

AD-A234 983



2

STUDY PROJECT

The views expressed in this paper are those of the author and do not necessarily reflect the views of the Department of Defense or any of its agencies. This document may not be released for open publication until it has been cleared by the appropriate military service or government agency.

LOGISTICS IN A MULTINATIONAL CORPS

BY

LIEUTENANT COLONEL GEORGE F. HENDERSON, JR., OD
and
LIEUTENANT COLONEL TOMMY W. VASSAUR, TC
United States Army

DISTRIBUTION STATEMENT A: Approved for public
release; distribution is unlimited.

USAWC CLASS OF 1991



U.S. ARMY WAR COLLEGE, CARLISLE BARRACKS, PA 17013-5050

UNCLASSIFIED
SECURITY CLASSIFICATION OF THIS PAGE

REPORT DOCUMENTATION PAGE				Form Approved OMB No. 0704-0188													
1a. REPORT SECURITY CLASSIFICATION UNCLASSIFIED			1b. RESTRICTIVE MARKINGS														
2a. SECURITY CLASSIFICATION AUTHORITY			3. DISTRIBUTION / AVAILABILITY OF REPORT Approved for public release. Distribution is unlimited.														
2b. DECLASSIFICATION / DOWNGRADING SCHEDULE			5. MONITORING ORGANIZATION REPORT NUMBER(S)														
4. PERFORMING ORGANIZATION REPORT NUMBER(S) U.S. Army War College Carlisle Barracks, PA 17013			7a. NAME OF MONITORING ORGANIZATION														
6a. NAME OF PERFORMING ORGANIZATION U.S. Army War College		6b. OFFICE SYMBOL (If applicable)	7b. ADDRESS (City, State, and ZIP Code)														
6c. ADDRESS (City, State, and ZIP Code) Carlisle Barracks, PA 17013-5050			9. PROCUREMENT INSTRUMENT IDENTIFICATION NUMBER														
8a. NAME OF FUNDING / SPONSORING ORGANIZATION		8b. OFFICE SYMBOL (If applicable)	10. SOURCE OF FUNDING NUMBERS														
8c. ADDRESS (City, State, and ZIP Code)		PROGRAM ELEMENT NO.	PROJECT NO.	TASK NO.	WORK UNIT ACCESSION NO.												
11. TITLE (Include Security Classification) LOGISTICS IN A MULTINATIONAL CORPS																	
12. PERSONAL AUTHOR(S) LTC George F. Henderson, Jr., and LTC Tommy W. Vassaur																	
13a. TYPE OF REPORT GROUP STUDY		13b. TIME COVERED FROM _____ TO _____		14. DATE OF REPORT (Year, Month, Day) 1991 April 5													
				15. PAGE COUNT 35 51													
16. SUPPLEMENTARY NOTATION																	
17. COSATI CODES			18. SUBJECT TERMS (Continue on reverse if necessary and identify by block number)														
<table border="1"><thead><tr><th>FIELD</th><th>GROUP</th><th>SUB-GROUP</th></tr></thead><tbody><tr><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td></tr></tbody></table>			FIELD	GROUP	SUB-GROUP												
FIELD	GROUP	SUB-GROUP															
19. ABSTRACT (Continue on reverse if necessary and identify by block number) In London, England, on 6 July 1990, the North Atlantic Treaty Organization issued the London Declaration on a Transformed North Atlantic Alliance. The document outlines the basis for a new NATO defense strategy. A key element is the predominant use of multinational corps-size forces in contrast to national corps as the main defensive effort of the alliance. The focus of this study is the impact of multinationalism on logistic support. The general concern is, what is the best logistic support concept from a U.S. interest perspective. The specific issues of who should be responsible for logistic support, and how should logistic support be accomplished in a multinational corps are addressed. A discussion of the advantages and disadvantages associated with possible courses of action is presented and a methodology for comparison, selecting the best choice, is offered. A recommendation as to how the U.S. should proceed in transition to the new strategy is also given.																	
20. DISTRIBUTION / AVAILABILITY OF ABSTRACT <input type="checkbox"/> UNCLASSIFIED/UNLIMITED <input type="checkbox"/> SAME AS RPT. <input type="checkbox"/> DTIC USERS			21. ABSTRACT SECURITY CLASSIFICATION UNCLASSIFIED														
22a. NAME OF RESPONSIBLE INDIVIDUAL JOHN E. BROWN, COL, OM			22b. TELEPHONE (Include Area Code) 717-245-4404		22c. OFFICE SYMBOL AWCAC												

DD Form 1473, JUN 86

Previous editions are obsolete.

SECURITY CLASSIFICATION OF THIS PAGE

91 UNCLASSIFIED 08 022

UNCLASSIFIED

Accession No.	
DTIC TAB	✓
Unannounced	
Justified	
by	
date	
for	
file	
no.	
notes	
ref.	
remarks	
A-1	

USAWC MILITARY STUDIES PROGRAM PAPER

The views expressed in this paper are those of the author and do not necessarily reflect the views of the Department of Defense or any of its agencies. This document may not be released for open publication until it has been cleared by the appropriate military service or government agency.

LOGISTICS IN A MULTINATIONAL CORPS

A GROUP STUDY PROJECT

by

Lieutenant Colonel George F. Henderson, Jr., OD
and
Lieutenant Colonel Tommy W. Vassaur, TC

Colonel John E. Brown
Project Adviser

DISTRIBUTION STATEMENT A: Approved for public release; distribution is unlimited.

U.S. Army War College
Carlisle Barracks, Pennsylvania 17013

UNCLASSIFIED

ABSTRACT

AUTHOR: George F. Henderson, Jr., LTC, USA and Tommy W. Vassaur, LTC, USA

TITLE: LOGISTICS IN A MULTINATIONAL CORPS

FORMAT: Group Study Project

DATE: 5 April 1991 PAGES: 35 CLASSIFICATION: Unclassified

In London, England, on 6 July 1990, the North Atlantic Treaty Organization issued the London Declaration on a Transformed North Atlantic Alliance. The document outlines the basis for a new NATO defense strategy. A key element is the predominant use of multinational corps-size forces in contrast to national corps as the main defensive effort of the alliance. The focus of this study is the impact of multinationalism on logistic support. The general concern is, what is the best logistic support concept from a U.S. interest perspective. The specific issues of who should be responsible for logistic support, and how should logistic support be accomplished in a multinational corps are addressed. A discussion of the advantages and disadvantages associated with possible courses of action is presented and a methodology for comparison, selecting the best choice, is offered. A recommendation as to how the U.S. should proceed in transition to the new strategy is also given.

INTRODUCTION

The recent political developments in Europe along with global economic concerns and a host of other key factors demand that the countries in the North Atlantic Treaty Organization (NATO) review their defensive strategy for the European continent. In July 1990 the alliance's leaders adopted a multinational approach using smaller and restructured active military forces.¹

This paper provides information, insight, and a general overview of operational issues concerning multinational units and, specifically, how United States ground forces may be logistically supported in NATO. Because of the complexity of the problem, the scope of this text is limited primarily to the Corps and its subordinate units, with maximum concentration on the Corps Support Command (COSCOM) structure.

BACKGROUND

After World War II ended the United States in addition to several European countries soon recognized that a fraternal organization was needed to oppose the Soviets and ensure peace and stability on the European continent. On 4 April 1949 twelve countries signed the military treaty forming what many people consider the most successful alliance in modern history.² Membership ultimately grew to sixteen, although all are not full participants. NATO's current defensive strategy of forward defense and flexible response is characterized by wartime deploy-

ment of national corps arrayed in the well known layer cake fashion to defend the eastern borders. The western forces are facing the massive old Warsaw Pact countries and Soviet Union, which we long believed possessed an offensive doctrine and purpose. NATO believed that little to no warning time of an attack from the east meant that forces had to be forward deployed and that a strong reliance on nuclear weapons was necessary to deter war. For over four decades this strategy was in place and worked. Numerous factors are now changing this situation.

The switch of Soviet Union attitude from world domination to a more internal concentration enabled the change to begin. This switch, which triggered the end of the Cold War, was caused in part by severe internal economic conditions limiting Soviet power projection. As tolerance for democratization in Eastern Europe increased, Warsaw Pact countries, through desire, determination and resolve to choose their own destiny, quickly took advantage and one-by-one left the group. Simultaneously, the Conventional Forces Europe (CFE) Treaty was negotiated resulting in conventional military forces being significantly reduced on both sides of the border. When fully implemented, all Soviet forces will be located east of the Ural mountains and the NATO force structure will be reduced in size. It is universally accepted that NATO has been the catalyst in preserving peace in Europe and expediting the many changes just described.

With the Soviet threat reduced to NATO, some might be inclined to think the alliance has served its useful life and

should be dissolved. However, most still see a need for its continued existence. It should not be forgotten that the Soviets still possess an awesome conventional military force, albeit located in Russia, and thousands of nuclear weapons. Also, the Soviets continue to modernize their equipment at an alarming rate. Given the instability of "mother" Russia and surrounding states, military challenges to the current status quo could happen at any time. Traditionally, NATO has been oriented to defend against an eastern invasion, but future military visionaries must also look to the flanks. Norway and Turkey on the north and south flanks respectively are each vulnerable to incursions from the Soviets. Turkey also borders the southwest Asian countries of IRAQ and Syria. With IRAQ's invasion of Kuwait, 2 August 1990, this latter area is extremely unstable and has immediate potential for armed conflict against NATO's southern flank.

Convinced of the continued need for NATO, member nations met in London, 5-6 July 1990, and developed a defensive strategy for the future. Defined in the London Declaration, the strategy provides for the common defense of member nations while increasing the political component of the alliance by building renewed friendships and partnerships. The new defensive strategy is based on reducing military forces through sound arms control agreements including short range nuclear force (SNF) talks. NATO forces will be smaller and restructured. They should be highly mobile and versatile so allied leaders will have maximum flexi-

bility in deciding the correct response during crisis. Also, considerations have even been given to possible out-of-sector roles for alliance forces. Communication facilities should be enhanced for crisis management. Active forces, along with training and exercises will be scaled back. More dependence will be placed on the ability to build larger forces, if and when they are needed. Because of smaller forces forward deployed, NATO must rely on multinational corps with national units. This concept will demonstrate solidarity and the collective nature of NATO's defense. Nuclear weapons are to remain in Europe, albeit in fewer quantities, for deterrence and they are truly weapons of last resort.'

For the purpose of this paper, the most important aspect of the London Communique is that forward deployed NATO forces will be reduced and the only stipulated way to provide a credible defense against known threats is through multinational forces. Planning is on-going to determine how to structure a reduced NATO force and simultaneously accommodate the new military strategy. The stated increased reliance on multinational corps leads us to the thesis of this paper on how to best logistically support this organization.

MULTINATIONAL CORPS

From its beginning, NATO was as much a political organization as a military alliance. Considering both these aspects and the London Declaration in July 1990, it is clear that the future

defensive strategy for NATO will include further integration of national forces.

As alluded to earlier, the rationale for gravitating to a multinational force (MNF) defensive strategy is not based solely on a change in threat or national policy. Further integration of forces may also provide access to the so called "peace dividends", not the least of which may be reduced defense expenditures. Multinational forces are considered politically acceptable, demonstrate alliance cohesiveness and solidarity, increase force interdependence, and provide a transatlantic link, thereby justifying the required presence of national forces. Additionally, it is perceived that MNF will be more digestible to the general public.

The NATO concept of multinational corps is to build corps size forces through integration of national elements of two or more countries. This multinational structure is limited to echelon above division level with no force integration at division or lower. The rationale for not integrating at lower levels includes tactical command, control, and intelligence, national unique doctrine which impacts force structuring, and logistic considerations. Additionally, as a world power, the U.S. must consider using its forces for global contingencies. National division packages make this task much simpler to implement.

NATO's concept of implementing the multinational force just described is applicable to the main defensive corps. Different parameters are applied to ACE Mobile Force Land (AMFL) and the

perceived requirement for a Rapid Reaction Force. For this study, we will limit the scope to logistical support of a main defensive corps.

There has been much discussion and study on how the overall NATO defenses should be positioned and what the U.S. force contribution should be. The answers to these questions are not known at this time. We will assume, for the purpose of this paper, that the U.S. contribution to the forward deployed NATO force will be at least two divisions, one corps headquarters, and associated corps troops. Given this scenario, Figure 1 shows one possible organizational structure.

LOGISTICS

It is necessary to establish a basic working definition of logistics prior to any discussion of issues and concerns associated with multinational logistics.

What is logistics? This question has been debated for years.

Jomini defined logistics as "the practical art of moving armies" but he gave it a far broader and deeper meaning. The "old logist-ique," he explained, had been "quite limited."

Logistics, declared Jomini, "comprises the means and arrangements which work out the plans of strategy and tactics." It was a major function of command, and a good commanding general required a skillful and efficient logistical staff and an even more competent logistician to head it. This chief of staff, Jomini wrote, "should be acquainted with all the various branches of the art of war," for logistics, in its ultimate sense, "war is nothing more nor less than the sci-

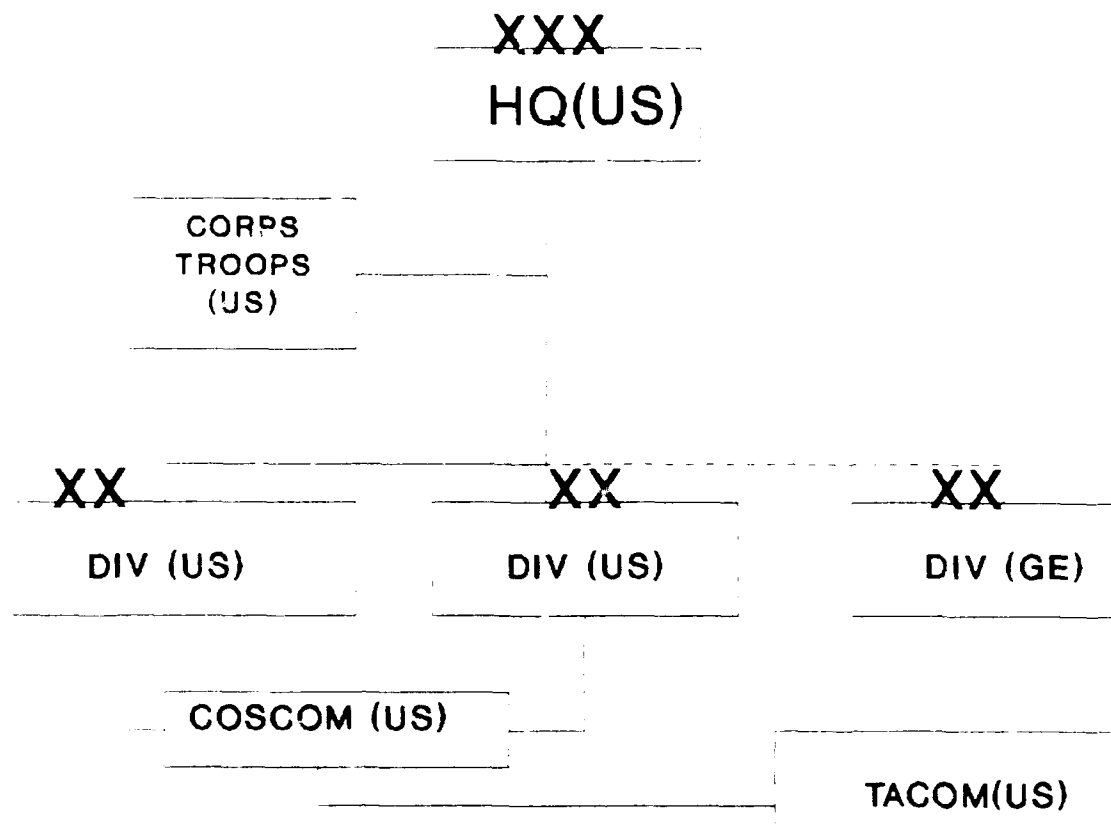


Figure 1

ence of applying all possible military knowledge."

Clausewitz paid lip service to logistics but refused to admit that it played any part in "the conduct of war properly so called." War was strategy and tactics. All else was merely "subservient" services, useful and necessary perhaps, but insignificant in the actual clash of war.'

Clausewitz preferred to categorize logistics as a part of the art of war as opposed to the actual conduct of war which rested on strategy and tactics.

Stanley L. Falk, a noted military historian, provides a more current and useful appraisal of what logistics is.

Logistics is essentially moving, supplying and maintaining military forces. It is basic to the ability of armies, fleets and air forces to operate - indeed, to exist. It involves men and materiel, transportation, quarters and depots, communications, evacuation and hospitalization, personnel replacement, service, and administration. In its broader sense, it has been called the economics of warfare, including industrial mobilization, research and development, funding, procurement, recruitment and training, testing, and, in effect, practically everything related to military activities besides strategy and tactics. Logistics, in short, in the words of one irreverent World War II supply officer, is "the stuff that if you don't have enough of, the war will not be won as soon as."⁵

A high probability exists that in a group of so called experts a definitional consensus on logistics could not be reached. In NATO, however, the agreed logistics definition is:

"Logistics: The science of planning and carrying out the movement and maintenance of forces. In its most comprehensive sense, those aspects of military operation which

deal with:

(a) design and development, acquisition, storage, movement, distribution, maintenance, evacuation and disposition of materiel;

(b) movement, evacuation and hospitalization of personnel;

(c) acquisition or construction, maintenance, operation and disposition of facilities;

(d) acquisition or furnishing of services".

The above definitions are too broad in scope for use in discussing logistics at the corps level. The purpose is to provide a basic understanding of the magnitude and complexity of logistics as a component of war fighting or preparation for war.

The Corps Support Command (COSCOM) is in the business of providing combat service support (CSS) and, in this context, is involved in preparation and war fighting execution. Combat service support is an integrated component of combat power. For those who are of the Clausewitz persuasion concerning logistics/CSS, a reference to FM 100-10 is appropriate. "The ability to provide and sustain support for combat operations is predicated on thorough, integrated planning; therefore, there exists an inseparable relationship between operations/tactics and sustainment on the Airland Battlefield."

For simplicity and focus from hereon, logistics and CSS are considered synonymous. The question then becomes: What is CSS? Combat Service Support is simply logistics at the tactical level of operations. The functional missions include: health services, personnel services, supply, maintenance, transportation, and field services. The basic CSS tasks are to man, arm, fuel, fix,

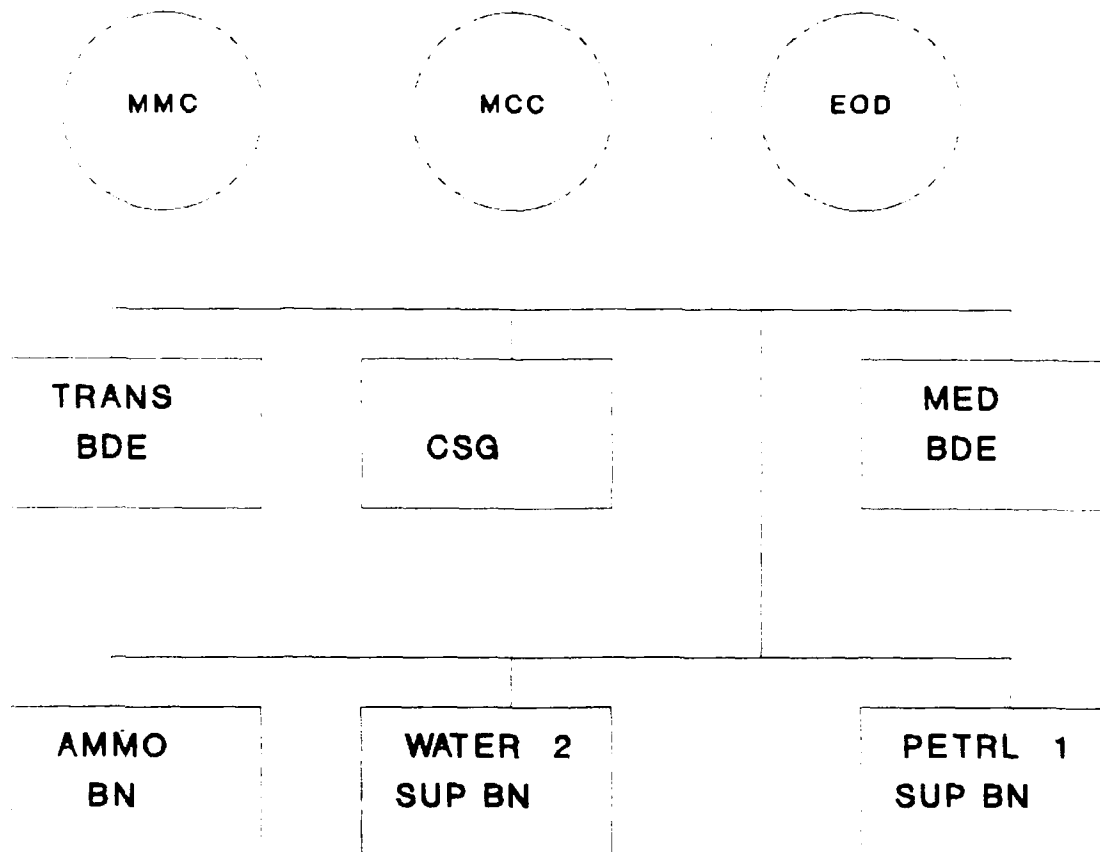
and move the force.

CORPS SUPPORT COMMAND OPERATIONS

The COSCOM provides logistical support to a U.S. national corps. Its military mission is to provide combat service support (CSS) to U.S. corps units and, when directed, to forces of other services (Air Force, Navy, Marines) or allied countries."

The COSCOM provides supply, maintenance, field services, transportation (mode operations and movement control), and medical support to divisions and nondivisional units operating in the corps area of responsibility (AOR). The size of the COSCOM is dynamic and can be tailored to meet support requirements for any contingency. It can support from two to five divisions in combat. Figure 2 shows a typical COSCOM organization.⁸ The COSCOM provides CSS through two basic subordinate elements: corps-wide support organizations (functional) and area support units (multifunctional). Doctrinally, COSCOM functional commands, provide transportation, ammunition, supply and distribution, petroleum supply and distribution and medical support on a corps-wide basis. Corps Support Groups are multifunctional subordinate elements of the COSCOM. They provide supply, ground maintenance, aviation maintenance, and field service functions on an assigned area basis in the corps rear area. Additionally, selected elements of the COSCOM may also provide CSS to corps troops located in the division AOR. Figure 3 shows a typical corps CSS operation.⁹ Figure 4 depicts CSS in the division

COSCOM



1. May be assigned to CSG
2. Arid environment

FIGURE 2

Corps CSS

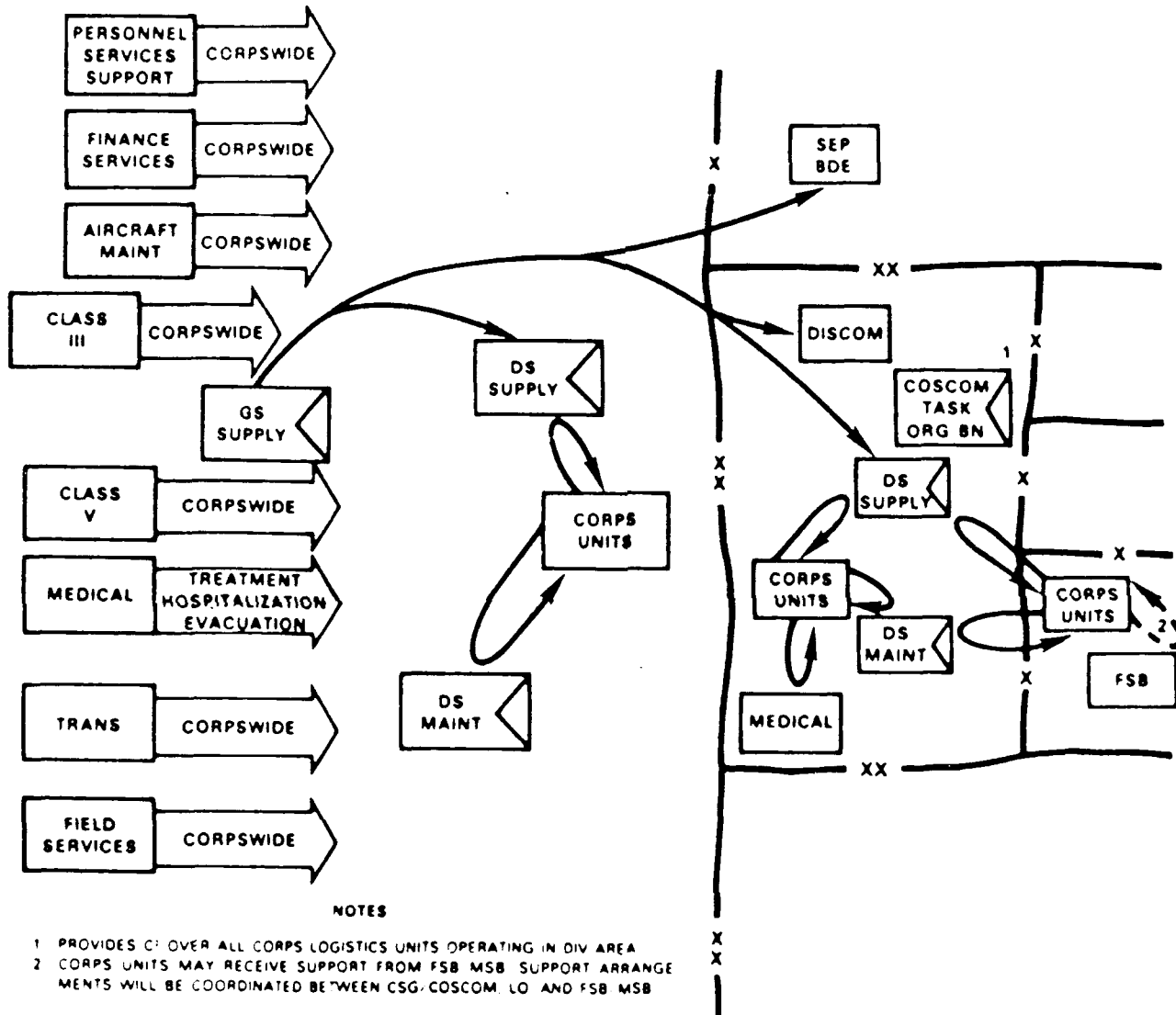
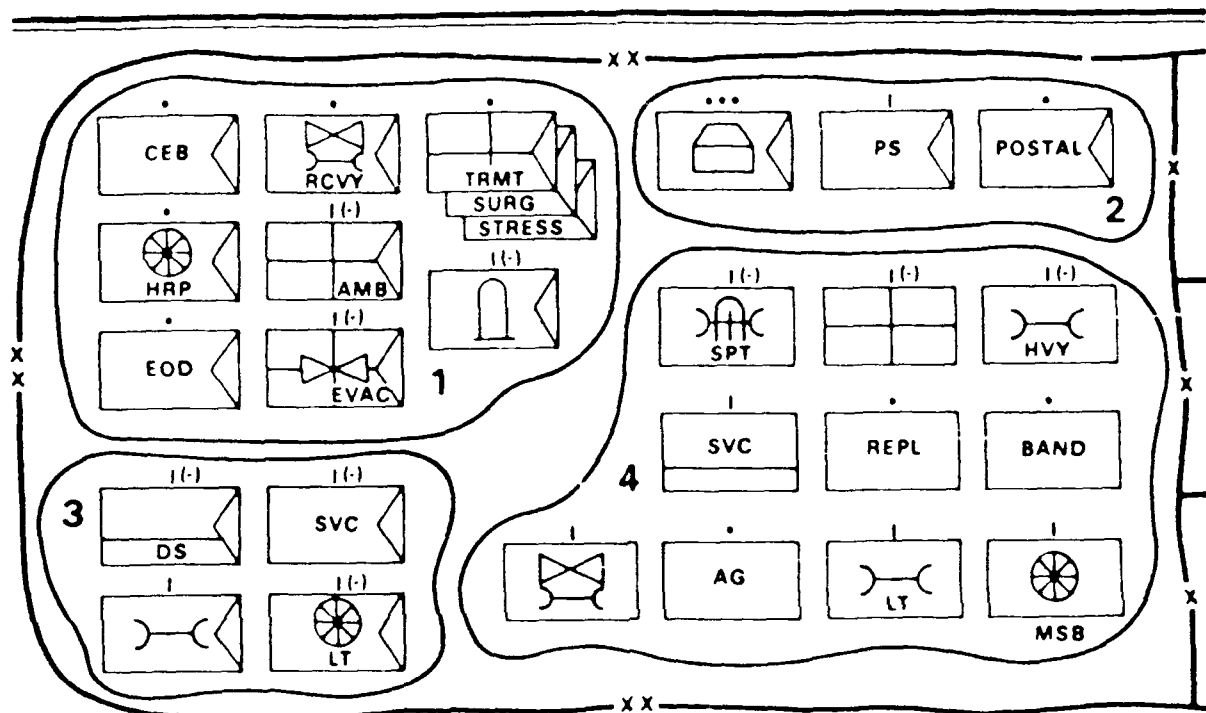


FIGURE 3

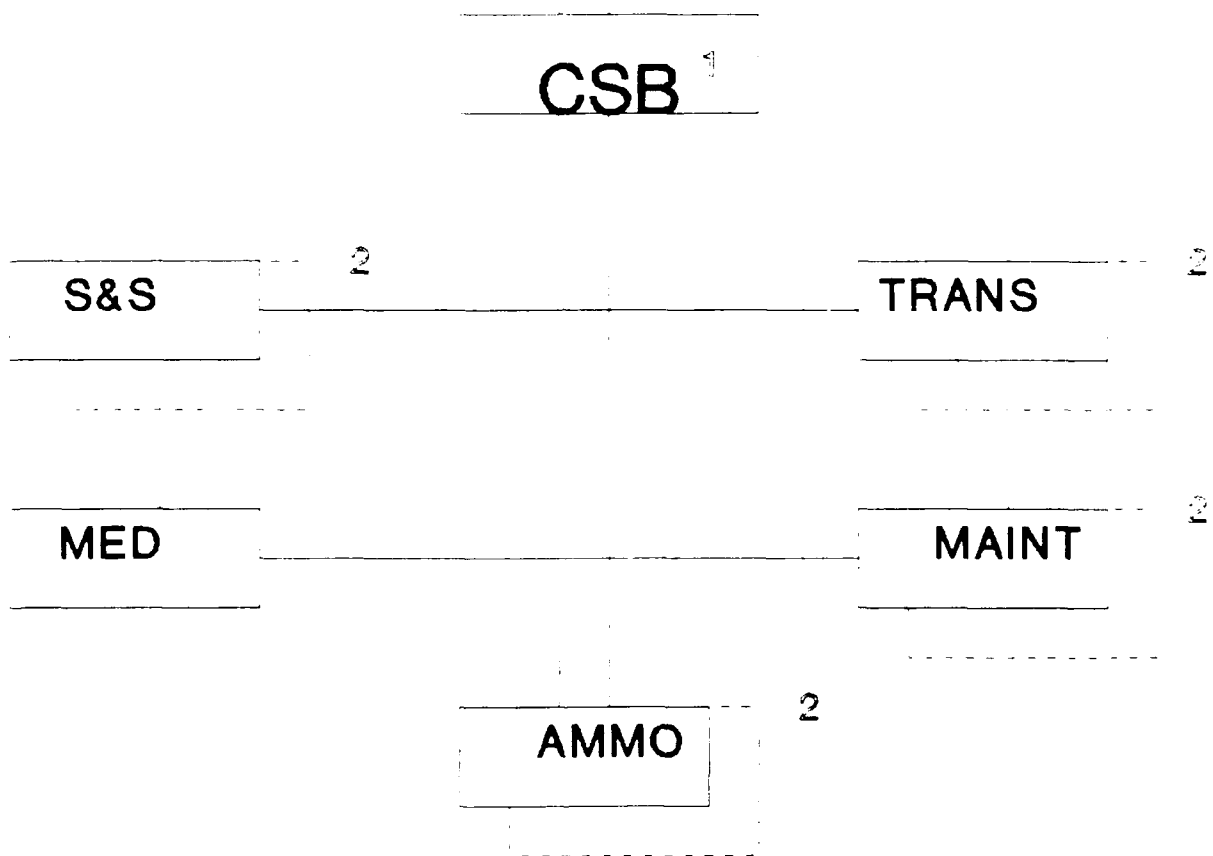
battle area.¹⁴ COSCOM units also provide backup support to divisional units when required and capacity and capability exists. The VII U.S. Corps conducted tests combining functional and multifunctional support elements into an organization called a Corps Support Battalion (CSB). It provided CSS to corps units maneuvering in the division AOR. Results from these tests were impressive. Figure 5 is an example of this multifunctional support battalion. The example not only shows a unit that has the capability to provide the maintenance, supply, and field service missions but also provides transportation, medical, petroleum, oils and lubricants (POL), and ammunition support. Primary units receiving this support include corps troops in the division AOR such as corps engineers, corps artillery and to a lesser degree medical, military police, and other specialized elements normally located in the corps rear area. The CSB may also provide limited support to division units.

In certain forward deployed areas, a COSCOM may experience logistical short-falls caused by international or political agreements, stationing limitations, force ceilings, and budgetary constraints. Reserve component (RC) units are normally programmed to satisfy these requirements provided they can meet deployment schedules. In the short term, however, support agreements are usually made with the host nation to cover logistical deltas until the RC units arrive. Host nation support (HNS) normally continues through peace, crisis, and war, when there are no deploying units.



- 1 COSCOM units that provide support to division and corps units. NOTE: While the goal is for ATPs to provide 100 percent of division ammunition requirements, ASPs will be "surge tanks" holding part of the corps reserve and will also issue to support units and organizations in reserve.
- 2 Corps CSS units that provide support to division and corps units.
- 3 COSCOM units that provide support to corps units operating in division area.
- 4 Division CSS units that provide support to division units. NOTE: Medical company provides support to either division or corps units on an area basis.

FIGURE 4



1. CSB is a subordinate element of CSG
2. Number of companies vary according to units supported

Figure 5

Civilian contractors provide an additional dimension to logistical support within the corps area. These contractors, composed of U.S., local national, or third country civilians, form the Logistics Civil Augmentation Program (LOGCAP). They provide a service, function, or form a labor pool for the army.¹¹ Providing support in wartime is LOGCAP's primary objective, but it may also provide assistance in peace and crisis. Other civilians, usually industrial system experts, provide CSS on high-tech equipment. Because of equipment complexity, many corporations provide highly-skilled company representatives to perform the necessary repairs. In many cases, this civilian support is the only authorized repair below depot level maintenance.

Discussion about the COSCOM would be incomplete without mentioning echelon above corps (EAC) support channels. When a forward-deployed COSCOM operates in a theater, it receives replenishment stocks (all classes of supplies) through lines of communication (LOC) which extend back to the port facilities. In some cases, sustaining stocks are stored at EAC units and may be provided upon request from the COSCOM/Corps units. Back-up support to the corps such as maintenance may also be provided by EAC units. When the corps is operating independently, it will be augmented to maintain the LOC and to provide the back-up CSS functions to the corps.

MULTINATIONAL FORCE LOGISTICS

After establishing a working definition of logistics/CSS and presenting an overview of support doctrine for a COSCOM, the question of how best to accomplish logistic functions in a MNF can be addressed. The simple truth is multinationalism per se has absolutely nothing to do with the basic functions and tasks of logistics/CSS, they remain the same. In a multinational force environment the issues become, who has the responsibility and how to best accomplish the logistic requirements.

Multinational forces are not new. There are historical precedents and current operational and contingency force structures containing multinational elements. Some examples of current MNFs are provided in Figure 6.¹² A review of these forces from a logistics responsibility perspective provides the following conclusion: logistics is a national responsibility. This should come as no surprise when one considers, differences in national force structures, equipment, and support doctrine. It may also be appropriate here to note that U.S. doctrine for joint operations, for essentially the same reasons, assigns logistic responsibility to each service component. The problem now becomes whether the traditional national approach to logistic support is best for multinational corps-size formations operating in NATO. Is there a better way?

In developing alternatives for logistic support in a multinational corps, the issue is integration. To what extent can the logistic functions be integrated to maximize the goals and

EXAMPLES OF CURRENT MULTINATIONAL FORCES

Force	No. of countries	Permanent vs. on call	Command & Control Peacetime	Equipment	Logistics	Personnel (units)	Funding
AEWCF (AWACS)	12	P	NATO	NATO	NATO	NATO	NATO
AMF (L)/(A)	8	OC	NATO (HQ only)	National	NATO/ National	National	NATO/ National
STANAVFORLANT	5	P	NATO	National	National	National	NATO/ National
STANAVFORCHAN	4	P	NATO	National	National	National	NATO/ National
NAVOCFORMED	8	OC	National	National	National	National	NATO/ National
COMLANDJUT (Rendsberg)	5	P/OC	National	National	National	National	National
FR/GR BDE	2	P	Joint	National	Bi-national	National	National

FIGURE 6

objectives of the force. The goals and objectives are screening criteria and therefore fundamental to selecting possible alternatives or solutions. For the purpose of this paper, the following screening criteria apply: alliance cohesiveness, military effectiveness, force independence, resource savings, and ease of execution. A detailed definition of each criteria will be provided later.

Since, as established earlier, multinationalism has nothing to do with basic logistic functions, a discussion of how to integrate (support options) is appropriate and necessary to defining integrated logistic support. Logistic support integration is accomplished through application of the following support options:

- . National support - each nation provides; traditional, logistics is national responsibility.
- . Role Specialization - one nation provides the function or item for all forces in the corps.
- . Binational or multinational - two or more nations provide the function or items (multiple support source).
- . Host Nation Support - similar to role

specialization but provided externally by host nation to all forces in the corps.

- . Logistics Civil Augmentation Program (LOGCAP)- similar to role specialization but provided externally by civilian contractors to all or designated forces.

Any support alternative considered must be addressed in terms of the above described options and related specifically to the logistic functions accommodated. This approach provides a methodology for measuring the extent or degree of support integration. How and at what level the options are applied determines the degree of support integration.

Various alternatives to MNF support can be placed on a continuum according to degree of integration. Figure 7 is a chart showing the extremes, low to high.¹³ The left side reflects a minimally integrated multinational corps. The characteristics of the minimalist approach are as follows:

- . The command structure follows the lead nation, one nation provides the corps commander and staff. The staff is not integrated, national divisions provide only liaison to the corps headquarters.
- . Support remains traditional - e.g. logistic support is a national responsibility.

APPROACHES TO MNF LOGISTICS

DEGREE OF INTEGRATION

Low ←	→ High
<ul style="list-style-type: none"> • Lead nation commander/staff with liaison • National logistics support of national units in MNFs • National stocks – current procedures/limitations regarding reallocation in “emergency in war” • National support at EAC • Individual national LOCs • Bilateral HNS 	<ul style="list-style-type: none"> • NATO commander/fully integrated staff • Functionally integrated corps level support for all divisions • Maximum reliance on role specialization • NATO support for EAC • Common stocks/common funding • Single NATO LOC • NATO-negotiated HNS

FIGURE 7

- . Stocks are under national control during peacetime and in crisis or war. The corps commander can only reallocate to the extent granted by the nations concerned.
- . Lines of communication are nationally operated.
- . Host nation support is negotiated bilaterally e.g. each nation executes own support agreements.

The right side represents a fully integrated support approach. The following characteristics are highlighted:

- . The corps commander is a NATO commander and the corps staff is fully integrated with personnel from all nations.
- . Corps level support is provided by a fully integrated corps support group which uses role specialization and multinational support extensively for all feasible logistic functions.
- . EAC logistic support is provided by a fully integrated multinational support organization.
- . All stocks are NATO funded and NATO commanders have full authority for allocation.

- . NATO LOCs are maintained and the movement of personnel, equipment, and supplies through the LOCs is controlled by NATO.

- . NATO negotiates all HNS agreements.

Determining the appropriate degree of integration is extremely complex. Selecting support options and applying them to specific logistic functions carte blanche will not work. Each MNF corps-size element must be addressed individually and logistic support tailored for that force. At the present time MNF corps organizations are not known. However, an examination of some notional MNF models provides a means of addressing advantages and disadvantages from a logistic support perspective. The models were purposefully constructed to demonstrate the full range of minimum to fully integrated as well as a balanced approach to logistic support. It should be noted and fully understood that no single logistic support concept is applicable to all force structures. Support concepts must be based on each nation's requirements and capabilities. The notional models are used solely for evaluation and comparison of possible alternatives.

MULTINATIONAL CORPS MODELS

Prior to determining the advantages and disadvantages of selected models, it is necessary to establish or set evaluation areas or parameters. Basically, the screening criteria repre-

sents the limits of this evaluation, and the following definitions are applicable:

- . Alliance cohesiveness - to enhance the political cohesiveness of NATO through greater force integration and interdependency.
- . Military effectiveness - the ability to successfully implement NATO's new defensive plan and simultaneously maintain the capability to satisfy individual nation interests.
- . Force independence - the ability to operate and sustain national forces committed to non-NATO missions.
- . Resource savings - the capitalization of the "peace dividend" (reduced Soviet threat) e.g. reduce costs of support for all NATO forces, ideally through equitable cooperative arrangements as opposed to merely burdenshifting.
- . Ease of execution - the ability to implement with the least negative impacts.

Using the above broad parameters as an evaluation umbrella, a discussion of specific advantages and disadvantages of each model is presented.

MODEL #1 - MINIMAL INTEGRATION

This option (see Figure 8) involves the least degree of change and closely resembles the arrangement of U.S. VII Corps (prior to the deployment to Saudi Arabia) and the German 12th Panzer Division.¹⁴ Here the nation with the preponderance of personnel is the lead nation. As such, the lead nation provides the commander, staff, the combat support forces (corps troops) and the majority of combat units. The OPCON German division is under operational control of the U.S. corps commander. NATO defines operational control as:

The authority delegated to a commander to direct forces assigned so that the commander may accomplish specific missions or tasks which are usually limited by function, time or location; to deploy units concerned and to retain or assign tactical control of these units. It does not include authority to assign separate employment of components of the units concerned. Neither does it, of itself, include administration or logistic control.¹⁵

In peacetime, the German and American units operate independently; however, liaison officers are exchanged between national divisions and the corps headquarters for operational contingency planning and combined training exercises.

The COSCOM provides logistical support to the U.S. units as CSS remains a national responsibility. However, extensive bilateral HNS and selected LOGCAP must be provided to compensate for capability shortfalls. Echelon above corps (EAC) CSS is provided to the U.S. corps by American logistical organizations in the

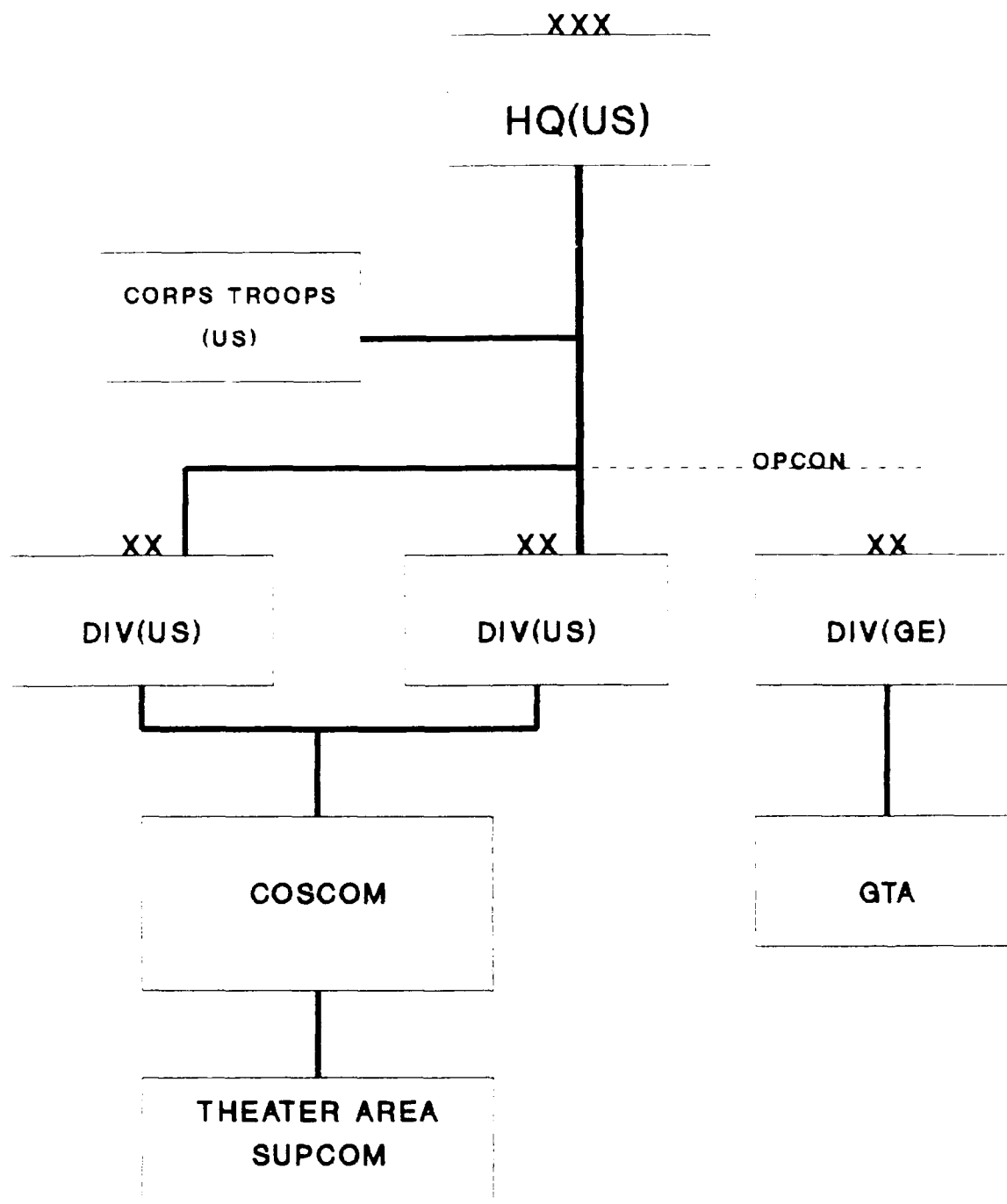


FIGURE 8

COMMZ, which also maintain the LOC from the sustainment base. The German division has its own organic CSS plus the German Territorial Army (GTA) provides additional assistance on an area oriented support basis. This minimally integrated MNF model is characterized by shared combat and combat support functions but is void of combat service support functional integration.

From a U.S. perspective, this organization provides several positive features. First it is separately structured and supported, making it relatively easy to detach the German division and deploy to another contingency outside of NATO. Given this scenario, the U.S. corps comes as a fighting package complete with its organic combat, combat support, and combat service support units. These units have a common doctrine, complete with standing operating procedures, which make it a routine exercise to fight as a two-division U.S. corps or to attach additional U.S. divisions if necessary. Little to no change in current operations, force structure, or equipment is required to implement this organization. Being extremely flexible, this option easily permits the addition of U.S. units to the corps to fight in the NATO theater. This feature supports NATO's new defense strategy, which relies heavily on the ability to quickly build larger forces, if and when they are needed. Reinforcement forces to the European Theater will be directed at making singularly national organizations from multinational forces, time permitting. This option makes that transition easy.

This minimal integration approach does not come without some

basic negatives. It violates the most basic and one of the most important logistic principles, economy of logistic force. Since both the U.S. and German units are each logistically supported by national organizations, there are many cases of functional duplication. This results in a force redundancy that increases force size and reduces the peace dividend which remains one of the major reasons for NATO's migration to a MNF defense strategy. It also limits the commander's ability to influence the battle by restricting his cross-leveling authority of logistical stocks belonging to the other (German) nation. Although it may sound trite, combatant commanders are restricted, in some cases by law, from transferring selected national sustaining stocks to forces other than those of their own nationality. This is especially true of special weapons ammunition, high-tech systems, and critical repair parts.

All MNFs will have a basic problem of communication caused by language and cultural differences. This may be especially acute in this organization due to the limited exposure of commanders and staffs to interact during peacetime. The chance of catastrophic misunderstandings increase as the organization matures during the transition to war.

There is also a significant unknown element associated with this option. The degree of integration of national forces was not specified by the London Declaration. With the option just described, minimal integration has been accomplished, but it may not meet the political desires of the NATO leadership.

This option is obviously the easiest way to transition to a multinational force. It involves minimal equipment standardization and interoperability and limits systems that must interact during battle. Transition time required is short, and expense should be insignificant unless movement of units to a collocated place is required for tactical or other reasons.

MODEL #2 - PARTIAL INTEGRATION

This model (see Figure 9) integrates forces to a greater degree than Option 1 and thus may be more appealing to the political desires of the NATO leadership.¹⁶ Divided between two corps, the U.S. divisions are logistically supported by essentially a national support group or COSCOM-slice tailored to meet requirements. The corps troops are the same nationality as the corps headquarters and the corps staffs are purely national. In the organization on the left, a Canadian brigade was added to show the complicating effects of a three-nation corps. The Canadian support element is similar to the U.S. support organization but tailored to a brigade size element. The Germans retain their organic CSS and their GTA area support. A theater level support group provides EAC support to the CSGs, U.S. divisions, and the Canadians. This EAC support group must maintain the LOC to the sustainment base and supplement U.S. and Canadian logistics in both the U.S. and German corps. The Canadian brigade and U.S. division are both OPCON to the U.S. and German corps respectively.

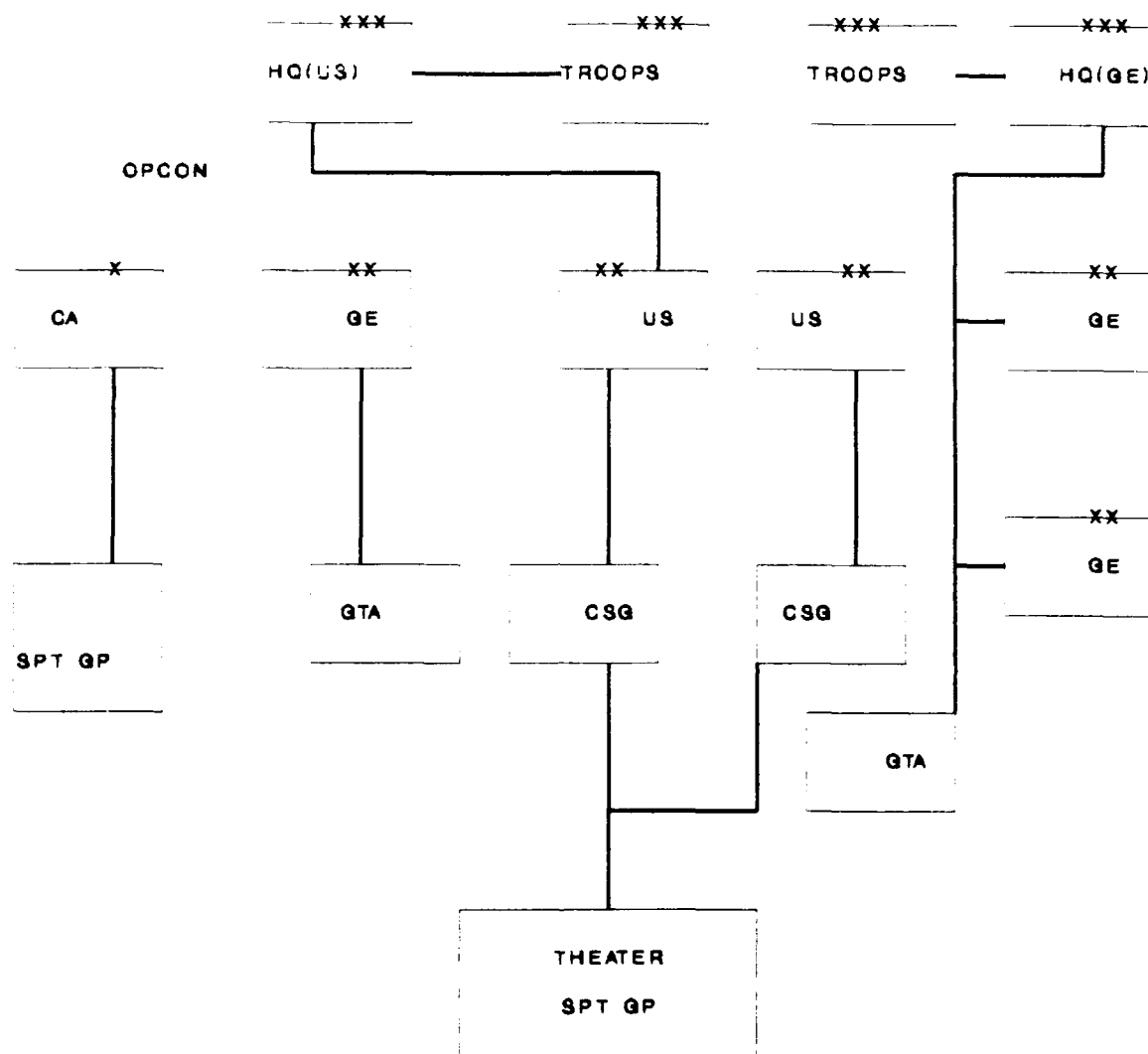


FIGURE 9

This approach enhances the integration of forces but the logistics support remains a national responsibility. The U.S. corps is still flexible, albeit not as flexible as Option 1, to withdraw and fight outside of the theater. In this scenario, the tailored support element may require augmentation or replacement with a COSCOM when additional U.S. units (Div/Bde) are added. This same action would be required if reinforcing U.S. units (Div/Bde) are brought in from CONUS to fight in the European Theater. As in Option 1, the absolute requirement to change equipment to gain greater standardization is not required, although any progress in this area is beneficial.

The intent of this option is to closer approximate NATO's desires to integrate MNF while still preserving a viable CSS doctrine; national logistic responsibility. The negatives associated with this approach are significant. It violates the economy of force logistic principle with two U.S. CSGs, GTA, and a Canadian Support Group performing duplicate logistical functions. This structure will place a greater requirement for personnel and equipment than a consolidated CSS organization. It is important to note that the U.S. CSG in the U.S. corps is larger in size and capability as it must support the U.S. corps troops. However, the CSG in the German corps would not have this mission.

Another issue, which cannot be forgotten, relates to NATO's defense strategy on rapid build-up. The preferred way to accomplish this objective is through reinforcement by units from home

countries, which will combine to make national fighting units. For the U.S., deploying CONUS units will combine with forward-deployed U.S. units. This requires moving the U.S. forward-deployed division and associated support elements located in the German corps to the U.S. corps. All of this turbulence is very confusing and inefficient.

Another negative associated with this option is communication difficulty. Since national forces remain OPCON to other national headquarters, they will operate jointly, only on occasion. Additionally, this option may not meet the political integration specified by NATO, and the cross-leveling of national supplies remains a problem.

MODEL #3 - FULL INTEGRATION

This model (see Figure 10) fully integrates multinational forces into a stand-alone organization that can fight as a totally independent unit.¹⁷ A NATO appointed officer commands the corps and the assigned nations provide personnel to a totally integrated (multinational) staff. The corps troops will be multinational, composed of national units such as a U.S. engineer battalion, German engineer battalion, U.S. artillery battalion, etc. Divisions/Brigade are purely national and each has a national support element capable of providing CSS peculiar to the organization or beyond the capability of the fully integrated CSG. Note should be made to the common stocks which belong to NATO as the result of common NATO funding. Communication zone or

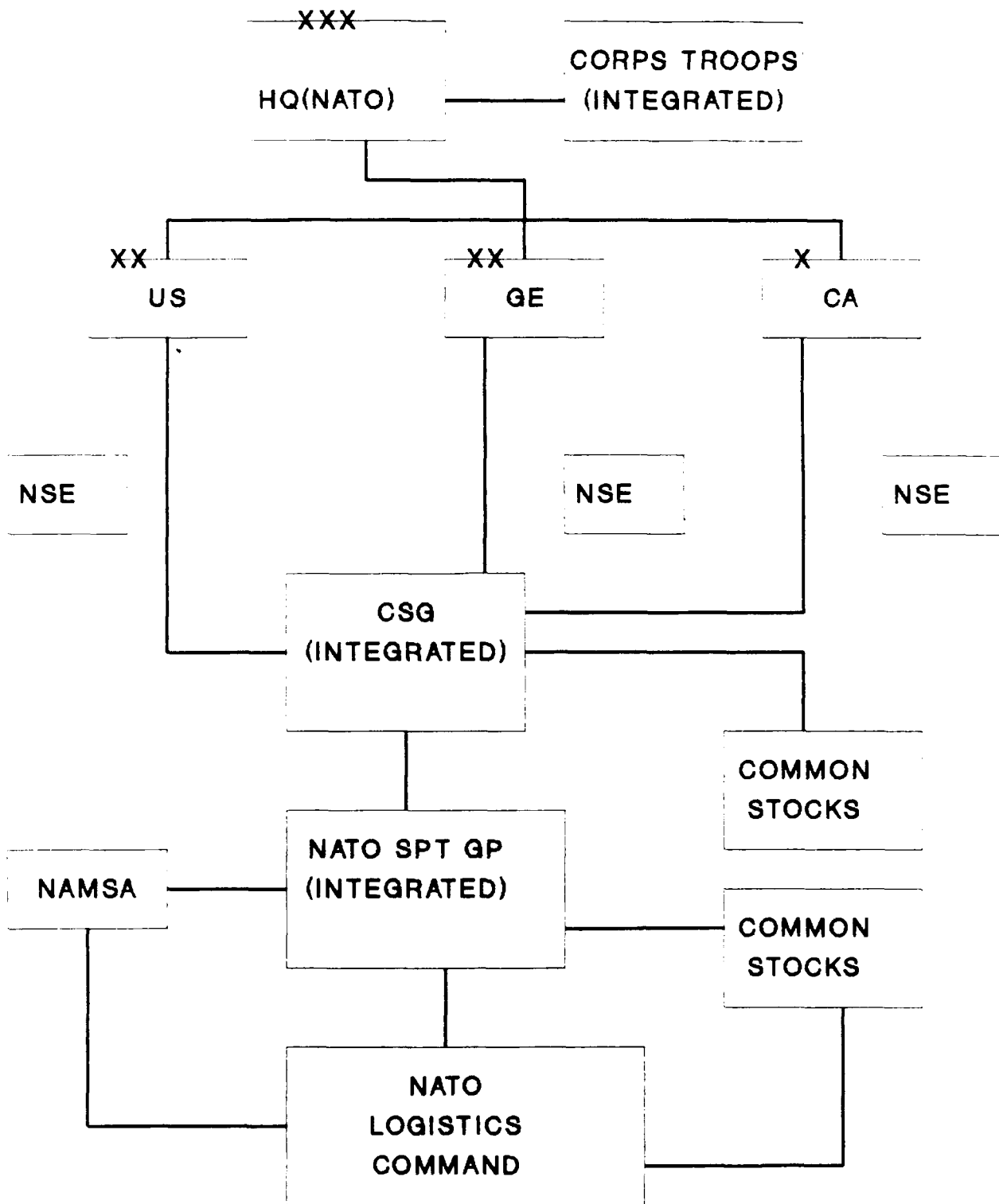


FIGURE 10

EAC support will follow fully integrated multinational support channels.

This organization has the necessary attributes to be accepted by the NATO leadership as a truly multinational organization. It emphasizes the economy of force principle with duplication of logistical functions reduced or eliminated. Another positive feature of this model is the fact that it can function as an integrated unit and comes as a complete corps package. The proposed structure permits the force to operate as a complete element in the European Theater or to deploy for an out-of-sector mission. A common NATO stock provides the NATO commander the advantage to cross-level supplies between all nations. However, gaining approval for common stocks will be difficult. Many sensitive and high-tech items/systems have American origin and are strictly controlled. In some cases, law explicitly prohibits transfer to other nations. Closely associated with the commander's control of the common stocks, is the authority to clearly command and control all subordinate organizations. This issue must be addressed by U.S. Department of Defense officials since current policy strictly prohibits command of U.S. units by other than U.S. officers.

The positive features of this model are impressive but there are some significant drawbacks that must be considered. This multinational organization is dependent on a high degree of equipment and, to some extent, doctrine standardization. Support of this MNF is virtually impossible by the integrated CSG unless

the majority of equipment is the same. Without this feature, the integrated CSG becomes mini-COSCOM organization under the command and control of a NATO commander. An organization of this type will be large, inefficient and difficult to control. Additionally, the common stocks would be extensive and immobile without a great deal of equipment standardization. The national support element (NSE) size is inversely proportional to the degree of equipment standardization; the greater standardization-the smaller the NSE. As discussed earlier, equipment standardization is very expensive and difficult to gain consensus from multiple nations. This fact alone could be a "war-stopper" given today's world economic problems. This model's flexibility to either build a national corps in theater with deploying units or to pull U.S. forces for out-of-sector missions is restricted. National command and control and logistic functions are not present and must be created in either of these scenarios. Also, not mentioned are the complications associated with the integrated corps troops and EAC support structure. Multinational forces will require extensive initial and sustainment training to fight as a credible organization. This increased training will be unpopular with the local population and very demanding to the already constrained defense budgets. Language is a problem and the probability for miscommunications is ever present, a condition exacerbated by the confusion and pressure of war. Another issue, heretofore not mentioned but is maybe the most significant in terms of logistical support, is the automation link from

national units to the CSG. This problem parallels the interoperability/standardization issue but needs further amplification. The U.S. army has standard automated programs such as the Standard Army Maintenance System (SAMS), for essentially every logistic function/service (see Figure 11). These automation links form the foundation for CSS and stretch from company/battery through division, corps, EAC to the wholesale sustaining base. For the U.S. Army to change their automation methodology to conform with a "NATO" system including the integrated CSG, would require massive funding and training. Essentially two armies would be required; a NATO army and a U.S. army. The possibility of gravitating to two structures is extremely remote given the current build-down philosophy and austere funding in the U.S. defense budget.

Corps support organizations described in Options 1 and Option 2 are essentially what we recognize as a U.S. COSCOM or COSCOM slice. However, the support organization described in the fully integrated MNF is totally different and requires further explanation. The number of configurations are endless but Figure 12 shows one example of a fully integrated corps support group.¹⁸ In this notional force, certain CSS functions should remain national. Personnel and financial support are prime candidates that fit this category best. There are other CSS functions that could be performed by either national or multinational organizations. Medical support and graves registration are examples that could be accomplished in this manner. Finally,

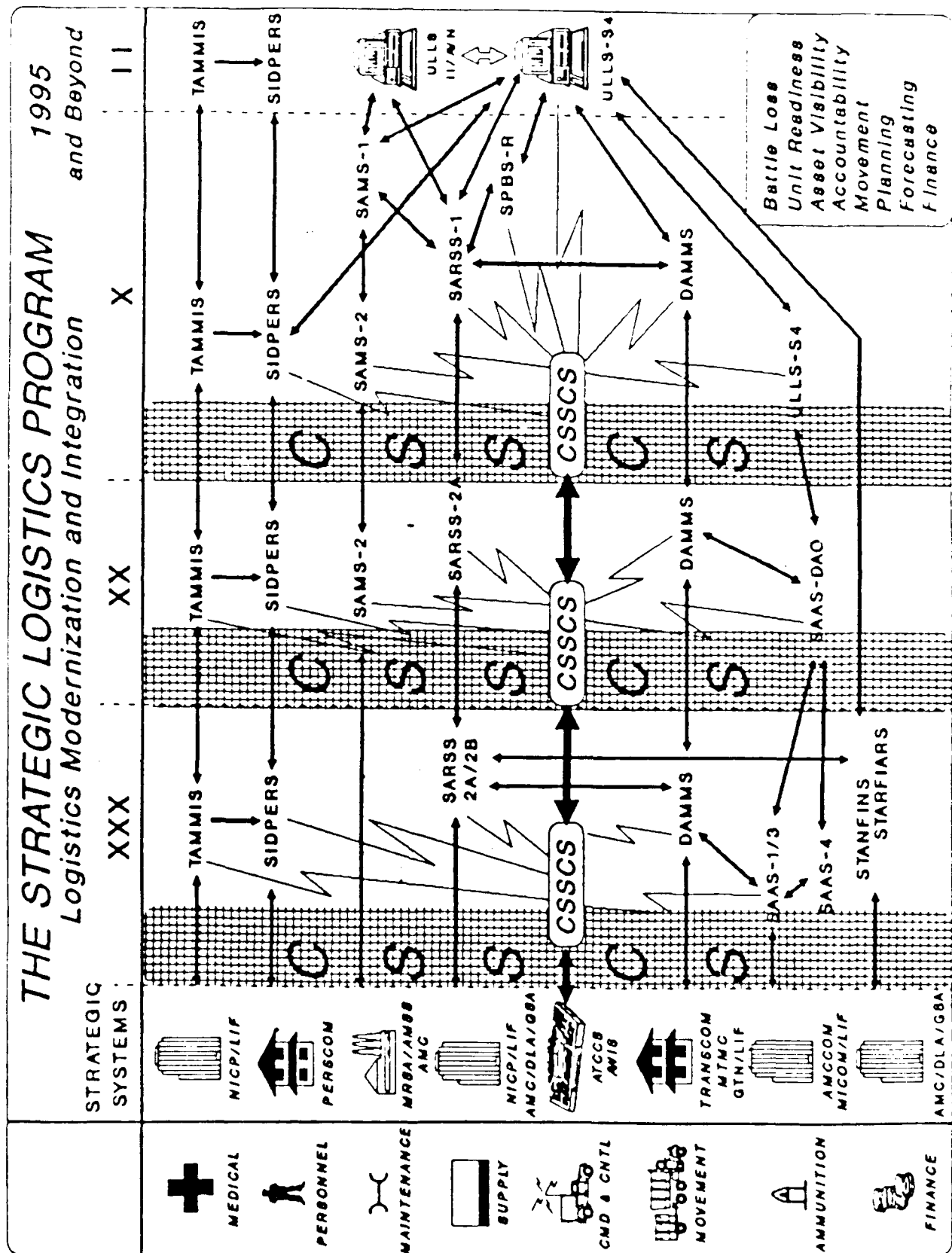


FIGURE 11

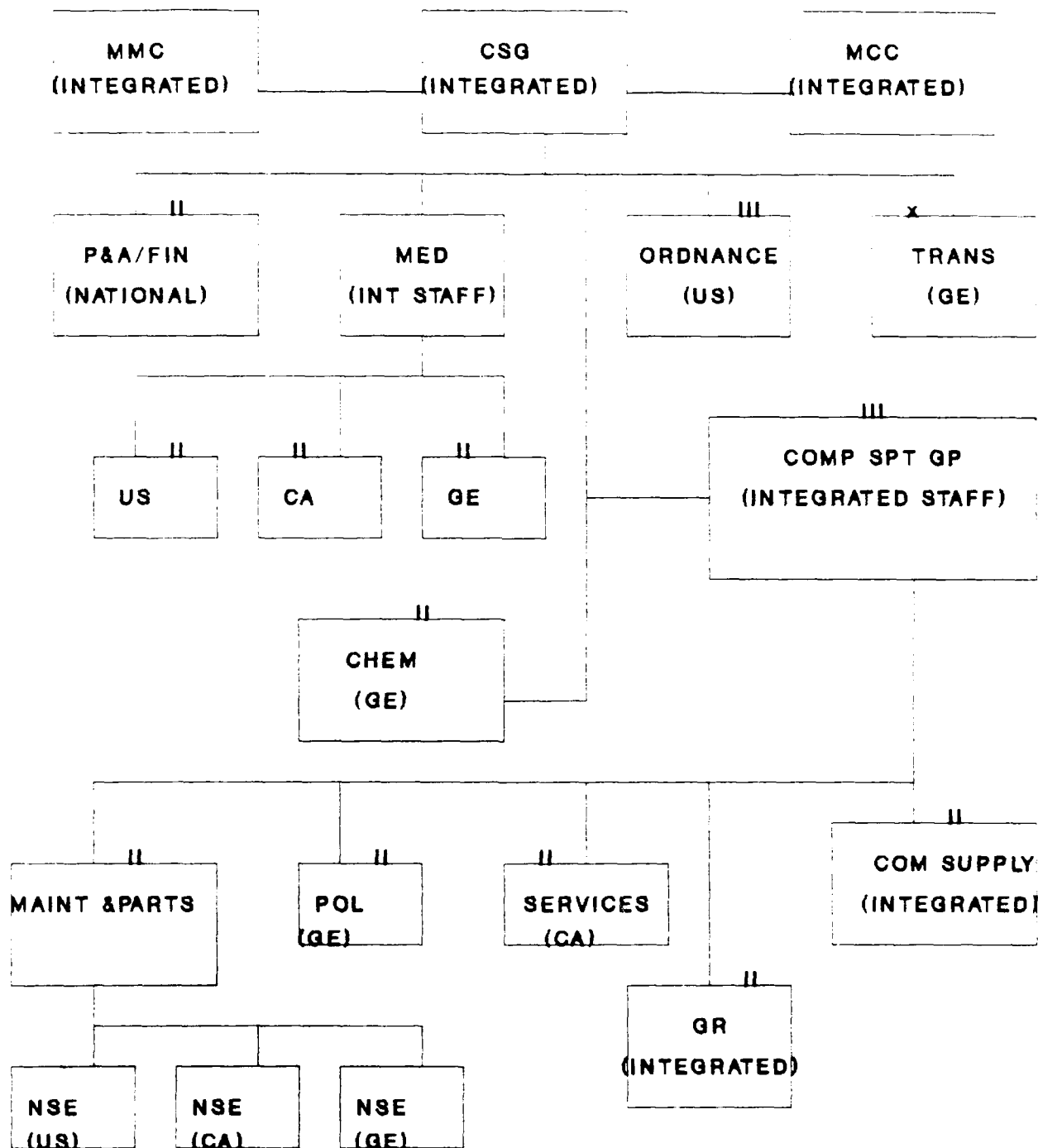


FIGURE 12

certain other functions/services may be accomplished by role specialization. The transportation function could be performed best by only one organization. The advantage of this kind of singular support is that one nation has total functional responsibility for supporting all units. With that mission comes complete control of all available assets in the area to perform the function, a clear case of mission responsibility and authority. Interoperability and standardization are not imperative in this case as the mission is to move materiel from point "A" to point "B", which normally does not require any special conveyance.

The above discussions concerning notional organizational models are primarily oriented on the degree of integration of MNFs. They are lengthy and somewhat confusing. In an effort to simplify the three MNF models and their associated advantages and disadvantages, a chart is provided at Figure 13. The purpose of the visual aid is to show how well each model meets the NATO MNF basic design criteria.

ANALYSIS

The purpose here is to determine the best alternative for logistical support in a multinational corps. It is evident from the previous discussion concerning the positive and negative aspects of each proposed model that each is feasible; they satisfy design criteria. However, as mentioned earlier no single support concept is appropriate for all corps-size force struc-

MODEL COMPARISON

MODEL	MILITARY EFFECTIVE	FORCE INDEP	ALLIANCE COHESIVE	RESOURCE SAVINGS	EXECUTION EASE
1	+	+	-	-	+
2	+	-	+	-	+
3	-	-	+	+	-

FIGURE 13

tures. Therefore, selecting the best logistical support concept must be applied to a specific force structure. In an attempt to provide an illustrative comparison and maintain consistency, the previously discussed corps force models will be used in this analysis. The focus of the analysis is from a U.S. interest perspective.

Accepting the following factual consideration is critical to this analysis:

- . NATO remains.
- . A large reduction in U.S. ground forces in Europe is imminent.
- . U.S. logistic principles and considerations are paramount in planning and executing logistical support.
- . U.S. interests override NATO interests.

The following assumptions apply:

- . All member nations will support NATO's multinational approach to the new defensive strategy.
- . Current threat estimate is valid.
- . Proposed force structures are adequate to counter the threat.
- . Member nations possess the resources and capability to execute as required.
- . All criteria are equally important.

A brief description of each model, course of action (COA) is appropriate prior to defining the evaluation criteria.

Model 1/COA 1 - three division force, two U.S. and one German, no staff integration, and logistic support is traditional, a national responsibility.

Model 2/COA 2 - Three division force; one U.S. and two German, or two division-plus force; one U.S., one German, and one Canadian brigade; no staff integration; role specialization is used for selective logistic functions and HNS is made bilaterally.

Model 3/COA 3 - Two division-plus force, one U.S., one German, and one Canadian brigade; NATO commander with fully integrated corps staff and corps troops; corps support is fully integrated with a national support element providing nation peculiar support requirements.

Since U.S. logistic principles are at the heart of any logistics support concept, it is fitting to use them as evaluation criteria. The definitions provided below are relevant.

- . Responsiveness -- is getting the right support in the right place at the right time.
- . Simplicity - fosters efficiency in both planning and executing logistic operations; mission-type orders and standardization procedures are the

hallmarks of simplicity.

- . Flexibility - is the ability to adapt logistic structure and procedures to changing situations, missions, and concepts of operations.
- . Economy - is the provision of support at the least cost in terms of resources available and necessary to accomplish the mission.
- . Attainability - is the ability to provide the minimum essential supplies and services required to begin combat operations.
- . Sustainability - is the ability to maintain logistic support throughout the operation.
- . Survivability - is the inherent capacity of the organization and its capabilities to prevail in the face of potential destruction.

A relative value methodology with minimum value being best was used in making a comparison of the proposed COAs. Simply stated each COA was rank ordered, 1-3, against each stated criteria with a value of 1 being the best. A sum total for each COA was derived and the lowest total value equalled the optimal choice. The decision matrix at Figure 14 reflects assigned

values and the final outcome using this methodology.

The analysis results clearly indicate that COA 1, the traditional national approach to logistic support, is the best choice. It allows the U.S. force to apply established logistical principles as a combat multiplier in weighting the battle whenever and wherever required. This choice does provide some functional duplication, increased costs, and possible excesses in force structure. However, this can be minimized through selective application of role-specialization e.g. assigning specific logistic function missions to individual nations. Specific role-specialization mission candidates are: transportation, movement control and highway regulation, conventional ammunition supply and distribution, class I supply, and class III (bulk) distribution. These COSCOM missions remain essentially functionally oriented in the Army's new Airland Battle Future doctrine, and therefore continuity is maintained with role-specialization.

Additionally, the integration of the corps and COSCOM staffs with logistic personnel from contributing nations will enhance logistic support operations in a MNF. This can be accomplished without compromising the basic tenet of logistic support being a national responsibility. Staff integration will also add to the multinational complexion of the corps-size force.

Once specific MNF structures are known, a detailed analysis can be accomplished to determine how best to integrate logistic support. Conceptually, the above analysis demonstrates that continuing logistic support as a national responsibility is in

Decision Matrix

Alternative Strategy	Weight	COA 1	COA 2	COA 3
REF	1.00	1.000	2.000	3.000
IMP	1.00	1.000	3.000	2.000
FLEX	1.00	1.000	3.000	2.000
ECON	1.00	3.000	2.000	1.000
ATTAIN	1.00	1.000	3.000	2.000
SUSTAIN	1.00	1.000	3.000	2.000
PERVIVE	1.00	1.000	2.000	3.000
Totals		9.000	18.000	15.000

The optimal strategy is 1

State of nature 1
Not sensitive

State of nature 2
Not sensitive

State of nature 3
Not sensitive

State of nature 4
Not sensitive

State of nature 5
Not sensitive

State of nature 6
Not sensitive

State of nature 7
Not sensitive

FIGURE 14

the best interest of the U.S. Role-specialization and staff integration are plausible alternatives to the question of how to integrate without subordinating responsibility.

CONCLUSION

This paper addressed numerous issues relative to MNFs and specifically the sustainment of these organizations. Providing CSS to a MNF is a complex multifaceted undertaking. There are endless possible force configurations and each could be equally well supported by a different CSS structure. Three possible logistic support structures, ranging from a minimally integrated to a fully integrated MNF, were discussed. Although the advantages and disadvantages were amplified, and a methodology presented for selecting the best course of action, there is no single best support concept for MNFs. However, the analysis suggests, from a U.S. perspective, that a national approach to logistics is wise.

The main issue impacting on the MNF and the selection of the best method of logistical sustainment is uncertainty. Several fundamental questions remain unanswered relative to the political, military and budgetary implications of MNFs. It is imperative that some clarification on these issues be obtained before a road map for a viable support philosophy can be derived. It is accepted that future NATO defenses will rely heavily on MNFs, but what will the size and composition of this force be? What will be the size and composition of forces each nation

contributes? World economics, world threats and political acceptability, will play a major role in determining contributions to the NATO defense. Additionally, the politically sensitive areas of interoperability and standardization must be addressed. NATO cannot advance to a fully integrated force unless monumental progress is made in this area. Given the national parochialism to own equipment and own doctrine, the outlook for progress is very pessimistic.

Expanding the MNF commander's reallocation authority is another key ingredient for successful support of a MNF. The current policy limits the NATO commander's authority. For the MNF to be an efficient and viable fighting force, the corps commander must be free to use all assets and forces within the command to directly influence the outcome of the battle.

Because the problems are so politically complex and often very expensive, it will take time to resolve the numerous issues associated with MNF and its related support. Given these conditions, the best approach is a phased implementation. Using this concept, initial logistical support should be primarily nationally oriented. It is already in place, low cost initially, and it works.

Lowering of the military profile in the host countries is another imperative. As military numbers are reduced, there will be a corresponding reduction in support capability. An increased reliance on HNS and LOGCAP will evolve and should be pursued to the maximum extent.

One last method of support which merits further discussion is role-specialization. This is a very fertile area. Much improvement is attainable with minimal effort and expense. Certain logistic functions/services fit the mold easily with one unit conceivably performing a consolidated support function for the entire MNF. Considerable savings in personnel and equipment can be realized. In the near term, this presents the best opportunity to reap the "peace dividend" demanded by NATO's political leaders.

This paper was constructed to generate thought on possible approaches to the dilemma facing NATO and its member nations relative to MNF. There are no quick and easy actions which will solve all the problems or answer all the questions. The one imperative that keeps surfacing throughout the research for this paper is that logistic planning must be joint and simultaneous with the operational planning for MNFs. Hopefully, this product will assist in this simultaneous planning process.

ENDNOTES

1. NATO North Atlantic Council, London Declaration on a Transformed North Atlantic Alliance, p. 5 (hereafter referred to as "NATO, London Declaration").
2. U.S. Army War College, Reference Text: NATO Armed Forces, p. 4.
3. NATO, London Declaration, pp. 4-6.
4. Stanley L. Falk, Pure Logistics, pp. XVIII-XIX.
5. Ibid., p. XI.
6. Senior NATO Logisticians' Conference, NATO Logistics Handbook, pp. 19-20 (hereafter referred to as "NATO Logistics Handbook").
7. U.S. Department of the Army, Field Manual 63-3J, p. 2-2.
8. U.S. Department of the Army, Field Manual 100-15, p. A-19.
9. Ibid., p. 3-18.
10. U.S. Department of the Army, Field Manual 100-10, p. 1-14.
11. Ibid., p. 1-22.
12. Ray Schaible, Perspectives on Supporting NATO Multinational Forces, p. 6. Cited with special permission of Mr. Schaible.
13. Ibid., p. 10.
14. Ibid., p. 11.
15. NATO Logistics Handbook, p. 8.
16. Ray Schaible, Perspectives on Supporting NATO Multinational Forces, p. 12. Cited with special permission of Mr. Schaible.
17. Ibid., p. 13.
18. Ibid., p. 14.

BIBLIOGRAPHY

- Falk, Stanley L. Pure Logistics. Washington: National Defense University Press, 1986.
- NATO North Atlantic Council. London Declaration on a Transformed North Atlantic Alliance Declaration. 5-6 July 1990. London: 1990.
- Senior NATO Logisticians' Conference. NATO Logistics Handbook. Brussels: 1986.
- Schaible, Ray. Perspectives on Supporting NATO Multinational Forces. Briefing. Brussels: 28 February 1991. (cited with special permission of Mr. Schaible).
- U.S. Army War College. Reference Text: NATO Armed Forces. Carlisle Barracks: 1 October 1990.
- U.S. Department of the Army. Field Manual 23-3J: Combat Service Support Operations - Corps. Washington: 12 August 1985.
- U.S. Department of the Army. Field Manual 100-5. Operations. Washington: 5 May 1986.
- U.S. Department of the Army. Field Manual 100-10: Combat Service Support. Washington: 18 February 1988.
- U.S. Department of the Army. Field Manual 100-15: Corps Operations. Washington: 13 September 1989.
- U.S. Department of the Army. Field Manual 100-16: Support Operations: Echelons Above Corps. Washington: 16 April 1985.
- U.S. Joint Chiefs of Staff. Joint Chiefs of Staff Test Publication 3-0: Doctrine For Unified and Joint Operations. Washington: 10 January 1990.
- U.S. Joint Chiefs of Staff. Joint Chiefs of Staff Test Publication 4.0: Doctrine For Logistic Support of Joint Operations. Washington: 1 June 1990.
- Young, Thomas-Durell, and Lowe, Karl H, Col. "The Case for U.S. Participation in NATO Multinational Corps". Case Study, Strategic Studies Institute, 1990.