

NAVAL WAR COLLEGE  
NEWPORT, RI

**Operational Planning for Contractors on the Battlefield**

By

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A paper submitted to the faculty of the Naval War College in partial satisfaction  
of the requirements for the Department of Joint Military Operations.

The contents of this paper reflect my own personal views and are not  
necessarily endorsed by the Naval War College or the Department of the Navy.

Signature

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18 May 1998

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## REPORT DOCUMENTATION PAGE

1. Report Security Classification: UNCLASSIFIED			
2. Security Classification Authority:			
3. Declassification/Downgrading Schedule:			
4. Distribution/Availability of Report: DISTRIBUTION STATEMENT A: APPROVED FOR PUBLIC RELEASE; DISTRIBUTION IS UNLIMITED.			
5. Name of Performing Organization: JOINT MILITARY OPERATIONS DEPARTMENT			
6. Office Symbol: C		7. Address: NAVAL WAR COLLEGE 686 CUSHING ROAD NEWPORT, RI 02841-1207	
8. Title (Include Security Classification): Operational Level Planning for Contractors on the Battlefield (unclassified)			
9. Personal Authors: David L. Young			
10. Type of Report: FINAL		11. Date of Report: May 18, 1998	
12. Page Count: 19			
13. Supplementary Notation: A paper submitted to the Faculty of the NWC in partial satisfaction of the requirements of the JMO Department. The contents of this paper reflect my own personal views and are not necessarily endorsed by the NWC or the Department of the Navy.			
14. Ten key words that relate to your paper:			
Logistics	Planning	Contracting	Civilians
CSS	OPLAN	CONPLAN	Acquisition
			LOGCAP
			Battlefield
15. Abstract: The practice of using civilian contractors to provide combat service support to U.S. forces at forward deployed locations is institutionalized and increasing in frequency and importance. The presence of contractors on the battlefield creates additional challenges for the responsible CINC and Joint Force Commander that must be addressed during operational level planning. As with all planning requirements, a better effort during deliberate planning will lessen the requirement for crises planning and increase efficiencies during execution. This paper draws upon recent U.S. experiences with LOGCAP and other contracts in Somalia, Haiti and Bosnia to synthesize lessons learned from raw experience as it relates to operational level planning. Specific issues include: the operating environment, restrictions imposed by the host government, U.S. government support to contractors, organizations responsible for contract administration, and financial management at the operational level.			
16. Distribution / Availability of Abstract:	Unclassified X	Same As Rpt	DTIC Users
17. Abstract Security Classification: UNCLASSIFIED			
18. Name of Responsible Individual: CHAIRMAN, JOINT MILITARY OPERATIONS DEPARTMENT			
19. Telephone: 841-6461		20. Office Symbol: C	

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## INTRODUCTION

*"No one knows better than I the tremendous work that Brown and Root has done in Somalia. The flexibility and competence demonstrated by your employees were key factors in allowing US forces to transition logistical support to the UN. . . ."*

*John M. Shalikashvili  
Chairman  
Of the Joint Chiefs of Staff<sup>d</sup>*

The battlefield of the future will be distinctly different from those of the past. Soldiers, sailors and airmen will have more advanced weapons systems, greater access to information, and increased of quality of life. They will also share the battlefield with a greater number of civilians<sup>2</sup>. The increased number of civilians will result from the growing reliance on contractors to perform combat support and combat service support (CS/CSS) functions in peacetime as well as war. The focus of this paper is on the integration of contractors into the operational plan (OPLAN). **The success of contractors on the battlefield requires cooperation, support, and advance planning from the Joint Force Commander's staff.**

Contractors are typically used to provide life support, weapons systems support, and other technical services (see appendix A). The common denominator in all of these efforts is that contractors are being asked to provide direct support to our military forces on a world-wide basis, including forward deployed locations. The Joint Force Commander (JFC) does not have the option of going to war (or MOOTW) with an all-military team. The good news is that the JFC has more options to draw upon to meet his requirements; the bad news is that someone must PLAN for the integration of these

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<sup>1</sup> Gen. John M. Shalikashvili to Mr. Thaddeus Smith, Letter dated 5 November 1994, Washington, D.C.

<sup>2</sup> The Army estimates that 5,000 Army civilians and 9,000 contractor personnel deployed to Desert Storm. "More Civilians to get BDU's," Army Logistician, March-April, 1994, 27.

civilian assets into the total force structure. Weaknesses in past planning efforts are typified by the General Accounting Office (GAO) Report on Bosnia:

Despite significant efforts to effectively manage LOGCAP, U.S. Army, Europe Officials' inexperience and lack of understanding of the contract, the contractor's capabilities, and program management created problems during deployment and resulted in unnecessary costs<sup>3</sup>.

An OPLAN that includes contractor support should answer such questions as:

- ◆ Will the operational environment permit the use of contractors? If so, when?
- ◆ What are the host nation restrictions on the use of contractors?
- ◆ How will support be provided to the contractors?
  - Force Protection
  - TPFDD
  - Life support (food, lodging and medical)
  - Facilities
- ◆ Command and Control
  - What organization will administer the contracts?
  - To what extent will contractors be integrated into the force?
- ◆ Operational Level Budgeting

To some, the answers to these questions may seem self-evident; to others it may appear that contractors are more trouble than they are worth. A solid plan that incorporates recent lessons learned will serve to correct both views.

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<sup>3</sup> General Accounting Office, Contingency Operations: Opportunities to Improve the Logistics Civil Augmentation Program, Report to Congressional Requestors. (Washington, D.C.: February, 1997), 14.

## The Operational Environment

**METT-T:** The operational environment is described in Army terms as METT-T: mission, enemy, terrain, troops and time<sup>4</sup>. The initial plan for the invasion into Haiti was for a forced entry and the planners were told that no "civilians" would be allowed into theater until after the shooting stopped. Fortunately the METT-T changed. The environment supported permissive entry and the contractors came ashore soon after the troops. None the less, planners must weigh the likelihood that contractors will not be allowed (or able) to enter the theater at the start of a major operation. The forces may be required to be self-sustaining for a period of time. It should be noted however, that the LOGCAP contractor entered Somalia, Rwanda, Haiti and Bosnia within days of the first U.S. troops going into theater. The 1<sup>st</sup> Corps Support Command (COSCOM) deployed to Haiti on 10 September 1990 (D-day) prepared to provide full combat service support (CSS) to U.S. forces. In less than 45 days the 1<sup>st</sup> COSCOM found that most of their responsibilities were being handled successfully by LOGCAP and the COSCOM could re-deploy to CONUS<sup>5</sup>.

**Peacetime Preparation:** It is vitally important that you know your contractor's reliability prior to deployment. Some planners consider our reliance upon civilian contractors, including host nation support agreements, to be an area of critical vulnerability<sup>6</sup>. One of the advantages of a contract like LOGCAP is that it is a five year contract (if all option years are exercised) and CINC and major command (MACOM)

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<sup>4</sup> HQ U.S. Army, Operations, (FM 100-5) (Washington: 14 June 1993), 2-4.

<sup>5</sup> John M. McDuffie, "Force XXI Corps Support," Army Logistician, July-August, 1995, 26-31; Gerald A. Dolinish, "Logistics in Haiti," Army Logistician, January-February, 1996, 24-28.

<sup>6</sup> Patrick J. Dulin, "Logistics Vulnerabilities in the Future," Army Logistician, January-February, 1998, 20-23.; Kevin R. Wheelock, "Review Criteria for the Logistics Plan," The Joint Force Quarterly, Spring 1997, 128-133.

planners can get to know their contractors during deliberate planning and exercises. Contracts awarded during crises planning contain much higher risk factors than those which are carefully planned and developed prior to deployment. Systems maintenance contracts should include a "deployment clause" at the time the contract is awarded rather than adding the requirement in the midst of a crises. DOD Instruction 3020.37 provides a checklist of planning considerations for deployment of civilian contractors<sup>7</sup>. It would be very beneficial to have these items taken care of prior to the deployment order. The question of whether the operational environment will be conducive to using contractors is largely dependent upon the contractor's state of readiness.

### Relationships With the Host Country

#### Permission to Enter the Country and Conduct

**Business:** There were no functioning host governments to deal with when LOGCAP was first deployed to Somalia, Rwanda and Haiti<sup>8</sup>. Operation

LOGCAP was a key element in the logistics support plan, yet the planners failed to ensure that the contractor would be able to operate in the host country.

Joint Endeavor (OJE)<sup>9</sup>, with a large logistics base planned for Hungary, was a very different situation. The logistics planners suggested U.S. contractors, especially LOGCAP, be included in the Omnibus Agreement (similar to a SOFA) with the government of Hungary. The suggestion was rejected; some members of the negotiating team incorrectly believed that the U.S. government (USG) should not get involved in the

<sup>7</sup> Department of Defense, Continuation of Essential Contractor Services During Crises, DODI 3020.37. (Washington: 1990).

<sup>8</sup> Haiti had a government but it was largely non-functional at the time the U.S. entered the country.

<sup>9</sup> Operation Joint Endeavor (OJE) is the name assigned to the NATO mission in the Former Yugoslavia (Hungary, Croatia and Bosnia) from Dec. 1995 to Dec. 1996. Thereafter the operation became Operation Joint Guard (OJG).

contractor's relationship with the host government --- this was something the contractor should work out on his own. The contractor had difficulty gaining permission to bring an outside labor force into the country, as a result of the lack of any formal agreement. The Hungarian government capitulated only after receiving assurances that a large portion of the contractor's workforce would be Hungarians.

**Liability for Host Nation Taxes:** Further problems developed when the Hungarian Ministry of Finance issued a ruling that the LOGCAP contractor was subject to the Value Added Tax (corporate income tax) and the contractor's employees were subject to Hungarian income tax. The USG countered with the argument that LOGCAP is a USG cost reimbursement contract and that costs are simply passed through the contractor to the USG. The omnibus agreement excused the USG from all Hungarian taxes. That argument fell on deaf ears and Brown & Root paid over \$18 million dollars in taxes, for which he was reimbursed by the USG<sup>10</sup>. The money was eventually recovered after the Hungarian government agreed to amend the omnibus agreement.

**Other Government Permits:** Additional challenges included requirements to obtain permits for everything from minor construction to permission to operate wash racks. In summary, the contractor was not permitted to operate with the same freedom as would a unit of the U.S. forces and was left on his own to negotiate many of these issues with the host government. The USG was in a better position to negotiate for the contractor and had a legal, financial, and operational interest in doing so. The contractor's success in supporting U.S. forces is largely dependent upon the synergistic relationship between the contractor's staff and the JFC staff.

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<sup>10</sup> GAO Report, 12.

## Support for Contractors

The first challenge for the planner in preparing for contractors on the battlefield may be a conceptual one: what is the Joint Force Commander's responsibility to civilian contractors? The JFC may be required to provide only limited support to contractors home-based in the host country, but the situation is far different for contractors brought in with the force from CONUS. The USG assumes greater responsibility for those contractors we bring into the theater.

**Force Protection:** The government's responsibility for providing force protection to contractors derives from three factors: a legal responsibility to provide a safe workplace, a contractual responsibility because it is stipulated in most contracts, and thirdly, to enable the contractors to continue doing their job<sup>11</sup>. Contractors in Somalia, Haiti and Bosnia were on the road continuously traveling between base camps to provide the necessary services. The threat level in Somalia was such that the LOGCAP contractor required a military escort nearly all the time. At various times there were as many as 12-18 Marines or soldiers assigned to escort duty with the contractor. The LOGCAP contractor travels nearly one million miles a month on the open roads of Bosnia, Croatia and Hungary, for the most part without the benefit of any force protection. The contractor practices good threat awareness and joins with military convoys where possible, but a lot of the time his employees travel alone and unprotected. The lesson here for the planner is that force protection must be part of the deliberate plan and include the flexibility to

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<sup>11</sup> U.S. Army Training and Doctrine Command (TRADOC), "Contractors on the Battlefield," (Unpublished White Paper, FT Monroe, VA: 19 February 1998), 2.

respond to the situation as it develops. You may be faced with the requirement for constant force protection (the Somalia model) or limited support (the Bosnia model).

The idea of contracting for security has surfaced more than once. Various legal opinions have debated, without finality, the issue of contracting for armed guards operating away from military installations. Aside from the potential legal problems, the political, financial and operational risks of such an arrangement should make it the option of last resort, if at all.

Contractor personnel should also be included in the force requirements for NBC gear.

**How Will the Contractor Get Into Theater — To TPFDD or Not to TPFDD?** It is generally wise to write contracts such that contractors are required to be self-sufficient in their operations. Contractors with a large workforce and a lot of equipment to transport can charter their own aircraft or surface vessels and not compete with U.S. forces for strategic lift. The decision however, is not that simple. If contractors are required to provide their own transportation the government will certainly pay for it through the terms of the contracts. The other element to be considered is the availability of ramp space at the airport or dock space at the seaport. Whether contractors flow through the TPFDD on government transportation or they are told to find their own ride to the dance, they must be provided space to disembark in the theater. Planners cannot simply tell contractors "that's your problem" when the military controls all of the Airports of Debarkation (APODs) and Seaports of Debarkation (SPODs) in the theater.

**Food, Lodging and Medical Support for Contractors:** As with the transportation

<p>"Civilian contractors in a theater of operations are entitled to the same medical care as military personnel." DOD Instruction 3020.37</p>
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options, the contractor can be directed to provide for his own life support or it can be provided by the government. It is generally less expensive to provide these services to contractors than to have them purchase their own. Regardless of contract type (fixed price or cost reimbursement) it is feasible and legal for the government to provide meals, lodging and medical care to contractors in a theater of operations. One area presenting significant challenges is medical care. DoD policy states "civilian contractors in a theater of operations are entitled to the same medical care as military personnel"<sup>12</sup>. The JFC may lack the facilities to provide medical care to a large number of contractor employees if the requirement has not been addressed in the logistics support plan. The J-4 should advise the planning staff of the support requirements for all contractors coming into theater, but the decision on how to satisfy those requirements should be made jointly between all elements of the planning staff.

**Real Estate Facilities for Contractors:** Where will the contractors setup shop? What are their requirements in terms of work space? Will they require facilities in a secured area such as inside of a military compound? Contractors can be directed to find their own facilities and, if necessary, hire guard services to protect the facilities. The planner should be concerned with the cost, physical protection requirements, and coordination of the contractor's requirements with the military's requirements. This last factor is often overlooked. In an area where facilities are limited contractors may be competing with the military for facilities. It may be desirable to require contractors to get USG permission before entering into real estate leases. The Joint Acquisition Review Board (see below) will normally make these decisions once established in theater.

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<sup>12</sup> DoD Instruction 3020.37, 6.

## Command and Control

With 9,000 contractor personnel deployed in support of Desert Storm, it is a good thing the war was short-lived. Though the situation may seem daunting, several organizations are available to support the JFC in administering contracts.

**Joint Acquisition Review Board:** The JARB concept is not entirely new, but was refined and used with notable success in OJE/OJG. The JARB's purpose is to review and monitor all contracting activity in a theater to promote efficiency and cost effectiveness. Contracting officers supporting the Gulf War sometimes competed with each other for scarce resources (e.g. vehicles) resulting in higher prices and less efficient allocation of resources. All acquisitions in the OJE/OJG theater above a specified threshold are reviewed by the JARB to determine: (1) is it a valid military requirement, (2) can the requirement be satisfied with organic (military) assets, (3) should it be acquired through contracting, and (4) the cost impact. Most actions referred to the JARB are for life support services for which the JFC has budgetary responsibility. Weapons systems maintenance actions are typically not referred to the board because they impact only one service. Membership of the JARB consists of the J-4 (usually represented by the senior contracting officer) and representatives of the user commands (customers). Additionally, AMC and DCMC (see below) are also represented.

The JARB can also perform the functions of the Joint Facilities Utilization Board, CINC Logistic Procurement Support Board and the Joint Material Priorities and Allocation Board as described in Joint Pub 4-0, especially so for small operations<sup>13</sup>.

**Principal Assistant Responsible for Contracting (PARC):** Joint doctrine for contracting has not been fully developed and, unfortunately, is being conducted in an ad hoc fashion. For that reason it will be helpful to use an Army term (PARC) for the purposes of this discussion, recognizing that in a joint environment this billet could be filled by any of the services and the title may be different. The legal authority to award contracts flows from Congress through designated lines of authority<sup>14</sup>. The PARC is a contracting professional (acquisition corps, regardless of service) designated by the JFC to represent him or her in contracting matters. The PARC will normally award new contracts issued in response to a crises situation. Normally the PARC would not get involved in contracts awarded during peacetime by other contracting commands.

Regardless of the source of the contract, the PARC should lead the JFC's planning effort in preparing for contractors on the battlefield. The PARC will normally chair the JARB.

**AMC's Logistics Support Element (LSE):** The Army Material Command (AMC) has a Logistics Support Element (LSE) designated for each CINC's AOR. If LOGCAP is used AMC will deploy a program management team known as "Team LOGCAP" to provide direct interface between the contractor and the JFC staff<sup>15</sup>. Team LOGCAP includes contracting, logistics and engineering professionals from AMC, Corps of Engineers, and the Defense Contract Management Command.

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<sup>13</sup> Joint Chiefs of Staff, Doctrine for Logistics Support of Joint Operations (Joint Pub 4-0) (Washington: 27 January 1995), Appendix B.

<sup>14</sup> Federal Acquisition Regulation (FAR 1.603), Chapter 1, Title 48, Code of Federal Regulations.

<sup>15</sup> HQ U.S. Army, Logistics Support Element, (FM 63-11) (Washington: 1996), Appendix E.

**Defense Contract Management Command (DCMC):** DCMC is a subordinate command of the Defense Logistics Agency (DLA) which is designated a combat support agency. DLA deploys a DLA Contingency Support Team (DCST) to act as the agency's single point of contact with the JFC. In this regard the DCST is very similar to AMC's Logistics Support Element. Contracting support is one functional element of the total team.

DCMC's mission charter is to provide post-award administration of DoD contracts. In this role DCMC provides on-site monitoring of the contractor's activities to ensure the contractor complies with the terms of the contract. DCMC will deploy a team of professionals including warranted contracting officers, quality assurance specialists, and government property specialists. Although the JFC planning staff may invite DCMC into theater, their legal authority to operate must be established via a contract delegation from the procuring contracting officer (PCO) that issued the contract. DCMC administered the LOGCAP contract on behalf of the Corps of Engineers in Somalia, Rwanda, Haiti, and Bosnia.

**US Army Corps of Engineers (USACE):** The Corps of Engineers Transatlantic Programs Center (CETAC), located in Winchester VA., developed the original LOGCAP contract in 1992 and managed the effort until AMC assumed responsibilities in October 1997<sup>16</sup>. USACE continues to provide program management of the OJG Sustainment Contract, the successor to LOGCAP in Bosnia. Although USACE's primary focus is construction, they have in-depth knowledge of services and support contracting in the contingency environment.

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<sup>16</sup> The LOGCAP program has a history that predates the 1992 contract, but it is best known for the support contract that bears the LOGCAP moniker.

**Contractor Integration Into the Force:** The extent to which contractor personnel are integrated into the force must be decided by the JFC based on the advice of legal counsel and other staff officers. Reoccurring issues include: should contractors be issued BDU uniforms, should they be required to follow force protection rules (travel restrictions), should they be required to live on post, and should they be required to follow general orders with regard to use of alcohol, etc.? These issues are best settled by mutual agreement between the government and each contractor BEFORE deployment. Except by mutual consent (contractual agreement) contractors are not subject to general orders or other policies designed for good order and discipline among the troops.

### **Operational Level Budgeting**

#### **Budgeting for life support**

contractors such as LOGCAP has long been a problem. The costs are normally borne by the service component with lead responsibility for common user logistics,

"... weaknesses in financial reporting and contract monitoring systems also contributed to cost increases. . . little doctrine on how to monitor contractor resources and effectively integrate them with force structure units exist."

GAO Report to Congress

with the hope that reimbursement may be forthcoming via a supplemental budget from congress. US Army Europe (USAREUR) has primary responsibility for managing LOGCAP costs for OJE/OJG, where costs topped \$459 million the first year alone. Although the Logistics Management Institute and GAO found LOGCAP to be a cost effective method of providing combat service support, GAO expressed serious concerns with the Army's ability to effectively control and report costs<sup>17</sup>. By the end of the first

<sup>17</sup> Logistics Management Institute, LOGCAP Support in Operation Joint Endeavor, (Alexandria, VA: 1996), 13; GAO Report, 5-14.

year USAREUR had developed the necessary cost reporting systems to overcome earlier criticisms<sup>18</sup>. The Army Audit Agency and GAO are clear in their opinion that most CINC and JFC staffs lack the expertise to manage a contract of this size<sup>19</sup>. The apparent solution is for the JFC to assemble a professional contract management cadre, including financial experts, to augment the operational staff. Defense Contract Management Command can provide invaluable assistance to the JFC in the area of monitoring contractor costs.

### Conclusion and Recommendations

Contractors are a valuable asset to the Joint Force Commander. Prior planning is necessary however, to capitalize on their strengths and minimize the potential for disruption. Although joint doctrine for contracting is not fully developed, there is a growing body of information available<sup>20</sup>. While one might desire a simplistic checklist that would cover all of the bases, the subject is far too complex. A few guidelines might prove helpful however:

- ◆ **Simplicity and Unity of Command.** Develop a simplistic organizational structure with unity of command over government personnel responsible for contract administration. Using the services of AMC, DCMC, or USACE to manage contracts can consolidate the oversight functions, reduce duplication of effort, and reduce the number of support personnel required in the theater. Personnel from all three commands joined to form the Joint Logistics Support Command (JLSC) in Haiti,

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<sup>18</sup> Alan I. Moses, "Contingency Funding Logistics Civil Augmentation," (Unpublished Fact Paper, HQ US Army Europe, Heidelberg, Germany: n.d.).

<sup>19</sup> U.S. Army Audit Agency, Logistics Civil Augmentation Program Contract, Operation Joint Endeavor, (Audit Report AA-96-767) (Heidelberg, Germany: April 1996), 13; GAO Report, 5-14.

<sup>20</sup> The Army's Training and Doctrine Command (TRADOC) has hosted several meetings of a working group for "Contractors on the Battlefield." Also see Department of the Army Pamphlet DA PAM 715-16, Contractor Deployment Guide.

under the command of Brigadier General Sullivan from AMC<sup>21</sup>. Such arrangements offer unity of effort while permitting the different organizations to retain alignment with their parent organizations for contracting authority.

- ◆ **Keep the number of contracting firms at a minimum.** Obviously one contractor with several thousand employees is easier to manage than a hundred small contractors with a few employees each. Strong consideration should be given to employing one major contractor such as LOGCAP or AFCAP to provide all common user logistics support services.
- ◆ **Include the contract management team and key contractors in the planning effort.** Early involvement by government contract administrators and contractor personnel can significantly increase the chances of mission success, as well as the reliability of preliminary cost estimates. The GAO estimates that LOGCAP costs exceeded the estimated budget for the first year in Bosnia by 32 percent, partially due to changes in the operational plan, and the fact that early estimates were not properly coordinated<sup>22</sup>.

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<sup>21</sup> Julian A. Sullivan, Jr., "New Logistics Concepts Tested in Haiti," Army Logistician, May-June 1996, 7-7.

<sup>22</sup> GAO Report, 5.

## Appendix A

Contractors are typically used to provide life support, weapons systems support, and other technical services.

**Life Support:** The Army's LOGCAP contract provides the best example of a typical life support contract. It is flexible enough to provide all types of logistics support to deployed U.S. personnel, and under some conditions, to our allies. It has been used to provide facility maintenance, power generation, operate dining facilities, provide laundry service, waste disposal, and a host of other services from mail delivery to stevedores. The Air Force Contract Augmentation Program (AFCAP) contract is similar to LOGCAP, but without the depth of experience.

**Weapons Systems Support:** Traditionally, newly-fielded weapons systems have had a contractor field team assigned to provide technical assistance to the operators and maintainers for the early years of the system's life-cycle. Contractor support for weapons systems is now being expanded beyond the technical assistance phase to include complete life-cycle maintenance. The Army is moving forward in this area with the Apache Prime Vendor Support (PVS) contract<sup>23</sup>.

**Other Technical Services:** Examples of other technical services include the Army's contract with BDM Federal for linguists in Operations Joint Endeavor and Joint Guard (OJE/OJG); the Sprint Telecommunications contract to operate the phone system in OJE/OJG; and the use of LOGCAP to provide Airfield Departure and Arrival Group (ADAG) services in Haiti.

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<sup>23</sup> Paul J. Kern, "Prime Vendor Support: Wave of the Future," *Army RD&A*, January-February 1998, 5. Team Apache Systems is a joint venture between Boeing and Lockheed-Martin.

## Bibliography

- Department of Defense. Continuation of Essential DoD Contractor Services During Crises, DODI 3020.37. Washington: 1990.
- Dolinish, Gerald A. "Logistics in Haiti," Army Logistician, January-February 1996, 24-28.
- Dulin, Oatrick J. "Logistics Vulnerabilities in the Future," Army Logistician, January-February 1998, 20-23.
- Federal Acquisition Regulation; Code of Federal Regulations, Chapter 1, Title 48.  
Washington: U.S. General Services Administration. Office of the Federal Register, 1 January 1996.
- Headquarters, Department of the Army. Contractor Deployment Guide, DA PAM 715-16 (Draft). Washington: n.d.
- Headquarters, Department of the Army. Logistics Support Element Tactics, Techniques, and Procedures, Field Manual 63-11, Appendix E. Washington: 1996.
- Headquarters, Department of the Army. Operations, Field Manual 100-5. Washington: 1993.
- Kral, Anthony H. "Need for External Support -- Don't Try Fighting without It!" Army Logistician, January-February 1993, 29-31.
- Kern, Paul J. "Prime Vendor Support: Wave of the Future," Army RD&A, January-February 1998, 5-6.
- Logistics Management Institute, LOGCAP Support in Operation Joint Endeavor, Alexandria, VA: 1996.
- McDuffie, John M. "Force XXI Corps Support," Army Logistician, July-August 1995, 26-31.
- "More Civilians to get BDU's?" Army Logistician, March-Aprril 1997.  
< <http://www.almc.army.mil/>> (27 March, 1998).
- Moses, Alan I. "Contingency Funding Logistics Civilian Augmentation." Unpublished Fact Paper, HQ US Army Europe, Heidelberg, Germany: n.d.
- Sullivan, Julian A, Jr. and Stephen D. Abney. Army Logistician, May-June 1995, 7-9..

U.S. Army Audit Agency, Logistics Civil Augmentation Program Contract, Operation Joint Endeavor (Audit Report AA-96-767) Heidelberg, Germany: 1996.

U.S. Army Combined Arms Support Command. White Paper: Contractors on the Battlefield. FT Lee, Virginia, 19 February 1998.

<<http://www.cascom.army.mil/multi/Doctrine/>> (30 March 1998).

U.S. General Accounting Office. Contingency Operations: Opportunities to Improve the Logistics Civil Augmentation Program, Report to Congressional Requestors. Washington: 1997.

U.S. Joint Chiefs of Staff, Doctrine for Logistics Support of Joint Operations (Joint Pub 4-0) Washington: 1995.

Wheelock, Kevin R. "Review Criteria for the Logistic Plan," Joint Force Quarterly, Spring 1997, 128-133.