things, selection of battery positions, assignment of fire missions to individual batteries, resupply of ammunition to firing batteries, personnel replacement priorities and maintenance priorities within the battalion. 38

## 8. Command Relationships during Joint Fire Support

a. "Command Relationships. The JFC tasks attack helicopters to conduct CAS [close air support] in support of another component in two ways. In the first way, the JFC tasks a component to provide direct support to another, establishing a command relationship between the two components for CAS. In the second way, the JFC uses the air apportionment and joint ATO [air tasking order] process to make the attack helicopters available for joint CAS as part of the joint air operations. This is the less likely case, as attack helicopters are not normally part of the air apportionment process. The following ~~two~~ examples where joint CAS is provided through direct support using either TACON or support command relationships.

- TACON. II Marine expeditionary force (MEF) is defending critical territory against a large enemy force. The enemy has, for the moment, relaxed its effort in the I Corps sector. The JFC appoints II MEF as the main effort, so II MEF receives the preponderance of CAS sorties. Additionally, the JFC instructs the Commander, Army Forces (COMARFOR), in this example the Commander, I Corps, that II

MEF will have TACON of two of his attack helicopter battalions for the next 48 hours. The I Corps Commander informs the Aviation Brigade Commander, who in turn selects two units based fairly close to II MEF's area of operations.

- Support. Army forces (ARFOR) might be designated to support a Marine expeditionary operation with attack helicopters. While ARFOR maintains control over these helicopters, he coordinates with the MAGTF [Marine air-ground task force] to position the attack helicopters and their required logistics. Once positioned, the attack helicopters respond to mission-type orders from the MAGTF.<sup>9</sup>

## SECTION B: LESSONS LEARNED

1. Joint Universal Lessons Learned (JULLS). The post-1990 JULLS database (6121 entries) was searched for text strings containing AADC, air defense, command relationships, TACON, and DS. There were four entries found which contained applicable comments. Those comments are provided below. See Appendix B for the complete JULLS entries.

a. Exercise OCEAN VENTURE 93. "Preplanned use of attack helos should be included on the ATO."

b. Exercise ROVING SANDS 93

(1) "The "I" in "IADS [integrated air defense system]" becomes "independent" rather than "Integrated" if the AADC/ACA is not made aware of all air defense artillery (ADA) locations and primary target lines (PTLs). It is fundamental to the AADC/ACA concept that he will have a major say in ADA location and their PTLs in order to provide the most effective area defense and the safest passage for friendly air forces. Despite the best efforts of the Battlefield Coordination Element (BCE) and the USMC liaison in the AOC [air operations center], there were almost daily surprises during the VTCs that some ADA units were not located where the AADC expected and the PTLs were not always optimized against the threat axis the enemy repeatedly flew."

(2) "Knowing radar and air defense artillery (ADA) engagement ranges is required in the AOC for the AADC/ACA to function effectively. Timely access to this info is necessary for the AADC/ACA to determine the best air defense and airspace control measures to use. Equally important is knowing when fire units and radars are scheduled to move. ADA unit moves have an obvious impact on air defense coverage and

airspace control measures. If AADC/ACA is not told about such moves before they occur, weapons engagement zones (WEZs) may be inappropriately activated as missile engagement zones (MEZs) when no high altitude surface-to-air missiles (HIMAD) are available, and fighters (paired with the opposing force) may be denied engagement authority (as occurred on Day 3, Push 1 in WEZ 1A), resulting in many of the enemy strikers reaching their targets and their escorts engaging friendly fighters in position more advantageous to the enemy.”

(3) “Having timely, accurate info in the AOC concerning radar/ADA coverage and move schedules is a must for the AADC/ACA to adequately perform his air defense and airspace control functions.”

(4) “Process of coordinating movements of ADA units with AADC didn't work. AADC must have some say in movement process to ensure there are not holes in air defense coverage. Joint doctrine or joint TTP [tactics, techniques, and procedures] do not appear to adequately address this issue. Affects questions of command and operation control.”

2. Exercise COHERENT DEFENSE 97. The following resulted from Part I doctrinal discussions regarding command relationships for countering air and missile threats.

a. “Army air defense assets apportioned by the JFC to the JFACC for counterair missions will be in DS (vice tactical control) to the JFACC. This includes assets at echelons above Corps levels<sup>40</sup>”

b. Appendix 20 to Annex C of the draft JTF COHERENT DEFENSE 97 OPORD of 17 May 97 includes a table on page C-20-34 which places Army active air defense Patriot units in DS of Regional Air Defense Commander (RADC). USMC and Navy units are shown as TACON to the RADC.

3. Exercise ROVING SANDS 97

a. The focus of Exercise ROVING SANDS 97 was theater missile defense (TMD). The exercise OPORD addressed pertinent command relationships in Annex C as follows:

(1) “Land based SHORAD and point air defense systems will remain under the OPCON of their respective component commanders. Area defense systems (e.g., Patriot and Hawk) will be integrated into the area air defense system by the AADC. All area air defense systems will be TACON to AADC. Positioning authority remains with appropriate

OPCON commander; however, coordination with AADC must be completed prior to movement to insure integrity of theater air defense system. Maritime Area Air Defense assets will be integrated into the area air defense system by the AADC.<sup>41</sup>

(2) Appendix 17 to Annex C, Missile Defense Plan, created Regional Area Defense Commanders (RADCs) who were responsible to the AADC for execution of the air defense plan within their assigned region. The RADCs were given: "TACON (less positioning authority for SAM/ADA units) of all air defense units within the assigned region."<sup>42</sup> Appendix 17 to Annex C also stated that functional component commanders (e.g., joint force land component commander and maritime component commander) retain OPCON and positioning responsibilities for their respective SAM/ADA units . . . ."<sup>43</sup>

b. Discussions with key Army Forces, US Central Command (USARCENT) and Air Force Forces, US Central Command (CENTAF) personnel indicated that they liked how US Central Command (USCENTCOM) had handled this issue, but believed that DS was the most realistic term to use in joint doctrine.

## SECTION C: OTHER DOCUMENTATION

### 1. Standing Operating Procedures (SOPs) and Orders

a. USCENCOM SOPs indicate:

(1) "The JFACC will normally be appointed as the Area Air Defense Commander (AADC) (any one of the service components could receive this mission--assignment is METT-T [mission, enemy, terrain and weather, troops and support available, time available] dependent). In this role he is responsible for the integration of the joint force air defense effort on and over the land and sea. To ensure mutually supporting and integrated air defense coverage, USCINCENT will normally give the AADC TACON of critical land based air defense assets."<sup>44</sup>

(2) "(a) To ensure mutually supporting and integrated air defense coverage, USCINCENT will normally give the AADC TACON of the critical land- and sea-based air defense assets which can be integrated into the theater air defense system. (b) AADC specific responsibilities include:

1 Develop a data base to facilitate planning a prioritized TMD target list.

2 In conjunction with the J2 and the CENTCOM Theater Missile Defense Cell (TMD Cell), develop and execute plans for dissemination of launch warning information to all components, allies, and host nation civil authorities for population warning, as appropriate.

3 In conjunction with the J2 and the CENTCOM TMD CELL, develop and execute detailed plans to disseminate launch warning and cueing information to components and to active defense forces for engagement of incoming TMs via the fastest means available.

4 Develop plans for TMD operations and ensure they are included in the counter-air annex for all operations plans and concept plans, if necessary. . . .

The AADC will issue mission type orders to be forwarded to executing components.<sup>45</sup>

b. The Republic of Korea (ROK)-US Combined Forces Command Air-Ground Operations Standing Operating Procedures (AGOSOP) addresses command relationships for air defense as follows:

“The CACC [commander, air component command], in his capacity as AADC is overall responsible for aerospace control (except in an AOA, . . .). When directed, the AADC assumes OPCON less operational command of certain theater air defense resources from the component forces . . . . Specifically, the CACC as AADC through his staff and in concert with component commands:

- a. Coordinates and integrates the theater’s air defense efforts.
- b. Assigns Areas of Responsibilities (AOR) for ground radars (MCRC, CREs, Patriot, Nike-Herc, and Hawk), airborne radars (AWACS, E-2 Hawkeye), and shipborne radars.
- c. Develops, coordinates, and promulgates air defense Rules Of Engagement (ROE), e.g., . . . .
  - (1) Establishes Weapons Engagement Zones (WEZs) . . . .
- d. Issues Weapons Control Status (WCS) . . . .
- e. Issues Air Defense Warnings (ADW)<sup>46</sup>

Note: OPCON less operational command is a NATO convention for granting OPCON with no authority to reassign forces

2. General Colin Powell addressed support relationships in his statement of doctrinal concepts paper published in 1992 as follows:

“Establishing supported and supporting relationships between components is one such useful option to accomplish needed tasks. For example, some naval operations, when conducted to enable or enhance air and land operations, can dramatically increase the successes achieved by the supported forces. This concept applies equally to all dimensions of the joint force. As defined in JP 0-2, "Unless limited by the establishing directive, the commander of the supported force will have the authority to exercise general direction of the supporting effort. General direction includes the designation of targets or objectives, timing, and duration of the supporting action, and other instructions necessary for coordination and efficiency. The supported commander should consider the accepted tactical practices of the Service of the supporting force. Normally, the supporting commander will be permitted to prescribe the tactics, methods, communications, and procedures to be employed by elements of the supporting force. The supporting commander has the responsibility to ascertain the needs of the supported force and take such action to fulfill them as is within existing capabilities, consistent with priorities and requirements of other assigned tasks<sup>4,7</sup>”

3. The Army-Air Force Warfighters Conference of December 1996 produced an agreement regarding command relationships between ADA forces and the JFACC/AADC.

a. The Army gave a presentation to illustrate why they prefer a DS relationship over TACON for surface forces provided to the JFACC/AADC. Bullets which summarize some of the presentation slides are provided below:

- DS relationship provides more flexibility
- TACON limits supporting commander’s flexibility to position forces to facilitate future operations and maximize capabilities
- DS provides continuous support
- TACON allows application of force (e.g., sorties) for a limited period or mission

- Long experience with combined arms operations shows that DS is the most suitable command relationship between dissimilar unit (e.g., air and surface units)

b. A pertinent conference report excerpt is provided below. See Appendix C for the entire report.

“G. JOINT PUB 3-01 (COUNTERING AIR AND MISSILE THREATS): BOTH SERVICES AGREED:

(1) THAT ANY ARFOR ASSETS APPORTIONED BY THE JFC TO THE JFACC FOR COUNTERAIR MISSIONS WOULD BE IN DIRECT SUPPORT (VICE TACON) TO THE JFACC. THIS INCLUDES ASSETS AT THE EAC LEVEL.”

#### 4. Draft Joint Doctrine

a. “The JFC may apportion component capabilities and/or forces to the JFACC or AADC to support theater/JOA-wide counterair missions. The JFC determines the most appropriate command authority over forces made available to conduct offensive and defensive counterair. Typically for OCA [offensive counterair], air and naval forces provide air sorties TACON, and land forces provide fire support and attack helicopters in direct support. Normally, for forces made available to the AADC for DCA [defensive counterair], air sorties are provided TACON, while surface-based active defense forces are provided in direct support. Regardless of the command relationship, all active defense forces made available are subject to the ROE, airspace, weapons control measures, and fire control orders established by the AADC and approved by the JFC. As the supported commander for theater/JOA-wide DCA, the AADC will be granted the necessary command authority to deconflict and control engagements and to exercise real-time battle management.”<sup>48</sup>

b. “The JFC specifies the JFACC area of operations, the specific forces and capabilities to be made available by other components of the joint force, and the authority of the JFACC over forces and capabilities made available; normally TACON or supporting.”<sup>49</sup>

c. “SOF [special operations forces] may be under the OPCON or TACON of Service or functional component commanders. Specific command arrangements should be determined by the nature of the mission and the objectives to be accomplished.”<sup>50</sup>

d. "Predominantly jointspace forces act in the role of a supporting force to a supported commander."<sup>51</sup>

## 5. Service Doctrine

a. "The commander of the force (GCE) [ground combat element] or division exercises control of artillery in his organization through the commander of that artillery unit. The higher artillery commander organizes artillery for combat to meet the needs of the force as a whole and the needs of subordinate units. He receives guidance from the commander of the force or division of which the artillery is a part. The selection of firing positions, assignment of fire missions, resupply, etc., are controlled by artillery commanders ; however, the delivery of fires and positioning must be cleared by the appropriate ground commander who has control of that zone or sector.

The mortar platoon, or an element thereof, may be employed in Direct Support of a specific unit of the battalion; e.g., a company. Liaison is maintained between the 81 mm platoon commander and the supported unit through an FO [forward observer]. The platoon commander retains responsibility for the control of the mortar unit/element's actions, to include positioning and displacement. The supported commander controls the allotted fires. This relationship is normally assigned for a specific mission or phase of an operation. DS may be warranted when the mortar platoon cannot provide the required support while its fires are under battalion control.<sup>52</sup>

b. Figure V-5 from "Army and Marine Corps Integration in Joint Operations" of May 1996 shows that an artillery unit with a DS mission is positioned by DS artillery unit commander or as ordered by force artillery HQ.<sup>53</sup> Figure VIII-2 illustrates that an air defense unit with a mission of DS has air defense priorities established by the supported commander and is positioned by the fire unit commander with the approval of the local ground commander.<sup>54</sup>

## CHAPTER III

## ANALYSIS RESULTS

*“The role of component commanders in a joint force merits special attention. Component commanders are first expected to orchestrate the activity of their own forces, branches, and warfare communities—itsself a demanding task. In addition, effective component commanders understand how their own pieces fit into the overall design and best support the joint force commander’s plans and goals. Component commanders also should understand how they can support and be supported by their fellow component commanders. Leaders who possess this extra dimension of professionalism have the potential to become great component commanders.”*

JP 1, “Joint Warfare of the Armed Forces of the United States”

## 1. TACON: An Authority-based Relationship

a. Command relationships by definition include “. . . the authority of commanders in the chain of command.” TACON relates directly to the notion of command authority. Specifically, it is described as “the command authority” over assigned or attached forces or commands, or military capability or forces made available for tasking. TACON is the degree of control to be exercised by a commander over forces or capabilities. It is limited when compared to OPCON--usually detailed and local direction and control of movements or maneuvers and does not include authority over organization, administration, or logistic support. “Local direction and control of movement or maneuvers” can be interpreted as “positioning authority” in terms of a geographical area (region, sector) or a geographical point (air patrol station, firing position) to operate from.

b. TACON lends itself to temporary requirements, commanders’ operations widely dispersed over a large area, or control of unit elements/functions (e.g., local direction and control of aircraft sorties or missile launches). Once the mission is accomplished, the TACON relationship can be quickly severed with no ill effects to organization, administration, and logistics.

## 2. Support: A Responsibility-based Relationship

a. Command relationships by definition also include the “interrelated responsibilities between commanders.” Support is described as “a command authority,” but the definition of “support” relates directly to the notion that one force should assist another. The support relationship doctrine centers on actions, responsibilities, or obligations of both the supported and supporting commanders. Joint doctrine acknowledges the

supported commander needs some authority, which should be specified in the establishing directive. Joint doctrine also recommends that the establishing directive include the authority of the supporting commander to modify the supporting effort in exceptional circumstances. Further, joint doctrine describes four categories of support (general, mutual, direct, and close) and their descriptions also center around the actions or mission of the supporting force. With the exception of mutual support, these categories of support require a degree of command authority be granted the supported commander. However, the thrust of a support relationship is the responsibilities of the supported and supporting commanders as specified by the establishing commander--not the authority granted to the supported commander by the establishing commander.

b. Support relationships lend themselves to situations in which a force must assist another force (e.g., ARFOR attack helicopter battalion in DS of a MEF). Because the supported commander is limited to general of the supporting effort and the supporting commander determines the tactics, methods, and procedures to be employed, it can be concluded that positioning authority belongs with the supporting commander. Note: Multi-Service doctrine grants positioning authority to the supporting air defense unit commanders, but they must coordinate with the supported commander.

3 Supported and Supporting Commanders. The terms "supported commander" and "supporting commander" are used in forty-four approved JPs. The context of their use is twofold: (1) the joint operational planning process; and (2) the support command relationship, which is the most common. However, the definitions of both terms do not match their use in the latter case. Apparently the definitions were initially developed to describe the key commanders in the deliberate and crisis action planning processes, but were never amended to describe their operational use.

#### 4. "Normally TACON"

a. General. Joint doctrine endorses functional component commanders normally exercising TACON of forces or capabilities made available by the JFC. This guidance was initially established because its common use was in the context of the JFACC exercising TACON over air sorties from other joint force components' units. This concept was a compromise to resolve the need to have unity of command in certain aspects of joint air operations while the air units remained OPCON to their Service components. It was unnecessary to provide air sorties under OPCON or support relationships because the required degree of authority and control would be overstated or

understated and the lifespan of an air sortie does not fit these alternatives. It was acceptable to grant the JFACC TACON over air sorties because of their individual mission control requirements and short duration. Additionally, air sorties are considered capabilities and not forces (units). Therefore, "normally TACON" is proven guidance with reference to the JFACC and air sorties which are tasked on the ATO.

b. Exceptions. There are exceptions to the "normally TACON" rule in joint doctrine. One example is: "a joint force special operations component commander normally has OPCON of assigned forces. Notice that forces are involved--not elements or capabilities of a force such as sorties. Additionally, the mission requirements of a special operations component may require more authority over organization and tactics, and the relationship will exist for an extended length of time. JPs 3-01.2 and 3-10.1 also indicate the AADC, who probably will be the JFACC, could have OPCON of air defense forces made available for tasking. Further and more pertinent to this study, the option of establishing a support command relationships between a functional component commander and forces or capabilities made available for tasking is discussed in JPs 3-0 and 3-03. Lastly, draft JPs 3-01, 3-14, and 3-56 in various stages of review and coordination all contain language which proposes that functional component commanders may have a support relationship with forces or capabilities provided by other components.

c. Countering Air and Missile Threats. Both offensive and defensive actions by forces or capabilities made available to the AADC, who probably will be the JFACC, are required to counter air and missile threats and provide unity of effort. The tasks could include control of aircraft sorties and TACON is the accepted choice as discussed above. If attack operations require the use of an entire aircraft unit, such as an attack helicopter battalion, over an extended period of time, a support relationship may be more appropriate. It would provide flexibility to the AADC to issue mission-type orders allowing the supporting force to choose the tactics, methods, and procedures. If attack operations require supporting arms responses to infrequent calls for fire, the traditional general support mission may be the most flexible option. The supporting unit could satisfy parent component missions when the AADC has no requirements pending. Theater active defense operations require surface air defense forces to provide area or point defense and to engage enemy aircraft or missiles in response to AADC orders and requests--surface defense forces are provided in DS of the AADC.

d. Joint Fire Support. During joint fire support, joint doctrine indicates TACON should be used for aviation sorties (e.g., attack helicopters conducting preplanned CAS) which must go on the ATO while TACON or DS

is used if forces are made available between land force commanders. The level of command authority is entirely dependent upon the situation, mission, and the desires of the JFC, and joint doctrine provides the flexibility and considerations to select the appropriate option.

e. Summary. The overriding doctrinal principle is that the JFC has the authority to tailor the command relationships of the joint force to best utilize components' capabilities in any given situation. The JFC must articulate the command relationship and key features that fit the situation, mission, and component capabilities in the establishing directive.

## 5. Positioning Authority

a. It is logical to conclude that TACON includes command authority to position forces and DS does not, but it is not directly addressed in the doctrinal discussions. Further, the term "positioning authority" is not defined. Positioning is addressed in some Service doctrine in the context of artillery and air defense DS missions as the responsibility of the supporting commander, but coordination with the supported commander also is required.

b. Regardless of the command relationship (TACON or support), the JFC should specify the presence or absence of positioning authority in the establishing directive as done in the Exercise ROVING SANDS 97 OPOD. Positioning authority exercised by the AADC to ensure an integrated air defense system with full umbrella coverage according to the JFC's guidance (e.g., defended assets list) seems appropriate. This does not necessarily mean designating positions by grid coordinate, but rather assigning regions, sectors, or points (airfield, port, population center) to defend. Experience has shown that these decisions are not done autocratically, but as a coordinated planning effort. Lessons learned surely justify the AADC being made aware of repositioning of active air defense assets.

6. Command Authority. The term "command authority" is used to describe command relationships; but it is not defined in joint doctrine. It is usually associated with the authority a commander may exercise to direct the activities of forces assigned, supporting forces, or forces and capabilities made available for tasking in the accomplishment of a mission(s).

7. Command Authority and Counterair Operations. The draft JP 3-01 language regarding forces or capabilities made available to the JFACC/AADC seems unnecessarily directive since the command relationship choices are channeled. For example, a DS relationship is prescribed between the AADC and surface air defense forces--a specific category of the support relationship.

Further, the verbiage does not detail the pros and cons of the command relationship options with respect to the situation, mission, and friendly force capabilities. This has been done in JP 3-09.3 with regard to attack helicopters used for CAS. As shown above, the counterair mission (countering air and missile threats) has varied characteristics which drives the type of command relationship required to establish the degree of command authority or responsibilities of the commanders and forces involved.

## CHAPTER IV

## CONCLUSIONS

*The JFC determines the command relationships and organization appropriate for each joint force operation. The organizational structure of forces will be influenced by the mission, threat, manner in which the mission is to be accomplished, capabilities and strengths of the forces assigned, phasing of operations planned, geography, and weather in the AOR.*

JP 3-04, "Doctrine for Joint Maritime Operations (Air)"

1. Current joint doctrine allows JFCs the option to select, as desired, the appropriate command relationship between a functional component commander and capabilities or forces made available for tasking--there is no "cookbook" solution, despite the "normally TACON" language.
2. In the past, some JFCs have applied joint doctrine's inherent flexibility by establishing OPCON, TACON, TACON (less positioning authority), and DS relationships between functional component commanders and forces and capabilities made available for countering air and missile threats.
3. TACON of capabilities such as aircraft sorties tasked with counterair or joint fire support missions by a functional component commander is acceptable and commonly used in joint operations.
4. The support command relationship is incorrectly labeled as "a command authority." Support is not "command authority" in the same sense as OPCON, or TACON. Support is an action or mission that requires one force to aid another. This premise does not diminish the power or status of support as a useful command relationships tool for conducting joint operations.
5. A support relationship between the AADC and surface air defense and attack forces provides more flexibility to the supporting force without unnecessarily degrading the authority of the supported commander or jeopardizing mission accomplishment.
6. Draft joint doctrine outlined in JP 3-01 regarding command relationships between the JFACC/AADC and counterair capabilities and forces made available for tasking is workable and not inconsistent with approved joint doctrine. However, the proposed draft doctrine does appear too "prescriptive."
7. The terms "supported commander" and supporting commander" should be updated with a second part to their definitions to delineate their use in the context of a support command relationship.

8. The term “command authority” needs to be defined to enable a better understanding of command relationships.
9. The term “positioning authority” needs to be defined to provide JFCs with a tool to delineate the extent of authority a command relationship contains.
10. Positioning authority appears inherent in TACON while positioning is coordinated in a support relationship. This should be clarified in joint doctrine.
11. Joint doctrine should address positioning authority as a potential element of the establishing directive.
12. Specific conclusions (responses) regarding the questions raised in the study request letter are provided in Appendix D.

## CHAPTER V

### RECOMMENDATIONS

*“Joint doctrine--Fundamental principles that guide the employment of forces of two or more Services in coordinated action toward a common objective.”*

JP 1-02, “DOD Dictionary of Military and Associated Terms”

1. Include the following definitions in JP 3-56 with the intent, upon approval, to include them in the list of approved DOD terms.
  - a. command authority--The authority of a commander to direct the military operations of subordinate or supporting forces, or forces and capabilities made available for tasking.
  - b. positioning authority--The authority of a commander to designate the geographical location of a subordinate or supporting command, or forces and capabilities made available for tasking.
2. Modify approved and developing joint doctrine as follows:
  - a. Remove the statement “support is a command authority” from the Joint Doctrine Keystone and Capstone Primer and JPs 0-2, “Unified Action Armed Forces (UNAAF),” 3-0, “Doctrine for Joint Operations,” 3-03, “Doctrine for Joint Interdiction Operations,” and 3-56, “Command and Control Doctrine for Joint Operations.”
  - b. JP 0-2, “Unified Action Armed Forces (UNAAF),” page III-10, para. 5b  
Change as follows:
 

“TACON provides the authority to:

    - Give direction for military operations
    - Position military forces or capabilities unless modified by the establishing directive
    - Control designated forces . . . .”
  - c. JP 0-2, “Unified Action Armed Forces (UNAAF),” page III-11, para. 6e  
Change as follows: The supporting commander determines . . . The supporting commander will advise and coordinate with the supported

commander on matters concerning the employment ( including positioning) and limitations . . . .”

d. JP 0-2, “Unified Action Armed Forces (UNAAF),” page III-11, para 6c, last single bullet; and JP 3-0, page II-9, para 5e, last double bullet“The degree of authority granted to the supported commander over the supporting effort (e.g., address supporting force positioning)”

e. JP 3-01, “Joint Doctrine for Countering Air and Missile Threats” (FC), page II-7, para 2f, Component Commanders. Replace with the following:

“Command relationships which may be established by the JFC for the conduct of counterair by the AADC using other components’ forces or capabilities are TACON or support. TACON provides the AADC the authority to more precisely control and direct the counterair mission(s) and position the forces or capabilities made available. A support relationship provides additional flexibility. The AADC can issue mission-type orders and designate and prioritize air defense areas/sectors, targets, or objectives. The supporting commander should choose the tactics, methods, procedures, and position of forces to best support, and can conduct other missions that do not conflict with counterair missions. For example, OCA and DCA air sorties could be TACON, surface air defense forces in direct support, and surface attack forces in general support of the AADC. Regardless of the command relationships, all active air defense forces made available are subject to the rules of engagement, airspace, and weapons control measures established by the AADC and approved by the JFC. As the supported commander for DCA, the AADC will be granted the necessary control authority to deconflict engagements and, when appropriate, to exercise real-time battle management.”

f. JP 3-01.5, “Doctrine for Joint Theater Missile Defense,” Figure II-1, Joint Force Commander Joint Theater Missile Defense GuidanceModify the 5th bullet as follows: “The capabilities/forces made available to the functional componentsand the degree of command authority (e.g., address positioning authority) over the capabilities/force”

g. JP 3-09, “Doctrine for Joint Fire Support” (FC), page GL-9, and JP 3-56, “Command and Control Doctrine for Joint Operations” (TD), page GL-12 Add the following terms and modify their definitions as follows:

“supported commander--(DOD) 1. The commander having primary responsibility for all aspects of a task assigned by the Joint Strategic

Capabilities Plan or other joint operation planning authority. In the context of joint operation planning, this term refers to the commander who prepares operation plans or operation orders in response to requirements of the Chairman of the Joint Chiefs of Staff<sup>2</sup>. In the context of a support command relationship, the commander who receives assistance from another commander's force or capabilities, and who is responsible for ensuring the supporting commander understands the assistance required. (Upon approval of this publication, the term and definition will be included in the next edition of JP 1-0<sup>2</sup>)

supporting commander--(DOD) 1. A commander who provides augmentation forces or other support to a supported commander or who develops a supporting plan. Includes the designated combatant commands and Defense agencies as appropriate<sup>2</sup>. In the context of a support command relationship; the commander who aids, protects, complements, or sustains another commander's force; and who is responsible for providing the assistance required by the supported commander (Upon approval of this publication, the term and definition will be included in the next edition of JP 1-0<sup>2</sup>)

h. JP 3-56, "Command and Control Doctrine for Joint Operations" (TD), page I-9, para 7c, Tactical Control (TACON)Change to read as follows: "TACON is the command authority over assigned or attached forces or commands, or military capability or forces made available for tasking, that is limited to the detailed and usually local positioning, and direction and control of movements or maneuvers necessary to accomplish assigned missions or tasks. Refer to JP 0-2 for a discussion of the specific details of TACON." Note: This change ultimately will affect the same language contained in numerous publications including JPs 0-2, "Unified Action Armed Forces (UNAAF)," and 3-0, "Doctrine for Joint Operations."

i. JP 3-56, "Command and Control Doctrine for Joint Operations" (TD), page I-9, para 7d, Support. Change to read as follows:

~~"Support is a command authority"~~A support relationship is established by a superior commander between subordinate commanders when one organization should aid, protect, complement, or sustain another force.

(1) Unless limited by the establishing directive the supported commander will have the authority to exercise general direction of the supporting effort. General direction includes the designation and prioritization of targets or objectives, timing and duration of the

supporting action, and other instructions necessary for coordination and efficiency.

(2) The supporting commander determines the forces, tactics, methods, procedures, and communications to be employed in providing this support. The supporting commander will advise and coordinate with the supported commander on matters concerning the employment (including positioning) and limitations (e.g., logistics) of such support, assist in planning for the integration of such support into the supported commander's effort as a whole, and ensure that support requirements are appropriately communicated into the supporting commander's organization. Categories of support include: . . . ."

j. JP 3-56, "Command and Control Doctrine for Joint Operations" (TD), page GL-12 Change the definition of tactical control as follows: "Command authority over assigned or attached forces or commands, or military capability or forces made available for tasking, that is limited to the detailed and, usually, local positioning, and direction and control of movements or maneuvers necessary to accomplish missions or tasks assigned. Tactical control is inherent in operational control. Tactical control may be delegated to, and exercised at any level at or below the level of combatant command. Also called TACON. See also combatant command; combatant command (command authority); operational control (Upon approval of this publication, the term and definition will be included in the next revision of JP 1-02)"

3. When discussing command relationships or command authority in joint doctrine and JTTP, always emphasize the JFC has the authority to tailor the command relationship and should establish the purpose and scope in the establishing directive.

## ENDNOTES

1. JP 1-02, "DOD Dictionary of Military and Associated Terms"
2. JP 1-02
3. JP 0-2, "Unified Action Armed Forces (UNAAF)," xii
4. JP 0-2, III-9,10
5. JP 5-00.2, "Joint Task Force Planning Guidance and Procedures," II-8
6. JP 0-2, III-10
7. JP 1-02
8. JP 1-02
9. JP 5-00.2, II-4
10. JP 1-02
11. JP 5-00.2, II-5
12. JP 1-02
13. JP 0-2, IV-3, 4
14. JP 0-2, IV-18, 19
15. JP 3-0, "Doctrine for Joint Operations," II-14
16. JP 0-2, III-10
17. JP 3-0, II-8
18. JP 0-2, IV-18
19. JP 3-0, II-15
20. JP 3-03, "Doctrine for Joint Interdiction Operations," II-8,9
21. JP 0-2, IV-18
22. JP 1-02
23. JP 3-52, "Doctrine for Joint Airspace Control in the Combat Zone," II-1
24. JP 3-56.1, "Command and Control for Joint Air Operations," II-4
25. JP 3-01.5, "Doctrine for Joint Theater Missile Defense," III-9
26. JP 3-01.2, "Joint Doctrine for Theater Counterair Operations," V-10
27. JP 3-01.5, xi

28. JP 3-01.5, II
29. JP 3-10.1, "JTTP for Base Defense," IV-8
30. JP 3-10.1, C-1
31. JP 3-01.2, III-5
32. JP 3-01.5, II-7
33. JP 3-01.5, III-9
34. JP 3-01.2, III-5
35. JP 3-01.2, V-11
36. JP 3-10, "Joint Doctrine for Rear Area Operations," IV-2.
37. JP 3-09.3, "JTTP for Close Air Support (CAS)," IV-5
38. JP 3-02.1, "Joint Doctrine for Landing Force Operations," VIII-5
39. JP 3-09.3, III-6,7
40. Memorandum from USACOM J-7, "0-6 Level Seminar After-Action Review," 28 Jan 97
41. ROVING SANDS 97 OPORD, Annex C, 7 Mar 97, C-4
42. ROVING SANDS 97 OPORD, Appendix 17 to Annex C, 7 Mar 97, I-7
43. ROVING SANDS 97 OPORD, Appendix 17 to Annex C, 7 Mar 97, I-13
44. USCENTCOM, "Concept for Operations (CONOPS) for Theater Missile Defense," 20 Dec 95, 2-6-8
45. USCINCCENT Warfighting Instruction R 525-1 Vol I, "Operations Standing Operating Procedures (SOP), 21 Aug 96, II-2
46. ROK-US Combined Forces Command Air-Ground Operations Standing Operating Procedures (AGOSOP), July 1995, 7-2 through 7-4.
47. "A Doctrinal Statement of Selected Joint Operational Concepts," General Colin L. Powell. 10 Nov 92, page 8
48. JP 3-01 (PC), "Joint Doctrine for Theater Counterair Operations," II-7,8
49. JP 3-56 (3rd Draft), "Command and Control Doctrine for Joint Operations," II-11
50. JP 3-05, Change 1 (FC), "Doctrine for Joint Special Operations," III-3,4

51. JP 3-14 (Draft), "Joint Doctrine; Tactics, Techniques, and Procedures for Space Operations," IV-1
52. FMFM 2-7, "Fire Support in MAGTF Operations," I-5
53. Army and Marine Corps Integration in Joint Operations of May 1996, V-12.
54. Army and Marine Corps Integration in Joint Operations of May 1996, VIII-9

## APPENDIX A

## COMMAND RELATIONSHIPS STUDY REQUEST LETTER

THE JOINT STAFF  
WASHINGTON, DCReply ZIP Code:  
20318-7000

16 April 1997

MEMORANDUM FOR COMMANDER, JOINT WARFIGHTING CENTER

Subject: Command Relationships

1. Request you conduct a study and provide recommendations concerning the command relationship issue of whether functional component commanders should have tactical control (TACON) or direct support (DS) of military forces and capabilities made available for tasking.
2. Currently, JPs 0-2, "Unified Action Armed Forces (UNAAF)," and 3-0, "Doctrine for Joint Operations," establish that TACON is normally exercised by functional component commanders over military capabilities or forces made available to the functional component for tasking. The US Army, with approval of other Services and Combatant Commands, has requested that surface assets made available should be DS instead of TACON. Proposed text for JP 3- 01 final coordination draft states that ARFOR counterair assets will be provided in DS. This shift in command authority may have large ramifications for future joint doctrine and, therefore, warrants further analysis.
3. Request JWFC study and provide recommendations about the following issues:
  - Does current joint doctrine establish the most effective command relationship?
  - Should functional component commanders have TACON or DS over military capabilities or forces made available for countering air and missile threats and conducting other missions?

- Should the functional component commander have positioning authority over military capabilities and forces made available for tasking for counterair operations?
  - Should functional component commanders have TACON or DS over military capabilities or forces made available to provide joint fire support?
4. Our goal is to continue the development of JPs 3-01 and 3-09. Once you have considered the scope of this study, please provide us with a realistic date the study can be concluded. Thanks for your assistance in resolving these important warfighting issues.

ROBERT F. DEES  
Brigadier General, USA  
Vice Director for Operational Plans  
and Interoperability

## APPENDIX B

## JULLS ENTRIES

## UNCLASSIFIED

1. (U) JULLS NUMBER: 52556-62796(1995), submitted by JOINT STAFF J-5, CDR JAMES, 227-6130, (703)697-6130.
2. (U) FTX OCEAN VENTURE 93 conducted by USCINCLANT on 05/01/93.
3. (U) KEYWORDS: OCEAN VENTURE 93, JFACC, ATO, CAS, FTX (FIELD TRAINING EXER), USAF (US AIR FORCE), JCS (JOINT CHIEFS OF STF), C2 (COMMAND AND CONTROL), COMMAND RELATIONSHIPS, ORDERS/GUIDANCE, REPORTING, DIRECT SUPPORT, OPERATIONS, AIR WARFARE, CAS (CLOSE AIR SUPPORT), AIR APPORTIONMENT/ALLOCAT, LAND WARFARE, FIRE SUPPORT, DTPP (DOC, TAC, TECH, PR), ATO (AIR TASKING ORDER), ROLES AND MISSIONS.
4. (U) TITLE: CAS HELOS APPEARING ON THE ATO.
5. (U) OBSERVATION: Attack helos are not currently included in the ATO process.
6. (U) DISCUSSION: The CJCS stated in his 1993 Roles, Missions, and Functions of the Armed Forces report that attack helos are now considered a Close Air Support asset. Their preplanned use for CAS needs to be covered in the ATO, even when operating in Direct Support, in order to properly allocate CAS assets to meet overall campaign goals.
7. (U) LESSON LEARNED: Preplanned use of attack helos should be included on the ATO.
8. (U) RECOMMENDED ACTION: Include attack helos providing pre-planned CAS in the ATO.
9. (U) COMMENTS: Remedial Action Project.

CJCS RAP WG932: PI. Assets are now included in the ATO and include mission numbers. Air Force, Army, and J33 concur.

1. (U) JULLS NUMBER: 70834-52435(2579), submitted by 9 AOC/CC, Col Rupert, 965-3281, (803)668-3281.
2. (U) FTX ROVING SANDS 93 conducted by CINCFOR on 05/30/93.
3. (U) KEYWORDS: ROVING SANDS 93, FTX (FIELD TRAINING EXER), USA (US ARMY), RESERVE COMPONENT, FORSCOM, DEPLOYMENT, REDEPLOYMENT, LOGISTICS, MAINTENANCE, MEDICAL, POL (PET, OILS, AND LUB), SUPPLY, TRANSPORTATION, ASG (AREA SUPPORT GROUP), INTEROPERABILITY, JOINT PLANNING, USAF, USMC, AADC, AIR DEFENSE, USAF (US AIR FORCE), USN (US NAVY), USMC (US MARINE CORPS), SPECIFIED COMMAND, OTHER AGENCIES, NCA (NATIONAL CMD AUTH), JTF (JOINT TASK FORCE), C2 (COMMAND AND CONTROL), AIRSPACE MANAGEMENT, INFORMATION MANAGEMENT, LIAISON, ORDERS/GUIDANCE, ROE (RULES OF ENGAGEMENT), ACA (AIRSPACE COORD AREA), INTELLIGENCE, SENSORS, TARGETING, HAVE QUICK, OPERATIONS, AIR WARFARE, AIR APPORTIONMENT/ALLOCAT, CAP (CBT AIR PATROL), LAND WARFARE, AVIATION, FIRE SUPPORT, ADA (AIR DEF ARTILLERY), OPERATIONAL TASKS, OPSEC (OPS SECURITY), FACILITIES, ORDNANCE, SEALIFT, COMMUNICATIONS, ADP/COMPUTERS, HARDWARE, TRANSMISSION SYSTEMS, RADIOS, SATELLITE, SATCOM (SATELLITE COMM), NETWORKS, WIN (WWMCCS INTER NET), LAN (LOCAL AREA NETWORK), TLCF (TELECONFERENCE), EXERCISE DESIGN, ARTIFICIALITY, OBJECTIVES, EXERCISE PLANNING, SPECIAL INTEREST ITEM, AWACS (AIRB WRN CNTL SYS), EQUIPMENT TYPE, COMPUTERS, ATO (AIR TASKING ORDER), AADC (AREA AIR DEF CDR), RADAR, TAOC (TAC AIR OPS CTR), TACC (TAC AIR CNTL CTR), UHF (ULTRA HIGH FREQ), C-130 AIRCRAFT, ARTILLERY, F-15 AIRCRAFT, SCUD, BCE (BATTLE FLD CO ELEM), CRP (CNTL AND RPTG PT), CRC (CNTL AND RPTG CTR), E-3 AIRCRAFT, TACS (TAC AIR CNTL SYS), C-141 AIRCRAFT, CH-46 HELICOPTER, F-117 AIRCRAFT, ANTI RADIATION MISSILE, HELICOPTER.
4. (U) TITLE: SUMMARY - AREA AIR DEFENSE COMMANDER (AADC) (1 of 2).
5. (U) OBSERVATION: No other FTX is better able to provide such realistic training for a joint integrated air defense system (IADS) than ROVING SANDS. It stresses all part of command and control (C2) and weapons employment against a variety of modern threats in a jamming environment. The main objective of planning, establishing and operating a joint IADS was accomplished during RS93 with the best integration occurring after units worked together for a week. However, there were several factors, other than "enemy" actions, which detracted from IADS effectiveness.

## 6. (U) DISCUSSION:

a. (U) Planning. The IADS planning process was greatly complicated by key participants (most U.S. Navy and the 728 ACS) dropping out of the exercise at the 11th hour. During the planning conferences and prior to STARTEX, more effort was spent on how to organize and incorporate unit objectives than would be expected. Consequently, IADS planning suffered. After STARTEX, the video teleconference (VTC) was a great help in discussing the IADS game plan with key players. Examples of planning problems follow:

(1). (U) For AOC players, there were numerous competing priorities for time (e.g., Operation Southern Watch, USCENTAF Exercise Quick Force, and 9th Air Force reorganization). Consequently, not as much time as needed was spent preparing the OPTASKLINK, TACOPDAT, and thinking through the communications and overall game plan.

(2). (U) As originally designed with a 4:1 enemy aircraft to friendly fighter ratio, RS93 would have allowed much better play from the AADC/Airspace Control Authority (ACA) and Blue Force in general. With the execution force ratio reduced to 2:1, one major problem resulted: training objectives for C3 units and flying units clashed. To ensure F-15 pilots had a reasonable opportunity to engage, limits on enemy threat axis and a reduction in vulnerability periods had to be made. However, doing this reduced the number of C2 decisions to make, which was counter to a primary FTX purpose. Because initial exercise execution time was spent convincing FORSCOM exercise controllers that these compromises should be made, control of the tactical situation was lost twice when the AADC was compelled to do his COMAFFOR duties rather than monitoring air raids in progress. Removing these artificial distractions would have allowed a more responsive use of the IADS.

(3). (U) Losing the planned USAF control and reporting center (CRC) often caused a C2 overload situation for the Marine Tactical Air Operation Center (TAOC) during air raids, as the first week's results show. The original exercise design had two C2 nodes in the AOC downtrace: the Marine TAOC and USAF CRC. This would have been challenging for the AOC to manage and more realistic from a doctrinal standpoint. The original design would have relieved some of the coordination burden from the TAOC, allowing more time for identification and pairing weapons against hostile tracks. When comm problems occurred to the point that the AOC could not adequately manage a function (e.g., the data link) normally the only choice was to decentralize to the TAOC.

b. (U) Establishing and Operating an IADS. From the standpoint of having the major combatant elements and comm to form an IADS, RS93 succeeded. In ability of the AADC/ACA to establish an overall defensive game plan for the day, RS93 succeeded. Although the IADS became more deadly as proficiency and comm improved during the exercise, there were factors, other than "enemy" action, that detracted from IADS effectiveness. The "I" in "IADS" becomes "independent" rather than "Integrated" if the AADC/ACA is not made aware of all air defense artillery (ADA) locations and primary target lines (PTLs). It is fundamental to the AADC/ACA concept that he will have a major say in ADA location and their PTLs in order to provide the most effective area defense and the safest passage for friendly air forces. Despite the best efforts of the Battlefield Coordination Element (BCE) and the USMC liaison in the AOC, there were almost daily surprises during the VTCs that some ADA units were not located where the AADC expected and the PTLs were not always optimized against the threat axis the enemy repeatedly flew. Having a joint task force (JTF) commander would help in putting leverage on ADA commanders to provide this required information in a timely manner to the AADC/ACA.

c. (U) Communications (Comm). In general, they were fairly robust with a few exceptions. The following areas need highlighting:

(1). (U) Voice comms to key C2 facilities were not as available as needed to manage the data links from the AOC, coordinate identification, pair weapons against targets, and provide the "big picture" to the AOC.

(2). (U) Have Quick II was available in the Marine TAOC, but not used often enough in respect of the "enemy's" jamming and intrusion capability.

(3). (U) Counter to what would be expected in a contingency, voice satellite comm (SATCOM) was not available to the E-3 AWACS (Airborne Warning and Control System), which required numerous relays to be made, taking valuable time away from key personnel needing to do the rest of their job.

(4). (U) Data Link. In the jamming environment, the TADIL-J from the E-3 AWACS to a ground station, with further connectivity provided via TADIL-B was very successful. Having this air picture was key to defense.

(5). (U) CTAPS (Contingency TACS (Theater Air Control System) Automated Planning System) was the primary way to disseminate the air tasking order (ATO) with backups of personal computer (PC)-to-PC

transfer, Marine local area network (LAN) and hand-carry; portions could be faxed, if needed. Availability of the ATO from the AOC and Marine Tactical Air Control Center (MTACC) was excellent, although not always used.

(6). (U) Ingenuity-one of the significant advantages Americans have. Many comm cases were seen where ingenuity in figuring out how to "make it work" really paid off.

d. (U) ATO coordination and dissemination. The RS93 ATO was quite small, but problems still arose, except with planning the Blue combat air patrol (CAP) sorties.

(1). (U) Exercise aircraft, which played both Red and Blue roles (e.g., C-141, C-130 and CH-46) were not always adequately explained to prevent fratricide.

(2). (U) Having non-exercise aircraft (Holloman F-117s and AT-38s) in the middle of the exercise airspace caused unrealistic identification problems.

(3). (U) The ATO was always available by some means every afternoon. However, key C2 units sometimes did not show the necessary sense of urgency in "pulling" the ATO if it was not received in time to break it out and disseminate it to their subordinates. This caused lost shot opportunities (e.g., no WEZ 7 for 31st ADA one day) and fratricide. The AOC should have set a time that the ATO would be released every day; per standard procedures, Combat Ops would have made further changes, if necessary.

e. (U) There was some difficulty in determining the effectiveness of the IADS and making needed changes to defense because the 'enemy' was allowed to attack from unrealistic directions and to avoid the IADS by using real-world range restrictions to their advantage. It often appeared the "enemy" wanted to "win" rather than solve the exercise defense-in-depth problem. Had the exercise designers/controllers been more forthcoming with the fact that Blue was to expect Red to play "dirty pool," the IADS would have been so structured. However, Blue never expected exercise controllers to provide inputs for our national command authorities (NCA) to put Americans in a position in a "foreign land" where they had to protect themselves and our national interests without reasonable rules of engagement (ROE) (e.g., not being able to engage aircraft committing hostile acts inside the country we were sent to protect) and adequate airspace (sometimes less than 5 miles

from range boundary to key items we were assigned to protect, not counting our #1 priority for protection, the air and sea ports of debarkation at El Paso, which were not within the range boundaries).

f. (U) Sadly to report, many elements showed a lack of aggressiveness in getting the word to/from the right C2 person when comms were available. Far too many times, during the VTC debriefs, Army ADA claimed they had requested engagement from TAOC on tracks in adjacent weapons engagement zones (WEZ), but were denied authority. However, the person who would normally grant such authority never heard of the request. During the last days of RS93, the right people were normally getting the word as quickly as could be expected, which definitely increased IADS effectiveness.

g. (U) Intel. The overall plan for intel dissemination seemed good. However, the key information expected by senior decision makers (e.g., AADC, Director of Combat Operations [DCO]) was sporadic and often in the wrong format (especially SCUD reports).

h. (U) There was a reluctance on the Army's part to adequately identify where their capabilities were being under utilized, especially in the area of radar emission control. It appeared that the AADC and TAOC may have retained too much control of the radiation conditions (RADCON) at times. This probably cost us engagements. On the other hand, AADC was not confident that the Patriot radars adjusted their state of emission (SOE) to honor the simulated SCUD threats and launches. Reports from Red anti-radiation missile shooters often indicated that Patriot radars may have been emitting in the anti-aircraft mode too steadily.

1. (U) JULS NUMBER: 60959-1303102606), submitted by 9COS/CC, COL Rupert, 965-3281, (803)668-3281.
2. (U) FTX ROVING SANDS 93 conducted by CINCFOR on 05/30/93.
3. (U) KEYWORDS: AADC, ADA, ROVING SANDS 93, FTX (FIELD TRAINING EXER), USA (US ARMY), USAF (US AIR FORCE), C2 (COMMAND AND CONTROL), AIRSPACE MANAGEMENT, ACA (AIRSPACE COORD AREA), AIR DEFENSE, ADA (AIR DEF ARTILLERY), INFORMATION MANAGEMENT, LIAISON, ORDERS/GUIDANCE, ROE (RULES OF ENGAGEMENT), SENSORS, TARGETING, AIR WARFARE, DCA (DEF COUNTER AIR), OCA (OFF COUNTER AIR), AIR APPORTIONMENT/ALLOCAT, ANTI AIR WARFARE, LAND WARFARE, FIRE SUPPORT, NAVAL WARFARE, ORDNANCE, SUPPLY, ADP/COMPUTERS, HARDWARE, FORCE STRUCTURE, SPECIAL INTEREST ITEM, BCE (BATTLE FLD CO ELEM), EQUIPMENT TYPE, COMPUTERS, ATO (AIR TASKING ORDER), AADC (AREA AIR DEF CDR), RADAR, ARTILLERY, SAM (SURFACE TO AIR MSLE).
4. (U) TITLE: Need for Timely, Accurate ADA Coverage and ADA Liaison in the AOC.
5. (U) OBSERVATION: Missile and radar coverage info was not provided to the Area Air Defense Commander (AADC)/Airspace Control Authority (ACA) in a form that was useful in determining adequacy of air defense coverage, resulting in gaps in coverage which were successfully exploited by the enemy during RS93.
6. (U) DISCUSSION:
  - a. (U) Knowing radar and air defense artillery (ADA) engagement ranges is required in the AOC for the AADC/ACA to function effectively. Timely access to this info is necessary for the AADC/ACA to determine the best air defense and airspace control measures to use. Equally important is knowing when fire units and radars are scheduled to move. ADA unit moves have an obvious impact on air defense coverage and airspace control measures. If AADC/ACA is not told about such moves before they occur, weapons engagement zones (WEZs) may be inappropriately activated as missile engagement zones (MEZs) when no high altitude surface-to-air missiles (HIMAD) are available, and fighters (paired with the opposing force) may be denied engagement authority (as occurred on Day 3, Push 1 in WEZ 1A), resulting in many of the enemy strikers reaching their targets and their escorts engaging friendly fighters in position more advantageous to the enemy.

b. (U) Ideally a computer capable of determining radar/ADA coverage would be available in the AOC. It would most likely be operated by ADA expert(s) assigned to the battlefield coordination element (BCE) or Marine liaison within the AOC. In any case, the ADA liaisons of ADA commanders in the field must supply this info in a timely manner, so that the impacts can be reduced and new tasking can be sent forth via the air tasking order (ATO).

c. (U) A proven way for the AADC/ACA to be provided this key info is through liaison officers, formalized between USAF and the Army as the BCE. Normally each corps or major ADA unit would provide liaison officers with the ability and means to provide necessary info and coordinate changes. This was not done during RS93. Only a portion of the USCENTAF, BCE core participated. Although they aggressively attempted to provide required info, significant shortfalls occurred. This was mostly due to lack of support by the units in the field. ADA commanders in the field must ensure key air defense info is provided to the AADC/ACA in a timely manner, so that impacts can be reduced and new tasking can be sent forth via the air tasking order (ATO).

7. (U) LESSON LEARNED: Having timely, accurate info in the AOC concerning radar/ADA coverage and move schedules is a must for the AADC/ACA to adequately perform his air defense and airspace control functions.

8. (U) RECOMMENDED ACTION:

a. (U) Provide BCE and Marine Liaison ADA expertise to the AOC.

b. (U) ADA commanders provide timely, accurate data concerning ADA unit location and move schedule to the AADC/ACA.

c. (U) Provide to the AOC the computers/software to display/print out ADA coverage.

1. (U) JULLS NUMBER: 60828-53967(2622), submitted by FCJ3-TJE, LCDR NISLEY, 572-3933, (404)752-3933.
2. (U) FTX ROVING SANDS 93 conducted by CINCFOR on 05/30/93.
3. (U) KEYWORDS: FTX (FIELD TRAINING EXER), USA (US ARMY), USAF (US AIR FORCE), USMC (US MARINE CORPS), C2 (COMMAND AND CONTROL), COMMAND RELATIONSHIPS, AIR DEFENSE, JOINT TRAINING, AADC, ADA, ROVING SANDS 93, INTEROPERABILITY, DTTP (DOC, TAC, TECH, PR), OPERATIONS, LAND WARFARE, AADC (AREA AIR DEF CDR).
4. (U) TITLE: Coordination of ADA Movements with the AADC.
5. (U) OBSERVATION: The movement and repositioning of ADA units was not well coordinated with the AADC, who was frequently surprised by movement of vital air defense assets he was counting on during high threat periods.
6. (U) DISCUSSION: Process of coordinating movements of ADA units with AADC didn't work. AADC must have some say in movement process to ensure there are not holes in air defense coverage. Joint doctrine or joint TTP do not appear to adequately address this issue. Affects questions of command and operation control.
7. (U) LESSON LEARNED: The process by which movement of air defense assets is coordinated with the AADC needs to be clarified and formalized.
8. (U) RECOMMENDED ACTION: ALSA should address this doctrinal question working with the ADA school and center.
9. (U) COMMENTS: (60828-53967)

## APPENDIX C

## ARMY-AIR FORCE WARFIGHTER CONFERENCE MESSAGE

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DTG: 172201Z DEC 96

From: HQDA WASHINGTON DC//DACS-ZA//  
To: HQ USAF WASHINGTON DC//CC/CV//  
HQDA WASHINGTON DC//DACS-ZZ//  
USCINCEUR ALT SHAPE BE//ECCC//  
USCINCEUR VAIHINGEN GE/DC//  
USCENTCOM MACDILL AFB FL//CCCC//  
CINCUNC SEOUL KOR//CC//  
CDRTRADOC FT MONROE VA//ATCB//  
CDRUSAREUR HEIDELBERG GE//AIACC//  
USCINCSOC MACDILL AFB FL//SCCC//  
CDRAMC ALEXANDRIA VA//AMCG//  
USCINCSO QUARRY HEIGHTS PM//CC//  
CDRFORSCOM FT MCPHERSON GA//AFCG//  
HQDA WASHINGTON DC//DACS-ZC//  
CDRUSACAC FT LEAVENWORTH KS//CG//  
CDRXVIIIABNCORPS FT BRAGG NC//AFZA-CG//  
CDRUSARPAC FT SHAFTER HI//APCG//  
HQDA WASHINGTON DC//DAMO-ZA//  
CDRUSASSDC ARLINGTON VA//CSSD-ZA//  
CNGE WASHINGTON DC//NGB-ZA//  
CDRUSAADACS FT BLISS TX//CG//  
ALMAJCOM//CC//  
USCINCSTRAT OFFUTT AFB NE//CC//  
HQ USEUCOM DCINC VAIHINGEN//E//  
NGB WASHINGTON DC//CC//

UNCLAS

PERSONAL FOR GEN MOORMAN; GEN GRIFFITH; GEN JOULWAN; GEN PEAY;  
GEN TILELLI; GEN HARTZOG; GEN CROUCE; GEN SHELTON; GEN WILSON;  
GEN CLARK; GEN BRAMLETT; LTG GARNER; LTG HOLDER; LTG KEANE; LTG  
STEELE; LTG SHINSEKI; LTG ANDERSON; MG NAVAS; MG COSTELLO; GEN  
BOLES; GEN ESTES; GEN HABIGER; GEN HAWLEY; GEN JAMERSON; GEN  
KROSS; GEN LORBER; GEN RUTHERFORD; GEN RYAN; GEN VICCELLIO; LTGEN  
JUMPER; MAJGEN CASE; MAJGEN HOBSON; MAJGEN MCINTOSE; MAJGEN  
SHEPPARD; FROM GEN REIMER AND GEN FOGLEMAN

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SUBJECT: JOINT AGREEMENT FROM ARMY-AIR FORCE WARFIGHTER CONFERENCE

1. THIS IS A JOINT CSA-CSAF MESSAGE.
2. ARMY-AIR FORCE WARFIGHTER CONFERENCE AT FT BLISS, 4-5 DEC 96, WAS INTELLECTUALLY STIMULATING AND PRODUCTIVE NOT ONLY FOR BOTH SERVICES, BUT ALSO FROM A JOINT PERSPECTIVE. MOST IMPORTANTLY, WE MADE TANGIBLE PROGRESS AND IN MOST CASES, REACHED AGREEMENT IN RESOLVING SOME LONGSTANDING JOINT DOCTRINAL ISSUES BETWEEN OUR SERVICES.
3. THE FOLLOWING PARAGRAPHS HIGHLIGHT OUR AGREEMENTS AT THE CONFERENCE.
  - A. PREDATOR UAV: ON THE ISSUE OF DYNAMIC RETASKING, THE AIR FORCE IS COMMITTED TO MEETING THE ARMY'S COMMAND AND CONTROL TIMELINES FOR PREDATOR. THE CHALLENGE REMAINS IN GETTING THE UAV RETASKED ON A TIMELY BASIS FROM THE ELEMENT DESIGNATED IN THE ATO TO THE ELEMENT REQUESTING SUPPORT UNDER DYNAMIC RETASKING.
  - B. POPE AFB: THE AIR FORCE WILL MAKE NO ATTEMPT TO SIGNIFICANTLY REDUCE PRESENCE OR CAPABILITIES AT POPE AFB PROVIDED TO XVIII CORPS. BOTH SERVICES AGREED TO EXAMINE REGIONALIZATION INITIATIVES IN AREAS WHERE BOTH SERVICES HAVE FACILITIES THAT ARE COLOCATED OR IN CLOSE PROXIMITY TO ACHIEVE DOLLAR SAVINGS AND ENHANCE EFFICIENCY. GEN ESTES WILL INITIATE THE EFFORT IN THE COLORADO SPRINGS AREA; GEN BRAMLETT WILL TAKE THE ARMY LEAD.
  - C. C17: BOTH SERVICES AGREED THAT A COMMON DEFINITION OF SEMI-PREPARED (OTHER THAN PAVED) RUNWAYS IS NEEDED. THE TWO DSCOPS WILL WORK THE ISSUE AND DEVELOP A JOINT DEFINITION BY MID-JANUARY 1997. THE AIR FORCE FURTHER AGREED TO MODIFY THE C17 AND EQUIP IT WITH A PRECISION APPROACH CAPABILITY, THUS REDUCING THE REQUIREMENT FOR PREPOSITIONED NAVIGATIONAL EQUIPMENT. ON THE STATIC LINE ISSUE, BOTH SERVICES AGREED TO CONTINUE WORKING THE OPTIONS AND THE TESTING EFFORTS. IF REQUIRED, THE AIR FORCE AGREED TO PAY FOR CHANGING THE STATIC LINES AT THE EXPENSE OF FURTHER MODS TO THE C17.
  - D. ARMY AFTER NEXT (AAN): THE ARMY AGREED TO INCORPORATE MORE JOINTNESS IN THE AAN PRESENTATION.
  - E. COMBAT ID: THE ARMY, AND SPECIFICALLY TRADOC, AGREED TO EXAMINE, AFTER THE TASK FORCE XXI ADVANCED WARFIGHTING EXPERIMENT, THE INTERFACE BETWEEN THE AIR FORCE'S SITUATIONAL AWARENESS DATA LINK (SADL) ON THE F16 AND EPLRS.
  - F. JOINT PUB 3-09 (JOINT FIRES): BOTH SERVICES AGREED:

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- (1) TO DELETING THE NOTIONAL GRAPHIC DEPICTING JOINT FIRES AND THE RELATED LANGUAGE FROM JOINT PUB 3-09.
  - (2) TO CHANGING THE NAME OF THE JOINT FORCES FIRE COORDINATOR (JFFC) SO IT DOES NOT CONNOTE ANY COMMAND FUNCTION AND WOULD BE AN OPTION PRIMARILY FOR JTF'S
  - (3) THAT ELEMENTS OF THE FIRES HIERARCHY BE DEFINED IN TERMS OF "EFFECTS" RATHER THAN SPECIFIC PLATFORMS.
  - (4) THAT THE SURFACE COMPONENT COMMANDER IS THE SUPPORTED COMMANDER FOR JOINT FIRES THROUGHOUT HIS AREA OF OPERATIONS. BEYOND THE SURFACE COMPONENT COMMANDERS' BOUNDARIES, THE ACC IS THE SUPPORTED COMMANDER. IN THE DELIBERATE PLANNING PROCESS, ALL TARGETS FOR JOINT FIRES WILL BE COORDINATED TO THE MAXIMUM EXTENT POSSIBLE.
  - (5) THAT ALL TARGETS FORWARD OF THE FSCL AND INSIDE THE GCC'S AREA OF OPERATIONS WILL BE COORDINATED WITH ALL AFFECTED COMMANDERS TO THE MAXIMUM EXTENT POSSIBLE. IF NOT PRACTICAL BECAUSE OF TIME SENSITIVITY, EMERGENCY OR EXCEPTIONAL CIRCUMSTANCES, THEN ALL AFFECTED COMMANDERS WILL BE INFORMED WITH THE COMMANDER EXECUTING THE MISSION ACCEPTING THE OPERATIONAL RISK.
- G. JOINT PUB 3-01 (COUNTERING AIR AND MISSILE THREATS): BOTH SERVICES AGREED:
- (1) THAT ANY ARFOR ASSETS APPORTIONED BY THE JFC TO THE JFACC FOR COUNTERAIR MISSIONS WOULD BE IN DIRECT SUPPORT (VICE TACON) TO THE JFACC. THIS INCLUDES ASSETS AT THE EAC LEVEL.
  - (2) THAT IN TERMS OF FORCE PROTECTION OPERATIONS, COMMANDERS HAVE THE RIGHT TO TAKE BOTH OFFENSIVE AND DEFENSIVE ACTIONS.
  - (3) THAT SPECIFIC LANGUAGE WOULD BE INCORPORATED IN JOINT PUB 3-01 THAT ADDRESSES HOW COUNTERAIR PRIORITIES, TO INCLUDE TMD PRIORITIES, ARE DETERMINED AND APPROVED BY THE JFC.
  - (4) THAT THE GCC IS THE SUPPORTED COMMANDER WITHIN HIS AREA OF OPERATIONS FOR COUNTERAIR ATTACK OPERATIONS AND THAT OCA TARGETS WOULD BE COORDINATED IAW PARA 2F(5) ABOVE.
  - (5) THAT COUNTERAIR BE DEFINED IN TERMS OF "EFFECTS" RATHER THAN SPECIFIC PLATFORMS.
4. AS A RESULT OF THIS CONFERENCE, WE HAVE FINALLY BROKEN THE DOCTRINAL LOGJAM ON JOINT PUBS 3-01 AND 3-09. COLLECTIVELY, WE WILL PRESS THE J7 FOR PROMPT CLOSURE AND CJCS APPROVAL OF BOTH PUBS WHICH WILL ENHANCE OUR JOINT WARFIGHTING CAPABILITY. WE APPRECIATE YOUR PARTICIPATION, CANDID COMMENTS AND CONTRIBUTIONS IN COMING TO GRIPS WITH SOME TOUGH BUT IMPORTANT ISSUES FOR BOTH OUR SERVICES AND THE JOINT TEAM. HAVE A GREAT HOLIDAY.

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## APPENDIX D

## STUDY QUESTIONS AND ANSWERS

1. Does current joint doctrine establish the most effective command relationship? Joint doctrine endorses TACON for functional component commanders who task forces or capabilities made available by the JFC from other components. Exceptions also are addressed. TACON has proven effective for control of air sorties. An OPCON or support relationship may be more appropriate for operations and missions using forces (units) rather than capabilities (sorties). TACON is not appropriate for every functional component operation, but there is enough flexibility in joint doctrine to allow the JFC to determine the most effective command relationship for a given situation.

2. Should functional component commanders have TACON or DS over military capabilities or forces made available for countering air and missile threats and conducting other missions? TACON works well for JFACC control of air sorties which conduct a variety of missions--not only counterair. However, our analysis reveals that support relationships may be more appropriate for active air defense and JFACC/AADC attack operations using surface forces for several reasons. First, functional component commanders responsible for air and missile defense would not have DS over forces such as a Patriot Battalion or an artillery battalion with Army tactical missile system ATACMS capabilities. The surface force commanders would be in support (DS or general support) of the functional component commander who has authority commensurate with the task as outlined in the establishing directive by the JFC. Second, support relationships provide the flexibility for units to respond with priority to the supported commander without being restricted in their tactics or from responding to others when not tasked by the supported commander. DS would work well for active air defense forces which must be dedicated to the AADC mission. Attack capabilities like ATACMS may work best in a general support relationship with the AADC. The ATACMS capability would be used sparingly and could respond to other calls for fire when not tasked. Last, there is no single, correct answer--the JFC in consultation with component commanders, must decide based on the military situation.

3. Should the functional component commander have positioning authority over military capabilities and forces made available for tasking for counterair operations? Assuming positioning authority means designating a grid coordinate--not necessarily. However, the AADC should have the command authority to assign air defense regions/sectors, air patrol stations, targets, etc., to comply with JFC guidance and fulfill his mission/responsibilities. This authority should be exercised in mission-type orders.
  
4. Should functional component commanders have TACON or DS over military capabilities or forces made available to provide joint fire support? Selection of the appropriate command relationship depends on the forces or capabilities provided. When it involves the employment of CAS sorties, they should be TACON to the JFACC. Other surface fire support capabilities are more likely to be employed by Service components in support of another Service component. JP 3-09.3 describes two situations (TACON and DS) where attack helicopters could be employed by a Service component in support of another Service component--no functional component involvement. Situations could arise in which the joint force land component commander may be supported (direct or close) by naval surface fire support or the special operations component commander may be given close support by other components' capabilities. Although technically a support relationship, close support execution involves positive control for a short period of time by capabilities that are ultimately under the OPCON or TACON of another component. Regardless of the situation, the JFC has the authority to tailor the command relationships to best utilize components' capabilities.

## GLOSSARY

## PART I--ABBREVIATIONS AND ACRONYMS

|          |   |
|----------|---|
| AADC     | area air defense commander                          |
| AAMDC    | Army Air and Missile Defense Command                |
| ACA      | airspace coordination authority                     |
| ADA      | air defense artillery                               |
| ADW      | air defense warning                                 |
| AGOSOP   | air-ground operations standing operating procedures |
| AO       | area of operations                                  |
| AOA      | amphibious objective area                           |
| AOC      | air operations center                               |
| AOR      | area of responsibility                              |
| ARCENT   | Army Forces, US Central Command                     |
| ARFOR    | Army forces   |
| ATO      | air tasking order                                   |
| AWACS    | Airborne Warning and Control System                 |
|          |   |
| BCD      | battlefield coordination detachment                 |
| BCE      | battlefield coordination element                    |
| BCOC     | base cluster operations center                      |
| BDOC     | base defense operations center                      |
|          |   |
| C2       | command and control                                 |
| CACC     | commander, air component command                    |
| CAS      | close air support                                   |
| CENTAF   | Air Force Forces, US Central Command                |
| COCOM    | combatant command (command authority)               |
| COMARFOR | Commander, Army Forces                              |
| CRC      | control and reporting center                        |
|          |   |
| DCA      | defensive counterair                                |
| DOD      | Department of Defense                               |
| DS       | direct support                                      |
| DTTP     | doctrine, tactics, techniques, and procedures       |
|          |   |
| EAC      | echelons above corps                                |
|          |   |
| FA       | field artillery                                     |
| FC       | final coordination                                  |
| FIST     | fire support team                                   |
| FO       | forward observer                                    |

|         |  |
|---------|--|
| FORSCOM | US Army Forces Command   |
| FSS     | fire support section   |
| FTX     | field training exercise  |
| GCE     | ground combat element  |
| GS      | general support  |
| GSR     | general support reinforcing  |
| HIMAD   | high to medium altitude air defense  |
| HQ      | headquarters   |
| IADS    | integrated air defense system  |
| JFACC   | joint force air component commander  |
| JFC     | joint force commander  |
| JFLCC   | joint force land component commander   |
| JOA     | joint operations area  |
| JRA     | joint rear area  |
| JTF     | joint task force   |
| JTMD    | joint theater missile defense  |
| JTTP    | joint tactics techniques and procedures  |
| JULLS   | Joint Universal Lessons Learned System   |
| JWFC    | Joint Warfighting Center   |
| MAF     | Marine amphibious force  |
| MAGTF   | Marine air-ground task force   |
| MCRC    | master control and reporting center  |
| MEF     | Marine expeditionary force   |
| METT-T  | mission, enemy, terrain and weather, troops and support<br>available, time available |
| MEZ     | missile engagement zone  |
| NCA     | National Command Authorities   |
| OCA     | offensive counterair   |
| OPCON   | operational control  |
| OPLAN   | operation plan   |
| OPORD   | operation order  |
| PC      | preliminary coordination   |
| POL     | petroleum, oils, and lubricants  |
| PR      | procedures   |
| PTL     | primary target line  |

|            |                                      |
|------------|--------------------------------------|
| R          | reinforcing                          |
| RADC       | regional air defense commander       |
| ROE        | rules of engagement                  |
| SAM        | surface-to-air missile               |
| SHORAD     | short range air defense              |
| SOF        | special operations forces            |
| SOP        | standing operating procedure         |
| STF        | staff                                |
| TAC        | tactics                              |
| TACON      | tactical control                     |
| TCF        | tactical combat force                |
| TD         | third draft                          |
| TECH       | techniques                           |
| TM         | theater missile                      |
| TMD        | theater missile defense              |
| TOC        | tactical operations center           |
| USACOM     | US Atlantic Command                  |
| USAF       | US Air Force                         |
| USCENTCOM  | US Central Command                   |
| USCINCCENT | Command in Chief, US Central Command |
| USMC       | US Marine Corps                      |
| VTC        | video teleconferencing               |
| WCS        | weapons control status               |
| WEZ        | weapons engagement zone              |

## PART II--TERMS AND DEFINITIONS

- active air defense . Direct defensive action taken to nullify or reduce the effectiveness of hostile air action. It includes such measures as the use of aircraft, air defense weapons, weapons not used primarily in an air defense role, and electronic warfare. See also air defense. (JP 1-02)
- airborne early warning. The detection of enemy air or surface units by radar or other equipment carried in an airborne vehicle, and the transmitting of a warning to friendly units. (JP 1-02)
- air defense. All defensive measures designed to destroy attacking enemy aircraft or missiles in the Earth's envelope of atmosphere, or to nullify or reduce the effectiveness of such attack. See also active air defense . (JP 1-02)
- air defense artillery . Weapons and equipment for actively combating air targets from the ground. (JP 1-02)
- airspace control authority . The commander designated to assume overall responsibility for the operation of the airspace control system in the airspace control area. (JP 1-02)
- air tasking order . A method used to task and disseminate to components, subordinate units, and command and control agencies projected sorties/capabilities/forces to targets and specific missions. Normally provides specific instructions to include call signs, targets, controlling agencies, etc., as well as general instructions. Also called ATO. (JP 1-02)
- antiair warfare. A US Navy/US Marine Corps term used to indicate that action required to destroy or reduce to an acceptable level the enemy air and missile threat. It includes such measures as the use of interceptors, bombers, antiaircraft guns, surface-to-air and air-to-air missiles, electronic attack, and destruction of the air or missile threat both before and after it is launched. Other measures which are taken to minimize the effects of hostile air action are cover, concealment, dispersion, deception (including electronic), and mobility. See also counter air. (JP 1-02)
- area air defense commander . Within a unified command, subordinate unified command, or joint task force, the commander will assign overall responsibility for air defense to a single commander. Normally, this will be the component commander with the preponderance of air defense capability and the command, control, and communications capability to plan and

execute integrated air defense operations. Representation from the other components involved will be provided, as appropriate, to the area air defense commander's headquarters. Also called AADC. (JP 1-02)

area of operations . An operational area defined by the joint force commander for land and naval forces. Areas of operation do not typically encompass the entire operational area of the joint force commander, but should be large enough for component commanders to accomplish their missions and protect their forces. See also area of responsibility; joint operations area . (JP 1-02)

area of responsibility . 1. The geographical area associated with a combatant command within which a combatant commander has authority to plan and conduct operations. 2. In naval usage, a predefined area of enemy terrain for which supporting ships are responsible for covering by fire on known targets or targets of opportunity and by observation. Also called AOR. (JP 1-02)

ballistic missile . Any missile which does not rely upon aerodynamic surfaces to produce lift and consequently follows a ballistic trajectory when thrust is terminated. See also aerodynamic missile; guided missile. (JP 1-02)

base cluster operations center . A command and control facility that serves as the base cluster commander's focal point for defense and security of the base cluster. (JP 1-02)

base defense operations center . A command and control facility established by the base commander to serve as the focal point for base security and defense. It plans, directs, integrates, coordinates, and controls all base defense efforts, and coordinates and integrates into area security operations with the rear area operations center/rear tactical operations center. (JP 1-02)

battlefield coordination element . An Army liaison provided by the Army component commander to the Air Operations Center (AOC) and/or to the component designated by the joint force commander to plan, coordinate, and deconflict air operations. The battlefield coordination element processes Army requests for tactical air support, monitors and interprets the land battle situation for the AOC, and provides the necessary interface for exchange of current intelligence and operational data. Also called BCE. (JP 1-02)

close air support. Air action by fixed- and rotary-wing aircraft against hostile targets which are in close proximity to friendly forces and which require detailed integration of each air mission with the fire and movement of those forces. Also called CAS. See also air interdiction; air support; immediate mission request; preplanned mission request. (JP 1-02)

close support. That action of the supporting force against targets or objectives which are sufficiently near the supported force as to require detailed integration or coordination of the supporting action with the fire, movement, or other actions of the supported force. See also direct support; general support; mutual support; support. (JP 1-02)

combat air patrol. An aircraft patrol provided over an objective area, over the force protected, over the critical area of a combat zone, or over an air defense area, for the purpose of intercepting and destroying hostile aircraft before they reach their target. (JP 1-02)

combatant command (command authority). Nontransferable command authority established by title 10 ("Armed Forces"), United States Code, section 164, exercised only by commanders of unified or specified combatant commands unless otherwise directed by the President or the Secretary of Defense. Combatant command (command authority) cannot be delegated and is the authority of a combatant commander to perform those functions of command over assigned forces involving organizing and employing commands and forces, assigning tasks, designating objectives, and giving authoritative direction over all aspects of military operations, joint training, and logistics necessary to accomplish the missions assigned to the command. Combatant command (command authority) should be exercised through the commanders of subordinate organizations. Normally this authority is exercised through subordinate joint force commanders and Service and/or functional component commanders. Combatant command (command authority) provides full authority to organize and employ commands and forces as the combatant commander considers necessary to accomplish assigned missions. Operational control is inherent in combatant command (command authority). Also called COCOM. See also combatant command; combatant commander; operational control; tactical control . (JP 1-02)

command. 1. The authority that a commander in the Armed Forces lawfully exercises over subordinates by virtue of rank or assignment. Command includes the authority and responsibility for effectively using available resources and for planning the employment of, organizing, directing, coordinating, and controlling military forces for the accomplishment of

assigned missions. It also includes responsibility for health, welfare, morale, and discipline of assigned personnel. 2. An order given by a commander; that is, the will of the commander expressed for the purpose of bringing about a particular action. 3. A unit or units, an organization, or an area under the command of one individual. See also ~~combatant~~ command; combatant command (command authority). (JP 1-02)

command relationships. The interrelated responsibilities between commanders, as well as the authority of commanders in the chain of command. (JP 1-02)

component. 1. One of the subordinate organizations that constitute a joint force. Normally a joint force is organized with a combination of Service and functional components. 2. In logistics, a part or combination of parts having a specific function, which can be installed or replaced only as an entity. See also functional component command; Service component command. (JP 1-02)

control. 1. Authority which may be less than full command exercised by a commander over part of the activities of subordinate or other organizations. 2. In mapping, charting, and photogrammetry, a collective term for a system of marks or objects on the Earth or on a map or a photograph, whose positions or elevations, or both, have been or will be determined. 3. Physical or psychological pressures exerted with the intent to assure that an agent or group will respond as directed. 4. An indicator governing the distribution and use of documents, information, or material. Such indicators are the subject of intelligence community agreement and are specifically defined in appropriate regulations. See also ~~operational~~ control; tactical control. (JP 1-02)

control and reporting center. A mobile command, control, and communications radar element of the US Air Force theater air control system subordinate to the air operations center. The control and reporting center possesses four Modular Control Equipment operations modules and integrates a comprehensive air picture via multiple data links from air-, sea-, and land-based sensors as well as from its surveillance and control radars. It performs decentralized command and control of joint operations by conducting threat warning, battle management, theater missile defense, weapons control, combat identification, and strategic communications. Also called CRC. (JP 1-02)

counter air. A US Air Force term for air operations conducted to attain and maintain a desired degree of air superiority by the destruction or

neutralization of enemy forces. Both air offensive and air defensive actions are involved. The former range throughout enemy territory and are generally conducted at the initiative of the friendly forces. The latter are conducted near or over friendly territory and are generally reactive to the initiative of the enemy air forces. See also anti-air warfare. (JP 1-02)

direct support. A mission requiring a force to support another specific force and authorizing it to answer directly the supported force's request for assistance. See also close support; general support; mutual support; support. (JP 1-02)

early warning. Early notification of the launch or approach of unknown weapons or weapon carriers. See also tactical warning. (JP 1-02)

emplacement. 1. A prepared position for one or more weapons or pieces of equipment, for protection against hostile fire or bombardment, and from which they can execute their tasks. 2. The act of fixing a gun in a prepared position from which it may be fired. (JP 1-02)

employment. The strategic, operational, or tactical use of forces. (JP 1-02)

engage. In air defense, a fire control order used to direct or authorize units and/or weapon systems to fire on a designated target. (JP 1-02)

engagement. In air defense, an attack with guns or air-to-air missiles by an interceptor aircraft, or the launch of an air defense missile by air defense artillery and the missile's subsequent travel to intercept. (JP 1-02)

engagement control. In air defense, that degree of control exercised over the operational functions of an air defense unit that are related to detection, identification, engagement, and destruction of hostile targets. (JP 1-02)

force. 1. An aggregation of military personnel, weapon systems, vehicles and necessary support, or combination thereof. 2. A major subdivision of a fleet. (JP 1-02)

functional component command. A command normally, but not necessarily, composed of forces of two or more Military Departments which may be established across the range of military operations to perform particular operational missions that may be of short duration or may extend over a period of time. See also component; Service component command. (JP 1-02)

general support. That support which is given to the supported force as a whole and not to any particular subdivision thereof. See also close support; direct support; mutual support; support. (JP 1-02)

general support-reinforcing . A tactical artillery mission. General support-reinforcing artillery has the mission of supporting the force as a whole and of providing reinforcing fires for another artillery unit. (JP 1-02)

joint force commander . A general term applied to a combatant commander, subunified commander, or joint task force commander authorized to exercise combatant command (command authority) or operational control over a joint force. Also called JFC. (JP 1-02)

joint force land component commander . The commander within a unified command, subordinate unified command, or joint task force responsible to the establishing commander for making recommendations on the proper employment of land forces, planning and coordinating land operations, or accomplishing such operational missions as may be assigned. The joint force land component commander is given the authority necessary to accomplish missions and tasks assigned by the establishing commander. The joint force land component commander will normally be the commander with the preponderance of land forces and the requisite command and control capabilities. Also called JFLCC. (JP 1-02)

joint force maritime component commander . The commander within a unified command, subordinate unified command, or joint task force responsible to the establishing commander for making recommendations on the proper employment of maritime forces and assets, planning and coordinating maritime operations, or accomplishing such operational missions as may be assigned. The joint force maritime component commander is given the authority necessary to accomplish missions and tasks assigned by the establishing commander. The joint force maritime component commander will normally be the commander with the preponderance of maritime forces and the requisite command and control capabilities. Also called JFMCC. (JP 1-02)

joint force air component commander . The joint force air component commander derives authority from the joint force commander who has the authority to exercise operational control, assign missions, direct coordination among subordinate commanders, redirect and organize forces to ensure unity of effort in the accomplishment of the overall mission. The joint force commander will normally designate a joint force air component commander. The joint force air component commander's responsibilities will

be assigned by the joint force commander (normally these would include, but not be limited to, planning, coordination, allocation, and tasking based on the joint force commander's apportionment decision). Using the joint force commander's guidance and authority, and in coordination with other Service component commanders and other assigned or supporting commanders, the joint force air component commander will recommend to the joint force commander apportionment of air sorties to various missions or geographic areas. Also called JFACC. See also joint force commander . (JP 1-02)

joint theater missile defense . The integration of joint force capabilities to destroy enemy theater missiles in flight or prior to launch or to otherwise disrupt the enemy's theater missile operations through an appropriate mix of mutually supportive passive missile defense; active missile defense; attack operations; and supporting command, control, communications, computers, and intelligence measures. Enemy theater missiles are those that are aimed at targets outside the continental United States. Also called JTMD. (JP 1-02)

mutual support. That support which units render each other against an enemy, because of their assigned tasks, their position relative to each other and to the enemy, and their inherent capabilities. See also close support; direct support; support. (JP 1-02)

naval surface fire support. Fire provided by Navy surface gun, missile, and electronic warfare systems in support of a unit or units tasked with achieving the commander's objectives. Also called NSFS. (JP 1-02)

offensive counter air operation . An operation mounted to destroy, disrupt, or limit enemy air power as close to its source as possible. (JP 1-02)

operation. A military action or the carrying out of a strategic, tactical, service, training, or administrative military mission; the process of carrying on combat, including movement, supply, attack, defense and maneuvers needed to gain the objectives of any battle or campaign. (JP 1-02)

operational authority . That authority exercised by a commander in the chain of command, defined further as combatant command (command authority), operational control, tactical control, or a support relationship. See also combatant command (command authority); operational control; support; tactical control . (JP 1-02)

operational control . Transferable command authority that may be exercised by commanders at any echelon at or below the level of combatant command.

Operational control is inherent in combatant command (command authority). Operational control may be delegated and is the authority to perform those functions of command over subordinate forces involving organizing and employing commands and forces, assigning tasks, designating objectives, and giving authoritative direction necessary to accomplish the mission. Operational control includes authoritative direction over all aspects of military operations and joint training necessary to accomplish missions assigned to the command. Operational control should be exercised through the commanders of subordinate organizations. Normally this authority is exercised through subordinate joint force commanders and Service and/or functional component commanders. Operational control normally provides full authority to organize commands and forces and to employ those forces as the commander in operational control considers necessary to accomplish assigned missions. Operational control does not, in and of itself, include authoritative direction for logistics or matters of administration, discipline, internal organization, or unit training. Also called OPCON. See also combatant command; combatant command (command authority); tactical control . (JP 1-02)

point defense . The defense or protection of special vital elements and installations; e.g., command and control facilities, air bases. (JP 1-02)

positive control . A method of airspace control which relies on positive identification, tracking, and direction of aircraft within an airspace, conducted with electronic means by an agency having the authority and responsibility therein. (JP 1-02)

procedural control . A method of airspace control which relies on a combination of previously agreed and promulgated orders and procedures. (JP 1-02)

reinforcing . In artillery usage, tactical mission in which one artillery unit augments the fire of another artillery unit. (JP 1-02)

responsibility . 1. The obligation to carry forward an assigned task to a successful conclusion. With responsibility goes authority to direct and take the necessary action to ensure success. 2. The obligation for the proper custody, care, and safekeeping of property or funds entrusted to the possession or supervision of an individual. (JP 1-02)

Service component command . A command consisting of the Service component commander and all those Service forces, such as individuals, units, detachments, organizations, and installations under the command,

including the support forces that have been assigned to a combatant command, or further assigned to a subordinate unified command or joint task force. See also component; functional component command . (JP 1-02)

short-range ballistic missile . A ballistic missile with a range capability up to about 600 nautical miles. Also called SRBM. (JP 1-02)

sortie . In air operations, an operational flight by one aircraft. (JP 1-02)

support. 1. The action of a force which aids, protects, complements, or sustains another force in accordance with a directive requiring such action. 2. A unit which helps another unit in battle. Aviation, artillery, or naval gunfire may be used as a support for infantry. 3. A part of any unit held back at the beginning of an attack as a reserve. 4. An element of a command which assists, protects, or supplies other forces in combat. See also close support; direct support; general support; mutual support . (JP 1-02)

supported commander . The commander having primary responsibility for all aspects of a task assigned by the Joint Strategic Capabilities Plan or other joint operation planning authority. In the context of joint operation planning, this term refers to the commander who prepares operation plans or operation orders in response to requirements of the Chairman of the Joint Chiefs of Staff. (JP 1-02)

supporting commander . A commander who provides augmentation forces or other support to a supported commander or who develops a supporting plan. Includes the designated combatant commands and Defense agencies as appropriate. See also supported commander. (JP 1-02)

surface-to-air guided missile . A surface-launched guided missile for use against air targets. (JP 1-02)

tactical control . Command authority over assigned or attached forces or commands, or military capability or forces made available for tasking, that is limited to the detailed and, usually, local direction and control of movements or maneuvers necessary to accomplish missions or tasks assigned. Tactical control is inherent in operational control. Tactical control may be delegated to, and exercised at any level at or below the level of combatant command. Also called TACON. See also combatant command; combatant command (command authority); operational control . (JP 1-02)

tactical warning . 1. A warning after initiation of a threatening or hostile act based on an evaluation of information from all available sources. 2. In satellite and missile surveillance, a notification to operational command centers that a specific threat event is occurring. The component elements that describe threat events are: Country of origin--country or countries initiating hostilities. Event type and size--identification of the type of event and determination of the size or number of weapons. Country under attack--determined by observing trajectory of an object and predicting its impact point. Event time--time the hostile event occurred. Also called integrated tactical warning. (JP 1-02)

theater missile . A missile, which may be a ballistic missile, a cruise missile, or an air-to-surface missile (not including short-range, non-nuclear, direct fire missiles, bombs, or rockets such as Maverick or wire-guided missiles), whose target is within a given theater of operation. See also theater missile defense . (JP 1-02)

unit. 1. Any military element whose structure is prescribed by competent authority, such as a table of organization and equipment; specifically, part of an organization. 2. An organization title of a subdivision of a group in a task force. 3. A standard or basic quantity into which an item of supply is divided, issued, or used. In this meaning, also called unit of issue. 4. With regard to reserve components of the Armed Forces, denotes a Selected Reserve unit organized, equipped and trained for mobilization to serve on active duty as a unit or to augment or be augmented by another unit. Headquarters and support functions without wartime missions are not considered units. (JP 1-02)

weapon engagement zone . In air defense, airspace of defined dimensions within which the responsibility for engagement of air threats normally rests with a particular weapon system. Also called WEZ. a. fighter engagement zone. In air defense, that airspace of defined dimensions within which the responsibility for engagement of air threats normally rests with fighter aircraft. Also called FEZ. b. high-altitude missile engagement zone. In air defense, that airspace of defined dimensions within which the responsibility for engagement of air threats normally rests with high-altitude surface-to-air missiles. Also called HIMEZ. c. low-altitude missile engagement zone. In air defense, that airspace of defined dimensions within which the responsibility for engagement of air threats normally rests with low- to medium-altitude surface-to-air missiles. Also called LOMEZ. d. short-range air defense engagement zone. In air defense, that airspace of defined dimensions within which the responsibility for engagement of air threats normally rests with short-range air defense weapons. It may be established

within a low- or high-altitude missile engagement zone. Also called SHORADEZ. e. joint engagement zone. In air defense, that airspace of defined dimensions within which multiple air defense systems (surface-to-air missiles and aircraft) are simultaneously employed to engage air threats. Also called JEZ. (JP 1-02)