

Since the dawn of warfare, the ability to execute a successful campaign has rested squarely on the foundation of military logistics.

# contemporary issues

Logistics for the 21<sup>st</sup> Century: Deployment Distribution Operations Center,  
Quick Fix or Long-Term Solution?

Operational-Level Analysis: DoD's Strategic Mobility and Logistics Support to the  
Homeland Security Architecture

Contemporary Issues presents two analytical articles in this edition—"Logistics for the 21<sup>st</sup> Century: Deployment Distribution Operations Center, Quick Fix or Long-Term Solution" and "Operational-Level Analysis: DoD's Strategic Mobility and Logistics Support to the Homeland Security Architecture."

In the first article, the authors examine the question of whether the implementation of the Deployment Distribution Operations Center into US Central Command's theater of operations substantially changed the Joint logistical process, or was it simply the application of logistical expertise focused on key problem areas. The research finds the latter to be more likely. It is to some degree a fundamental change as to how the deployment and distribution system is focused on warfighter priorities. It is, however, more the application of strategic logisticians brought together to form a physical enterprise resource planning to bring a common operating picture to the entire distribution community.

In the second article the authors provide a comprehensive analysis of Department of Defense (DoD) logistics support to the Department of Homeland Security. The research includes analysis of the homeland security architecture and the national legal framework that govern the Department of Homeland Security and the DoD during homeland security operations and the challenges inherent in this relationship. The article includes a practical analysis of the logistics efforts during hurricane Katrina and the 2004 Indian Ocean Tsunami relief efforts. The authors conclude that there is a demarcation of two concentric logistics mobility missions at the tactical and operational levels; and mobility management for the latter should fall under the purview of US Transportation Command because of its inherent logistics organizational management design. The article ends with recommendations to develop a more formalized and structured architecture for coordinating all federal, state, and private airlift and mobility requirements for relief support and to enhance DoD's critical role in the homeland security.



# Operational-Level Analysis DoD's Strategic Mobility and Logistics Support to the Homeland Security Architecture

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## Introduction

On September 11, 2001 (9/11) the United States appeared powerless in the face of a sudden asymmetrical terrorist air attack on several key centers of national power. While the nation rallied in the wake of the attacks, most notably with heroic consequence management efforts in hardest-hit New York City, it also braced itself for follow-on incidents that could range from weapons-laden container ships through the specter of dirty bombs in the American heartland. The US defense establishment was hard pressed to explain how the mightiest military on earth had let the country down. Meanwhile, all departments of the Federal government scrambled to demonstrate resolve in cooperatively *fixing* the apparent breach in civil-military defenses.

Toward this effort, the United States reorganized its homeland support structure, creating the Department of Homeland Security (DHS) and establishing United States Northern Command (USNORTHCOM) as the single unified command for homeland defense and civil support.<sup>1</sup> To better organize itself for emergency response, the DHS integrated the Federal Emergency Management Agency (FEMA) and the United States Coast Guard.<sup>2</sup> These comprehensive changes to the national response structure were designed to increase overall responsiveness to catastrophic events whether caused by an act of terrorism or an act of nature. Yet, although no apparent follow-on deliberate attack has occurred since, the national-level crisis apparatus was tested in the Gulf Coast region of the United States in 2005 with the Hurricane Katrina disaster response, and found wanting—4 full years after 9/11.

The United States homeland security command architecture is extremely complex. Integrating a coherent strategic logistics management process to support this architecture is even more complex. The command architecture is so challenging that very few government officials fully understand how it currently works. Even Department of Defense (DoD) logistics experts are hard-pressed to differentiate parts of problems from parts of solutions. This article examines and synthesizes several essential research areas in order to form a comprehensive analysis of DoD's deployment and distribution architecture to support homeland security. It proposes that the Federal National Response Plan (NRP) is analogous to an interdepartmental coalition operation, and hence can learn from, and possibly model the attributes inherent in a military coalition structure. The analysis culminates with recommendations to enhance DoD's critical role in the homeland security architecture.

This research has three overarching conclusions. First, there is a demarcation of two concentric logistics and mobility



missions. One can be thought of as *tactical relief* operations inside the Joint task force (JTF) Joint operating area (JOA), while the other is the intratheater or *operational and strategic movement* via common-user, DoD airlift and other mobility assets. Second, this article concludes that the USNORTHCOM area of responsibility (AOR), in both the Homeland defense and Homeland security support mission realms, has a requirement for operational and strategic logistics and mobility management—

### Acronyms

AEG - Air Expeditionary Groups  
 AMD - Air Mobility Division  
 AOC - Air Operations Center  
 AOR - Area of Responsibility  
 C2 - Command and Control  
 C3 - Command, Control, and Communications  
 COCOM - Combatant Commander  
 CONUS - Continental United States  
 CRG - Contingency Response Group  
 DDOC - Deployment and Distribution Center  
 DHS - Department of Homeland Security  
 DIRMOBFOR - Director of Mobility Forces  
 DoD - Department of Defense  
 ESF - Energy Support Function  
 FAA - Federal Aviation Administration  
 FEMA - Federal Emergency Management Agency  
 GPMRC - Global Patient Movement Requirements Center  
 HSOC - Homeland Security Operations Center  
 HSPD - Homeland Security Presidential Directive  
 ISR - Intelligence, Surveillance, and Reconnaissance  
 JFACC - Joint Forces Air Component Commander  
 JFCOM - Joint Forces Command  
 JOA - Joint Operating Area  
 JP - Joint Publication  
 JTF - Joint Task Force  
 LFA - Lead Federal Agency  
 MAF - Mobility Air Force  
 NDDOC - NORTHCOM Deployment and Distribution Center  
 NIMS - National Incident Management System  
 NORAD - North American Air Defense Command  
 NRP - National Response Plan  
 SAC - Strategic Air Command  
 TACC - Tanker Airlift Control Center  
 TALCE - Tanker Airlift Control Elements  
 UCP - United Command Plan  
 USCENTCOM - United States Central Command  
 USEUCOM - United States European Command  
 USNORTHCOM - United States Northern Command  
 USPACOM - United States Pacific Command  
 USSOCOM - United States Special Operations Command  
 USSOUTHCOM - United States Southern Command  
 USSPACECOM - United States Space Command  
 USSTRATCOM - United States Strategic Command  
 USTRANSCOM - United States Transportation Command

these are within the purview of United States Transportation Command (USTRANSCOM). These functions need not be replicated by USNORTHCOM because they are already resident at USTRANSCOM. Third, operational and strategic logistical and mobility planning for incidents of national significance cannot wait until requests are made by overwhelmed lead federal agencies.

Analysis begins with a review of the legal foundation that established the framework for the DHS and the rules that guide the federal response architecture. It includes the presidential directives and legal underpinnings most important to DoD support of civilian and military authorities. Next, it lays out the national-level *solution* of federal reorganization designed to foster closer interagency cooperation. It explains the national incident response structure within which DoD is expected to serve as a support functionary.

Next, the article discusses the fundamental differences of the principles of unity of effort and unity of command to explore the limitations on civil-military cooperative command arrangements. The article dwells on the purpose, history, and structure of the unified command plan (UCP) in order to comprehend the military's worldwide organizational architecture and USNORTHCOM's and USTRANSCOM's respective positions within it. The history of the UCP reveals how DoD organization has developed to support operations inside North America, both for homeland defense and for supporting civilian authorities. Further the UCP allows mission-specific divisions inside the United States that are unique to the homeland AOR. It also touches on the distinguishing characteristics of geographic and functional commands in order to highlight the nuances of supporting operations inside sovereign US territory.

Third, it assesses how DoD, USNORTHCOM specifically, integrates into the newly established response system and the interagency unity of effort and unity of command challenges that come with domestic military endeavors. Fourth, for a practical assessment, this article analyzes the military deployment and distribution operations in support of the relief efforts for Hurricane Katrina and Operation Unified Assistance, the US-led international relief effort following the Indian Ocean tsunami of December 2004.

Finally, the article draws conclusions from the striking similarities between the strategic and tactical logistical issues of both the international and domestic relief efforts. It explores the overarching issue of end-to-end strategic logistics management and the associated division of civil-military responsibilities therein, with respect to large-scale catastrophic relief operations.

### National Legal Framework

The national legal framework deliberately places restrictions on the US military for operations outside of overt *defense* in the strictest sense. Operations conducted on US sovereign soil are legally constrained to a significant degree. There are a variety of governing documents that guide homeland security mission areas.<sup>3</sup> Two of the core purposes laid out in the preamble of the United States Constitution state that its very purpose is to ensure domestic tranquility and provide for the common defense. The specific language in the body of the Constitution explicitly divides powers to do so. For example, the Congress has the power

to declare war, raise and support armies, provide and maintain a Navy, and provide for calling forth the militia to execute the laws of the Union, suppress insurrections, and repel invasions. Meanwhile, the President is designated as the Commander in Chief of all the Armed Forces. Therefore, the Constitution itself is the cornerstone justification for the US military's role in homeland defense and homeland security.<sup>4</sup>

## Legal Underpinnings of DoD Support to Homeland Security

The DoD fulfills two baseline missions in support of homeland security. The more straightforward military mission of homeland defense is to defeat conventional threats on the sea, land, and aerospace approaches to the United States under direct orders of the President or Secretary of Defense (SECDEF).<sup>5</sup> By contrast, the homeland security mission of defense support to civil authorities is pursuant to a number of federal legal restrictions designed to safeguard military capabilities from misuse by civilian agencies and military abuse of civilians.<sup>6</sup> In fact, it might surprise the US public to learn what a tiny fraction of its continental United States (CONUS) based military is actively involved in homeland security operations. Moreover, the US public may assume unreasonable expectations of what its military can and cannot do for them—even in crisis.

Over the last two centuries civil and military laws have expanded geometrically. Several pieces of federal legislation and their associated definitions are noteworthy, especially for their impact on the use of the US military for homeland defense and homeland security support. First, the Robert T. Stafford Disaster Relief and Emergency Assistance Act authorizes the Federal government to provide supplemental assistance to state and local governments for relief from major disasters or emergencies.<sup>7</sup> Specifically the President may direct any federal agency, including DoD, to take “special measures, designed to assist the efforts of the affected states in expediting the rendering of aid, assistance, emergency services, and the reconstruction and rehabilitation of devastated areas.”<sup>8</sup>

The Stafford Act is the primary legal authority for federal participation in domestic disaster relief. There are three scenarios in which the DoD may be directed to provide assistance.

- A presidential declaration of a *major disaster*
- A presidential order to perform emergency work for the preservation of life and property
- A presidential declaration of an *emergency*<sup>9</sup>

The Stafford Act and the NRP offer detailed definitions for a federal emergency and a major disaster. A federal emergency is:

Any occasion or instance for which, in the determination of the President, federal assistance is needed to supplement state and local efforts and capabilities to save lives and to protect property and public health and safety, or to lessen (or to avert) the threat of a catastrophe in any part of the United States.<sup>10</sup>

Whereas a major disaster is described as:

Any natural catastrophe (including hurricane, tornado, storm, high water, wind-driven water, tidal wave, tsunami, earthquake, volcanic eruption, landslide, mudslide, snowstorm, or drought) or regardless of cause, any fire, flood or explosion, in any part of the United States, which in the determination of the President causes damage in

sufficient severity and magnitude to warrant major disaster assistance under this act to supplement the efforts and available resources of the States, local governments, and disaster relief organizations in alleviating the damage, loss, hardship, or suffering caused thereby.

In similar fashion, the Homeland Security Presidential Directive (HSPD)-5 establishes threshold criteria for an event to qualify as an *incident of national significance* warranting a coordinated federal response. The NRP defines an incident of national significance as:

An actual or potential high-impact event that requires a coordinated and effective response by an appropriate combination of federal, state, local, tribal, nongovernment, or private sector entities in order to save lives and minimize damage, and provide the basis for long-term community recovery and mitigation activities.

These federal declarations, and the subsequent level of assistance, are graduated in nature. Emergencies differ from major disasters in that they do not require a specific causal event and are limited in the level of federal assistance rendered. Emergency assistance is limited to \$5 million without specific Congressional approval to exceed this amount.<sup>11</sup> Major disasters, by definition, are event-related and natural in origin. To qualify as an incident of national significance, an event must meet one of four criteria.

- A responding federal department or agency must request the assistance of the Secretary of Homeland Security.
- The State and local authorities must be overwhelmed and have sought federal assistance through the appropriate channels.
- More than one federal department or agency is substantially involved in responding to the incident.
- The Secretary of Homeland Security has been designated by the President as the manager for the domestic incident.<sup>12</sup>

In addition to the Stafford Act, under certain situations, the Economy Act can be invoked to expedite assistance.<sup>13</sup> The Economy Act allows one federal agency to acquire goods or services from another federal agency provided the requested goods or services cannot be obtained by other means. By invoking this act, a federal agency can request DoD support without a Presidential declaration of an emergency as required by the Stafford Act. Four criteria must be met to invoke the Economy Act.

- The amount (goods) for the purchase must be available.
- The purchase must be in the best interest of the government.
- The goods or services cannot be provided by a contract from a commercial enterprise.
- The agency filling the request must be able to provide or contract for the goods or services.<sup>14</sup>

## The Homeland Security Act

The Homeland Security Act of 2002 and the HSPD-5 established the DHS to be the Federal government's “focal point regarding natural and manmade crises and emergency planning.”<sup>15</sup> The Secretary of the DHS is designated as the principal federal official for domestic incident management. In this role, the Secretary is also responsible for “coordinating federal resources utilized in response to or recovery from terrorist attacks, major disasters, or other emergencies” when organic state resources are overwhelmed or as directed.<sup>16</sup> In short, the DHS is termed the

lead federal agency for both planning and response management of homeland security.

The overarching national *solution* to cope with the stove-piped nature of the federal government was the establishment of the DHS itself. Further, the most critical document for achieving forward progress has proven to be HSPD-5. It directed the development and implementation of the NRP, and is predicated on a new “National Incident Management System (NIMS), which aligns the patchwork of federal special-purpose incident management and emergency response plans into an effective and efficient structure.”<sup>17</sup> The NRP and NIMS are an ambitious attempt to provide a comprehensive *national framework* for integrating various plans and organizations involved in crisis planning and response.<sup>18</sup> The NRP attempts to put order on the chaotic confluence of agency interrelationships. The NIMS attempts to draw a template for incident response. In a simple example, the NIMS prescribes national standard radio communication language guidelines for all emergency responders to adhere to. This is designed to limit confusing localisms in crisis-situation terminology and to foster interoperability at all levels of government in case an incident expands across multiple jurisdictions.<sup>19</sup>

The NRP assigns lead federal agency (LFA) responsibilities for 15 various types of responses in the form of a matrix containing emergency support function (ESF) annexes which show each applicable *primary agency* (or LFA), and which agencies are tasked to provide support to it.<sup>20</sup> Of the 15 ESFs, DoD is only the LFA for *public works and engineering*, yet DoD is an integral part of the supporting matrix to every other ESF

(see Figure 1).<sup>21</sup> In short, DoD will always have a support role regardless of the nature of the emergency.

The ESF annexes are the organizational means for an integrated federal response to incidents of national significance. They provide for federal-to-state, and federal-to-federal interagency support.<sup>22</sup> Each function has a coordinator responsible for all phases of incident management from prevention and preparedness to recovery and mitigation. The coordinator conducts planning and coordination activities on a scheduled basis with support agencies and private sector organizations.<sup>23</sup> The coordinator fills a central role in the organizational foundation of each ESF. A successful response to an incident may very well rest on the level of preparedness and leadership skills at this critical coordination position.

When an incident occurs, the response system activates across the federal and regional levels. The process starts at the Homeland Security Operations Center (HSOC) when the National Response Coordination Center initiates individual ESFs in response to an incident of national significance. The designated ESF primary agencies respond accordingly, activating the appropriate level of responders and support agencies to include the regional echelon through standardized protocols and operating procedures.<sup>24</sup> The goal is a seamless response system implemented across all agencies, primary and support.

### National Response Chain

When an incident becomes a large-scale catastrophe, it will most likely overwhelm state and local emergency responders in short order. In general, these personnel simply do not have the

Agency	Emergency Support Functions														
	#1 - Transportation	#2 - Communications	#3 - Public Works and Engineering	#4 - Firefighting	#5 - Emergency Management	#6 - Mass Care, Housing, and Human Services	#7 - Resource Support	#8 - Public Health and Medical Services	#9 - Urban Search and Rescue	#10 - Oil and Hazardous Materials Response	#11 - Agriculture and Natural Resources	#12 - Energy	#13 - Public Safety and Security	#14 - Long-term Community Recovery and Mitigation	#15 - External Affairs
USDA			S		S	S		S		S	C/P	S		P	S
USDA/FS	S	S	S	C/P	S	S	S	S	S	S			S		
DOC	S	S	S	S	S		S	S	S	S	S	S	S	P/S	S
DOD	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
DOD/USACE			C/P	S	S	S		S	S	S	S	S	S	S	
ED					S										S
DOE	S		S		S		S	S	S	S	S	C/P	S	S	S
HHS			S		S	S		C/P	S	S	S			P/S	S
DHS	S	S	S		S	S	S	S	S	S	S	S	C/P/S	S	C
DHS/EPR/FEMA		S	P	S	C/P	C/P			C/P	S				C/P	P
DHS/IAIP/NCS		C/P										S			
DHS/USCG	S		S	S				S	S	P			S		
HUD					S	S								P	S
DOI	S	S	S	S	S	S				S	P	S	S	S	S
DOJ	S				S	S		S	S	S	S		C/P/S		S
DOL			S		S	S	S	S	S	S	S	S		S	S

C = ESF coordination  
P = Primary agency  
S = Support agency

Note: Unless a specific component of a department or agency is the ESF coordinator or a primary agency, it is not listed in this chart. Refer to the ESF annexes for detailed support by each of these departments or agencies.

Figure 1. Designation of ESF Coordinator and Primary and Support Agencies

manpower or equipment to react in a sufficient and timely manner. Federal assistance is obtained through a reactive process triggered by a request for assistance initiated at the state level. The NRP states a governor “requests federal assistance when it becomes clear that state or tribal capabilities will be insufficient or have been exceeded or exhausted.”<sup>25</sup>

After an event has occurred, a series of responses and assessments guide the process of obtaining external assistance. First responders to any incident will always be local emergency personnel. These individuals work through the local emergency operations center assessing the extent of the incident in an attempt to determine the level of response required. These initial assessment actions are below the state level with local officials as the incident managers. As the scope of the incident exceeds the capacity of local responders, local authorities request state assistance from the governor through the state emergency operations center. The governor determines if the situation warrants a declaration of a state emergency.<sup>26</sup>

When the governor declares a state of emergency, he or she also notifies the regional FEMA director, who in turn, notifies the FEMA Director, and in turn, the Secretary of Homeland Security through the HSOC. The operations center evaluates the situation and prepares recommendations for the Secretary and potential presentation to the President. The governor also requests a joint State and DHS Preliminary Damage assessment to determine if the emergency merits a federal emergency or major disaster declaration by the President under the provisions of the Stafford Act (see Figure 2).<sup>27</sup>

It is not inconceivable that a large-scale disaster will overwhelm the capabilities of most organizations. This is where the sheer magnitude and extensive logistics and mobility capabilities of DoD are recognizably unmatched, making it the ideal support element for every ESF of the NRP. Ancillary to its warfighting role, the DoD has a long history of national preparedness and domestic operations often overshadowed by its combat architecture. To further illustrate this point, the next section explores the foundational elements of DoD’s strength, the origins of the UCP structure, and the development of USNORTHCOM as a domestic combatant command.

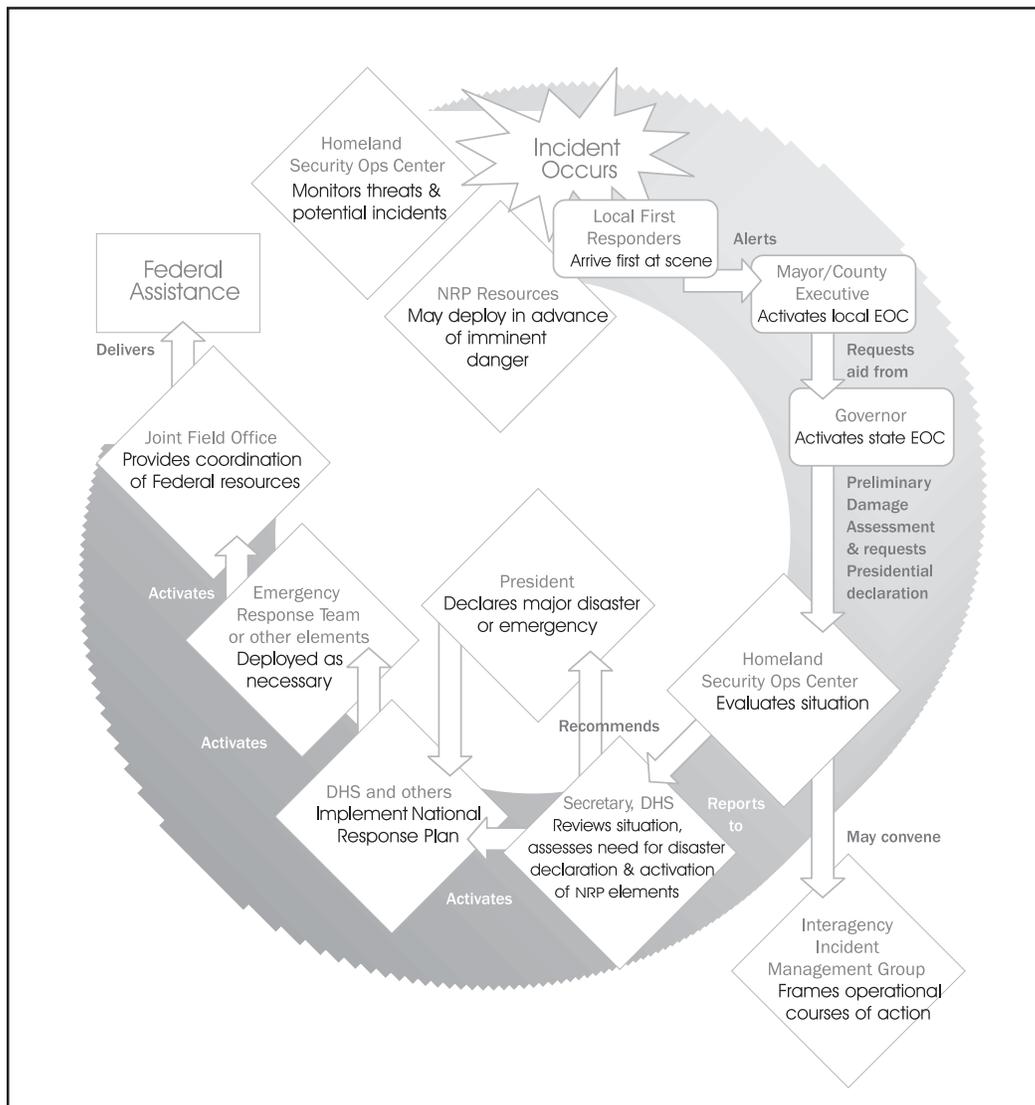


Figure 2. Federal Involvement Under the Stafford Act

## DoD Framework

### Unity of Command Versus Unity of Effort

Although HSPD-5 and related national guidance describe interdepartment support, cooperation and coordination processes in terms of “unity of effort,” only DoD maintains the legal framework for “unity of command.” Moreover, DoD is legally bound by Title 10 United States Code authority to always maintain a clear chain of military command regardless of the mission or task being performed. To the military, unity of command is sacrosanct. No Service member can be unattached or take direct orders from a member of another federal agency. Further, the Title 10 chain of command can always be drawn from the airman to the President, or under Title 32 from the airman to his or her Governor. To emphasize this critical point HSPD-5 clarifies: “Nothing in this directive impairs or otherwise affects the authority of . . . the chain of command for military forces.”<sup>28</sup>

The military, unlike its federal partners, holds that “command is central to all military action, and unity of command is central to unity of effort.”<sup>29</sup> For the military, it is the essential authority that a military commander “lawfully exercises over subordinates” to assign missions—and to “demand accountability for their attainment.”<sup>30</sup> Joint Publication (JP) 0-2, *Unified Action Armed*

*Services*, defines unity of command as the “necessary interlocking web of responsibility” that makes unified action viable.<sup>31</sup> This reflects a difference in perspective between the military and civil servants. Civilian officials certainly rely on unity of effort, yet even law enforcement and firefighters can quit or refuse duty without serious legal repercussion. By contrast, the military member is duty-bound to carry out legal orders. Therefore, who takes orders from whom, matters more inside a purely military hierarchy than in a civilian equivalent. Given the heavy burden of responsibility inherent in such powers, a very clear chain of command is required at all times.

The fact that the civil side of the federal government does not have a clear and codified interdepartmental chain of command, in the Title 10 sense, is a major problem in terms of homeland security. This presents challenges for integrated federal operations where collaborative operations involve both civilian and military personnel. Civilian departments are familiar with this type of interagency environment, despite the obvious inherent inefficiencies. Paradoxically, the DoD, which is most accustomed to clear lines of command and control (C2), is arguably furthest ahead of all federal departments in anticipating disconnects and working within a nonunified command chain. The DoD has gone so far as to codify its wisdom in Joint Publication (JP) 3-08, *Interagency Coordination During Joint Operations*. While not perfect, at a minimum it offers to the DoD Joint community the limitations and nuances of working with external agencies in both planning and execution of complex operations. No such document exists for the federal government in general.

## The Unified Command Plan Architecture

Of all federal departments, the DoD has the most unique structural principles. Doctrine governs that military forces be organized on either a geographic or functional basis.<sup>32</sup> This is spelled out in the UCP, which is the overarching directive that establishes the worldwide architecture of geographic areas of responsibility and functional missions assigned to operational US combatant commanders. The latter alone are given Title 10 combatant command (COCOM) authority to control operational forces.<sup>33</sup> Moreover, the essential role of the Army, Air Force, Navy and Marine Corps Services is to recruit, train, and equip their respective forces for use by the COCOMs. Thus, the Chiefs of Staff of the various Services, all holding the ultimate leadership position achievable for that Service, have in fact no direct role in conducting military operations. Furthermore, the unified commanders themselves only have COCOM of forces assigned to them by a governing DoD *forces for* document. Each command executes operations using standard DoD command, control, and communication (C3) architectures. The current version of the UCP contains five geographic and four functional commands (a new US Africa Command will be created by the end of fiscal year 2008). The geographic commands illustrated in Figure 4 are reminiscent of maps of the Roman Empire, and serve a similar function for US military operations. In short, the commander of each AOR is responsible for all day-to-day Joint operations inside his respective AOR.<sup>35</sup> Additionally, the geographic commands lead planning and political-military *engagement* activities with

resident nations. To respond to localized crisis situations or to accomplish specific tasks, combatant commanders are expected to assign either subunified commands or JTFs to concentrate effort without detracting from their broad and continuing AOR missions. For example, US Central Command (USCENTCOM) currently has three JTFs operating simultaneously within its AOR for separate operations inside Afghanistan, Iraq and the Horn of Africa.

By contrast, functional commands control Joint forces performing specific types of continuous military operations without respect to a specific geographic region.<sup>37</sup> The UCP’s four current functional command names reflect their unique missions: transportation (USTRANSCOM), special operations (USSOCOM), strategic (USSTRATCOM) and Joint forces (JFCOM). Moreover, each functional command has its own worldwide C3 architecture, and each mutually supports all other unified commands as directed. For example, USTRANSCOM’s mission is to “provide air, land and sea transportation for the DoD, both in time of peace and time of war.”<sup>38</sup>

Finally, it is important to understand that the President, as commander-in-chief of the armed forces, is granted the establishment authority to reorder the US geographic military *empire* whenever he sees fit.<sup>39</sup> For example, as the UCP map (Figure 3) reveals, prior to 9/11 there was no geographic commander with command of Joint force operations in and around North America. Yet, one year later the UCP architecture had been rapidly adjusted (figure 4).<sup>40</sup> This begs two questions. First, was a catastrophic attack necessary to highlight the American *open gap* in the otherwise comprehensive UCP? Second, why was America initially *uncovered* in the UCP?

## UCP Background

The original goal of the UCP was to preserve the conflict-proven structural framework that was built during the multitheater Second World War. The hard experience of the conflict validated the need for a peacetime military command structure that locked in the wartime proven benefits of *Joint* unity of command. In 1946 the first *UCP* (known as the Outline Command Plan) was approved by President Truman. It established seven unified commands, each with a specific AOR and a set of specified missions. Fifty-nine years later, despite substantial revision and realignment, the basic UCP architectural concept has survived.<sup>41</sup>

The map in Figure 3 shows the delineated AORs of the five geographic commands prior to 9/11: JFCOM, USCENTCOM, US Southern Command (USSOUTHCOM), US European Command (USEUCOM) and US Pacific Command (USPACOM). The two obvious *unassigned* territorial gaps were North America and the former Soviet Union. The latter, comprising the Russian region, remained unassigned as much for its sheer size (it spanned 12 Eurasian time zones) as for its status as a superpower. As the *box* occupied by the very target of the Cold War grand strategy of containment, it was too much of a leviathan to assign to a single geographic command’s AOR. In that sense, the pre-9/11 UCP effectively illustrates the military bulwark around the periphery of the Warsaw Pact adversary. Thus, this geographic UCP gap made sense. By contrast the other glaring exception, North America, had no valid military rationale. In fact, it ran counter to the principles of unity of effort and unity of command that were, and are the underpinnings of the UCP architecture.

The North American omission was maintained for a variety of political reasons. First, 60 years ago, there was no viable threat to the secure post-war strategic position of the North American continent. Second, the civil-law legacy of concern over *Posse Comitatus* and suspicion of military interference with *internal affairs* hampered advocacy of including the continental United States in the plan. Third, the very powerful Armed Services were less than enthusiastic about subjecting their own forces at home, *in garrison*, to a Joint commander from a sister service—especially in the heyday of interservice rivalry. Fourth, the prospect of a *commander in chief* with such an all-important AOR would likely be viewed as first among equals, with responsibilities eclipsing all other combatant commanders. There was also fear that such a position would rival the Chairman of the Joint Chiefs of Staff (CJCS) himself. Yet, in the final analysis, all these reasons (and the list is not exhaustive) prove to be grounded more in internal DoD politics than in any military practicality.<sup>42</sup>

At the UCP's inception, four of the first seven commands (Alaskan, Northeast, Atlantic, and Caribbean Commands) were located in, or tangential to, North America and had collective responsibilities equating to the de facto defense of the continent.<sup>43</sup> While this division was a low-risk proposition in the late 1940s, as time went on the UCP structure was repeatedly forced by *operational military necessity* to be continually adjusted. For example, in 1954, the emerging threat of Russian atomic bomber attack moved the Eisenhower administration and the Joint Chiefs of Staff (JCS) to form the Continental Air Defense Command (CONAD). Three years later in 1957, as a result of Sputnik and the emergence of an intercontinental ballistic missile threat to North America, the North American Air Defense Command (NORAD) was established to extend aerospace early warning and air defense across the CONUS, Canada, and Alaska. Therefore, a Joint force commander with the entire North American continent as an

assigned AOR, has been in existence since the 1950s, albeit solely in the realm of air and space *approaches*. Furthermore, hypothetically, had the Soviet threat included a viable land invasion route for massed tank armies across the North pole, a comprehensive air, land, and sea forces Joint command for North America would, of necessity, likely have been organized. In the final analysis then, the reality has been to limit the homeland

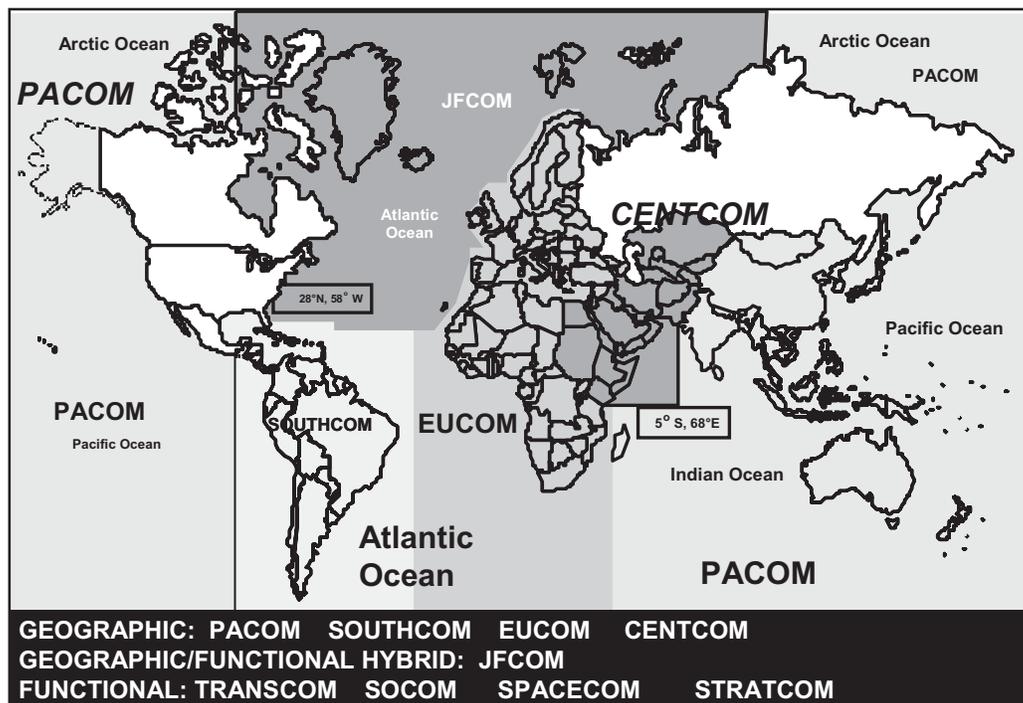


Figure 3. The Unified Command Plan on 11 Sep 2001.<sup>34</sup>

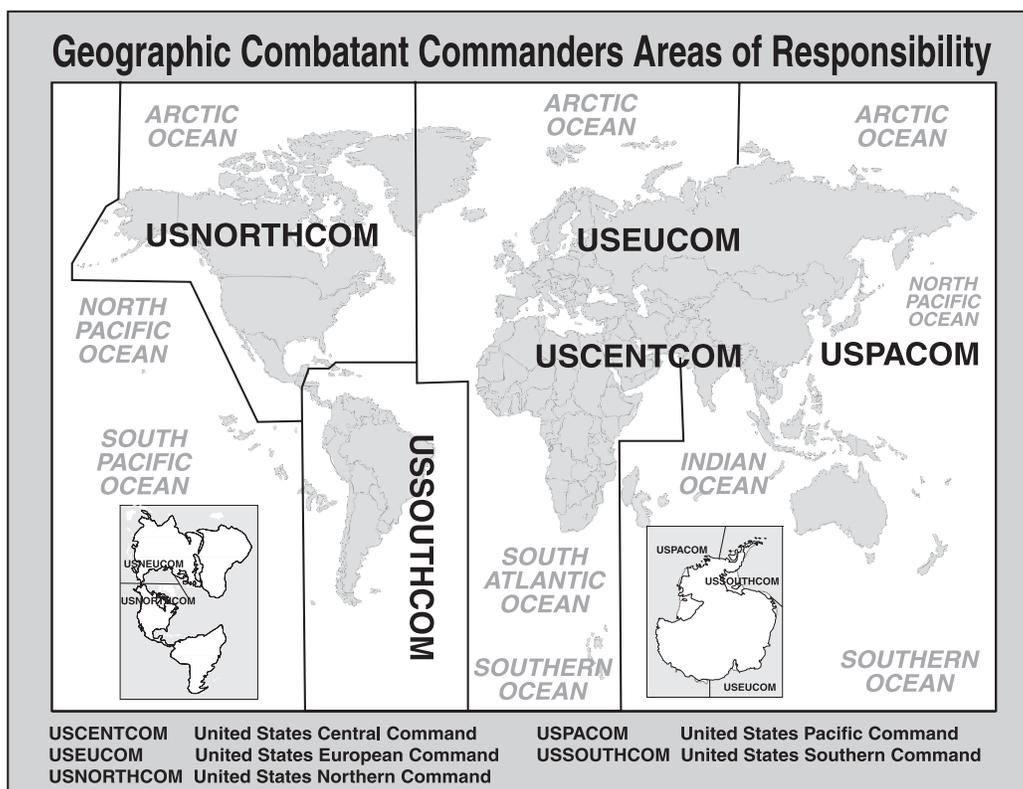


Figure 4. The Current Unified Command Plan (New US Africa Command to be Created by the End of Fiscal Year 2008)<sup>36</sup>

UCP geographic region to be organized solely upon defense, and only as a last resort.

Technically, defense is only half of the equation for any geographic commander. The other half is the capability to plan and conduct offensive operations to deter, and failing that, defeat the same enemy you are defending against. For North America in the post-war period, *strategic* offensive power originating in the CONUS equated to the capability to deliver nuclear weapons to any threat-nation on earth, starting with the Soviet Union and later extending to China and elsewhere. Into the mid 1950s, Air Force heavy bombers were the sole delivery systems for atomic weapons. For this reason, the Air Force's Strategic Air Command (SAC) was designated as the first *specified command*—an older concept not in current use that controls only the forces of a single service to accomplish its mission.

The example of SAC is a telling historical lesson in what types of C3 arrangements can be constructed to accomplish a mission deemed critical to national security. As the primary commander charged with offensive strategic weapons delivery prior to the advent of the strategic triad, the Commander-in-Chief, Strategic Air Command (CINCSAC) had awesome (some would argue dangerous) responsibility. In the era of deterrence through *massive retaliation*, an immense responsibility rested on the shoulders of a single-point *offensive* commander who resided inside the CONUS, but whose mission was both global and continuous. Congress and the rest of the Services objected to the disproportionate funding (half of the entire DoD budget) SAC required in the 1950s, but given the gravity of the mission, all understood that a crystal clear, tightly-controlled chain of command was in order. In short, it was once again an operational necessity for such an architecture given the extreme reaction times required to effectively respond to—and thereby deter—a Soviet strategic nuclear attack.

Unfortunately, given the safeguards involved in nuclear offensive operations, and the concomitant requirement for survivable and instantaneous *fail-safe* communications, the C3 architecture of the US offensive forces has been intentionally stove-piped from the C3 of the strategic defense which complements it. The offensive operations of SAC which stood ready to respond in minutes and the defensive operations of NORAD, also postured on alert, were and still are entirely bifurcated and relatively oblivious to each other's operational plans and tactical procedures.

The salient rationale for this self-inflicted disunity of command is the Canadian government's recalcitrance to be integrated into a command that is designed to conduct offensive nuclear operations of any sort. Given the geographical realities of Canada's territorial juxtaposition between the United States and Soviet Union, this price continues to be paid. Yet, it would be ludicrous to divide offensive and defensive military operations in any other theater. For example, would it make sense if the USCENTCOM AOR were divided into an offensive command and a defensive command with entirely separated and stovepiped C3? It would not be logical to order the offensive command to launch a campaign of invasion, while a defensive command dealt only with enemy counter-attacks. Wartime operations would be hopelessly confused and overlap everywhere in the AOR. Yet, that is precisely the structure that existed from the 1950s through to the end of the Cold War. Furthermore, this inherent dichotomy in our strategic planning

is essentially invisible. Its fundamental C3 flaws will only be apparent upon execution.

If nothing else, this doomsday scenario illustrates the level of national acceptance in operational design flaws prior to 9/11. Given that the Cold War strategic landscape dictated a strategy of offensive deterrence at the expense of true unified Joint strategic warfighting capability, design flaws in the latter area are at least understandable. However, the baseline assumption to this line of reasoning is that actual real-world execution would never happen. For if *the unthinkable* did happen, the Soviets would suffer unacceptable damage via the nation-ending lethality of the offensive arm. The problem is that the Cold War baseline assumptions have melted away in the face of asymmetric, nonstate actors who have already demonstrated the will and acumen for mounting real-world unthinkable attacks on sovereign American territory. Therefore, the paradigms that allowed military disunity of command and uncentralized Joint coordination at the operational level should have been swept away with the Cold War. In the final analysis, the fall of the Soviet Union did, in fact, drive a relook at the American UCP architecture, but it was done for decidedly nonoperational reasons.

### Closing the North American Gap Prior to 9/11

In the decade prior to 9/11 the JCS began consideration of how to restructure the Cold War UCP to cope with an expected drawdown in forces based overseas. Of immediate concern was how to organize the substantial forces slated to return to permanent CONUS garrisons. This helped to propel a proposal for an all new geographic *Americas Command* that would have included all of North and South America, with the exception of Alaska. USSOUTHCOM was to be disestablished. It proposed to combine Army Forces Command, Tactical Air Command (later Air Combat Command), Atlantic Fleet, and Marine Forces Atlantic as its Service components.<sup>44</sup> However, the proposal was not oriented on missions in and around America, but rather to place all CONUS-based forces under one command as a Joint force manager to support contingencies around the globe. As a functional combatant command it would have responsibility for "Joint training, force packaging, and facilitating deployments of designated CONUS forces."<sup>45</sup> It was also designed to serve as the central manager of Joint force integration and experimentation. The extent of its CONUS operational mission was to lend support to domestic agencies for disaster relief and civil support.<sup>46</sup>

The proposal for an Americas Command eventually resulted in the stand-up of JFCOM, but it faced modification and compromise in the process. Its proposed geographic area was curtailed by the retention of a separate USSOUTHCOM when it was deemed necessary for regional engagement purposes to retain it intact. Also, rather than create an all new command, General Powell, the CJCS at the time, selected the existing Atlantic Command (LANTCOM) as the most favorable alternative to build upon. Because it was a patchwork compromise, the new commander had to add the above-mentioned missions to his existing duties as NATO Supreme Allied Commander Atlantic (SACLANT). Thus, the command was a cobbled together hybrid of geographic and functional missions.<sup>47</sup>

This analysis of the UCP architecture for North America leads to three overall observations. First, the benefits of unity of

command in and around North America have been repeatedly compromised for largely political reasons. Second, true geographic unity of effort and command have been lacking inside North America, given that the missions of homeland defense and the equivalent of *homeland offense* have been assigned to separate commands. Finally, any time there has been proof of operational necessity, substantial adjustments to the North American UCP architecture have been made in order to adapt to emerging mission areas. Of these, the last is the most important. It means that the DoD homeland UCP architecture, and by extension the subsystem constructs within it, have always been malleable. Therefore, when circumstances dictate, there should be no hesitation to make requisite changes as quickly and efficiently as possible.

## **Support to the Department of Homeland Security**

### **Military Architecture in Support of DHS**

The 9/11 attacks were followed by political anger and dismay at the lack of federal interagency coordination in both intelligence and counterterrorism. Local agency first responders in both New York City and Washington, DC experienced acute difficulties in communications. The US military, used to meting out precision strikes, received a taste of its own medicine when its central C2 node, the Pentagon, received a direct hit from the air. Even the

In April 2002, President Bush signed the 2002 revision to the UCP. It contained his executive decision to establish US Northern Command (USNORTHCOM) with geographic responsibility for homeland defense and civil support operations. The new command relieved Joint Forces Command of the homeland defense mission and inherited and modified the air sovereignty mission of NORAD.<sup>49</sup> The USNORTHCOM AOR encompassed the continental United States, Alaska, Canada, Mexico, and the air, land, and sea approaches including waters out to approximately 500 nautical miles. It also included the Gulf of Mexico, Cuba, Puerto Rico and the US Virgin Islands. The defense of Hawaii and Pacific territories remains the responsibility of the US Pacific Command (see Figure 4).<sup>50</sup> According to its mission statement USNORTHCOM “conducts operations to deter, prevent, and defeat threats and aggression aimed at the United States, its territories, and interests within the assigned area of responsibility ... and, as directed by the President, or Secretary of Defense, provide defense support of civil authorities including consequence management.”<sup>51</sup>

The commander of USNORTHCOM is dual billeted as the US commander of NORAD. While not the air component of USNORTHCOM, the NORAD C3 infrastructure effectively functions in both roles as well. By long-standing bilateral agreement, NORAD is confined to only aerospace early warning and enforcing “control of the skies over the United States and Canada” not the above, more extensive USNORTHCOM AOR.<sup>52</sup>

**The DoD homeland UCP architecture, and by extension the subsystem constructs within it, have always been malleable. Therefore, when circumstances dictate, there should be no hesitation to make requisite changes as quickly and efficiently as possible.**

otherwise quick response launch of NORAD fighters was too little, too late. From local through federal levels, it was apparent that the interagency security apparatus of the United States was in need of critical examination. The President vowed both retribution and rapid reformation of the overall national security infrastructure.

The DoD’s game plan for homeland defense was a top down restructuring of its Joint posture. The 9/11 attacks swept away lingering opposition to the idea of an American unified command on US domestic territory. Within weeks all senior DoD officials, including the unified commanders were solicited for recommended changes in the UCP architecture. Multiple proposals were forthcoming, including one for a *North American Command* that would have absorbed both NORAD and STRATCOM to achieve unity of Joint offensive and defensive operations at the national strategic level. However, opposition to this unity of command initiative was a prospective Canadian objection to integrated involvement in a command that was in control of offensive nuclear operations. This may have caused their withdrawal from the critical defensive-only NORAD coalition. Since the actual executive-level deliberations were top secret, it will likely be some years before all considered UCP courses of action are revealed.<sup>48</sup>

While this arrangement is virtually invisible in the purely defensive role, many of the functions of a standard geographic AOR air component are missing. First, there is a glaring lack of integration with the offensive air component whose C3 belongs to STRATCOM as discussed in the previous section on DoD framework. Second, USNORTHCOM has a severely limited capability for planning and executing its own AOR’s intratheater air mobility operations.

With the assignment of Russia to EUCOM and the stand-up of USNORTHCOM, the 2002 UCP finally closed the remaining geographic command AOR gaps. However, it also contained major revisions to the functional commands with equities inside the USNORTHCOM AOR. First, it removed JFCOM’s geographic command area responsibilities by transferring it to USNORTHCOM (see Figures 3 and 4).<sup>53</sup> Second, it ordered US Space Command (USSPACECOM) to stand down and transfer its core missions to USSTRATCOM, with the exception of NORAD functions which were transferred to USNORTHCOM. Third, the detachment of NORAD to USNORTHCOM reconfirmed the separation of strategic defensive operations from national strategic offensive operations controlled by USSTRATCOM. In no other AOR are offense and defensive operations intentionally

stovepiped at the operational, planning, execution, and C3 levels. Finally, the 2002 UCP dissolution of USSPACECOM was a matter of choice, not necessity. The expansion of the USSTRATCOM mission set was part of the long-range vision of Defense Secretary Rumsfeld who used the necessity of establishing a headquarters for an all new USNORTHCOM as leverage to disassemble USSPACECOM. The UCP maintained the previous number of nine unified commands, thereby minimizing the costs of associated staff *overhead*.<sup>54</sup>

The sweeping UCP reorganizations also created turbulence at the headquarters of all affected unified commands at the very time the military was ramping up to support the Global War on Terror, including operations in Afghanistan. Meanwhile, USNORTHCOM's initial cadre of Joint staffers were consumed with forming a working organization internally, while keeping abreast of the wider federal homeland security reorganization efforts underway externally.

Further, USNORTHCOM, the command singularly dedicated to homeland security operations, reached operational capability in 2003 with little more than the ex-JFCOM JTF-Civil Support and JTF-6 (counter-drug operations support) as its main tactical units. Although USNORTHCOM is given priority for the forces it requests, it tactically controls very few forces day-to-day. In fact, it technically has no assigned or apportioned forces whatsoever. In this sense, it is very much a *paper command*.<sup>55</sup> Moreover, its Service component commanders are *dual-hatted* with primary duties elsewhere. For example, its 1st Army land component is primarily for training—not for homeland defense or civil support execution.<sup>56</sup>

The USNORTHCOM of 2005 is more robust, but its operations are still relatively narrow in scope. In its defense support to civil authority mission, the command provides support to federal agencies through established Joint task forces. Currently these forces are organized into five distinctive areas or missions: Standing JTF Headquarters North; JTF Civil Support; JTF Alaska; JTF North, and Joint Forces Headquarters, National Capital Region.<sup>57</sup> Unfortunately, USNORTHCOM's task-organized defense and support missions somewhat undermine its basic reason for existing—military unity of command and effort. Due to the dissimilar nature of its unique mission sets, USNORTHCOM's air, land, and sea components must each be independently organized to perform what are disparate missions. For example, the air component is primarily focused on air sovereignty. Its JTF-Civil Support has specific tasks for chemical, biological, radiological, nuclear, and high explosive (CBRNE) detection and consequence management. As a result, rather than training, exercising, and operating as a geographic Joint force, USNORTHCOM forces are spread into specific mission areas, effectively stovepiping their operational C2.

USNORTHCOM is unique in that it either borders with, or is host to the headquarters of, the other eight unified commands. Since all commands are stakeholders in defending the homeland, this should, in theory, foster good *interior lines* of communications. Yet, the intentional *use only as a last resort* language at the heart of its homeland security charter, coupled with the minimum *only as required* force structure, compels USNORTHCOM to compensate with heavy reliance on the four functional commands. JFCOM provides virtually all of its forces. USSOCOM assists with counter-terrorism operations. USSTRATCOM partners in defensive information operations,

communications, space support, and missile defense tasks. However, for large-scale consequence management incidents, almost always requiring rapid mobility and logistics support, USTRANSCOM becomes the indispensable functional supporting command.

## Federal Interagency Coalition Concept

The role of USNORTHCOM is difficult to grasp without understanding its role as the military component, or *DoD LFA* piece of the larger national homeland security puzzle. The unique LFA-centric structure of the Federal NRP might best be understood in terms of an interdepartmental coalition operation. Since non-DoD actors cannot be integrated into a true unified command model (in the Title 10 military sense), and given that these operations are predicated upon unity of common effort, a coalition is an accurate description of the myriad of independent federal agencies that are involved in major national emergency response operations. Similar to sovereign nations of varying sizes and capabilities, the numerous federal departments, states, and local agencies are intensely *territorial* about guarding their independent equities and identities, even at the expense of the common objectives of the rest. Yet, all are clearly stakeholders in the same homeland security coalition effort. Moreover, all departments publicly agree that, to be effective, efforts must be coordinated. The DoD might have the hardest time coming to grips with being part of a coalition it does not lead or control.

Therefore, the coalition model can be a useful template for analyzing the federal homeland security *war effort* as it were. The President's own HSPD-5 states, "The objective of the United States Government is to ensure that all levels of government across the Nation have the capability to work efficiently and effectively together, using a national approach to domestic incident management ... to prepare for, respond to, and recover from domestic incidents, regardless of cause, size, or complexity."<sup>58</sup>

Putting policy on paper provides only a vision and its intent. Actually executing interagency planning and coordination within the largest and most complex bureaucracy in world history is a bit more of a challenge. According to author Arthur Rice, three elements are essential to coalition success—a lead nation, unity of command, and staff integration.<sup>59</sup> The following macroanalysis applies these three elements to the US civil-military *homeland coalition*.

First, the role of *lead nation* must be bestowed on the DHS, since it is the ultimate LFA with the assignment of coordinating "the Federal Government's resources utilized in response to or recovery from" incidents of national significance.<sup>60</sup> Therefore, only DHS can rightfully assume this role, especially in purely disaster and catastrophic humanitarian relief scenarios. All agencies agree that a surprise, multifaceted event involving critical infrastructure and multiple population centers could occur at any time. Yet the chaos-producing events in New Orleans in 2005 were relatively forgiving in that they were driven by a benign natural enemy and not by a determined and deliberately malicious terrorist organization. If it had been the latter, the careful legal distinctions surrounding what constitutes a DoD-led homeland defense scenario versus a DHS-led civil support scenario could have easily become blurred. In such dire cases, the President will be the ultimate arbiter of categorizing the crisis and assigning an LFA. The two clearly dominant departments—

DoD and DHS—will have to provide mutual support. However, The President’s HSPD-5 lays out policy direction, but defaulted to the Secretaries of Defense and Homeland Security to “establish appropriate relationships and mechanisms for cooperation and coordination between their two departments.”<sup>61</sup> Although both have technically complied, the less-than-stellar response to Hurricane Katrina, and the extremely negative political fallout has both departments, DoD and DHS, reevaluating all cross-coordination and response mechanisms.<sup>62</sup>

The second essential element of coalition success is unity of command. The departments of the US government are technically parts of a centralized federal government. However, the departments work more as a loose confederation than a strongly centralized federalist government.<sup>63</sup> To use the US Civil War as the leading example, a major limitation to the Confederate government’s war effort was lack of authority to supersede states rights—insurmountable since it was the root cause of their rebellion. While the Union centrally resourced, planned, and executed under a true unified command structure, the most the Confederacy could do was coordinate efforts for *the cause*. For example, the states could not even be compelled to share uniforms or weapons. State forces cooperated with each other and provided mutual support only on a voluntary basis. The authority granted the Secretary of the DHS by the Homeland Security Act of 2002, and echoed in HSPD-5 makes DHS responsible for *coordinating* federal operations, not controlling them per se.<sup>64</sup> While the Secretary of DHS is certainly not the equivalent of Jefferson Davis, his problems are very much similar in dealing with other interagency actors which include the 50 US state governors who also must be included as independent executives and homeland security coalition *partners*. Federal unity of command is missing and unity of effort is based on a DHS-led confederated architecture. This is the homeland security coalition’s Achilles Heel.

The third essential in Rice’s coalition model is staff integration. Of the three, this is the most promising to emphasize given the number and complexities of the federal departments and agencies. Interagency information sharing and cross-intelligence will be crucial in managing complex crisis action responses. To formally facilitate this, all combatant commanders, including USNORTHCOM, have created permanently assigned Joint interagency coordination groups (JIACGs) which include experts and liaison officers from other commands, various departments, and state and local authorities. These are supposed to form a “critical bridge between the combatant commander and the appropriate LFA as required.”<sup>65</sup> However, exchanging liaisons is not integration of operations. Moreover, the proliferation of command centers within every major department makes it almost impossible to maintain liaison connectivity with every one, and vice versa.

Further, the military paradigm of tactical level tied to operational control, tied to strategic objectives means little to local agencies. Moreover, since incidents of national significance happen only rarely, local, and even federal entities, are willing to wait until an event is underway before devoting the type of planning and training resources that should be required for each ESF scenario. For example, there is no strategic fire chief who can order the training and equipping of hundreds of thousands of firefighters in tens of thousands of localities. Furthermore, even though all US first responders are technically at the *tactical level*,

as are DoD forces, they are not beholden to any form of centralized doctrine or a layered C3 system per se. The NIMS is the best attempt to connect C3 in crisis response, but its utility does not directly extend to steady-state planning and coordination efforts. Integration for cooperative and collaborative efforts is better than nothing, but it is far less efficient than strong centralized planning and C3.

The challenges for the DHS Secretary and the inherent difficulties in the DHS system became readily apparent in August 2005 when a catastrophic hurricane devastated the Gulf Coast region of the United States. The ensuing federal response became an excellent case study for all aspects of the federal *coalitional* mechanisms established since 9/11. The following chapter analyzes that domestic hurricane relief effort to identify organizational and logistical challenges and compare these challenges to the international tsunami relief effort of 2004.

## Humanitarian Relief Operations

*It was the largest natural disaster ever to strike the United States—92,000 square miles. Logistics were falling apart.... I should have asked for the military sooner. I should have demanded the military sooner.*

—(Former) FEMA Director Michael Brown,  
18 January 2006

### Hurricane Katrina

The DHS pressed the previously untested NRP into action on 29 August 2005 when a natural event of immense proportion struck the Gulf Coast. In the latter part of August, a hurricane developed in the Caribbean, cut across southern Florida, and moved northwest into the Gulf of Mexico.<sup>66</sup> The hurricane, named Katrina, intensified, tracked northward and made landfall in the Gulf Coast regions of Louisiana, Mississippi and Alabama. At its peak, the storm developed into a category five event on the Saffir-Simpson scale.<sup>67</sup> At landfall, it was a category four hurricane with winds of 140 miles per hour.<sup>68</sup> The devastation from the storm was beyond any level anticipated. Thousands of Gulf Coast residents across the three states were in dire need of assistance.

In anticipation of the impending relief effort, USNORTHCOM began to position liaison elements well before requests for assistance from any of the states reached the federal level. USNORTHCOM began coordinating with USTRANSCOM, FEMA, and the states a full five days prior. On 24 August, USNORTHCOM sent warning orders to regional and state emergency preparedness officers and the states’ senior Army guard advisors.<sup>69</sup> On 28 August, USNORTHCOM positioned a USTRANSCOM liaison officer inside its headquarters.<sup>70</sup> Given that the destructive scale of Hurricane Katrina was yet unknown, these steps were reasonable.

It was not until the Hurricane was actually moving inland that DHS requested DoD assistance per formal NRP process channels. In response, USNORTHCOM established JTF Katrina, a contingency JTF construct built from elements of the command’s standing JTF Headquarters North, JTF North, and JTF Civil Support. However, USNORTHCOM chose to deviate from its expected composition by tasking 1st Army at Fort Gillem, Georgia as lead unit, instead of 5th Army at Fort Sam Houston,

Texas, which had been predesignated for the homeland security support mission.

Over the next 7 days staging operations were established at Maxwell Air Force Base, Alabama; Keesler Air Force Base, Mississippi; Barksdale Air Force Base, Louisiana; Naval Air Station Meridian, Mississippi; Alexandria, Louisiana; Fort Polk, Louisiana; and New Orleans International airport. C3 operations were established at the USNORTHCOM JOC located at Peterson Air Force Base, Colorado; Fort Gillem, Georgia (JTF Katrina Headquarters); Camp Shelby, Mississippi (JTF Katrina forward); Baton Rouge (JTF Katrina Southern Louisiana) and aboard the USS Iwo Jima (a second JTF Katrina forward), with an air expeditionary task force (1<sup>st</sup> AETF) at the Air Operations Center (AOC) located at Tyndall Air Force Base Florida.<sup>71</sup>

The USNORTHCOM-appointed JFACC, Major General M. Scott Mayes, led JTF Katrina air component operations through the Tyndall AOC. General Mayes, a veteran fighter pilot, was commander 1st Air Force, and commander Continental North American Aerospace Defense Command Region. He was also the JFACC for Operation Noble Eagle, responsible for contingency planning and aerospace defense of the continental United States.<sup>72</sup> However, doctrinally the JTF commander selects the JFACC based on the overall mission, concept of operations, the missions and tasks assigned to subordinate commanders, forces available, duration and nature of the operation, and the degree of unity of command required.<sup>73</sup> With JTF Katrina, the clear

supporting air defense, air sovereignty, air battle management, radar warning, fighter patrol, and aerial tanker operations.<sup>74</sup> While the standing AOC structure presented a logical C3 center for the JTF Katrina air component, the internal structures and capabilities for support of a humanitarian-type civil support operation were questionable. As a standing AOC, Tyndall has the five standard divisions: strategy, combat operations, combat plans, air mobility (AMD), and intelligence, surveillance, and reconnaissance (ISR). However, unlike AOCs in Korea, Europe, or USCENTCOM, the USNORTHCOM AOC divisions are oriented almost entirely toward the air defense mission, but poorly manned for a major deployment and distribution mission.<sup>75</sup>

To be sure, JTF-Katrina's complex air operations went beyond mobility, but air sovereignty fighter missions were not part of the mission set. The overall air component mission was fourfold—ISR, search and rescue, airspace control, and humanitarian relief operations which were comprised of airlift and aeromedical evacuation missions. The ISR mission was minimal, amounting to one sensor-equipped aircraft that flew less than five times in support of JTF-Katrina. Search and rescue operations were controlled by the Joint Personnel Recovery Center collocated with the AOC at Tyndall AFB.<sup>76</sup> This organization operated parallel and in coordination with the AOC.

Airspace control proved to be a larger challenge due to Federal Aviation Administration (FAA) jurisdiction and the sheer

**The organized chaos highlights that requisite coordination, let alone command and control, was never truly attained. Given the disparate organizations employed, one must question if an adequate command and control structure is even feasible under the current response agreements, given the number of *federal coalition* actors. It is, however, apparent that a viable command and control architecture must exist across the span of the DoD responders.**

preponderance of fixed-wing forces were from the mobility air forces (MAF), as was the C3 architecture inherent at the Tanker Airlift Control Center (TACC) and the Global Patient Movements Requirements Center (GPMRC). These factors would have made the 18th Air Force commander, as the MAF's numbered Air Force *warfighting* commander, the most logical candidate for the JTF/JFACC position. Another logical choice would have been a senior ranking helicopter search and rescue airman, from any service including the US Coast Guard. While either of these options would have been a viable solution, USNORTHCOM felt it was more appropriate to use its organic air component commander, and his *inhouse* AOC capability to manage operations.

Under normal conditions the Tyndall AOC operates as the NORAD Southeast Air Defense Sector for Operation Noble Eagle,

amount of rotary wing assets operating in the recovery area and outside the AOC Air Tasking Order System. The AOC did produce an airspace control plan, however based on reported conflicts, it is doubtful that all military aircraft adhered to the plan. The potential for a mid-air collision operating under a *see-and-avoid* type system requires further research to define responsibilities and mandatory coordination between the FAA and the AOC.

In the final analysis, with virtually independent airlift, aeromedical and search and rescue operations underway throughout the Katrina AOR, the interceptor-centric AOC's Air Tasking Order amounted to controlling the three special use platforms that were under the tactical control of the JFACC—the Scathe View imaging system, the aerial spraying system, and the airborne firefighting system. All of these assets completed

negligible sorties in comparison to the scope of the aerial relief missions.

On 29 August, 18th Air Force designated Colonel John Gomez as the Director of Mobility Forces (DIRMOBFOR) in support of the aerial relief effort. Later, as the scope of the catastrophe expanded, Brigadier General Mark Zamzow plus two deputy DIRMOBFORs were brought in to help coordinate tasking and validation of airlift and aeromedical missions with USTRANSCOM and the 18AF/AOC, also known as the TACC, at Scott Air Force Base, Illinois.<sup>77</sup> This adjustment reflected not only the change in scale of the emergency, but the major role the DIRMOBFOR would fulfill as the mobility expert in advising the JFACC and directing the actions of his Air Mobility Division (AMD).

The Tyndall AOC's AMD was heavily weighted toward air refueling experts necessary for the AOCs primary fighter-centric NORAD mission, at the expense of operational airlift expertise. This required substantial augmentation of the AMD via deployment of seven airlift specialists from USTRANSCOM. Humanitarian relief operations, specifically airlift support, were coordinated through the AMD to the TACC using a *reachback* concept for tasking and coordination essentially independent of the AOC's Air Tasking Order.<sup>78</sup> Aeromedical evacuation operations were managed in a similar fashion through the Global Patient Movement Requirements Center (GPMRC) at USTRANSCOM.<sup>79</sup>

Requests for assistance from various federal agencies and nongovernmental organizations were validated through USNORTHCOM's Deployment and Distribution Center (NDDOC) at Fort Gillem in coordination with the USNORTHCOM Joint Operations Center/J4. Valid requests were forwarded to the USTRANSCOM DDOC for DoD priority, validation and modal determination. Perhaps most importantly, the *big picture* operational mobility management was performed at USTRANSCOM headquarters DDOC, rather than the USNORTHCOM AOR's NDDOC. Requests from USNORTHCOM were collated and stacked against other worldwide DoD priorities. After USTRANSCOM added their validation stamp to requested movements, it translated them into missions for its component elements in the most efficient and effective way possible—specifically 18<sup>th</sup> Air Force, the Surface Deployment and Distribution Command, and the Military Sealift Command.

It is noteworthy that the USNORTHCOM validation and tasking process took 5 days to establish as the center was forward located and the command does not normally operate a Deployment and Distribution Center.<sup>80</sup> Moreover, both the USNORTHCOM DDOC and the AOC/AMD at Tyndall were stood up by deploying primarily USTRANSCOM-assigned personnel. Thus, on paper USNORTHCOM provided the operational and *tactical relief* C3, when in actuality it did not have the organic capability to do so. By contrast, the TACC, which normally manages dozens of airlift missions worldwide at any given moment, every day of the year, performed those same C3 duties for airlift missions in support of JTF Katrina in normal stride.

On the ground inside the JTF AOR there were tandem operations. As the magnitude of the crisis became clear, USTRANSCOM coordinated with USNORTHCOM to allow the rapid deployment of its AMC Contingency Response Group

(CRG) Elements and Tanker Airlift Control Elements (TALCEs) to establish major aerial ports at Keesler Air Force Base, Mississippi; Jackson International Airport, Mississippi; New Orleans International Airport, Louisiana; Pensacola Naval Air Station and Duke Field, Florida. Each of these elements is specialized in *airfield opening*, or standing up the prerequisite air mobility enabling functions of airfield operations, C3, and aerial port capabilities—all essentials for the reception and handling of inbound platforms, their cargoes, deploying forces, and so forth. Moreover, these elements are arguably the single most critical piece of any airlift operation since they modulate throughput and efficiency inside the disaster relief zone itself. Furthermore, these units are trained, manned, and equipped for short-notice response to austere environments, which means they are essentially tailor-made for reestablishing access to catastrophically-impacted areas—even if those are in the CONUS. Based in California and New Jersey, and maintaining a 12-hour alert-to-launch window, these assets can be rushed to any point in the 50 states well within 24 hours.

These professional mobility experts were, without question, the right teams inserted at the right locations. However, they were the final delivery destinations of the USTRANSCOM system. Therefore, at these same locations, the JFACC established air expeditionary groups (AEGs) to act as functional air bases for the JTF. Reports indicate the USNORTHCOM CRG/TALCEs and AEGs cooperated well; however, they maintained separate command and control lines, presenting obvious challenges for deconfliction and unity of command. The salient point is that the aerial ports were where USTRANSCOM's job technically ended and the USNORTHCOM/JTF-Katrina (or DHS) responsibilities began, in terms of onward movement and distribution of the relief personnel and cargo delivered. Therefore, the span of control of the two major DoD stakeholders was marked out at the boundary between the operational level (USTRANSCOM) and the tactical level (USNORTHCOM).

Unfortunately, USTRANSCOM's controlled and deliberate mobility processes were pitted against a plethora of *coalition partners* external to the official JTF. No less than seven organizations were attempting to respond simultaneously, not always in parallel, or even coordinated.<sup>81</sup> Alongside USNORTHCOM, other DoD, FEMA, state, National Guard, nongovernmental organizations, and private organizations all strived to provide relief as quickly as possible. Unscheduled aircraft began arriving at the relief distribution operations, including various state National Guard actors whose air mobility assets (primarily C-130s) were never formally assigned to the USNORTHCOM or USTRANSCOM. Furthermore, Navy, Army, and Marine Corps fixed-wing assets were not managed by the JTF, since they were *organic* service lift assets. Consequently, the JFACC had no control and very little visibility over these aircraft.<sup>82</sup> Chaotic conditions are as counterproductive in relief operations as they are in war zones. Airfields and ramp space were always at a premium. Finally, the lack of centralized C2 created confusing and potentially dangerous situations for all involved. Scheduling, preventing bottlenecks, and ensuring throughput of lift assets was the goal.

All of the complicating unity of command and unity of effort issues resulted in a far less than optimized logistical operation. Situation reports had multiple examples of poor coordination. At Keesler Air Force Base, "lack of a single point of [overall]

scheduling caused airlift operations to slow considerably.” At New Orleans International Airport, “intransit visibility of cargo was nonexistent; unmarked pallets were offloaded [and] ownership was unobtainable.”<sup>83</sup>

The organized chaos highlights that requisite coordination, let alone command and control, was never truly attained. Given the disparate organizations employed, one must question if an adequate command and control structure is even feasible under the current response agreements, given the number of *federal coalition* actors. It is, however, apparent that a viable command and control architecture must exist across the span of the DoD responders. And this structure should maximize existing capabilities and capitalize on dedicated expertise from the tactical through operational levels. If nothing else, clearly in this first major *real world* test, both DHS and USNORTHCOM proved they were ill-prepared to effectively manage wide-area logistics with organic capabilities in a large-scale domestic catastrophe. Certainly it underscored their reliance on USTRANSCOM’s core competency expertise, assets, and C3 architecture.

### Indian Ocean Tsunami

The similarities of interagency and coalition operations in the Indian Ocean tsunami of 2004 and Hurricane Katrina 2005 are striking. According to the Operation Unified Assistance after actions report, 16 countries and no less than 200 nongovernmental organizations were involved in the international relief operation, operating from multiple countries. Indonesia hosted 68 nongovernment organizations, Thailand 35, Sri Lanka 84, and the Maldives 17. The greatest challenges to overcome were communication and, more importantly, command and control.”<sup>84</sup>

The intensive helicopter-centric operations of JTF-Katrina in the United States were mirrored and exaggerated by the severe lack of ground infrastructure in the far-flung Indian Ocean. The fixed-wing airlift operation was equally as complex. US C-5 and C-17 heavy-airlift aircraft were flown into Utaaphao, Thailand, making it the strategic distribution hub. From there, C-130 tactical airlift aircraft from a variety of countries and Service components, 19 suboperations in total, delivered relief supplies to forward locations in Sri Lanka, Indonesia, and Thailand. From those forward operating locations, helicopters, the critical key to successful distribution operations, were used to take supplies in, and refugees out of remote disaster areas.<sup>85</sup> The DoD air component commander’s concept of operations was a classic strategic logistical management example of hub and spoke operations. While this type of operation is simple in concept, the supporting C3 architecture is not. The US military, specifically USTRANSCOM, has the equipment, communications, and most importantly, the expertise to organize on such a scale. The hundreds of nations and nongovernment organizations that plugged into this US-facilitated system and the victims were the beneficiaries. The alternative would likely have been haphazard in execution and lethally slow in effect.

Of special note, the US military-led coalition originally formed a JTF, however the political implications of a perspective US-dominated C2 structure led to the re-designation of the operation under the guise of *combined support forces*.<sup>86</sup> This structure may forecast the future of international coalition relief operations. It may also be a blueprint for domestic operations given the “coalition” of interagency, active duty, state, local and

National Guard operators—especially to effectively coordinate the myriad ground, helicopter, and light fixed-wing relief actors.

Since the operation was multinational and ad hoc, there was ineffective cargo validation and prioritization management, at least in the first critical weeks of the relief operation. After-actions reporting by the JFACC, Major General Deptula, is telling:

[Relief requirements] assumptions and reality clashed as we all struggled to identify requirements. Initially there was a big push to deliver as much water, food, clothing, plastic, and sheeting, into theater as we could cram onto available aircraft. As the operation progressed and we started to see piled supplies, the requirements definition became critical. Since the US Agency for International Development was the lead organization there was an assumption that they would take the lead, and maybe they did ... but the translation of those needs to the JFACC was slow and at times nonexistent.<sup>87</sup>

The associated lessons learned observation made by USPACOM is virtually identical for Katrina operations. It stated there was a need to quickly establish a robust requirements and validation process, based on a common doctrine to ensure the proper flow of cargo requests for airlift. There are also critical needs for a 24 hour, 7 day continuous response capability and for personnel experienced in the requirements process.<sup>88</sup> In every major mobility support operation the essential information is “what, where, how much, and how fast.” Requirements absolutely drive the size and scope of the transportation response. However, without this type of accurate and timely data flow from the LFA, the supporting operations, even if led by DoD, are doomed to produce chaos.

## Summary, Conclusions and Recommendations

This article started with the Presidential directives and legal underpinnings most important to DoD support of civilian and military authorities. Second, it laid out the national-level solution of federal reorganization designed to foster close coordination. It explained the NRP and NIMS graduated incident response structure within which DoD support is expected to function. In order to explain the limitations on forming civil-military cooperative command arrangements, it touched upon the fundamental differences of the principles of unity of effort and unity of command. Next, the article explained the purpose and structure of the UCP in order to enable the reader to understand specifically the military’s worldwide organizational architecture and USNORTHCOM and USTRANSCOM’s respective positions inside it.

The history of the UCP reveals three key observations. First, the DoD has historically only organized to perform the minimum essential operations required of it both in the military homeland defense and civil-support homeland security missions, a luxury no longer affordable. The DoD must be a full partner in proactively supporting DHS and other government agencies in anticipation of, rather than purely in response to, incidents of national significance. Second, the UCP history reveals that subarchitectures can be reformed any time there is an operational necessity to do so. Finally, the accepted divisions in the offensive and defensive C3 architectures confirm that the single unified commander for the North American AOR does not have to be in control of every traditional mission facet assigned to geographical AOR commanders.

The authors have reached three overarching conclusions based on the above analysis. First, there is a demarcation of two concentric logistics and mobility missions. The first can be thought of as *tactical relief* operations inside the JTF JOA, which includes distribution of relief cargo and services. Both the USNORTHCOM AOR Katrina and the PACOM AOR tsunami relief efforts depended largely on US and *coalition* partners at the tactical level. These forces provided boots on the ground and especially rotor-wing rescue and lift assets which are arguably the most vital assets of all that military capabilities bring to bear in such a crisis. The second is the intratheater, or what can be thought of as the *operational and strategic movement* via common user, DoD airlift and other mobility assets.

Second, this article concludes that the USNORTHCOM AOR, in both the Homeland defense and Homeland security support mission realms, has a requirement for operational and strategic logistics and mobility management. These functions are within the purview of USTRANSCOM. The need not be replicated by USNORTHCOM because they are already resident at USTRANSCOM.

USTRANSCOM's functional core competency mission makes it the only DoD entity capable of strategic logistics management—not only in the sense that its worldwide mobility capabilities are an instrument of national power, but also in the literal sense of using an expert strategy to gain maximum efficiency and effectiveness from the supply chain. The US Council of Logistics Management defines strategic logistics management as:

The process of planning, implementing and controlling the efficient, cost-effective flow and storage of raw materials, in-process inventory, finished goods, and related information from point-of-origin to point-of-consumption for the purpose of conforming to customer requirements.<sup>89</sup>

In this case, the customers can be defined as either the end users that DoD is trying to supply (like hurricane victims), or to the LFA or DoD command being supported itself—either way the definition fits. The salient point is that USTRANSCOM is the only *federal agency* that can perform the above functions on a grand scale.

According to Joint Publication (JP) 3-26 *Homeland Security*, USTRANSCOM “provides common user and commercial air, land, and sea transportation, common user port management and terminal services ... to [USNORTHCOM] and [PACOM] within their respective AORs for homeland defense and civil support mission areas.”<sup>90</sup> In addition to this charter to support the two commands whose AORs contain all 50 US states, JP 3-26 also says that USTRANSCOM will do the same for lead federal agencies directly when ordered by the President or Secretary of Defense. Therefore, depending on the situation, LFAs may be directly supported by USTRANSCOM, or they may use USNORTHCOM or PACOM as a DoD intermediary.

USTRANSCOM also provides worldwide patient movement and evacuation, and it now serves as the DoD distribution process owner responsible for the execution of the strategic distribution system.<sup>91</sup> In this last capacity, the command has moved beyond merely transporting personnel and cargo from point to point. USTRANSCOM is now attempting to mirror civilian supply chain management and distribution processes. Its command headquarters, central DDOC, is populated with staff from its Army, Navy and Air Force components which process DoD

transportation requests by validating, prioritizing, and choosing the transportation mode given the requirements. Furthermore, USTRANSCOM has unique and distinctive capabilities that need very few layers of bureaucracy to accomplish the effects required. In fact every layer added actually slows down the response unless there is value added in the form of efficiency for the wider effort. For a given movement, say armor for vehicles to USCENTCOM or humanitarian relief supplies to USNORTHCOM, waiting for an opportunity to *bundle* larger aggregates of supplies are examples of overall value-added efficiency delays. On the other hand, simply waiting for another layer of DoD or civilian bureaucracy to rubber stamp an approval is nonvalue added.

In strategic logistics, efficiency equates to effectiveness. This premise is deceptively simple to agree with but much harder to actually orchestrate. At the tactical level each independent operator considers their load of materials *top priority*. The Katrina DIRMFOR noted the effectiveness and timeliness of airlift requests “were hampered by the fact that few agencies outside of USTRANSCOM and AMC truly understood distribution processes.”<sup>92</sup>

The USNORTHCOM headquarters, by contrast, has a relatively small logistics planning staff by geographic command standards. Day-to-day, it directs its execution through a collocated Joint operations center. In times of crisis in its AOR involving large-scale mobility operations, the command will partner with USTRANSCOM to stand up its own “USNORTHCOM DDOC,” or NDDOC, which is essentially a forward deployable DDOC performing a similar function as USTRANSCOM's but on an AOR- or JTF-confined scale. Moreover the NDDOC's operational chain of command runs up to USNORTHCOM, while most of its practical coordination is with USTRANSCOM. Therefore, the overall NDDOC coordination process owner is technically USNORTHCOM, but the de facto process owner, given its worldwide constant C3 of the entire DoD system, is clearly USTRANSCOM.<sup>93</sup>

The third conclusion is that, for incidents of national significance, operational and strategic logistics planning cannot wait until requests are made by overwhelmed LFAs. The rationale for developing the DHS and USNORTHCOM was to increase overall responsiveness to catastrophic events whether caused by an act of terrorism or an act of nature. Trying to do this effectively while in a reactionary mode from a national crisis is next to impossible. In hindsight, the operational response became a reverse engineering project where execution of the mission by USNORTHCOM developed ahead of an adequately robust support architecture.

It is clear that the federal government's lead umbrella organization, DHS, functions more on a coalition operational model that is closer to a *confederacy* than a federal *union*. Therefore, given the uniqueness of the AOR and the myriad agencies operating inside it, the requirement for USNORTHCOM to duplicate the USTRANSCOM functional architecture for large-scale contingency logistics and air mobility is obviated. Moreover, USTRANSCOM needs to be recognized as a discrete, full partner in the federal coalition, confined to its functional, core-competency as the single-point manager for transportation and logistics during large-scale *incidents of national significance*.

While the USNORTHCOM charter clearly defines roles for itself and USTRANSCOM, the limitations placed upon the civil support mission of *respond only when requested*, forces DoD,

and USTRANSCOM especially, to distort the distinctions between who is responsible for what, and when. It is the very nature of the response system that causes confusion and ultimately delays. Planning for in extremis response to incidents of national significance is the most critical missing component. While DoD assistance and resources can only be requested as a last resort for overwhelmed government agencies, *anticipatory*, DoD-guided planning coordination for those events need not be. Moreover, in military parlance, the CONUS is a very *mature theater*. Perhaps hardest to reconcile in terms of the rapid logistical response to Katrina is that there are so many obvious infrastructure advantages of the CONUS. Unlike remote parts of the Indian Ocean or central Africa, the United States enjoys the most robust transportation network on the planet. There is no physical impediment that cannot be overcome to ensure efficient end-to-end movement of relief supplies into, and evacuees out of a JOA like that of JTF-Katrina.

A systematic intermodal logistics chain and its C3 cannot be formed quickly enough to match crisis timelines in most cases. A second 9/11-scale incident or worse could happen at any time. However, while the NRP implores departments and commanders to lean forward in preparation, the current posture of *stand-by for official tasking* from the designated and overwhelmed LFA will guarantee a response system lag. Yet, a tear in the national fabric must be immediately treated via all federal coalition means available. The disaster response sensor-to-reaction mechanisms must be made more efficient. The Homeland Security and Homeland Defense stakeholders must be postured to provide a wide-area *organized* response to domestic catastrophe.

In Thomas Friedman's book *The World is Flat*, he uses UPS as the model corporation that takes the logistics piece over on behalf of less capable companies rather than have them *duplicate the process*.<sup>94</sup> USTRANSCOM is perfectly suited to fulfill this function. It de facto forms an all-modal reach-back for domestic incidents of national consequence with USNORTHCOM as the DoD primary C2-agent command.

Planning for rough requirements, pre-siting perspective airfields and cargo ramps, and likely logistics relief hubs and spokes in the USNORTHCOM AOR takes a predictive strategic logistics approach. FEMA certainly has the experience and expertise in defining the baseline relief requirements. These should be prepackaged and ready when a crisis occurs. However, to ensure this working relationship, USTRANSCOM cannot afford to rely on crisis action scenarios. It must devote a sizeable portion of its own expert planning resources to assist USNORTHCOM and the other coalition partners during the preplanning and preparedness phases. No other lead entity can accurately perform shaping functions on size, nature, scope and limitations of the logistics portion of a federal response. In practical terms USTRANSCOM, with its global support to all unified commands, can only afford to treat USNORTHCOM as one of its major warfighter customers. However, the USNORTHCOM/J4 logistics staff's *primary* role needs to be planning and exercising with USTRANSCOM.

The relationship between USNORTHCOM and USTRANSCOM should differ from relationships among the other geographic commanders. Both commands, one functional and one geographic, must team with DHS to develop a more formalized and structured architecture for coordinating all federal, state and private airlift and mobility requirements for

relief support. This would entail mandating all responding agencies and organizations to coordinate their airlift needs or operations with a central clearinghouse for deconfliction. This will tie the USNORTHCOM JTF tactical end-user distribution piece with USTRANSCOM's strategic logistical capabilities piece. The latter should be considered a full partner in the federal coalition for exactly that function—its chartered unified command function defined in the UCP.

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