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NMCI: HISTORY, IMPLEMENTATION, AND CHANGE

by

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In October of 2000, the Navy's leadership entered a multi-billion dollar IT service contract with a private company to build and maintain the Navy-Marine Corps Intranet (NMCI). The hope was to have the new intranet fully operational in just two years, but the program encountered so many difficulties that, almost six years later, the initial implementation process is still underway. Aside from the unexpectedly high number of applications that needed to be migrated to the new network and the repeated attacks by members of Congress and other government agencies, by far the largest obstacle to NMCI's success has been the end users' resistance to change.

The Navy's leaders underestimated the significant cultural change brought on by the implementation of NMCI, and as a result, they were not adequately prepared to deal with the negative user response. After providing a historical account on how NMCI was conceived, planned and delivered, this thesis goes deeper into NMCI's implementation process by recounting the experiences of those who used NMCI at the site level. Once the history and site case study are presented, this thesis ties in the theme of change to show how proper communication can facilitate the success of future transformation initiatives.

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NMCI: HISTORY, IMPLEMENTATION, AND CHANGE

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ABSTRACT

In October of 2000, the Navy's leadership entered a multi-billion dollar IT service contract with a private company to build and maintain the Navy-Marine Corps Intranet (NMCI). The hope was to have the new intranet fully operational in just two years, but the program encountered so many difficulties that, almost six years later, the initial implementation process is still underway. Aside from the unexpectedly high number of applications that needed to be migrated to the new network and the repeated attacks by members of Congress and other government agencies, by far the largest obstacle to NMCI's success has been the end users' resistance to change.

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LIST OF ACRONYMS

ALNAV	All Navy
AOR	Assumption of Responsibility
BHAG	Big Hairy Audacious Goal
BLII	Base Level Information Infrastructure
C&A	Certification and Accreditation
C3I	Command, Control, Communications, and Intelligence
C4I	Command, Control, Communications, Computers, and Intelligence
C4ISR	Command, Control, Communications, Computers Intelligence, Surveillance, and Reconnaissance
CD-ROM	Compact Disk - Read Only Memory
CDI	Computer Desktop Initiative
CEO	Chief Executive Officer
CFO	Chief Financial Officer
CINCLANTFLT	Commander in Chief, United States Atlantic Fleet
CLIN	Contract Line Item Number
CNI	Commander, Naval Installations
CNO	Chief of Naval Operations
CO	Commanding Officer
COMPACFLT	Commander, Pacific Fleet
COTS	Commercial off the Shelf
CPM	Customer Project Manager
CSC	Computer Sciences Corporation
CT&E	Contractor Test and Evaluation
DISA	Defense Information Systems Agency
DISN	Defense Information Systems Network
DITSCAP	DoD IT Security Certification and Accreditation Process
DoD or DOD	Department of Defense
DoN or DON	Department of the Navy
DoN CIO	Department of the Navy Chief Information Officer
DREN	Defense Research and Engineering Network
DRMO	Defense Reutilization and Marketing Office
DRPM	Direct Reporting Program Manager
EDS	Electronic Data Systems
FOC	Full Operational Capability
FY	Fiscal Year

GAO	Government Accounting Office
GCN	Government Computer News
GOTS	Government off the Shelf
HQ	Headquarters
IOC	Initial Operational Capability
IT	Information Technology
IT-21	Information Technology for the 21st Century
ITN	Inside the Navy
IPT	Integrated Process Team
ISF	Information Strike Force
LADRA	Legacy Applications Deployment Readiness Activity
LAN	Local Area Network
LRA	Local Registration Authority
MB	Megabyte
Mbps	Mega bits per second
MCSE	Microsoft Certified Systems Engineer
MOA	Memorandum of Agreement
MOE	Measure of Effectiveness
NALCOMIS	Naval Aviation Logistics Command/Management Information System
NAS	Naval Air Station
NAVAIR	Naval Air Systems Command
NI	Naval Intranet
NMCI	Navy-Marine Corps Intranet
NOC	Network Operations Center
NPV	Net Present Value
NVI	Naval Virtual Intranet
NWI	Navy-Wide Intranet
OMB	Office of Management and Budget
OPEVAL	Operational Evaluation
OPTEVFOR	Operational Test & Evaluation Force
OS	Operating System
OSD	Office of the Secretary of Defense
PC	Performance Category
PC	Personal Computer
PEO	Program Executive Office(r)
PEO-EIS	Program Executive Office for Enterprise Information Systems

PEO-IT	Program Executive Office for Information Technology
PEO (T)	Program Executive Office for Tactical Aircraft
PIR	Post Implementation Review
PKI	Public Key Infrastructure
PM	Program Manager
POM	Program Objective Memorandum
POTS	Plain Old Telephone Service
PY	Program Year
qos	quality of service
RAS	Remote Access Service
RFP	Request for Proposal
SAME	Similar to Automated Maintenance Environment
SDG	Site Deployment Guide
SEC	Securities and Exchange Commission
SIL	Site Integration Lead
SIPRNET	Secret Internet Protocol Router Network
SLA	Service Level Agreement
SME	Subject Matter Expert
SOW	Statement of Work
SPAWAR	Space and Naval Warfare Systems Command
SSC	SPAWAR Systems Center
TMT	Transition Management Team
T&E	Testing and Evaluation

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I would first and foremost like to thank God for giving me the talent to write and the gifts of patience and persistence, all of which are required to complete a project of this magnitude. I am very satisfied with this work, and I sincerely believe that without His help and the power of prayer, I could not have delivered a product that has given me such a sense of accomplishment and fulfillment.

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I. THESIS SUMMARY AND RESEARCH METHODOLOGY

A. INTRODUCTION

The purpose of this chapter is to introduce the thesis topic, provide a brief overview of each chapter, and present the thesis research methodology. The thesis topic of NMCI: History, Implementation, and Change was primarily born from a question that has been circulating around the Navy's leadership for quite some time: "Why has there been so much user resistance to NMCI?" Many attribute this resistance to the cultural change associated with the Navy's decision to remove user autonomy and reduce its application inventory, and others put the blame solely on NMCI's technical problems and lackluster performance. Although both the cultural change and the intranet's deficiencies have no doubt contributed to the negative user response, they are merely symptoms of a larger problem: the Navy's fundamentally flawed implementation strategy (although there were other problems with NMCI, this is the one that this thesis will address). That is, it was not so much *what* the Navy implemented; it was the *way* that the Navy chose to implement it. This thesis will show how the Navy's leaders alienated users and how this undesirable result can be avoided in the future by concentrating on preparation and communication.

The next two chapters of this thesis provide the reader with two separate views of NMCI. Chapter II provides the "big picture" view of NMCI's entire implementation process from the perspective of the strategic and program management levels of the Navy. A thorough grasp of where NMCI came from and how it evolved through the acquisition process will allow the reader to better understand the user experience that is conveyed in Chapter III, the NAS Lemoore/SPAWAR San Diego comparative site case study. This case study transports the reader from the strategic view to the operational view (i.e., from planning to execution). Changing the perspective allows the reader to see how the decisions of Navy leaders were transformed into action and how they affected the average user. The final chapter of this thesis offers an alternate strategy that leaders can use to prepare for a large-scale implementation project by placing the focus on vision, communication, and leadership. This chapter outlines a logical methodology for

introducing change, it provides some lessons learned from NMCI's implementation process, and it suggests some topics that may be worthy of follow-on research efforts.

In addition to presenting some lessons learned from the acquisition and implementation of large-scale projects in the DoD, this thesis raises many questions that merit further thought. For example, when is outsourcing the appropriate solution for military procurement needs; does it get the product out there quicker; is it worth it? What are the limitations to enterprise-wide purchasing and management; can a network be too large; is there a size where we begin to see diminishing returns? And how long does it take for an organization to transform; are NMCI's difficulties just growing pains; will NMCI one day be hailed as a visionary idea for other organizations to emulate? Even though this thesis does not explicitly provide the answers to these questions, it does facilitate dialogue that will hopefully allow leaders to one day find the right balance between cost effectiveness and user productivity so that the Navy's scare resources are allocated in the most efficient way possible.

B. CHAPTER SUMMARIES

1. Chapter II: The Evolution and History of NMCI

In the late 1990s, leaders in the Navy came to the realization that the department as a whole was doing a poor job in managing its IT resources. One of the problems was related to fiscal accountability: everyone seemed to know that a lot of money was spent on IT, but no one could come up with an actual dollar amount. Another problem was the redundant purchasing of software and services: stoved-piped systems were the norm instead of the exception. The Navy also had serious network security concerns: there were many policies and procedures designed to protect systems and information, but because of its huge, geographically dispersed workforce, the Navy had difficulty enforcing network configuration and security standards.

To allay the problems outlined above, the Navy's leaders concluded that a Navy-wide intranet, provided by an outside contractor, would allow them to not only quantify IT spending and increase security, but also to reduce the overall IT costs by reducing jobs and eliminating redundant expenditures. The Navy hoped that they could take advantage of economies of scale by leveraging an enterprise strategy towards the purchase of

software, systems, and support. Leaders also felt that outsourcing the project would allow them to concentrate more on war-fighting, while the industry experts managed the information systems.

Because the Navy attempted to bypass the traditional procurement process by labeling NMCI as a "service" and not a "system," Congress became very critical of the program, and lawmakers made several key decisions that either limited the pace of the implementation process or threatened to eliminate the program altogether. Congress wanted proof that was NMCI less expensive than the Navy's current method of purchasing IT, and they also wanted the system to be extensively tested. The Navy succumbed to Congress' demands by providing a business case analysis and by agreeing to a series of network evaluations, but in addition to the constraints imposed by Congress, the Navy was dealing with other unforeseen difficulties with NMCI's delivery plan. For example, the number of applications that the Navy found on its legacy systems was an order of magnitude higher than expected. This "application problem" has been blamed for slowing down NMCI's implementation by at least two years. There were also numerous software compatibility problems with the new NMCI machines that forced many users to retain their legacy computers along side their NMCI computer for an extended period of time.

Eighteen months into the delivery process, the Secretary of the Navy put an admiral in charge of NMCI in an attempt to resolve some of the program's implementation problems, but the addition of authority did not speed up the process. As the situation became worse, the prime contractor became more desperate, and the Navy began to make concessions to keep the contractor "well." In addition to awarding a two-year extension to the base contract and the decision to execute the contract's three-year option (bringing the total obligation to ten years), the Navy also lowered the number of service level agreements that they used to evaluate performance and they agreed to begin paying for legacy system support.

It has been almost six years since the NMCI contract was signed, yet the initial seat rollout is still underway. Making matters more complicated are the additional challenges that have been brought upon by Tech Refresh (most would argue that Tech

Refresh is late and that the process takes too long) and the fact that numerous legacy systems are still in operation. As of early 2006, the Navy still had over 1,000 legacy networks or devices that were running about 11,000 applications. Despite all of NMCI's setbacks and shortcomings the Navy's leadership has remained confident that NMCI will one day be a successful program that satisfies their vision for a Navy-wide intranet.

2. Chapter III: Implementation at the Site Level

The case study presented in Chapter III is a comparative analysis of the implementation process at two separate naval facilities. These two facilities were selected based on their respective level of IT maturity at the time the NMCI delivery process began; NAS Lemoore was a site that had low IT maturity, whereas SPAWAR Systems Center, San Diego had a very advanced IT infrastructure that came complete with broadband connectivity, a local helpdesk, and the latest hardware and software computing solutions.

To prepare users for the rollout process, the IT managers at NAS Lemoore were directed to convene an information meeting regarding the NMCI's implementation plan, but because of user apathy, this session lacked significant participation. Users paid little attention to the new intranet and leaders were more focused on NMCI's technical and logistical challenges; therefore, the first time that many users even heard the NMCI acronym was on the day they received new computers. At SPAWAR the situation was slightly different: instead of apathy, users were left in a state of disbelief. No one understood how NMCI was supposed to fulfill the complex computer processing needs necessitated by their advanced research projects. Because of the perceived limitations of NMCI, many of the researchers at SPAWAR panicked, and in an effort to protect their data, they engaged in activities that bypassed the need for them to give up their legacy seats.

Aside from the chaotic scene that the massive rollout effort created during the actual delivery of NMCI workstations, users at NAS Lemoore were also put off by several lingering issues that made using the new network a frustrating experience. Some users even began to question whether they were better off with their older, legacy computers. Because the users at SPAWAR still retained their legacy networks, they were less affected by NMCI's technical limitations; they instead focused on a strategy to

persuade the Navy to officially sanction their expansive RTD&E networks. The Navy's leadership did eventually recognize SPAWAR's need to operate a network separate from NMCI, but the decision was conditional: each employee still had to maintain an NMCI account and all business functions needed to be transferred to NMCI.

The most recent hurdle in the NMCI program is the Tech Refresh process. In the first half of 2006, most of the NAS Lemoore computers were refreshed, and at SPAWAR, Tech Refresh is not scheduled to occur until early 2007. NMCI managers are confident that the completion of Tech Refresh coupled with the conclusion of the initial rollout will aid in the rise of local user satisfaction rates. The hope is that the new computers will increase the network's overall performance, and that finishing the rollout will allow NMCI implementers to either tackle some of the problems that have plagued NMCI for years or take on new challenges with the goal of making the intranet more usable, reliable and secure.

3. Chapter IV: Transformation and Change

The last chapter of this thesis develops a strategy for implementing a large-scale change effort by first disassembling the NMCI program's implementation process and then evaluating the pieces against proven and theoretical methodologies. Chapter IV was built on the framework of John Kotter's *Harvard Business Review* (HBR) article *Leading Change: Why Transformation Efforts Fail*. In his article, Kotter outlined eight errors that executives commonly make when introducing a transformation initiative. Kotter then uses these errors to create a comprehensive list of steps that managers can follow to increase program success rates. The primary goals of this chapter are to illustrate the many connections between Kotter's errors and the NMCI program to underscore the importance of planning for change and to provide a roadmap of steps that future leaders can follow when embarking upon the path of transformation.

Kotter's first step is to "establish a sense of urgency." At a conference in January of 1999, the CNO at the time, Admiral Jay Johnson, publicly announced his vision for a new, Navy-wide intranet. He called for an ambitious implementation schedule that would have the entire network up and running in just two years, but this push for urgency was never *established* within the organization. Although Admiral Johnson made a good case for rapid deployment, his message needed to reach everyone within the organization, not just the strategic leaders.

The second step in Kotter's list is "forming a powerful guiding coalition." The Navy's plan was to procure NMCI as a "service," thereby bypassing the military's lengthy and bureaucratic procurement process. However, when Congress learned that the Navy was preparing to make a multi-billion dollar commitment without seeking their approval, the Navy's plan backfired, and Congress suddenly became NMCI's most persistent critic. The Navy essentially lost the trust of Congress to field NMCI on its own. As a result, Congress added many provisions to the NMCI implementation process, and they ensured that the program had oversight from other government organizations.

The third step is "creating a vision." The vision that was created for NMCI was too simplistic and vague, and it was never sufficiently articulated in one place. Instead, pieces of NMCI's vision were scattered across the numerous paragraphs of reports, press releases, news articles, and Navy messages, which made it difficult for users to get a clear picture of the intranet's expected purpose and goals. The NMCI Program Office published many how-to-do manuals and guides, but without a supporting vision, these documents were undoubtedly less effective.

After a vision is created it must be shared with the organization; therefore Kotter's fourth step is "communicating the vision." When the NMCI delivery process began in early 2001, most of the primary users of the new intranet were not introduced to NMCI until a workstation was placed on their desk. Users were excited to receive new computers, but the majority of them did not initially understand that they would also be working on a different, more restrictive network. Sailors and civilian employees were simply not prepared for the huge change that NMCI represented, and naturally, they began to resist.

Kotter's fifth step is "empowering others to act on the vision." To empower the users of NMCI, the Navy needed to remove obstacles, and by far the largest obstacle in the path of NMCI's implementation was the unexpectedly high number of legacy applications that needed to be certified and migrated for use on the new network's machines. Navy leaders attempted to control this problem by directing commanders to reduce their application inventories, but users were reluctant to cooperate. Despite all of the Navy's efforts to eliminate legacy applications, the delays and complications associated with the application approval process remains the number one cause of frustration among NMCI users.

The sixth step is "planning for and creating short-term wins." The Navy planned on delivering NMCI incrementally, which was aligned nicely with the prospect to create short-term wins, but the highly visible setbacks in the program continuously eclipsed its significant accomplishments. Even as major milestones were reached, the fact that they occurred months behind schedule only served to embolden the positions of the critics and dissenters. Too often officials set the NMCI program up for failure by setting unrealistic, long-term goals when they should have creating and celebrating short-term wins.

Kotter's seventh step is "consolidating improvements and producing still more change," which Kotter equates to as "not declaring victory too soon." As of December 2005 approximately 270,000 NMCI seats were delivered. The remaining 25% of the seats are ordered and are planned to be installed throughout 2006 and 2007. Clearly the Navy has a lot of work to do before NMCI can be labeled as a success, but to its credit, the Navy has admitted many of its failures and leaders in the program office are continuously working hard to correct deficiencies. Even though the Navy has not declared victory, leaders are still adamant that one day NMCI will be recognized as a successful system.

Kotter's final step is "institutionalizing new approaches." This step refers to permanently changing the organization's culture. After the initial implementation process is done, the Navy will still be in a continuous battle to ensure that NMCI evolves not only technologically, but also culturally. Cultural acceptance is important because without it, any system will be susceptible to the internal deterioration that can be caused

by both active and passive resistance. Until the Navy makes a concerted effort to cultivate a culture that encourages its leaders to operate as change agents, expensive programs like NMCI will continue to mete out the financial consequences.

C. RESEARCH METHODOLOGY

The research strategy for this thesis first involved the cataloguing NMCI's major milestones and events to build a historical timeline to serve as the framework for the flow of Chapter II. After this timeline was established, the next step was to conduct site visits to gather data directly from the people who were most impacted by NMCI's implementation process and the system's subsequent use as a tool. The last step (which was done in parallel with the previous two steps) was to consult academic writings regarding change, transformation, leadership, and communication for the purpose of relating NMCI's actual implementation process to theory and industry best practices.

There were two main sources of data that contributed to the development of this thesis. The first source was archival data. The archival data included news releases, magazine articles, Navy messages, internal memos, public letters, PowerPoint presentations, NMCI program documents, and various Internet websites and publications (many of these sources can be found in their entirety in this thesis' Appendices). The second source of data was face-to-face, semi-structured interviews. These interviews served to provide clarity to existing documentation and to give deeper insight into the implementation process through the sharing of experiences and observations. Interviews were conducted at the following venues:

- Washington D.C.: One site visit to conduct a total of three interviews with current and former members of the NMCI Program Office.
- NAS Lemoore: Two site visits to conduct a total of three interviews with a member of EDS and federal NMCI employees.
- SPAWAR System Center San Diego: Two site visits to conduct a total five interviews with a member of EDS, federal NMCI employees, a SPAWAR official, and a former NMCI implementer.

Most of the interviews were one hour in length with a 30-minute follow-up interview conducted on the next day. Also, at least six of the interviewees have responded to emails and/or participated in phone conversations to answer questions or provide clarification regarding NMCI-related topics.

In addition to the site visits, information was also gathered at the 2006 NMCI Winter Conference held in San Diego, California at the end of January 2006. This conference mostly consisted of information presentations regarding NMCI's current state and action-based presentations that were developed by joint EDS-Navy teams to address the intranet's ongoing challenges and the proposed solutions.

D. CONCLUSION

The purpose of this chapter was to introduce the reader to this thesis' research topic, provide a broad overview of each chapter contained within this thesis paper, and to provide the research methodology used to gather data. The next chapter will outline the entire history of NMCI beginning with the conception of a naval intranet and ending with the vision that will take the NMCI program into 2007. The history chapter provides the strategic view of the NMCI program, which lays the foundation for the rest of the thesis since it provides the background information necessary to understand the perspective of the local IT managers and NMCI's end users.

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II. THE EVOLUTION AND HISTORY OF NMCI

A. INTRODUCTION

This chapter explains how the idea of a Navy-wide intranet was conceived, planned and delivered. The first section of this chapter is focuses on how the original idea for a Navy-wide intranet evolved from concept to reality; it identifies the major people involved in the planning process, and it explains how NMCI became an official program. The second section explains why Congress initially did not support NMCI and how the Navy's executives reacted to the increased attention and scrutiny that the program elicited. The third section covers the details of the NMCI contract award, and the final sections of the chapter describe NMCI's implementation process from the delivery of the first workstation, through testing and evaluation, to the status of the system today. These last sections highlight the difficulties that the NMCI program officials faced and the actions that they took to smooth the implementation process and prevent the entire program from being terminated.

A complete historical account of NMCI that included all parties, events, and nuances would take volumes to record; therefore, it is impossible for this chapter to capture every aspect of NMCI's history. However, this chapter does purport to accurately catalogue most of the important decisions regarding the NMCI program, who made them, and to some extent, why.

B. NMCI IN ITS INFANCY

1. The NVI Concept

As the close of the twentieth century was nearing, the Department of the Navy began to explore the possibility of building a single, expansive intranet to meet the networking needs of its Sailors and government employees. To support this vision, an Integrated Process Team (IPT) was formed at the Space and Naval Warfare Systems Command (SPAWAR) at the request of Dr. Marv Langston, the Department of Navy Chief Information Officer (DoN CIO) at the time. According to a whitepaper prepared by the IPT and presented in December of 1997, this team "was charged with developing a functional architecture and a preliminary concept of operations for a globe-spanning

network infrastructure" (NVI Whitepaper, 1). This new initiative was named Naval Virtual Intranet or, more simply, NVI. The NVI was called a "virtual" intranet because the original infrastructure was to be shared with other DoD subscribers over leased telecommunication lines. The NVI whitepaper further stated that the principal objectives of the NVI were "to enhance Naval war fighting capabilities and reduce operating costs to all ashore and afloat commands, both within the continental United States and throughout the world" (NVI Whitepaper, 2).

The NVI whitepaper illustrated the vision of a network that consisted of individual client computers connected to an "Information Services 'Cloud'" (see Figure 1). This cloud represented the centralized infrastructure that would support both classified and unclassified network traffic. The IPT also suggested that this architecture would ultimately reduce IT related expenditures incurred by the inefficient operation of stand-alone, command-owned IT systems (e.g., under-utilized network servers). Cost savings would be accomplished by eliminating the hiring of local, skilled personnel and the need to purchase and maintain expensive and complex hardware. Network security was another concern that the IPT felt could be mitigated by establishing the NVI. With so many Local Area Networks (LANs) operating independently, it was difficult to develop a network security standard that would fit all networking situations, and it was even more difficult to verify that these standards were being properly disseminated and adhered to in the rapidly changing information technology environment. (NVI Whitepaper, 3)

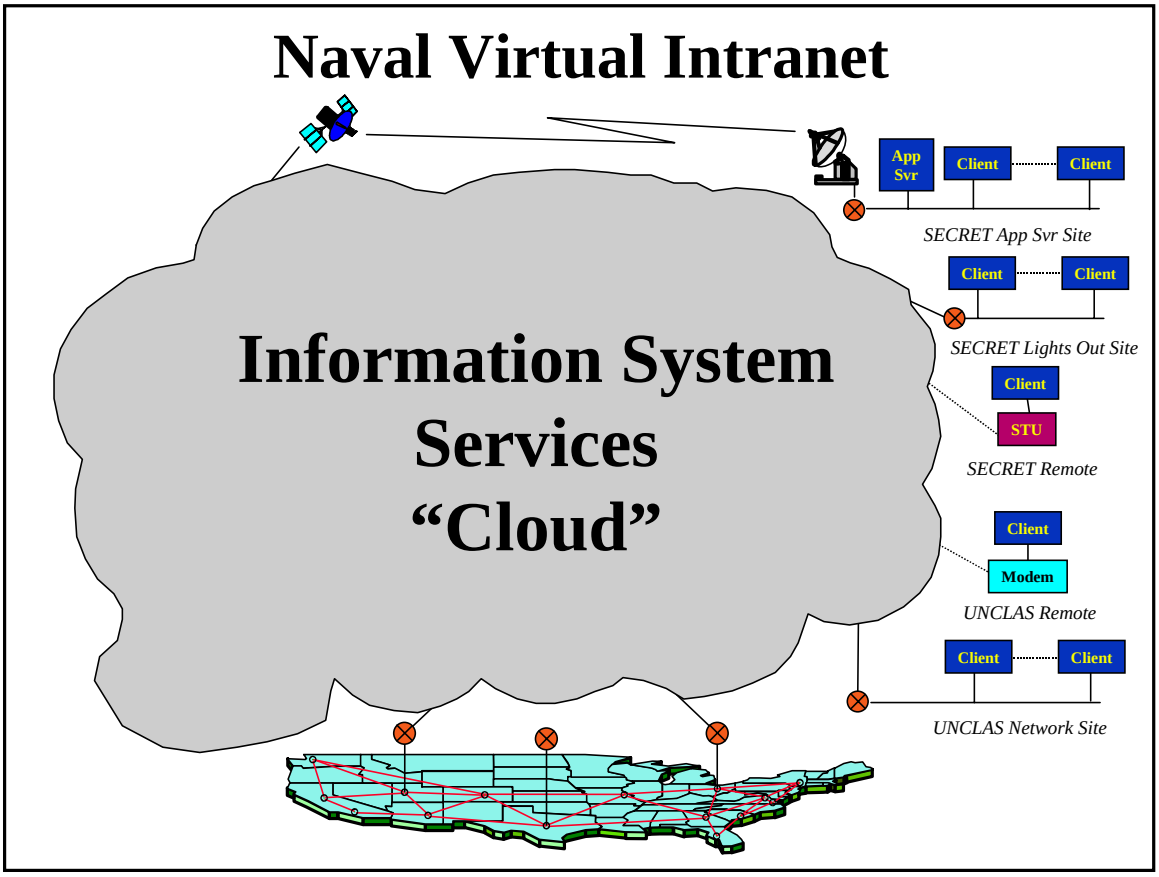

Figure 1. The NVI Concept. (From: The NVI Whitepaper, 3)

The NVI whitepaper also identified "six axioms" that were used to establish the basis for the IPT's engineering and architectural assumptions. The first axiom stated that "[i]f an Information Technology activity is central to core Naval business, it must be under positive Naval control," and the last axiom declared that "[i]n-band management of critical system resources (e.g. routers, switches) must be under positive Government control. Out-of-band management (e.g. POTS switches) may be contracted out" (NVI Whitepaper, 4). The fact that these two axioms stress "positive Naval control" and "positive Government control" was an early indication of one position regarding a controversial topic that would soon make waves throughout the Navy's program management and acquisition communities: should the Navy build or buy its IT networking capability? "Building" meant keeping the Navy's IT functions "in house" and under the direct control of the Navy, whereas "buying" indicated that the Navy would pay an outside contractor to operate and maintain its internal network.

2. NVI to NWI

At a defense technology conference in January 1999, the Chief of Naval Operations (CNO), Admiral Jay Johnson, publicly shared his vision for a Navy-wide networking solution. In his speech, Admiral Johnson expressed his desire to "create a Navy-wide intranet by 2001." Johnson told his audience that the Navy's intranet initiative, now called NWI, would serve to complement the Navy's afloat system: Information Technology for the 21st Century (IT-21). (Incidentally, according to a person involved in many upper level discussions, the name was changed from NVI to NWI because a senior Admiral thought that the word "virtual" suggested that the intranet was not real.) IT-21 provided a standard architecture for shipboard networks and it provided the framework for how these systems would link to the Navy's satellite and long-distance communications infrastructure. IT-21 was an early example of how the Navy wanted to move toward an enterprise strategy regarding the procurement of IT systems in an effort to reduce costs. When addressing the issue of price, Admiral Johnson stated that "[t]he Navy-wide intranet will increase performance, decrease cost and improve security, and with those kinds of payoffs, once again, we can't afford not to do it." Admiral Johnson also stated that the Navy intended to "buy the capability, not build it" (Castelli, 25 Jan 99).

Although the NWI was advertised as an initiative that would ultimately save the Navy money, a considerable investment would still be required to move the program from concept to reality. In March of 1999, the Navy went to Congress and asked for an additional $560 million, spread over fiscal years '00 and '01 (i.e., $280 million in FY00 and $280 million in FY01), to finance the initial NWI effort. This event marked the first in a series of confrontations between Navy officials and Congress regarding the funding of a Navy-wide intranet. In his testimony to a House Armed Services subcommittee, Vice Admiral Robert Natter, the Director for Space, Information Warfare, and Command and Control, stressed the importance of the NWI to the Navy's emerging Network-Centric strategy: "This intranet, when fully completed, will reach every Sailor and Marine and will eventually become a larger part of a DOD-wide intranet" (Skibitski, 1 Mar 99). Natter also stated that the amount of money needed depended upon the desired speed of the implementation. With a higher initial investment (i.e., more than $280

million in 2000), Admiral Natter believed that the entire intranet installation could be complete in just two years. (Skibitski, 1 Mar 99)

3. NWI to NI to NMCI

Long before the ashore intranet idea became a priority, some Navy leaders recognized the need for a fleet-wide, standardized, computer network for the afloat force. Starting in 1996 and under the supervision of Admiral Archie Clemins, the IT-21 system implementation began aboard naval vessels. The initial success of IT-21 was largely attributed to the powerful coalition that Admiral Clemins formed with fleet commanders and other influential decision makers. As a means to garner support, Clemins used workshops (later referred to as "Archie Camps") to disseminate information and to seek innovative ideas so that the best possible solution regarding performance and cost could be outlined and, because consensus at the highest level had been reached, seamlessly executed.

The "Archie Camp" concept was used once again in May of 1999 at the Center for Naval Analysis when Admiral Clemins and the Navy's top IT leadership met for a weeklong conference to map out the future of the proposed intranet program. One of the most important discussions was centered on the "build or buy" question; this was a point of contention that could not be agreed upon. Dr. Lee Buchanan, the Assistant Secretary of the Navy for Research, Development, and Acquisition, was the biggest proponent for the idea that the Navy should buy capability, not infrastructure. Those who opposed the idea of trusting an outside contractor to provide Navy IT services persistently upheld the traditional paradigm that suggested important military systems should be owned by the government and operated by trained military personnel. According to an observer that participated in many planning sessions, both sides were adamant, and emotions sometimes ran high, but eventually the view of Dr. Buchanan (the ultimate decision maker) became the official plan. Now called the Naval Intranet (NI), the new network vision would be accomplished by purchasing services from an outside contractor.

On June 25, 1999, the Navy announced the major shift in its intranet strategy. In a series of moves that established the NI as a formal program, Dr. Buchanan appointed Joseph Cipriano, a senior Navy civilian, to lead the newly created Program Executive

Office for Information Technology (PEO-IT). The following statement released to the public described the NI vision as:

> A Department of the Navy enterprise-wide network capability that provides end-to-end, secure, assured access to the full range of voice, video, and data services by 2001. The Naval Intranet enables and enhances enterprise-wide work, training, and quality of life for every Navy and Marine Corps service member and employee. (Skibitski, 5 Jul 99)

The next step in accomplishing this vision was to find a cost-effective and able contractor. To support the CNO's desire to have the Naval Intranet operational by the end of 2001, officials hoped that a contract would be awarded as early as May 2000. (Skibitski, 11 Oct 99)

During the last three months of 1999, the PEO-IT was busy requesting, collecting and analyzing industry's comments on the Statement of Work (SOW) in preparation for the release a Request for Proposal (RFP). (Skibitski, 11 Oct 99) In an effort to provide strategic guidance for the RFP, Rear Admiral Richard Mayo, the Director of Space, Information Warfare, Command and Control, sent a memo (see Appendix A, Part A) to the Navy's CIO that directed the PEO-IT to acquire the new intranet as a service and that it that must provide:

- Security to protect the network and information, and to detect and respond to intrusions with no loss of information or network capability
- Interoperability and reliability
- Efficiency in order to reduce the cost of manning and training, and to reduce the time to incorporate new technology, techniques and processes
- Network operation and maintenance to guarantee network response time, and implement enterprise-wide policies, procedures and training to maintain interoperability and currency.

In the memo, Admiral Mayo stated that "a robust information infrastructure is the foundation of achieving information and business process superiority." It was clear from the memo that the Navy's hopes and expectations for the new intranet's functionality were set at high levels.

Now called the Navy-Marine Corps Intranet (NMCI) to underscore the inclusion of the Marines, the intranet program's RFP was released at the end of 1999 on December 23; the initial deadline for industry responses was set for January 31 of the following

year. Since Congress still needed to be sold on the intranet idea, the language of the solicitation warned potential bidders that funds were "not presently available for performance under this contract beyond the first program year (FY00)" (Castelli, 24 Jan 00). The RFP was also changed to reflect a less aggressive implementation schedule that had originally been articulated from the Navy's top leaders. The final RFP stated that "the intranet should reach initial operational capability (IOC) by the end of 2001 and full operational capability [(FOC)] by the end of 2002, with the more intensive functions of the intranet not available until latter in the year" (Castelli, 24 Jan 00). The RFP deadline was subsequently extended to February 14 at the request of a bidder who needed more time. (Bohmfalk, 7 Feb 00) When the closing date finally arrived, the Navy had received bids from four teams: Computer Sciences Corp. (CSC), Electronic Data Systems (EDS), General Dynamics, and IBM.

In January of 2000 and as the Navy waited for responses to the NMCI RFP, Admiral Johnson sent a memo to all Commanding Officers and Officers in Charge to notify them that a Navy-wide intranet was in the process of being established (see Appendix A, Part B). Johnson briefly outlined the reasons for pursuing the new intranet program and what services were expected to be provided, but the major thrust of the memo was to direct Commanding Officers entering into new IT service-related contracts "to ensure that the contract can be terminated after one year in order to expedite the transition to N/MCI" and to inform them that participation in the NMCI program "will be mandatory for all Navy commands."

C. THE FIGHT FOR NMCI

1. Resistance from Congress

Although the scope and cost of NMCI was projected to be in the billions, the Navy hoped to fund the endeavor with minimal involvement by Congress. There was no budget line item for IT-21, and Navy officials hoped that NMCI could be handled similarly by reprogramming and transferring funding that was already designated for IT services. In a letter dated February 4, 2000, Congressman Hebert Bateman expressed his concerns directly to the Secretary of the Navy, Richard Danzig, about the Navy's non-traditional approach in procuring its new network program (see Appendix B, Part A).

Congressman Bateman, the Chairman of the House Military Readiness Subcommittee, requested that the Navy "delay the acquisition and implementation of this initiative until it is fully developed, is included in the future budget request, and receives the proper level of Congressional oversight." The Congressman also urged the Navy to conduct a business case analysis so that the program could be subjected to further scrutiny.

On March 8, the Government Accounting Office (GAO) publicly characterized the NMCI as "unnecessarily risky" and advised Congress to slow the program's pace. (Bohmfalk, 13 Mar 00) On the same day, Secretary Danzig sent a written response to Congressman Bateman to explain the Navy's present position and future intentions with regard to the NMCI (see Appendix B, Part B). Danzig admitted that "[t]he dollars involved are substantial," but he went on to explain that "existing DON expenditures for IT infrastructure and services are already substantial;" therefore, according to Danzig, the Navy was merely planning to spend already allocated IT dollars more efficiently. Danzig argued that the Navy's decision to seek a service-based contract was fiscally sound and in line with current business practices, and that purchasing this service was no different than buying other types of utilities like water, telephone and electricity. Secretary Danzig also addressed Bateman's concerns with respect to the lack of a business case:

> …a business case could not be completed without input from industry. Consequently, the data required to complete the business case was requested as part of the RFP. The contract will not be awarded until the business case is completed and the results are understood by both the Department and DoD.

Secretary Danzig attached a Memorandum of Agreement (MOA) at the end of his letter to present the "key elements" of the agreements between the staffs of the major participants in the acquisition and oversight of the NMCI (see Appendix A, Part C). Danzig implied that the Navy would use the MOA as a roadmap to NMCI's implementation.

In a second letter to Secretary Danzig, Congressman Bateman stated that "the substantive merit of NMCI is not questioned," and that his concern was that "the Navy has yet to identify the O&M funding which will be put toward the contract in fiscal years 2000 and 2001" (see Appendix B, Part C). Bateman indicated that he did not approve of

the fact that the Navy was using money from accounts that were authorized and appropriated to fund legacy systems, not the NMCI program. The Congressman reiterated his request for the Navy to name the affected accounts. (As a side note, Congressman Bateman died in his sleep on Monday, September 11, 2000 at the age of 72.)

2. The Navy Builds its Case

While the Navy mulled over which industry team should be awarded the NMCI contract, proponents of the program began to speak out to the public in an attempt to quell the negative press NMCI had been receiving over the previous months. The most fundamental question that the Navy could not answer was how much NMCI would cost. Dr. Lee Buchanan addressed this issue by stating that the Navy did not intend to spend more than it was already paying for IT services. Buchanan said that the Department of the Navy was presently spending approximately $4,600 per seat per year, so if the seat price in the NMCI contract could be negotiated below that mark, then the Navy would save money. Regarding the non-traditional funding strategy that the Navy was using to field NMCI, Dr. Buchanan said that "[w]e don't regard this as an acquisition program in the traditional sense. It's not a purchase, we don't own anything… We're buying a service, and we're paying for the service the same way industry does it" (Bohmfalk, 20 Mar 00). Buchanan also suggested that the conventional procurement process was inadequate to support the purchase of IT related goods:

> What I can't do is buy a traditional Navy-Marine Corps Intranet in a traditional acquisition system and take seven or eight years to put the thing up, and have equipment on line that's seven or eight years old – already four generations behind whatever you can buy on the open market. I can't do that. (Bohmfalk, 20 Mar 00)

Ron Turner, the Deputy Navy Chief Information Officer for Infrastructure Systems and technology, went a step further than Dr. Buchanan by saying that even if NMCI "costs a little bit more and we still get the [additional] capability, it's still a good deal" (Bohmfalk, 3 Apr 00). Turner also described the Navy's approach in the determination of NMCI's cost and financing method by outlining a three-step process. The first step was to identify which accounts would be affected by NMCI so that planners could determine what money would need to be realigned. The second step involved gathering

assessments that were being conducted at individual commands to determine how they planned to pay for their seats. And the last step would be a "due diligence" analysis conducted by the contractor to determine how much of the current IT infrastructure could be reused for NMCI, and subsequently, the overall cost of the initial investment. (Bohmfalk, 3 Apr 00)

3. The Senate Gets Involved

In May of 2000, the NMCI initiative was severely threatened. Congress was still waiting for the Navy to deliver the NMCI business case analysis, and they still had deep concerns about how the program would be funded. In response to the perceived lack of financial discipline by the Navy, both the Senate and the House used the FY01 Authorization Bill to prevent the Secretary of the Navy from pursuing the NMCI program "until supporting documentation is provided to Congress" (Bohmfalk, 15 May 00). The Senate's version of the Authorization Bill also restricted the Marine Corps and all Navy shipyards and depots from participating in the intranet program until after it had sustained proven operation for a minimum of one year. Additionally, the Navy needed to fulfill the following requirements before NMCI could be pursued further:

- Identify which accounts will pay for the intranet
- Develop an acquisition plan based on implementing the project in increments
- Follow a management framework set up in a March MOA between the Navy and DoD information officers
- Assess the effects of the initiative on federal workers (Bohmfalk, 15 May 00)

Congress' actions showed that they intended to slow down the Navy's aggressive implementation plan. As a consequence of the FY01 Authorization Bill, the Navy was forced to face the possibility that they may need to make adjustments to some of the earlier deadlines specified in the proposed NMCI contract. (Bohmfalk, 15 May 00)

The Navy initially declared May as the month they would award the NMCI contract, but due to the delay tactics employed by Congress, the Navy's projected timeline was revised. In June, the Navy determined that the NMCI contract would not be awarded until August, if at all. The Navy also removed all references regarding hard deadlines for NMCI's IOC and FOC from the paperwork outlining contractor

responsibilities since the opportunity for the winning bidder to get started in FY00 was slowly slipping away. (Bohmfalk, 12 Jun 00)

In the middle of June, the Navy experienced another setback. Two Senators, Olympia Snowe and Charles Robb, added an amendment to the FY01 Authorization Bill that focused on the protection of federal workers. The new version of the bill directed the Secretary of the Navy to "mitigate any adverse impact of the implementation of the Navy-Marine Corps Intranet on civilian employees of the Department of the Navy" by:

- Planning how to transition employees to other functions
- Taking full advantage of all transition options
- Encouraging that affected employees be retrained if they wish to work at other Navy jobs
- Requiring the winning contractor to "provide a preference for hiring employees" (Bohmfalk, 26 Jun 00)

The amendment also restricted the number of installed NMCI workstations to no more than 15 percent in the first quarter of FY 2001, and it stipulated that no additional seats could be delivered until the Department of Defense had certified the program. (Bohmfalk, 26 Jun 00) According to an official that was involved with the early planning of NMCI, this new law was problematic from the Navy's standpoint since the elimination of jobs was an intended outcome of the intranet plan that, in the long run, was supposed to save money. If the Navy was forced to not only transition workers to other jobs but also retrain them, the net effect would more than likely be an increase in overall employment costs, instead of the desired drop.

4. The Navy's Report to Congress

On June 30, 2000, the highly anticipated NMCI business case analysis was finally delivered to Capitol Hill as a part of the Navy Marine Corps Intranet Report to Congress. Navy Secretary Richard Danzig sent identical letters to Congressmen Floyd Spence (Chairman of the House Armed Services Committee) and Jerry Lewis (Chairman of the Subcommittee on Defense) and Senators John Warner (Chairman of the Committee on Armed Services) and Ted Stevens (Chairman of the Subcommittee on Defense) to inform them that the Navy's report was finished and ready for review (see Appendix B, Part D to see Senator Stevens' letter). The Navy's leaders knew that NMCI needed support from

each one of these influential politicians (i.e., in both the House and the Senate) to increase the likelihood that the program would be approved.

The Navy Marine Corps Intranet Report to Congress once again outlined the many expected benefits of NMCI and with regard to IT expenditures, it identified 335,000 seats that were presently being utilized, and it concluded that the Navy was spending an average of $4,582 on each seat per year; therefore, the Navy's total annual IT obligation was implied at slightly over $1.5 billion. (NMCI Report to Congress, A-2) In contrast, the report stated that the NMCI would cost the Navy somewhere between $1 billion and $1.5 billion per year (i.e., up to $500 million in savings per year), depending upon the program year. The report also listed the specific accounts that would be used to fund the NMCI initiative (see Figure 2).

The Navy's Plan to Pay for NMCI (figures in millions)

	FY01	FY02	FY03 - FY05
Navy O&M	119.6	577	679.8
Navy Reserve O&M	19.8	131.3	183.2
Navy RDT&E	7	9.8	9.8
Working Capital Fund	109.8	248.5	269
USMC O&M		70.1	280.5
USMC Reserve O&M		7.2	28.4
Navy Environmental Restoration		0.6	0.7
Navy Military Construction		8.2	9.4
Navy-USMC Family Housing		0.7	1
BRAC		1	1
Defense Health Program		<0.5	<0.5
FY Total	**256.2**	**1055**	**1463**

Estimated contract award: 5.7 billion over 5 years

Figure 2. NMCI Funding Accounts (After: NMCI Report to Congress, A-3)

In addition to cost data, the NMCI report also addressed several other issues that were of interest to Congress:

- Protection of federal workers: the current analysis indicated that NMCI will directly impact the functions of less than 1% of DON's civilian workforce. Of the 1,938 personnel impacted, it is currently estimated there will be:
  - 1,003 internal placements within the current activity
  - 36 placements at other activities within the claimancy
  - 84 regular retirements
  - 240 early retirements
  - 199 departures through normal attrition
  - 329 involuntary separations
- The use of military personnel: the Navy will make 421 billets available for assignment to NMCI, and the Marine Corps has identified 251 positions that will be made available for assignment to NMCI
- A plan to encourage the participation of small businesses: the NMCI solicitation requires the successful contractor to subcontract at least 35% of the contract price to small businesses, with at least 10% dedicated at the first-tier subcontractor level
- Risk management: a 4-step risk management process will be executed (NMCI Report to Congress, A-4 thru A-6)

The report also stated that NMCI would be "incrementally phased" to give the operational test and evaluation communities the opportunity to "verify that the service level agreements [(SLAs)] can be measured and met prior to initiating any additional task orders against the contract" and that the delivery process would undergo a "strategic pause" (a period of approximately 2-3 months) to "allow for the development of lessons learned that will be passed to all further installations" (NMCI Report to Congress, A-4 thru A-6).

D. THE NMCI CONTRACT IS AWARDED

1. The Final Stretch

In the last few months leading up to the NMCI contract award, the Navy, the Office of the Secretary of Defense (OSD), the Office of Management and Budget (OMB), and Congressional leaders were all struggling to reach an agreement on the final

details of the proposed intranet program. One of OSD's primary concerns with how the Navy planned to use (or not to use) the Defense Information Systems Network (DISN), which was a DoD network created from commercially leased lines. DISN, managed by the Defense Information Systems Agency (DISA), was the DoD's telecommunications backbone that was shared by various government subscribers. Since many felt that DISA's future was dependent upon securing NMCI as a customer, DISA's leadership lobbied hard to be the primary carrier for the new intranet program, and subsequently, OSD also pushed for DISN's utilization. The Navy on the other hand, did not want the technical and financial limitations of DISN to hamper the new network initiative. According to a NMCI planner, the Navy felt that DISN would cost more, have longer delivery times, and provide a lower level of service than other comparable solutions. On August 17, the Navy succumbed to the political pressure and reached an agreement with DISA that required the Navy to consult with them before making any commitment to use a privately owned, data transfer service (see Appendix A, Part D). This was a huge defeat for the Navy because the cost for data transfer services was already included in the NMCI contract bid; therefore, any money that the Navy paid to use the DISN was an extra expense. One official that was close to the program estimated that "when it is all said and done, DISA will have siphoned off a quarter of a billion dollars."

OMB's analysis of NMCI was two-part: legal and financial. In a memo sent to the Secretary of Defense, William Cohen, the Director of OMB expressed conditional approval for the NMCI project (see Appendix A, Part E). First, the letter discussed the Clinger-Cohen Act of 1996 which "requires IT investments be integrated with the budget process, provide quantifiable performance benefits, and demonstrate a positive return on investment." Although the Director of OMB stated his concerns regarding whether NMCI met these requirements, he agreed that "adequate justification exists for conducting the pilot phase of the NMCI acquisition." The letter then listed the conditions upon which OMB would continue to support the NMCI project. Most of these conditions were related to the outcomes of the first phase of NMCI's rollout; OMB referred to this phase as the "NAVAIR pilot." The Naval Air Systems Command (NAVAIR) was one of the first organizations scheduled to undergo the NMCI installation process.

As the new fiscal year approached, Navy officials waited the final decision from Congress. Self-imposed deadlines to award the NMCI contract slid several times throughout the month of September. OMB signed off on the intranet plan on September 12, and OSD gave its conditional blessing on September 15 (see Appendix A, Part F). Of particular concern was the predicament that NAVAIR faced due to the expiration of their existing IT services contracts. As the new fiscal year began, leaders at NAVAIR would have to seek short-term contract extensions while they waited for Congress to either approve or reject the NMCI initiative via the FY01 Authorization Bill. (Bohmfalk, 2 Oct 00)

2. The Contract Award

On Friday October 6, 2000, the eve of a 3-day weekend, it was announced that the NMCI contract would be awarded at 5:00 o'clock that afternoon (immediately after the financial markets closed for the day). Flanked by Admiral Vern Clark, the CNO, General James Jones, the Commandant of the Marine Corps, Joe Cipriano, the PEO-IT, Dan Porter, the DoN CIO, and a few other high-ranking officials, Secretary Richard Danzig addressed the news media at a DoD news briefing regarding the impending NMCI contract award. In his opening remarks, the Secretary reiterated the Navy's expected benefits of the program. He stated that the NMCI would be "more economic," "more secure," and "more reliable," and that the idea of treating IT services as a utility would allow the Navy to capitalize on the frequent advances in technology. Danzig went on to describe what he thought was the most fundamental advantage of NMCI:

> [W]e realize that apart from its virtues of economy and security and reliability, apart from its keeping pace with an extraordinary evolving technology, there was one transcendent, enormous advantage of [NMCI], and that is that we can change the culture of the organization by creating a common information system so that instead of participants individually with different sections of the organization maintaining their own information supply, and when they need something form someone else, sending them an email and asking for it, they could instead directly access it. (DoD News Briefing, 6 Oct 00)

In response to a question regarding metrics, Secretary Danzig outlined "five parameters" that he planned to use as a means to measure NMCI's success:

- Is the DoN getting more for its money?
- Is the system more secure?
- Has efficiency and effectiveness improved?
- Is the refresh rate fast enough?
- Are we changing the culture of the organization?

Secretary Danzig also stated that he was impressed with the overall speed at which the NMCI program made its way through a historically slow acquisition process: "We have taken this idea from its conception, 18 months ago, through an RFP this last Christmas, to implementation now. And that's something we're very proud of" (DoD News Briefing, 6 Oct 00).

As the news briefing continued, more of the NMCI contract specifics were revealed. For example, General Jones stated that the Marine Corps would now participate in NMCI starting in FY03 (not FY02 as the NMCI Report to Congress indicated). Also, the amount of the award, which had been rumored to total somewhere between $10 and $16 billion, was said to be closer to $6 billion over five years. Regarding the DISN controversy, Joe Cipriano, alluding to the August 17 MOA, confirmed that "we'll be communicating through DISN to the Defense Network to the other services as our primary long-haul carrier." When responding to an implementation question, Cipriano also stated that the initial installment would consist of 40,000 seats (for testing during the "strategic pause" phase). Cipriano pointed out that the winning contractor would also be able to receive incentive bonuses for reaching predetermined goals in areas of customer satisfaction, security, small business participation, and full operational capability (see Figure 3). (DoD News Briefing, 6 Oct 00)

NMCI Contract Incentives

1) Full Operational Capability:
A one-time payment of $10M when steady state operation is achieved.

2) Customer Satisfaction:
If rated either above the average or above the mid point, as applicable, by more than (85%, 90%, 95%), then the government will pay the contractor ($25, $50, $75) for each data seat in that Navy Claimant or USMC Major Command which has obtained full performance.

3) Information Assurance:
Up to a maximum of $10M per Program Year for superior performance against network attacks.

4) Small and Disadvantaged Business Participation:
A maximum of $625,000 semi-annually ($1.25M per year) will be awarded if small and small disadvantaged business participation is at a level higher than the level of 40% over all and 10% subcontracted to the First Tier.

Figure 3. NMCI Contract Incentives (After: NMCI Contract, 154-156)

On the same day, Secretary Danzig also released an administrative message that was sent to every command in the Navy and the Marine Corps (see Appendix C, Part A). In this ALNAV (message to all Navy), Danzig outlined NMCI's expected benefits, and he addressed the many changes that NMCI would bring to the long-established way of conducting daily operations:

> The challenge of the next months, years, and perhaps decades, is whether we can seize the advantages of the system we are putting in place. This will require changes that transcend technology – they are changes in the way we do things. To seize the benefit of what we are today creating, we will need to decentralize where historically we have centralized, flatten decision-making that has historically been hierarchical, integrate where we are often now separated, customize what we once struggled to standardize, and use private industry to perform functions we have previously jealously guarded.

Secretary Danzig acknowledged that "there are legitimate objections and inherent difficulties in what we are trying to do," but at the same time he asked Sailors, Marines, and Civilians to "embrace the opportunities inherent in this technology change or put ourselves and the nation at risk."

As promised, at 5:00 pm E.S.T. the identity of the winning bidder was revealed to the public: EDS was the Navy's choice. The total award was valued at $6.9 billion over eight years (i.e., five base years plus three optional years). $4.1 billion of the award was designated to be spent during the first five program years (PY01 thru PY05) and the remaining $2.8 billion was the value of the optional years (PY06 thru PY08). The EDS team, also known by their self-named coalition the "Information Strike Force" (ISF), included several different subcontractors. The subcontractors that comprised the ISF included Dell, Cisco, MCI, Microsoft, Raytheon, WAM!NET, WorldCom, and other companies from the small business community. Although the NMCI solicitation paperwork originally called for the minimum participation of 35% from small subcontractors, EDS announced that they were targeting 40%. In accordance with the wishes of Congress, the contract also limited the initial implementation to 15% (45,000 seats) with naval shipyards, naval aviation depots, and the Marine Corps being prohibited from participating until PY02. The first batch of NMCI seats were planned to be delivered by January 2001, after which the Navy planned to undergo the "strategic pause" phase until April or May to allow for extensive testing and evaluation. (Bohmfalk, 9 Oct 00)

Within a week after the contract award, the NMCI Execution Plan was released. The NMCI Execution Plan was a 300-page document "designed to provide a comprehensive guide for the Navy and Marine Corps Intranet (NMCI) execution" and it was presented as "a stand-alone manual to describe the major NMCI system considerations from program start-up, though system transition, to full operational capability (FOC)" (NMCI Execution Plan, 1-1). This plan described the NMCI vision as an IT initiative and procurement strategy to provide:

> …secure seamless, global, end-to-end connectivity supporting both warfighting and business functions that will allow our people to focus on the mission rather than IT services, and that will enable new processes and

> technologies such as knowledge management, distance learning, and telemedicine to improve the quality of life of all service members and employees. (NMCI Execution Plan, 1-2)

The NMCI Execution Plan also defined the responsibilities of all involved offices and agencies and it outlined the transition methodology, the contract management approach, the risk management plan, the business performance metrics, and the master training plan. Additionally, the NMCI Execution Plan addressed personnel issues regarding federal worker protection and military member training and billeting, and it also included various guides and checklists that were intended to make the process of ordering of NMCI services as simple as possible.

E. THE NMCI IMPLEMENTATION PROCESS GETS UNDERWAY

1. The Delays Begin

After the Navy awarded the NMCI contract, leaders began to focus on the first major step of the intranet's implementation process: delivering the first 40,000 seats. NAVAIR was first on the installation schedule along with the following offices and organizations:

- Secretary of the Navy staff
- CNO staff
- Pacific Fleet aviation commands
- A portion of Naval Sea Systems Command
- Office of Naval Intelligence
- A Navy Reserve command in D.C.
- Office of the Space and Naval Warfare Systems Command (Bohmfalk, 6 Nov 00)

Planners hoped that the initial rollout would be completed in just three months so that the congressionally mandated test and evaluation period could begin, but the Navy quickly concluded that reaching that goal was impracticable. Late in the month of October, the Navy announced its new plans for implementing the first stage of the NMCI project: EDS would devote most of its energy in the last months of 2000 and the beginning of the next calendar year establishing a working relationship with the NMCI Program Office, reaching agreements with local subcontractors, and hiring new personnel (see Appendix

C, Part B). After this initial transition period, the first six months of 2001 would then be used to deliver seats, transfer responsibilities, and transition software applications. The Navy cited the multiple delays in the contract award process as the cause of the three-month IOC slide from March to June 2001. (Bohmfalk, 6 Nov 00)

With the exception of the reported smooth rollout at the Atlantic Fleet headquarters, the first few months of 2001 represented turbulent times for EDS and the Navy. (Bohmfalk, 28 May 01) As EDS scrambled to meet deadlines and expectations, leaders in the NMCI Program Office would once again need to adjust the NMCI implementation schedule; in fact, it seemed as though the NMCI seat rollout plan was under almost continuous revision. As seat delivery reached the summer months, cutover (when EDS physically installs the NMCI workstations and connects them to the NMCI network) was lagging approximately two months behind for some commands. The Navy's top brass were beginning to accept the undesirable probability that the first phase of implementation would extend into the next fiscal year (i.e., FY02). (Bohmfalk, 23 Apr 01)

The process of cutover could not be accomplished until an NMCI Network Operations Center (NOC) had been built and put into operation. EDS originally planned to build six NOCs; the locations of these centers are illustrated in Figure 4. EDS later decided that four NOCs could support the NMCI network and meet all SLAs; therefore, the NOCs that were planned to be built in Jacksonville, FL and Puget Sound, WA, would "instead be called enterprise management facilities and will contain a host of servers and other IT network capabilities;" if needed in the future, these facilities would also have the capability of being converted into a NOC. (Bohmfalk and Castelli, 19 Nov 01) Although construction of the first two NOCs in Norfolk and San Diego was competed in mid-May, they were not operational until July 9 and August 6, respectively. (Bohmfalk, 9 Jul 01 and 6 Aug 01)

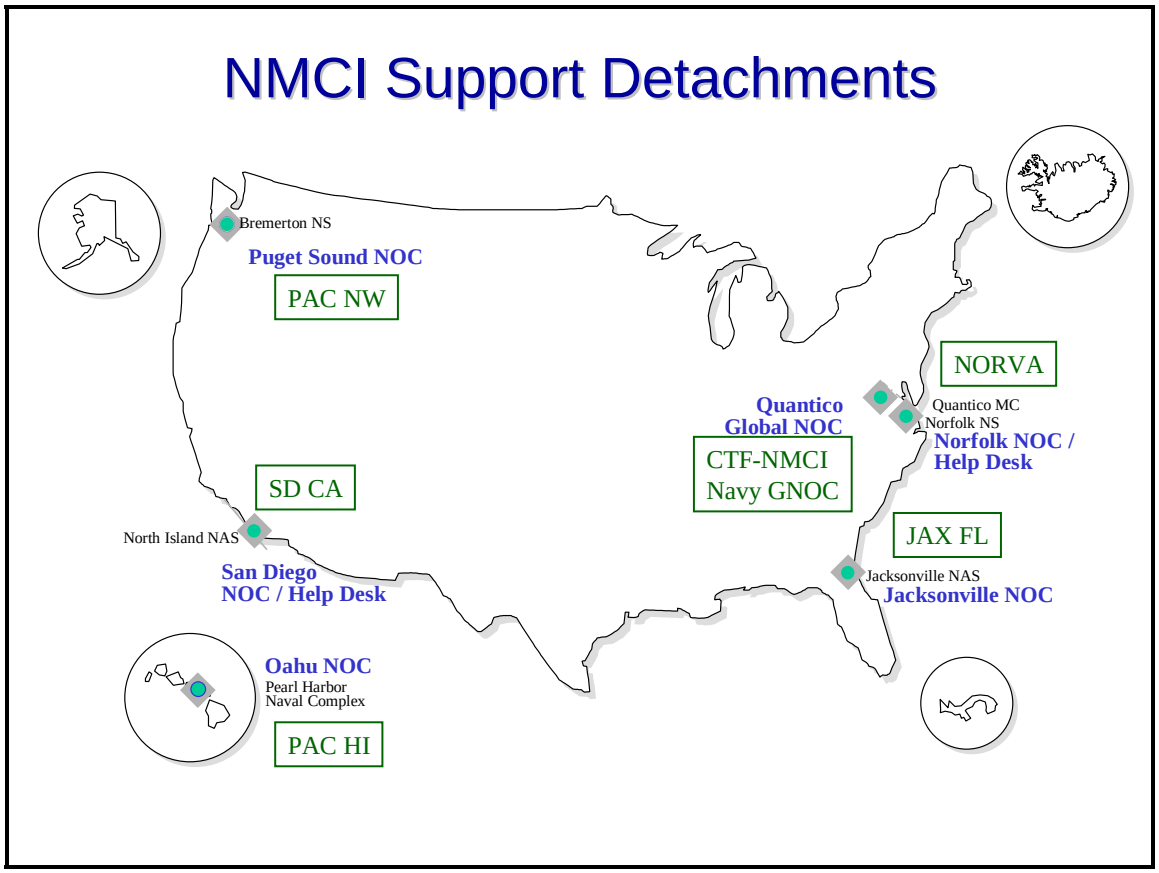

Figure 4. NOC Construction Plan (After: Joseph Cipriano Press Conference PPT, 11)

Cutover for the first site (Naval Air Facility, Washington D.C.) was originally scheduled to happen in late June, but no NOC was ready. (Bohmfalk, 28 May 01) The cutover delay, however, was not only being caused by the availability of the NOCs, but also the unexpectedly high number of legacy applications that needed to be approved for use on NMCI. The Information Strike Force was required to evaluate and migrate each one of these legacy applications for use on the new network using the laborious DoD Information Technology Security Certification and Accreditation Process (DITSCAP), but the number of applications found at Navy commands continued to increase. When explaining the cause of NMCI's slow implementation, Joe Cipriano commented that the "[l]egacy applications are turning out to be the long pole in the tent" (Bohmfalk, 14 May 01). An official in from the NMCI Program Office recalled that NAVAIR alone had initially identified more than 23,000 applications (this list was later revised to 13,000 when all commands were asked to identify only those applications that were mission essential).

The Navy was dissatisfied with the fact that EDS was investing a disproportionate amount of time and effort on the transition of legacy applications, so in response to this growing problem, VADM Richard Mayo, serving as the Navy's CIO, sent an Administrative Message to all Echelon II Commanders to notify them that the Navy has "more COTS and GOTS applications currently in use than is either efficient or affordable" (see Appendix C, Part C). Admiral Mayo made each one of these commanders responsible for "identification, rationalization, and submission for certification of applications, via a process that includes integration, consolidation, and elimination of applications and databases." Each commander was required to submit a report listing an initial application inventory, and the message also outlined a timeline for the identification and rationalization process. To emphasize the importance of these new requirements, Admiral Mayo ended the message by stating that he would "be individually contacting every Echelon II Commander in the next week;" it was evident that the Navy's leadership was determined to get the NMCI implementation schedule back on track by reducing the number of what they thought were nonessential applications used by Navy personnel.

2. NMCI Encounters More Barriers

In a memo dated June 29, 2001 and addressed to NMCI program executives, Linton Wells II, the acting Assistant Secretary of Defense for Command, Control, Communications, and Intelligence (C3I), suggested that the NMCI program was in serious trouble. The memo cited a PEO-IT brief that, according to Wells, revealed "a significant slip in the NMCI implementation schedule as well as the events and activities required to exit from the Strategic Pause, including the operational evaluation and updated Business Case Analysis" (see Appendix A, Part G). Given this new information, Wells concluded that if the Navy followed the guidance of Congress and OMB, the operational evaluation "will occur in October/November of 2002 rather than in October/November 2001 as previously planned." In response to the Secretary's memo, CAPT Chris Christopher, a senior official in the NMCI Program Office, stated that the schedule will only slide if Congress rejects the Navy's request to test the system under "commercial best practices" (Bohmfalk, 9 Jul 01). Christopher stated that the leaders in the NMCI Program Office preferred to execute an evaluation plan that was less extensive

than the arduous testing and evaluation process that most military systems were required to endure. In early September, DoD officials signed an agreement that reflected a step closer to a compromise between the disputed testing methods (see Appendix A, Part H). The agreement also listed criteria for the ordering of additional seats (listed in Figure 5), and it stated that the NMCI was expected to undergo its operational evaluation (OPEVAL) in June 2002.

NMCI Seat Delivery Milestones

1) No more than 60,000 NMCI seats shall be ordered until the senior level review decision at the end of CT&E 3, based on the assessment of results.

2) Based on a successful review of the test results above, the DoN will be allowed to order an additional 100,000 seats (bringing the total to 160,000).

3) Based on a successful review of the performance results from SLA testing on the first 20,000 seats, the DoN will be allowed to order an additional 150,000 seats (bringing the total to 310,000).

Note that authorization to "order" seats does not give authorization to "cutover" seats. No more than 60,000 seats (i.e. 15% of the workstations) can be cutover until the DoD CIO certifies NMCI's compliance with law.

Figure 5. NMCI Seat Delivery Milestones (After: OSD Memo)

In the June 29 memo, Secretary Wells also expressed his concerns regarding the use of DISN. Wells explained that the Navy was not living up to their promise to prioritize the use of the already existing DISA controlled network:

> Finally, I don't want to lose sight of the Defense Information System Network's (DISN) use in NMCI. The August 17, 2000 Memorandum of Agreement (MOA) requires that DISA have "the first opportunity to satisfy all wide area network (WAN) requirements…" The MOA further states that only in instances where DISA is not able to meet the service requirements, "commercial augmentation is allowed." By all appearances, augmentation has taken on the scope of an entire data services network. (see Appendix A, Part G)

CAPT Christopher would later reply that the Navy was "committed to using the DISN wherever it allows the vendor to meet his [service level agreements]," but he also pointed out that the Navy could not require EDS to use DISN. Christopher claimed that if EDS determines that the use of DISN will increase costs or raise the level of risk, they have the option of using a different data carrier. (Bohmfalk, 9 Jul 01)

Similar to the years before, Congress was ready to pass legislation to show its displeasure with the NMCI initiative. The House of Representatives' version of the FY02 Authorization Bill once again put into question the future of the embattled intranet program. In early August, the House Armed Services Committee recommended cutting NMCI by $120 million in FY02 as well as removing the Marine Corps as a potential NMCI customer. A press release outlined the committee's concerns:

> Due to the lengthy program delays and significant questions about the Navy's funding and budgetary strategy for NMCI, the committee recommends releasing the Marine Corps from the program, excluding aviation depots and naval shipyards, and authorizing $527 million ($120 million less than the President's request) for NMCI. (Bohmfalk, 6 Aug 01)

Concerned that the Marine Corps would not receive a much needed IT replenishment promised by the delivery of NMCI, General Jones, the Marine Commandant, wrote a letter to the Armed Services Committee Chairman and other Congressional leaders (see Appendix B, Part E). In his letter to Congressman Robert Stump, General Jones expressed the Marines' commitment to NMCI, and he stated that "[a]ny exclusion of the Marine Corps from NMCI would exacerbate the degraded condition of our information technology infrastructure that has not been modernized for almost two years awaiting NMCI."

3. The Navy Shows Some Progress

On September 7, 2001, an enlisted Sailor stationed at NAF Washington, D.C., became the first person to log onto the NMCI network. After logging on, Petty Officer Ian Gehrmann sent an email to "Navy Secretary Gordon England and other senior officials, informing them that NMCI was working and had been launched at the air facility" (Bohmfalk, 17 Sep 01). EDS had planned to cut over 600 seats at NAF Washington within the following three weeks, but the terrorist attack on the Pentagon temporarily diverted the attention of EDS contactors. A senior official in the NMCI

Program Office recalled that even though thirty Navy computer servers and key IT infrastructure were destroyed in the attack, EDS was able to establish a command center within four days and restore network connectivity to 700 affected Navy personnel within eight days.

In the wake of the terrorist attacks that occurred on 9/11 and on the eve of the United States' initial response in Afghanistan, Secretary Gordon England, Richard Danzig's successor, released the second ALNAV pertaining to NMCI's implementation process. The subject of the October 5, 2001 message was "Navy and Marine Corps Intranet: Future of our Naval Forces" (see Appendix C, Part D). In the message, Secretary England explained that he wanted to reinforce and update the policies stated by Secretary Danzig:

> I want to reiterate to each person how important our Navy Marine Corps Intranet (NMCI) initiative is to the future of our Navy and Marine Corps, and what we have discovered on our ongoing implementation of NMCI. NMCI is the foundation program to provide the Navy and the Marine Corps a secure, interoperable, and user friendly "information superhighway." It is the right thing to do – and we are proceeding to make it a reality.

The Secretary listed the many expected benefits of the NMCI, but he also warned that those benefits would only be realized if individuals embraced the Navy's "commitment to change." Secretary England asked all Sailors and Marines to fully support the NMCI initiative and to "be a leader" during the implementation process.

In the fall of 2001, the Navy reported that SPAWAR's "red team" (a group of hackers that tests Navy networks for vulnerabilities) was having more trouble breaking into the NMCI than the Navy's legacy networks. (Bohmfalk and Castelli, 19 Nov 01) Since one of the selling points of NMCI was increased network security, the news that came out of SPAWAR was a welcomed change from the media reports of lengthy delays and constant Congressional criticism. The Navy attributed the increase in security to the centralized nature of the NMCI infrastructure, which lowers the number of potential entry points for would-be attackers to exploit.

4. Congress Makes More Demands

As of the end of October 2001, the House's version of the FY02 Authorization Bill called for a $120 million cut in the NMCI program, and the Senate's version proposed a $59 million decrease. Conferees worked for the next two months to find a compromise between the House and Senate Armed Services Committees' proposals, and the final decision would grant the Navy a partial victory. The biggest win for the DoN was that Congress had abandoned the idea of prohibiting the Marine Corps from participating in the NMCI program. Although Congress also decided not to cut any requested funding, they did choose to add more conditions to the NMCI implementation process:

- The Secretary of the Navy is directed to "conduct a study comparing different solutions to managing an information technology network and to provide recommendations on how a service or agency might implement those solutions, including any lessons to be learned from the NMCI effort"
- The Information Strike Force "may take over no more than half of the 150,000 workstations that can be ordered in the third NMCI increment until all the implemented seats at the Naval Air Systems Command's headquarters are meeting service-level agreements"
- The General Accounting Office will study the "impact of NMCI implementation on the rate structure of naval shipyards and depots"
- The Secretary of the Navy will name a single person "whose sole responsibility will be to direct and oversee the NMCI program" (Plummer, 20 Dec 01)

When Gordon England became the Secretary of the Navy, he recognized the need for a single NMCI program manager even before it became congressionally mandated. The problem was finding a two-star Admiral that was available for the job. On February 11, 2002, the Navy named Rear Admiral Charles Munns, a career submariner, to head the NMCI Directors Office and a Marine Corps Colonel, Robert Logan, to be the Admiral's deputy. (Bohmfalk, 11 Feb 02) Before the Navy created the Director of NMCI position, there was not a distinct person with *military* authority who oversaw the operation of the NMCI program; Joe Cipriano was the PEO-IT, and he was technically in charge of NMCI, but because of his civilian status, many felt that he lacked some influence and power over operational commanders.

F. NMCI BEGINS THE NEXT PHASE OF IMPLEMENTATION

1. Testing and Evaluation

Contractor Test and Evaluation (CT&E) for NMCI consisted of three phases (called CT&E 1, CT&E 2, and CT&E 3). Each phase had a separate focus (see Figure 6).

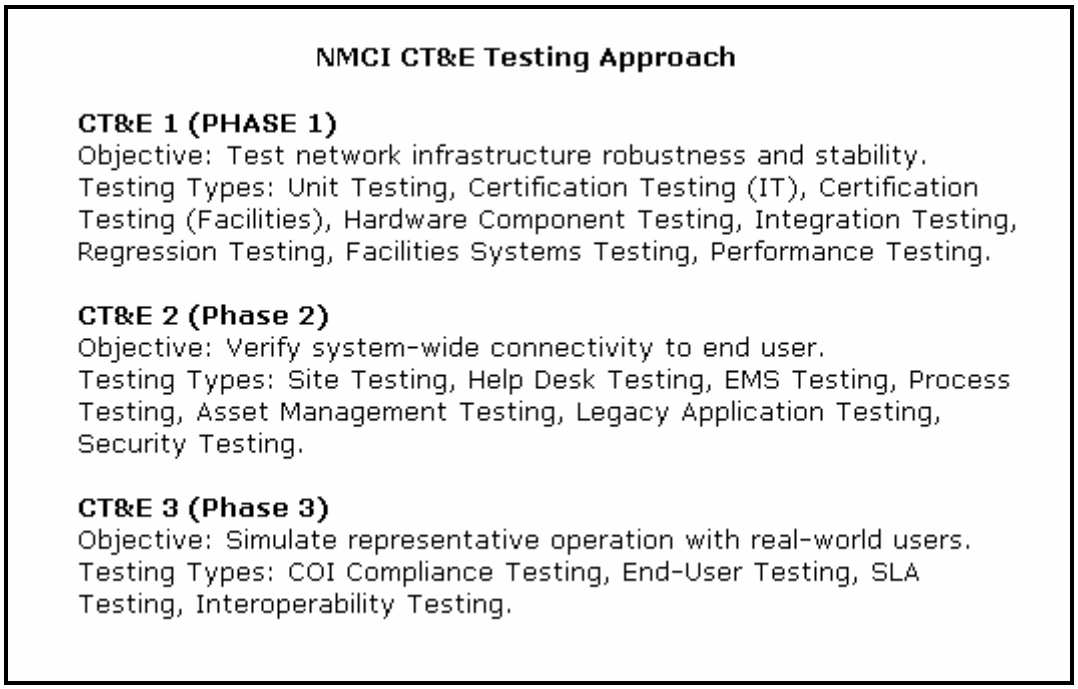

Figure 6. Phases of CT&E (After: NMCI Senior Level Review PPT, 17–19)

Before the OPEVAL could begin, the first three NMCI sites that received NMCI needed to pass each CT&E phase. As of February 2002, only one site had finished the CT&E process (NAF Washington D.C.) with only about 1200 seats cutover Navy wide. (Bohmfalk, 25 Feb 02) In April, Admiral Munns reported that CT&E testing was "halfway" done. (Woods, 8 Apr 02)

The Navy was also still waiting for testing to be completed at NAS Lemoore and at NAVAIR HQ so they could seek permission from OSD to order 100,000 more seats. On May 3, OSD granted this approval (the official memo was signed on May 7), and a total of 160,000 seats were authorized to be installed in the NMCI program (see Appendix A, Part I). Reacting to this "significant milestone," Admiral Munns commented that NMCI implementation would now become more aggressive and that the Navy was shifting from a "pilot phase to a roll-out phase" (Stevens, 6 May 02). Up to that point, 4,000 seats had been cutover across the initial delivery locations, and 20,000

more were expected to join that number by the end of July. After these seats were installed, a customer usability test was planned to begin, upon which successful completion would allow an additional 150,000 seats to be ordered. Once the implementation process was in full swing, NMCI officials hoped to deliver as many as 30,000 seats per month. (Plummer, 9 May 02)

2. The House of Reacts to NMCI's Problematic Delivery

On June 27, 2002, the House of Representatives passed the FY03 Appropriations Bill that once again sought to limit NMCI's funding and pace of delivery. The "Report of the Committee on Appropriations" explained the rationale that was partly behind Congress' unrelenting censure against the NMCI program:

> Unfortunately, while significant progress has been made in establishing the beginnings of the network, the initial rollout has demonstrated not only the magnitude of this undertaking, but the previously unforeseen challenges it presents. The Committee has heard repeatedly from the Navy, the contractor, and the claimants that failure to identify the existence of tens of thousands of legacy applications, and how or whether they could operate on the network, has severely inhibited transitioning. (HR Report 107-532)

The report stated that the complication of transitioning these legacy applications has created a choice between two unacceptable courses of action: either the application must be "made secure in order to be accommodated on the NMCI," or the application must be used "on a terminal outside of NMCI." The report provided an example of how the second of these options has "significantly impacted operations:"

> At one test center the dependence on legacy applications which are not currently on NMCI is so fundamental that more than fifty percent of the workstations require more than one computer--an NMCI terminal and a legacy terminal. It is evident at the test site that seats have not been "cut over" but merely cut in half. While this problem exists, the Navy has proceeded with additional seat orders for additional locations, creating the potential for this crisis to grow exponentially. (HR Report 107-532)

For the reasons listed above, the House Appropriations Bill stipulated that the Navy could not order any additional seats beyond the 160,000 already authorized until the following criteria were met:

- The OPEVAL is conducted once there has been a full transition of not less than 20,000 workstations to NMCI

- The network must be robust enough to perform adequate testing (HR Report 107-532)

Even though Congress elected to slow down NMCI's implementation process, they also acknowledged that EDS would need more time to fulfill their contractual obligations; this concern was mitigated in the report when it was revealed that "authorization has been proposed in other legislation to extend the contract for NMCI with the contractor an additional two years to address delays in transitioning seats to the NMCI environment" (HR Report 107-532).

Despite the news that the House of Representatives was pushing for a more deliberate rollout pace, the Navy continued to pursue its NMCI program goals. In early August 2002, the number of activated NMCI seats had reached 20,000. This milestone allowed the Navy to begin a thirty-day testing period that evaluated the usability of the intranet by testing NMCI's ability to achieve contractual service level agreements (SLAs). SLAs represent a concept that was borrowed from private industry; they are a group of metrics (also known as Measures of Effectiveness (MOEs)) that are used by a customer to evaluate network performance. The original NMCI contract outlined 44 SLAs (shown in Figure 7) with 192 Performance Categories (PCs). PCs are subsets of SLAs that identify specific performance characteristics that must be met by the contractor to avoid payment penalties.

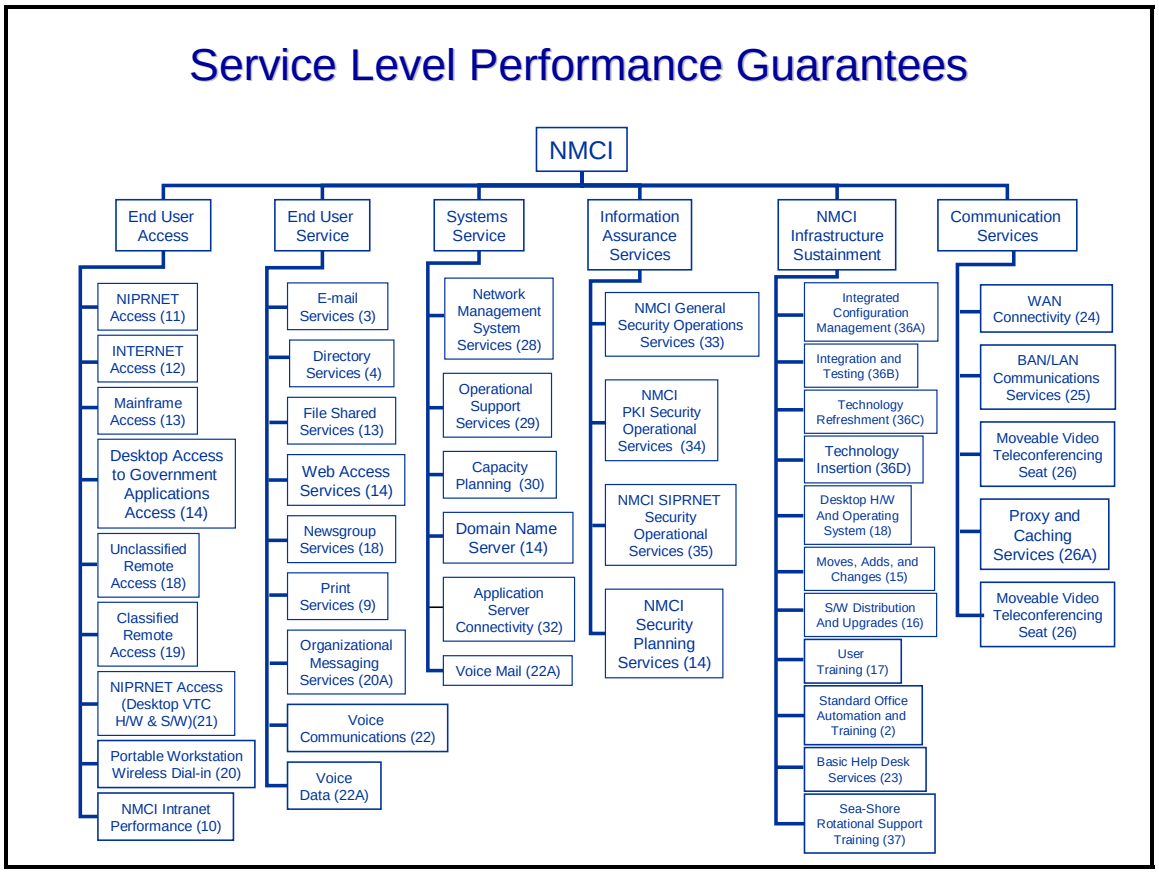

Figure 7. NMCI Service Level Agreements (From: NMCI Update Briefing PPT, 11)

3. The Contract Extension

On October 30, 2002, the Navy awarded EDS a two-year contract extension worth $1.9 billion. The new contract consisted of seven base years with a three-year option plan (see Figure 8). The Navy determined that the extension was necessary since the original contract minimums were based on an earlier projected contract award date and did not reflect the numerous implementation obstacles that NMCI ultimately faced. According to EDS, the lengthy delays caused by the legacy application problem and the slower-than-planned seat delivery rate greatly affected its NMCI business model. EDS' initial profit outlook was based on the expected seat rollout rate illustrated in Figure 9. EDS planned to invest heavily at the beginning of the program with the intent to recover any losses during the latter years when the capital costs were minimal. EDS claimed that because seat delivery did not occur at the expected rate, they were unable to take advantage of the NMCI contract's "full performance" incentives, which increased the amount the Navy pays for an operational seat from 85% to 100% of the listed price when

all SLAs were met. The Navy used Net Present Value (NPV) calculations and a new conservative cutover rate to determine that a 24-month extension worth approximately $2 billion would return EDS' projected revenue stream closer to originally estimated levels.

NMCI Contract Minimums after Extension

Program Year	Minimum
PY01	$ 90,000,000
PY02	$ 200,000,000
PY03	$ 800,000,000
PY04	$1,250,000,000
PY05	$1,350,000,000
PY06	$1,155,000,000
PY07	$1,155,000,000
TOTAL BASE	$6,000,000,000
PY08 Option	$ 939,675,867
PY09 Option	$ 939,675,867
PY10 Option	$ 939,675,867
TOTAL OPTION	$2,819,027,601
TOTAL CONTRACT	$8,819,027,601

Figure 8. New NMCI Minimums (From: NMCI Budget and Finance 101 PPT, 3)

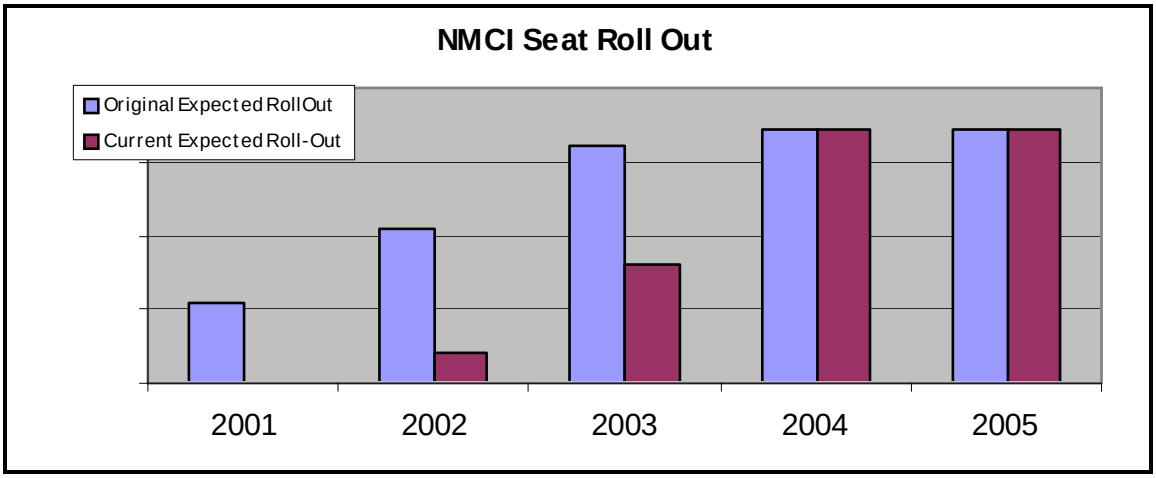

Figure 9. NMCI Seat Rollout Plan (From: NMCI Contract Extension Draft Point Paper, 2)

4. Approval for Additional Seats

In early December of 2002, the Navy was waiting for approval to expand NMCI on two separate fronts: 1) the authorization to exceed the 60,000 seat cutover limit, and 2) the approval to order another 150,000 seats. The seat cutover limit of 60,000 (i.e., 15% of the 400,000 total workstations the Navy originally intended to install) could be increased to 160,000 seats once John Stenbit, the DoD CIO, determined that the NMCI network met the certification criteria set by law. In mid-December, Mr. Stenbit indicated that the merits and functionality of the NMCI program had been independently verified and that approval to cutover an additional 100,000 seats was forthcoming:

> We believe that an acceptable testing process has been implemented and the test results demonstrated that the NMCI project is sufficiently capable of identifying issues and implementing appropriate mitigation activities, corrective actions and program improvements as the program continues. (Plummer, 19 Dec 02)

Stenbit added that "[w]hile some issues remain, the program is displaying the requisite stability and positive test results to proceed beyond the limitation stipulated" (Plummer, 19 Dec 02). Mr. Stenbit signed a letter on January 2, 2003, certifying "that the results of the operational test are acceptable" (see Appendix A, Part J).

The second issue of extending the authorization of the number of seats that the Navy could order from 160,000 to 310,000 was dependent upon the SLA testing results. (see Appendix A, Part H) SLA testing had been ongoing since August, but not enough of the 20,000 seats under evaluation had been meeting the minimum service level agreements to substantiate the decision to allow the program to advance to next implementation milestone. However, in December of 2002, the NMCI began to meet the applicable SLAs, and on January 17, Admiral Munns sent a memo to OSD (see Appendix A, Part K) along with a CD-ROM that contained the testing reports. On February 4, OSD officially expressed satisfaction with the SLA testing results, and the seat order authorization was lifted by 150,000 (see Appendix A, Part L). Notification of the approval was forwarded to Congress.

5. NMCI Faces another Budget Cut Request

In May of 2003, the House Armed Services Committee was once again looking to reduce funding for the NMCI program. Citing the slow implementation rate as the

primary concern, Congressman Jim Saxton recommended that $160 million be removed from the NMCI budget in FY04; he reassured his colleagues that the money would be replaced when the pace of seat delivery had increased. (Ma, 19 May 03) Those against the reduction argued that the cut would only cause further delays with the implementation process and would negatively impact the program as a whole. In a formal appeal dated July 9, the DoD claimed that the cut would cause the Navy to choose between two undesirable alternatives: either cancel the installation of an additional 40,000 workstations in FY04, or stop some existing seat services in FY03 to keep the delivery schedule intact. The appeal also indicated that the proposed NMCI cutback would violate contract payment minimums to EDS, thereby opening the possibility for the contractor to take legal action against the Navy. (Ma, 21 Jul 03)

6. EDS Faces Legal Questions

On July 7, 2003, a group of shareholders filed a lawsuit against EDS accusing the company's prior CEO and CFO of engaging in questionable accounting practices that hid multi-million dollar losses relating to the NMCI contract. The complaint stated that "EDS improperly used percentage of completion accounting to inflate its revenues" which ultimately caused "EDS securities to trade at artificially inflated levels" (EDS Shareholder Complaint, 1 and 4). The crux of the complaint was focused on the accounting method that EDS used to recognize revenue:

> Indeed, by June 2002, EDS had recorded revenue of approximately $1.6 billion on the NMCI Contract, representing that work was approximately 23% complete. In reality, as made clear in Congressional hearings held that month, EDS had failed to meet the Navy's criteria for acceptance for even 5% of the workstations called for under the contract. (EDS Shareholder Complaint, 2)

To illustrate the negative effect of EDS' leaders alleged actions, the shareholder complaint cited a 50% decrease in stock value (from $36.46 to $17.20) when in September of 2002, EDS announced that it expected to report a $300 million loss instead of realizing the 4%–6% quarterly growth that was projected only one month earlier. The ensuing plummet in shareholder wealth cost EDS investors $11.8 billion. (Verton, 7 Jul 03)

In early March of 2004, EDS announced that the Securities and Exchange Commission (SEC) had requested additional information concerning two NMCI related tax write-offs. EDS claimed that these write-offs, which occurred in FY03 and totaled $893 million, stemmed from the slower than expected NMCI rollout rate and were considered unrecoverable. According to EDS, a portion of this reported loss was due to the Navy's inefficient delivery plan, which had NMCI contractors installing workstations concurrently in multiple geographical locations instead of concentrating on one area at a time. For example, EDS would have preferred to rollout all of the NMCI seats in San Diego at one time instead of rolling out seats at NAS Coronado in one year, and then delivering seats to MCAS Miramar the following year. The Navy and EDS drafted a new implementation schedule to prevent future, unnecessary waste.

Despite EDS' legal and financial troubles, Robert Swan, the EDS CFO whose tenure began in February of 2003, expressed optimism in the earning potential for the NMCI deal. Although EDS had reported negative cash flows in years 2001 thru 2004 and had reported approximately $1 billion in losses (with respect to the NMCI contract), Swan projected that the company would eventually profit from the program and experience positive cash flows beginning in 2005. (Ma, 22 Mar 04)

7. Viruses and Worms Test NMCI

Although the NMCI administrators were prepared to fend off the Blaster worm that spread through the Internet in August of 2003, they did not anticipate the infiltration of the Welchia worm, a program that was designed to seek out and fix a vulnerability that was being exploited by the Blaster worm. The Welchia worm was not meant to inflict damage; however, it did affect network connectivity since its search for the Blaster worm flooded transmission lines. Press releases claimed that the NMCI network continued to operate during the attack, with some users experiencing the negative effects that ranged from slow service to no service at all. At the end of August, the Navy reported that although the Welchia worm had accessed 75 percent of NMCI's workstations, 95 percent of the affected computers were clear. (Ma, 25 Aug 03) Although the Navy performed an investigation into the incident, the final report was classified and is not available for public viewing.

On January 26, 2004, the Mydoom (also called Novarg) virus began spreading via an email attachment. This virus was designed to launch denial-of-service attacks against specific web servers. While an estimated 500,000 to 1,000,000 computers were infected globally, the NMCI network successfully blocked the malicious attachment. (Brown, 9 Feb 04)

8. The OPEVAL

In an OSD memo dated October 23, 2003, John Stenbit authorized the Navy to order an additional 35,000 seats, putting the total at 345,000 (see Appendix A, Part M). This amount represented the final increment in the original seat authorization (note that in April of 2004, the Navy requested authorization for an additional 110,000 seats to bring the total to 455,000 seats; see Appendix A, Part N). Four days after the last seat authorization, the long awaited NMCI OPEVAL began. The OPEVAL was conducted on 20,000 workstations (this number was determined to be a representative sample of the network), and it lasted until December 15. The NMCI Program Office had conducted its own technical review on the network from June to September in preparation for the evaluation, and during that test, no major discrepancies were noted; therefore, NMCI officials stated that they were fairly confident that the network would perform at a satisfactory level. The specifics of the final OPEVAL report (finished in May 2004) were classified Secret, but in early 2004 CAPT Christopher remarked that "some initial feedback suggests that the OPEVAL did not differ much from the previous technical review," and he stated that some problems were revealed, but that none were "show stoppers" (Ma, 12 Jan 04).

9. The 2004 IT Industry Symposium

In 2004, the PEO-IT sponsored an IT Industry Symposium that was held in New Orleans June 20 to June 23. According to a website that was set up to provide information about the event, the purpose of the symposium was to "foster a continuing dialogue among the IT Industry, the Department of the Navy (DON), and the NMCI prime contractor EDS to help reshape the Navy and Marine Corps IT marketplace in the Age of NMCI" (www.nmcisymposium.com, accessed November 2005). The symposium offered the leaders and implementers of NMCI an opportunity to discuss the program's current challenges and future expectations.

The keynote speaker of the symposium was Navy Secretary England. England agreed to speak at the symposium because he wanted to explain why he thought the NMCI program was crucial to the Navy:

> In case you are wondering what the Secretary of the Navy is going to tell a group of NMCI industry and military leaders, it is this: I am here today because… quite simply… I believe in and support this program. I wouldn't be here if I didn't. Although I wasn't the one who initiated NMCI… I have made every effort to make sure it survives and thrives under my tenure. It is too important not to. (England Speech, 22 Jun 04)

Secretary England continued by sharing some NMCI facts and statistics with the symposium audience: "You've likely already heard plenty of numbers this week but here are the numbers that are important to me:"

- NMCI is now the largest single network in the world… by the way… the second largest is IBM (319,000 users)… the third largest is the UK government (100,000 users; outsourced), and the next largest is General Motors (80,000 users; also EDS).
- It serves 360,000 users on line. In fact, only the Internet itself has more users than NMCI.
- 90% of the Department's shore IT is being run by EDS and over 55% of it has been cut over to the end state.
- It has on-line 4 Network Operation Centers (NOCs), 27 unclassified server farms, and 6 classified server farms – all designed to keep us operating through fires, floods, blackouts, hurricanes and unplanned deployments.
- Over 300 military and professional certifications have been achieved by our NOC-assigned sailors, including our first three Navy Microsoft Certified Systems Engineers (MCSE).
- The NMCI effort has focused us on our applications and pushed us to a much needed reduction of applications – a 90% reduction. (England Speech, 22 Jun 04)

England also stated that the NMCI program has allowed the Navy to manage the real costs of IT services better and it forced the Department to comply with DITSCAP procedures to ensure that applications used within the intranet were secure. Secretary England ended his speech by predicting that "NMCI will be a success for both EDS and for the Department of the Navy" (England Speech, 22 Jun 04).

Before the 2004 IT Industry Symposium, the NMCI Program Office and PEO-IT sponsored the NMCI Industry Symposium in 2003. In 2004 and 2005, the "NMCI"

acronym was dropped from the symposium title to put the focus on "enterprise IT," but in early 2006, the NMCI Program Office and EDS sponsored the 2006 Winter NMCI Enterprise Conference, which put the emphasis back on NMCI.

10. Admiral Godwin Takes Control

On August 6, 2004, the Navy announced that Rear Admiral James Godwin would replace Admiral Munns as the Director of NMCI. RADM Munns, now authorized promotion to the rank of Vice Admiral, was moving on from the NMCI program since he had recently been selected to serve as Commander, Submarine Forces Atlantic (SUBLANT). Admiral Godwin was an F/A-18 pilot who transitioned to the Navy's Acquisition Community in 1992. Godwin began his acquisitions career at NAVAIR as the Lead Systems Engineer, and he eventually served as the F/A-18 Program Manager and then as the Program Executive Officer for Tactical Aircraft (PEO (T)). (www.nmci.navy.mil, accessed January 2006)

Admiral Godwin officially began his tenure as the Director of NMCI on September 3, 2004. One of Godwin's first duties was to supervise the final agreement of the NMCI contract renegotiation regarding SLAs (reevaluation for scaling back SLAs had begun earlier in May). (Ma, 6 Sep 04) In a letter sent to Secretary England in early September that lamented his company's losses, EDS' CEO, Michael Jordan, asked the Navy to execute the new SLA standards by the end of the month (see Appendix A, Part O). Jordan stated that SLAs were "EDS' most visible public commitment and absolutely vital to our future;" he was referring to the fact that EDS needed to meet minimum SLA requirements to bill the Navy for 100% of an NMCI seat price (the Navy had only been paying for 85% of the seat costs since NMCI's inception). Jordan also suggested that another benefit of instituting a new SLA plan would be the likely increase in customer satisfaction rates, thereby making the company eligible for more incentive bonuses. Once the NMCI program officials determined that no performance would be lost, they agreed to reduce the number of SLAs from 44 to seven and the number of PCs from 192 to 27. The Navy claimed that the smaller number of metrics would not only be more manageable from EDS' standpoint, but also more representative of the end users' experience.

Towards the end of Admiral Godwin's first month on the job, he received a memo from OSD proclaimed that the NMCI program was "stable," and that because "the Navy has instituted effective internal management and oversight structures, and is steadily progressing toward its goal of implementing the NMCI across the entire Department of the Navy (DoN)," the NMCI program's oversight would be transferred back to the Navy (see Appendix A, Part P). This transfer of control was authorized under the following conditions:

- The DoN shall provide quarterly assessments of NMCI status to OSD beginning in November of 2004
- The DoN Chief Information Officer shall conduct a NMCI Post Implementation Interview (PIR) within 60 days of completion of the NMCI Enterprise Assessment (scheduled to occur at the end of FY06)
- The DoN shall establish future NMCI seat requirements through the Department's Planning, Programming, and Budgeting System

The decision to delegate oversight back to the Navy was largely based on a status report that was submitted by the NMCI Director's office on September 2. The memo also approved an earlier request to order an additional 110,000 seats, setting the total number of authorized seats at 455,000.

11. The NMCI Organizational Structure

The next priority on Admiral Godwin's agenda was to reduce redundancies by combining the separate Navy and Marine Corps NMCI Program Managers into one PM position, and he wanted to change NMCI's hierarchy to better align it with the already established Acquisition Community reporting structure. When Admiral Munns took control of NMCI, the position of "Director" was created for him because, according government standards, he was not qualified to be named a Direct Reporting Program Manager (DRPM). A DRPM reports directly to the ASN(RDA), similar to a PEO. Godwin, on the other hand, was qualified to hold a DRPM billet; therefore, in March 2005, Admiral Godwin's title was officially changed from the Director of NMCI to the DRPM NMCI (see Appendix A, Part Q).

In February of 2006, another organizational change was made that affected the NMCI reporting structure. Admiral Godwin became the head of the newly formed Program Executive Office for Enterprise Information Systems (PEO-EIS) (the PEO-EIS

was created from the recently disestablished PEO-IT), and his former position of DRPM NMCI was abolished. To see how the NMCI reporting structure evolved over NMCI's lifetime, see Figure 10.

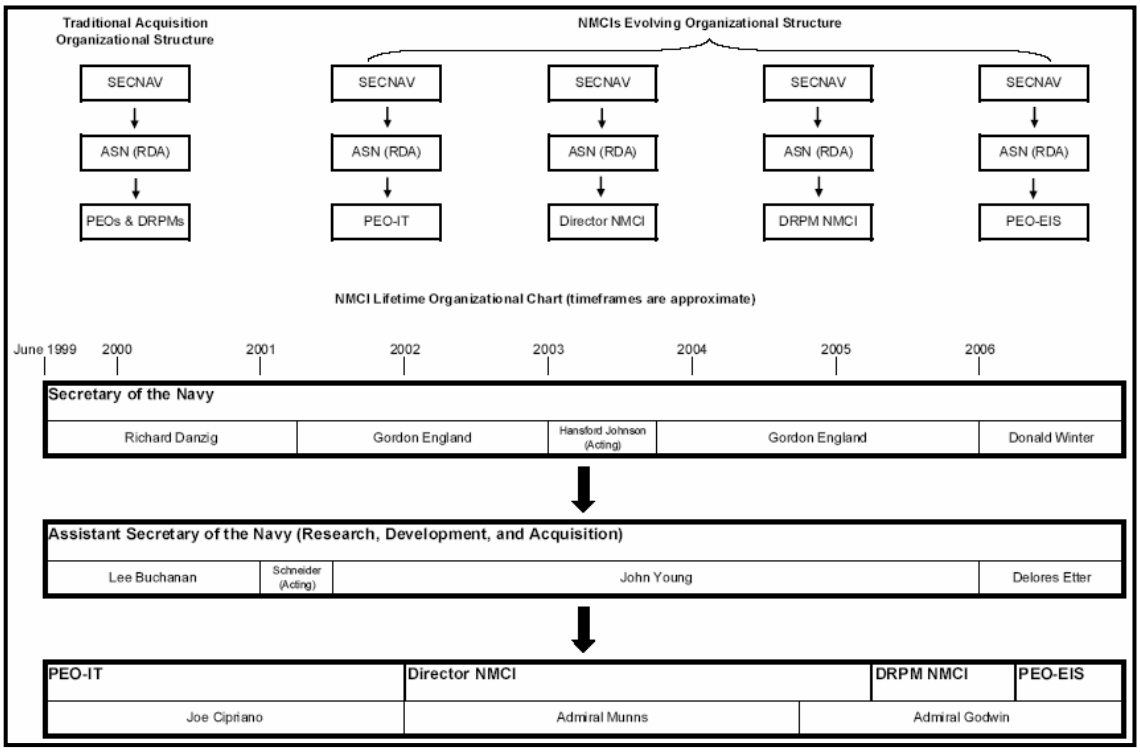

Figure 10. NMCI Evolving Organization Chart from June 1999 to June 2006

G. NMCI TODAY

1. Top Priorities

As of early 2006, the efforts of the NMCI program were divided into three primary areas to address the management's top priorities. These IPTs (commonly called Business Areas in the commercial sector) were designed to focus on the more prevalent and complex problems that plagued the program. The NMCI IPTs are expected to increase efficiencies by facilitating the Navy/contractor relationship (each team was co-led by a Navy Civilian appointee and an EDS employee), establishing a single POC for the entire program and creating a team of individuals whose sole job was to ensure IPT mission success. The three IPTs are Pre-Production & Deployment, Legacy Environment, and Life Cycle System Management, and the information regarding the mission and purpose of each of these IPTs explained below was primarily collected at the 2006 NMCI Winter Conference.

a. Pre-Production and Deployment

At the start of 2006, only 58,000 NMCI seats remained undelivered. Most of these seats were planned to be cut over in 2006, with the balance left to be rolled-out in 2007 (see Figure 11 for the 2006 planned rollout schedule). Since seat delivery has historically been the most visible aspect of NMCI's implementation difficulties (recall that the original plan called for a two-year rollout period), the Pre-Production and Deployment IPT was formed to facilitate a smooth, final rollout phase. In addition to making process improvements and eliminating obstacles, the following mission objectives for this IPT were outlined in a brief that was presented at the 2006 NMCI Winter Conference:

- To provide the Navy and Marine Corps with a high quality, cost-competitive personal computer solution
- To deliver a consistent, enterprise-wide solution
- To perform to schedule commitments between the contractor and customer, utilizing standard repeatable processes
- To improve quality of first time seat deployment (Cox and Freed, 6)

As a means to accomplish this mission, the Pre-Production and Deployment team was also chartered to identify risk, prioritize tasks, and enforce contractual obligations for both the Navy and EDS.

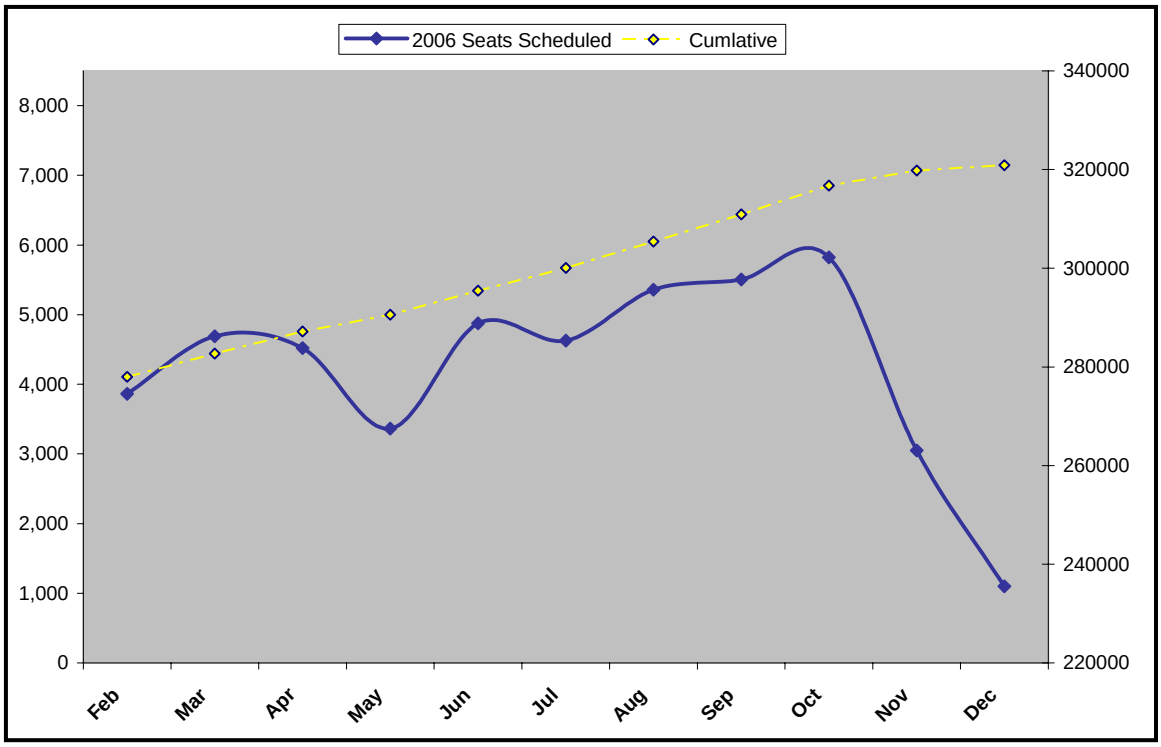

Figure 11. 2006 NMCI Seat Rollout (From: Pre-Production & Deployment IPT PPT, 14)

b. Legacy Environment

The Navy has long recognized that non-NMCI networks must be shutdown before significant cost savings could be realized, so the Legacy IPT was created to facilitate the steady decrease of legacy systems. As of January 9, 2006, the number of legacy networks still active in the Navy totaled 1,087. There were also 19,951 legacy servers that needed to be either decommissioned or transitioned to the NMCI network. The Legacy Environment IPT's main purpose is to migrate the contents and functionality of these networks and servers to NMCI. If this goal cannot be accomplished, then the IPT's aim is to either eliminate the legacy system or transfer its responsibility to another entity. (Henderson, 4)

Another goal of the Legacy Environment IPT is to mitigate the negative effects of the Navy's ongoing application problem. At the beginning of 2006, the Navy was running 11,094 applications on legacy networks and devices. Once a network is shut down, the legacy applications that were running on it (unless a particular program passed the certification and accreditation process) is no longer available for use. Because of this eventuality, the Legacy Environment IPT also helps users find alternative solutions for

their computing needs. The Navy-wide goal is to one day have an application inventory of no more than 2,000 applications that operate on the NMCI network. (Henderson, 4)

c. Life Cycle System Management

The purpose of the Life Cycle System Management IPT is to continuously enhance the quality of service for the end user by improving processes and examining customer needs and to lower the overall cost associated with lifecycle issues. To accomplish its goal of reducing cost, the Life Cycle System Management IPT members are expected to identify unnecessary expenditures from excessive network assessment (i.e., collecting data that is never analyzed or intended to be analyzed), and they also determine "courses of action as it relates to the utilization and performance of the NMCI network, applications, and associated systems" to:

- Optimize existing resources and reduce support costs
- Predict IT performance and capacity requirements for user growth and change
- Evaluate NMCI system architecture's performance and capacity for cost savings and improved efficiencies (Datte and Kelly, 9)

The Life Cycle System Management IPT enhances the end user experience by ensuring deployable seats are interoperable on diverse networks, making the seat ordering process as simple as possible, improving post-cutover assistance, facilitating customer problem resolution, and spearheading the Tech Refresh effort.

Recall that one of NMCI's selling points was the continuous technical refresh of software and hardware for the purpose of keeping the Navy's technology close to industry standards, but although the first NMCI seats were delivered in 2001, Tech Refresh did not start until recently, and the rate at which these seats are being replaced is unexpectedly slow (e.g., the goal for 2006 is to refresh 10,000 seats). (Datte and Kelly, 15)

2. The Contract Decision

On March 24, 2006, the Navy announced that the decision was made to exercise the three-year contract extension option with EDS. The Navy chose this option instead of putting the entire NMCI contract up for bid, which was set to expire in September of 2007. Dr. Delores Etter, the new Assistant Secretary of the Navy for Research, Development & Acquisition, made the decision with the aid of an independent

assessment that was conducted by a private contractor and after she consulted with NMCI Program Manager, the DoD, and numerous Congressional committees.

> After studying the issue closely I agree with the NMCI Program Manager that the decision to exercise the option early was in the best interests of the Navy. NMCI has become a vital part of our day-to-day naval operations and I felt it critically important that we not lose connectivity for our users, particularly at a critical time in the Global War on Terrorism. (Navy Awards the Contract for NMCI Program, 24 Mar 06)

The contract extension is worth approximately $3.1 billion (subject to the availability of funds), and it obligates the Navy to use EDS until September 30, 2010. According to a source in the NMCI Program Office, the following key provisions were included in the contract modification:

- Settlement of a $100 million lawsuit against the DoN
- Full and final release of all of EDS' claims up to March 24, 2006
- Improved end of contract transition planning
- Schedule assurance improvements
- Program management reviews
- New legacy systems clauses
- New clauses related to contract minimums
- Technology refresh parameters

The legacy system clauses state that all legacy peripherals, servers, network connections must be identified by May 24, 2006, and they must be registered and purchased by June 24, 2006; if a legacy system is not identified and registered, EDS can turn the system off. The legacy system clauses were added so that EDS could begin to receive payment for legacy system support (few people had anticipated that the Navy would still be operating legacy systems six years after the NMCI contract was signed). The modification also preserved the 15 percent seat price decrease (over the option period) that was established in the base contract.

Regarding the decision to extend the contract, Admiral Godwin, the PEO-EIS, stated that "[a]ffordability, performance, schedule and security are the reasons this is the right choice to make" (Navy Awards the Contract for NMCI Program, 24 Mar 06).

H. CONCLUSION

The purpose of this chapter was to introduce the reader to the NMCI program from the viewpoint of strategic leaders and top-level managers. By illustrating the program's implementation problems and the turbulence that was encountered in the Congressional approval process, this chapter showed how NMCI officials could easily become distracted with outside threats. Although this chapter focused on the historical events that surrounded the NMCI program, its main purpose was to lay the groundwork for subsequent chapter discussions.

The next chapter gives an historical account of site-specific events at NAS Lemoore and SPAWAR San Diego. This comparative case study will show the NMCI program from the viewpoint of the local IT managers and the system's end users at two very different locations. The employees at one location were starving for an IT upgrade, whereas the employees at the other had everything they needed. Ultimately, the experiences that are described in Chapter III show how the NMCI program was managed with regard to change.

III. IMPLEMENTATION AT THE SITE LEVEL

A. INTRODUCTION

Unlike the previous chapter that gave a historical perspective of NMCI from the upper management and strategic level, this chapter gives the reader a sense of what was happening in the "trenches" during NMCI's implementation process (i.e., at the site level). This is the level that is often ignored during a transformation process because top leaders are usually focused on the "big picture" impact of their decisions. In the case of the Navy, leaders were too engulfed with dealing with the resistance from Congress (and other government agencies) to notice the opposition that was growing within their own organization. This chapter will establish the primary reasons for user resistance to NMCI and how this resistance has evolved over the past five years. This chapter highlights some of the more serious problems that officials encountered during NMCI's rollout, and what leaders or contractors did to mitigate or fix them.

This chapter is divided into two major sections. Each section details the activities and events that occurred during NMCI's rollout at a specific location. The first section covers NAS Lemoore, the Navy's west coast Master Jet Base, and the second section describes the NMCI installation process at a SPAWAR site located in Point Loma, a suburb of San Diego, California. The goal of this chapter is to compare and contrast the implementation process at each one of these locations with regard to acceptance, attitudes, behavior, and leadership.

These two sites were selected because they were both at opposite ends of the spectrum regarding pre-NMCI computing and networking capability. NAS Lemoore was considered a "have-not" location, and SPAWAR was considered a "have." Commands or bases that were "have-nots" usually had an older IT infrastructure that consisted of antiquated servers and computers, and the "haves" of the Navy frequently prioritized the functionality of their information systems. "Have-not" commands did not have the IT budget that was required to purchase high performance equipment or high-speed Internet connection services, whereas the Navy's "haves" were able to regularly purchase new

technologies and build robust computer networks, and they also enjoyed superior LAN performance as well as good connectivity to the Internet.

B. NAS LEMOORE

1. Site Overview

NAS Lemoore is located approximately thirty miles south of Fresno, California. Once a WWII Army Air Corps training site, the Navy formally established a Naval Air Station at Lemoore on July 8, 1961. Through the years, NAS Lemoore has been the home of the A-4 Skyhawk, the A-7 Corsair, the F/A-18 Hornet, and most recently, the F/A-18 Super Hornet. Today, NAS Lemoore is the home base of approximately twenty F/A-18 squadrons. With the exception of the two Fleet Refresher Squadrons (training squadrons that are considerably larger), each squadron is assigned twelve aircraft and approximately 150 to 200 personnel. In addition to the Hornet squadrons, NAS Lemoore also hosts several tenant activities. Most of these tenant activities are physically separated from the airfield by a five-mile strip of road. This road divides the base into two sections that are commonly referred to as “main side” and “ops side” respectively (see Figure 12).

2. The State of IT before NMCI

Before NMCI, the average squadron had fifty-six desktop computers, with the lowest number around twenty and the highest approaching eighty. Although COMPACFLT (Commander, Pacific Fleet) entered a Dell lease contract that brought 500 computers to Lemoore for distribution among the airwings, the PCs that were found in use at the squadrons during the NMCI rollout ranged from Pentium IIs to Pentium IVs, with the oldest computers nearing the age of eight years. The networks that connected these computers also varied in robustness and capability. The major differences between squadron networks was normally a combination of the ambitions and expertise of the enlisted IT personnel attached to that unit and the amount of funding that the Commanding Officer approved for IT related purchases.

Figure 12. NAS Lemoore Satellite View. (After: Google Maps)

3. Getting Ready for NMCI

a. Preparing the Infrastructure

Before EDS installed new communications lines, they had the opportunity to examine and reuse all or part of the base's existing infrastructure. Because NAS Lemoore was a "have-not" site, most of the network cabling consisted of Thicknet (an outdated, thick coaxial Ethernet medium rated at 10 Mbps). The only building that met

contemporary wiring standards was a hanger that had had begun the Base Level Information Infrastructure (BLII) installation process. Other than this hangar and a small amount of fiber and Category 5 cabling, the network infrastructure had to be built from scratch. (Note that the BLII program, which still exists overseas, was halted at NAS Lemoore in 2000 after the NMCI contract was signed).

NAS Lemoore was scheduled to receive 3,500 seats, with each squadron authorized 100 NMCI workstations (ten classified and ninety unclassified); therefore, a large amount of structural work needed to be done before the actual rollout process could begin. After EDS and its industry partners determined what part of the existing infrastructure could be reused, construction teams began the job of laying the base's new network backbone. This task consisted of visiting each building and hanger to drill holes, route cabling, and install NMCI wall plugs.

b. Preparing the Users

To prepare base employees and squadron personnel, the IT managers were directed to hold an information session to educate the new NMCI users. This session (referred to by IT managers as "the town hall meeting") was held in the fall of 2001 at the base theater located on NAS Lemoore's main side. Aside from this single user session, there were many leadership and management meetings concerning NMCI, but these meetings were geared more towards the logistical processes of identifying funding, ordering workstations, and planning for installation.

The main topic of discussion at the NAS Lemoore town hall meeting was focused on what NMCI was going to do for the average user. For example, a person who helped facilitate the meeting said that the future users of the new network were assured that they were going to receive brand new, top-of-the-line computers connected to a high-speed, fiber optic network, and that NMCI was "gonna be faster, better, more secure, and provide you better service." Additionally, users were told that NMCI would streamline the Navy-wide application inventory, eliminate the need for each command to conduct its own lifecycle management, and that once users had an account, they could enjoy the convenience of accessing their personal files and email from any location that was connected to the NMCI network. The meeting facilitators also explained that the Navy wanted to not only help technologically disadvantaged commands, but they also wanted

to take an enterprise approach towards purchasing systems and software to eliminate redundant expenditures and collect accurate data on how much money the Navy actually spent on IT.

Everyone that wanted to come to the town hall meeting was invited, but attendance was low and those who did attend were mostly IT professionals who wanted to know how NMCI was going to impact their daily jobs. One official who was involved with the planning and execution of the user session described the general attitude towards the new intranet as follows:

> As I remember it, I don't think the turnout was real good, because it was kind of "oh, whatever, my computer will be on my desk tomorrow, it doesn't pay for me to come here to see what the Navy's doing with IT. Ya know, I'll have a computer there and I can either log in or I can't."

It was clear to the NAS Lemoore IT managers that users were complacent; the prevailing attitude on the base was that of indifference. Users simply viewed NMCI as new computers; they did not initially understand that NMCI also meant a new, more restrictive network and that the Navy planned to remove long enjoyed freedoms and autonomy.

4. The Rollout Process

At the beginning of the NMCI rollout process, the funding for all of the new workstations, with a few exceptions, was provided through COMPACFLT. But approximately two years into the process, Commander, Naval Installations (CNI) assumed the funding responsibility for many of the main side seats, which consisted of about twenty percent of the base total. This change was mostly transparent to the user, but it did call for a new management hierarchy to oversee the CNI seats. The split was largely inconsequential at first, but the fiscal separation would prove to be important when the Tech Refresh process began, a topic that will be covered in a later section.

NAS Lemoore was originally slated to begin the NMCI rollout process on July 5, 2001, but due to unforeseen problems that centered mostly on planning and logistics, the actual rollout did not begin until the month of October, 2001. The problems that caused the rollout date to slide stemmed from the fact that implementers did not fully understand what needed to be accomplished before the rollout process could begin. For example,

implementers were constantly running into roadblocks that could have been avoided if someone had simply known weeks in advance that it would be a problem. In fact, the experience at NAS Lemoore helped the NMCI Program Office build a timeline that outlined what tasks needed to be completed and the number of days prior to cutover that these tasks needed to be addressed to facilitate a successful implementation. This timeline is often referred to as the "NMCI Execution Discipline" (see Figure 13).

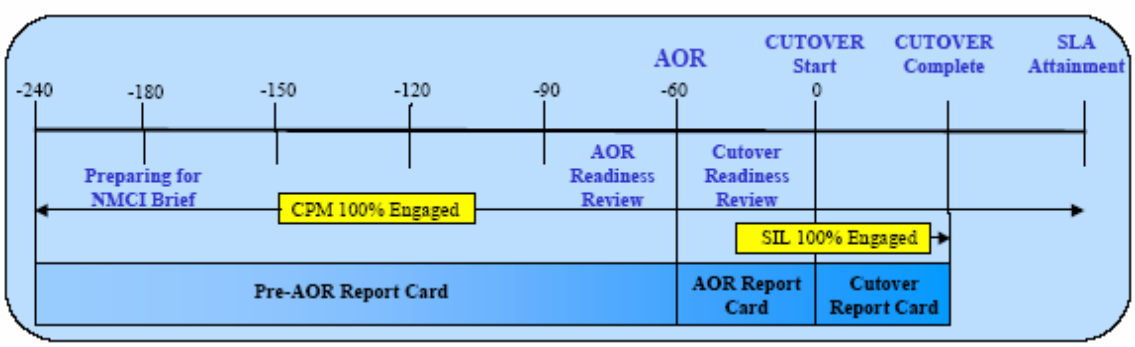

Figure 13. Abbreviated NMCI Execution Discipline (From NMCI SDG, 37)

a. Delivery and Installation

To ensure each user's workstation had all of the programs that they used on their legacy computers, each command was directed to provide an application list to the NMCI team. The original, consolidated list consisted of 992 applications. The NAS Lemoore NMCI team them took it upon themselves to further reduce this list by eliminating older versions of the same program and by selecting one application to perform a specific function (e.g., they choose Adobe Photoshop as the standard graphical application). After the application issue exploded into a Navy-wide crisis, all NMCI sites were given specific guidance from the strategic level on how to handle the request for software not on "the Gold Disc" (to see an example of the standard software found on the 2003 version of the Gold Disc, see Appendix D Part A). Today, there are approximately 180 applications dispersed across the NMCI machines that operate at NAS Lemoore.

After NMCI workstations were ordered and delivered to a warehouse on the base, the next step in the implementation process was the staging of machines to make them ready for installation. The staging process consisted of matching each machine to a user and then imaging the machine with that user's initial software load (a

process that took four to six hours to complete per computer). During the initial rollout, imaging was done twenty-four hours a day.

Once a machine had been imaged, it was stacked with other computers in preparation for delivery to a specific command. When that command's rollout day arrived, the machines were loaded onto trucks and dropped off at the rollout location where the deployment team was waiting to begin the installation process. The Dell deployment team then carried the boxes of new monitors and computers into the command spaces, staging them near the assigned users' workspace.

After the hardware was staged, contractors then began the task of assembling and configuring the new NMCI workstations. This evolution mostly consisted of setting up the new machine on the users' desk and transferring the users' files from their legacy computer to the NMCI machine. To smooth the data transfer process, users were asked to put all of the files that they wanted to keep on their new NMCI machine into a folder called MIGDATA (Migration Data) prior to rollout day. If users did not follow these instructions, time was wasted while the user scrambled to locate and consolidate all of his or her files. This lack of preparation (due to poor communication at some commands) was one factor that contributed to average cutover time of six hours or more. After the information transfer was complete, the contractor would then give the user a quick tour of the NMCI environment (i.e., show them how to log on and access their email and personal folders) and then ask the user to sign the NMCI User/Asset Information Form (see Appendix D, Part B) before moving onto the next user on their list. If the user had a problem that could not be resolved by the installer, then he or she was instructed to call the NMCI help desk.

During the rollout period, the deployment team could install an average of sixty workstations per day, which usually equated to a two to three-day evolution at most commands (note that at this rollout rate, it would take fifty-eight workdays to cutover 3,500 seats).

b. Early Problems

Some of the rollout evolutions were smoother than others, with the earliest ones being the most problematic. Contributing to the already difficult seat installation

task was the lack of experience exhibited by some of the rollout team members. Even though the lead of a rollout team was usually a knowledgeable employee, the rest of the group consisted of temporary workers with mixed capabilities and skills. One IT professional described her impression of the NMCI rollout teams as "people who were hired off of the street and given three days of training. Some of them were very IT capable, and some of them were not." The other side of the delivery problem was an inherent flaw in the rollout plan: EDS and its subcontractors had assumed that rolling out seats was going to be a step-by-step, easy-to-execute process. At one time, EDS even claimed that it could rollout thousands of seats per month, but the below statement from a government NMCI employee explained why EDS never reached this goal:

> EDS also thought that it was a scripted rollout… that you could take a seat out of a box - it already had been staged, it already had the applications on it - you could sit it on a desktop, you could move the data over, the user could log in, and they move on. Well, we had all these legacy problems, [the user would say] "my application is not on there… you didn't hook up my scanner… what about my PDA? My printer is not working." and it threw the whole process out of kilter. They did not factor in all those things that the user was going to have problems with.

Instead of installing seat after seat in a neat, methodical fashion, the rollout team members were forced to deal with what the NMCI program implementers had ignored from day one: the individual needs of the user. Because installers were pressed to rollout workstations quickly, users often felt abandoned after receiving their new computer.

On main side, the scheduling of NMCI seat delivery of was easier since tenant commands did not deploy, but when contractors showed up to install workstations, the scene was just as chaotic. On rollout day, command spaces were filled with empty computer boxes and Styrofoam, new computers, old computers, and a small army of deployment team members. The interruption of daily activity could not be avoided, but at one point, the Commanding Officer of NAS Lemoore halted the NMCI rollout process at his administration building because, according to an internal memo, he felt that contractors were "leaving a trail of destruction" on his base. This sense of intrusion was largely alleviated when EDS began installing workstations after the workday was over and into the night. Nighttime rollouts were executed to not only speed up the rollout

process (nighttime rollouts took only a fraction of the time that it took to complete a daytime rollout), but also to minimize the users' perception of being invaded.

c. Testing and Evaluation

Another aspect of the implementation process at NAS Lemoore that made it even more difficult to execute was the fact that Lemoore was selected as one of the Navy's Test and Evaluation (T&E) sites. Other T&E sites included these facilities/commands:

- Naval Air Facility, Washington
- Naval Air Systems Command Headquarters
- CINCLANTFLT Headquarters (Classified network only)

Managers at the T&E sites were breaking new ground and paving the way for future rollouts at other naval installations since they developed and/or refined many of the procedures and processes used to implement NMCI fleet-wide. Being a T&E site also meant that all processes including ordering, staging, and installation as well as network and desktop performance were closely scrutinized and recorded by the Operational Test & Evaluation Force (OPTEVFOR) for further analysis.

5. User Frustration Begins

a. Applications

There were many reasons for the initial negative reaction to NMCI, but the most common cause of user frustration was centered on the Navy's restrictive application policy. Once users learned that they could not install their own programs on NMCI machines, the excitement that many users felt upon receiving new computers slowly turned to disillusionment. Users who were accustomed to using a specific application to accomplish a daily task suddenly needed to find a new way of doing business. The Navy's implicit suggestion was that users use an application that was already approved and installed on NMCI machines, but sometimes users determined that the best solution was to continue using a legacy seat, or they decided they could use their own personal computer to do the job. These approaches defeated the purpose of NMCI, but in many cases, people were desperate. Some workers were even able to convince the installation contractors to break the security rules and install a non-approved application on their NMCI workstation.

If a user wanted to follow the rules and legally add an application to an NMCI machine, he or she needed to follow a special procedure. The user would submit the application on a CD-ROM along with a completed Request for Service (RFS) form (see Appendix D Part C). The application was then tested by a special team called the Legacy Applications Deployment Readiness Activity (LADRA). These teams would install the requested application on a "virgin" NMCI machine (i.e., a machine that had only the Gold Disk contents installed on it) to determine how the application affected the computer's OS. Then a SME for that application tested the functionality of the program to ensure that it operated correctly. After what seemed like a random period of time (the process took from three months to three years) and if the application passed the security testing, the user was notified and an NMCI employee would install the application on the user's NMCI machine (assuming that the user was still around and did not find a suitable alternative during the long wait period). Sometimes this process was so lengthy, a new version of the application would be released, and if the user needed to use the new application instead of the one that was undergoing the C&A process (e.g., when using an application that used Internet resources), the user had to initiate the approval process all over again.

Today the application approval procedure is similar, except now the application's necessity needs to be validated by the user's Commanding Officer via a justification form. This form details the reason for the application's need and it identifies the source of the funding that will be required to perform the security testing. One NMCI manager remarked that getting an application approved for use on NMCI "takes an act of Congress and patience."

b. The Laundry List

In addition to the application woes, other sources of user frustration are included in the list below. These problems embody the daily struggle that users faced when they attempted to use NMCI as a tool to perform their tasks. This list also helps to explain why users had low confidence in the Navy's new intranet and the reason for the subsequent years of user resistance and backlash.

(1) Long Login Times. In the early months of NMCI existence, many users would come to work, log on to their machine, get a cup of coffee, and return

to a machine that was still undergoing the login process. This problem was later attributed to the login program which downloaded the user's entire profile when the user logged onto any machine; if the user's profile was large, then login time could take from ten to fifteen minutes. EDS claims they have mitigated this problem by eliminating roaming profiles. Today when a user logs onto a machine that was not assigned to him, his profile is only partially loaded; however, when users log onto a machine that they have never used before, the login process can still take a long period of time.

(2) Long Logoff Times. If a user wanted to logoff to let another user use the workstation, both participants were likely to endure a long wait. This problem was due to the fact that NMCI saved the user's My Documents folder to their H-Drive upon logoff. If the user had a large My Documents folder, logoff could take tens of minutes to complete. NMCI solved this problem by removing the script that backed up the user's My Documents folder on the H-Drive.

(3) Forced Reboot. If NMCI administrators wanted to push a software update to an NMCI machine, users were notified by a window that popped up in the foreground of their computer desktops. The window informed users that an update was complete and that the computer needed to be restarted for the update to take effect. The window also suggested that the user save their work, and it showed a timer that counted down. When this timer reached zero, the computer would automatically reboot. It did not matter if the user was in the middle of something important or if the user could not afford to wait for the time it would take for the reboot and subsequent login. To remedy this user-unfriendly issue, NMCI administrators now allow users to defer software updates up to three times (the fourth time the user does not have the choice).

(4) Lack of Administrative Control. The largest cultural change introduced by NMCI is the removal of long enjoyed administrative rights and privileges from the user. This lack of control not only prevented unauthorized application installation, but also the alteration of computer preferences and settings. For example, users initially could not choose a personal image as their desktop background or change the settings on the NMCI screen saver (this policy later changed, and users can now choose their own wallpaper, and the NMCI screen saver was changed to the Windows

default screen saver). Aside from minor exceptions, the Navy has not relented on its policy to deny basic users administrative rights.

(5) Blockage of Critical Websites. At NMCI's inception, the default settings on allowed ports and protocols was very restrictive. After rollout, users discovered that some of the websites that they needed to use to perform their duties (e.g., ordering parts or retrieving important data) were blocked. When this denial of service occurred, it was up to the inconvenienced user to report the problem to NMCI officials. The request to open or allow a forbidden port or protocol was then considered and approved on a case by case basis.

(6) Slow Network Speeds. NMCI was advertised as the savior to NAS Lemoore's Internet connectivity problems; however, users were initially unimpressed with the new network's performance when they compared it to their legacy machine. Even today as a full-performance site (meaning the Navy pays 100% of the seat costs because of SLA attainment), users at NAS Lemoore still complain that they had notably faster network performance before NMCI and on their computers at home. Although the NMCI folders (H-Drive and shared drives) are typically easy and quick to access, the Internet services are more sluggish. The typical response to these speed concerns was that the additional security polices that NMCI enforces causes of slower network performance (i.e., the trade-off for security is network speed). Some users suspect that the slow network speeds are instead due to proxy server settings and/or poor network configuration.

(7) The NMCI Help Desk. While NAS Lemoore was cutting over seats, the help desk operation was still relatively new. Perhaps this was the reason users quickly lost confidence in the help desk's ability to solve their problems. Calls to the help desk in the early days could take over an hour, with the user spending most of the time on hold. When help desk personnel did try to provide a solution, it was hit or miss as to whether the suggested remedy would actually fix the problem. The general feeling among the users was that the help desk personnel were not trained very well and that they were not much help at all. In fact, most of the time they spent on hold was because the help desk person was seeking help from their supervisor or another knowledgeable

person. Through the years the help desk has improved immensely; however, many users are still wary to call when they have a problem.

(8) The Radia Push. Radia is a software application that NMCI used (and still uses today on a less frequent basis) to conduct maintenance on end systems attached to the network. Radia software packages were pushed to each NMCI workstation at night to fix problems and correct unauthorized alterations to computer files, but the Radia application itself was not without faults. Users would report that upon logging on to their machine, they would discover incorrect software deletions or additions, and changes on trivial settings. While most of the problems with Radia have been solved, there are still isolated incidents that arise from time to time (e.g., recently some manual changes that were made by NMCI administrators were returned to the previous state by the Radia push).

c. Removing Legacy Systems

One of the most undesirable byproducts of the NMCI implementation process was the dual-desktop phenomenon. "Dual-desktop" simply meant that a user had two complete computer systems located on his or her desk. (Note that today at NAS Lemoore there are less than 200 users with dual desktops; this is down from a peak of 1,000.) If a command was running a mission essential application that could not be installed on NMCI machines for one reason or another, that command was allowed to keep its legacy network operating on a temporary basis (i.e., until the discrepancy was fixed). For example, the older Hornet squadrons use a maintenance program called the Naval Aviation Logistics Command/Management Information System (NALCOMIS) and the Super Hornet squadrons use a program called Similar to Automated Maintenance Environment (SAME). These two critical applications were considered security risks since they interacted with contractor information systems that operated outside of the NMCI environment; therefore, EDS was required to support these systems outside of NMCI until an acceptable solution could be implemented.

Oftentimes the process of removing legacy systems or workstations proved to be a lengthy evolution. The first step in the process was to get the non-accredited applications through the certification and accreditation process. Once applications were accredited, the newly approved application(s) were installed to the

NMCI seat(s). Then, to ensure the functionality from all users that logged onto that machine, users were usually given about a month before contractors returned to physically remove the legacy seat. As depicted by a NMCI employee below, this last step was occasionally met with resistance:

> Sometimes we are ignored; sometimes the IT [Information System Technician] is like "yeah I'm ready to get this out of there, let me make an appointment and bring it up so that we can DRMO the equipment," and sometimes the users say "you'll take that machine over my dead body." [If that happens, the] CO is notified, and the problem is usually taken care of. COs are very supportive.

After the legacy seat was removed from the users' workspace, it was stored in a warehouse for a specified period of time, just in case the user forgot to transfer some critical files or if some data was lost.

d. Leadership

According to the local IT managers that oversaw the NMCI implementation process at NAS Lemoore, most of the leadership supported the new intranet. However, a smaller percentage of leaders decided to join the resistance against NMCI and refuse to relinquish custody of their old computer. One NMCI manager expressed her perception of the local leadership:

> There's two kinds of leaders: there's the kind of leader that's proactive and willing to change and try new things and go along with the game, and there is the other kind of leader that digs in their heels and says "this is the way I've always done it, and I'm not going to change, and I need to do it this way, and I'm not going to give up my legacy seat, I'm going to keep that seat no matter what you tell me."

The type of leader that did not cooperate was the exception at NAS Lemoore. Even when the base CO briefly halted rollout of NMCI seats, it was not because he was afraid of change; according to an internal memo, it was because he was dissatisfied with the disorderly installation process, and he was concerned that problems with the new intranet would erode user confidence in NMCI as a tool.

6. Technology Refresh

In the first half of calendar year 2006, approximately 2,700 seats at NAS Lemoore went through the Tech Refresh process (this number represented the COMPACFLT seats,

the CNI seats have yet to be refreshed because Tech Refresh has yet to be funded for that command). Although users were initially told that they would receive new computers every three years, the age of the average NMCI machine at NAS Lemoore before refresh was five years old (including the time the computers sat in a warehouse before delivery). This slowdown was primarily due to the unexpected slow rollout of the first generation NMCI machines; EDS and the Navy did not plan on the extremely long implementation process. Another factor that has slowed Tech Refresh is the desire to use a newer operating system (i.e., Windows XP).

As of January 2006, there was a 40% pass rate on the applications that have been re-tested for use on Windows XP. As extreme examples, the Naval Flight Planning System (NFPS) application (a popular flight planning program that allows pilots to calculate fuel consumption, print flight routes, and view satellite images of practice targets) and the Super Hornet squadrons' SAME maintenance application simply did not work on NMCI machines running the Windows XP operating system. Because of these and other incompatibility problems, NAS Lemoore has elected to stay with Windows 2000.

C. SPAWAR

1. Site Overview

The Space and Naval Warfare Systems Command (SPAWAR) is a consortium of numerous commands that represent the Navy's research, development and acquisition arm for C4ISR and FORCEnet. According to the SPAWAR website, the following commands work together to "develop Navy, joint and coalition interoperability" by delivering FORCEnet, "the decisive weapon for the future force" (www.spawar.navy.mil, accessed August 2006).

- System Center San Diego
- System Center Charleston
- System Center New Orleans
- System Center Norfolk
- Space Field Activity
- PEO EIS

- PEO C4I & Space
- PEO Space Systems

This thesis will focus on the implementation process that occurred at SPAWAR Systems Center (SSC) San Diego, located on the Point Loma peninsula (see Figure 14). The other SPAWAR locations that are located in San Diego are not included in this study; they include SPAWAR Headquarters (located in the Old Town area) and SSC Norfolk, detachment San Diego (located at Naval Station 32nd Street).

SPAWAR is regarded as the Navy's top information technology research institution. As an organization, SPAWAR employs approximately 7,600 employees across the globe, of which approximately half are attached to SSC San Diego. Although the bulk of the personnel employed by SSC San Diego are physically located in San Diego, the center also supports detachments at the following remote sites:

- Philadelphia, PA
- Suffolk, VA
- Pearl Harbor, HI
- Japan
- Guam

The composition of the personnel at SSC San Diego is mostly civilian with some military, with the military component's function being largely administrative. It is the center's civilians that make up the majority of the scientists, engineers and technicians. These personnel not only build technology solutions, they also test and implement the Navy's newest information systems. (www.spawar.navy.mil/sandiego, accessed August 2006)

Figure 14. San Diego Satellite View. (After: Google Maps)

2. The State of IT before NMCI

As a "have" site, SPAWAR boasted one of the Navy's premiere IT environments. In addition to the various computer networks and servers that the scientists and engineers maintained to support their research, SPAWAR built and managed a large commodity network in the late 1990s that they called the Computer Desktop Initiative (CDI). The CDI consisted of 3,000 to 4,000 seats, and it was designed to meet the needs of the average user (i.e., email and other administrative applications). The CDI LAN ran on Fast Ethernet (100 Mbps), and the typical age of a desktop computer was only one to three years old. Users also had access to a local help desk with competent support staff, and they enjoyed high bandwidth connectivity to the Internet through the Defense Research and Engineering Network (DREN).

3. Getting Ready for NMCI

a. Paper Communication

Before the rollout process began, administrators distributed what EDS called the Ready, Set, Go! guides. These documents consisted of a set of guidelines that were designed to make the users' transition to the NMCI environment as painless as possible. The Ready Guide provided "an overview of what to expect in the two guides that follow it – the Set Guide and the Go! Guide" and it highlighted some additional topics such as the roles of key personnel in the rollout process and the removal of legacy workstations. The Set Guide was an OS specific document that provided users step-by-step instruction in performing preparation tasks like finding and moving files to the MIGDATA folder and remapping Outlook folders. And finally the Go! Guide began "with a list of critical tasks that [the user] must complete before cutover, and directs [the user] to the instructions needed to complete the tasks." These tasks included actions like changing passwords, locating the MIGDATA folder, and backing up user files. The Ready, Set, Go! guides were largely drafted as a means to address the installation issues and user concerns that were discovered during the rollout process at the T&E locations. (Ready, Set, Go! Guide Overview, 28 Jul 04)

Like NAS Lemoore, there were plenty of management level meetings that convened to discuss the NMCI installation process, but few, if any, user meetings took place. EDS relied heavily on the Navy's chain-of-command to spread the word, and the Navy's leaders relied on the distribution of documentation like the Ready, Set, Go! guides. The only real message that the users understood were the horrible implementation stories that emanated from sites like NAS Lemoore and NAVAIR. Even before the installation of the first workstation, most of the personnel at SPAWAR had their minds made up: the NMCI program was a complete nightmare.

b. The "Gag Order"

As the NMCI rollout date approached, the dissent among the SPAWAR personnel became increasingly vocal. The idea that the Navy's executives believed that the NMCI one-size-fits-all approach could work at SPAWAR left the researchers in confusion and disbelief. At one point when tensions were running high, a Navy Captain

called a meeting in an attempt to quell the rebellion. One employee who was present at this meeting recalled the moment when he and his colleagues were put under what he called a "gag order:"

> [The Captain said] if you complain about NMCI and you don't sign up to this, you will be dragged into the Admiral's office and you will be given an attitude adjustment… so, keep it quiet, don't talk about how bad it is… end of discussion… we are going NMCI, end of story.

Since this meeting, SPAWAR personnel have refrained from talking publicly about NMCI's problems, but the internal resistance against the new network has never died. In fact, the "gag order" only served to fuel the dissent and resentment towards the new network. Even more than four years after the rollout process began at SPAWAR, the Navy's leadership still avoids and stifles all NMCI related dialogue. In fact, during a recent visit by a senior naval acquisition executive, an officer from SPAWAR's Public Affairs office told those present at a speaking function that they could ask the guest any question they wanted to, as long as they did not ask anything about NMCI.

4. The Rollout Process

a. Delivery and Installation

Because NMCI was a service-based contract, EDS could not get paid for a seat until it was deployed. This fact became increasingly painful to EDS as the NMCI program continued to move along at a snail's pace. Therefore, when the rollout process began at SSC San Diego in the summer 2002, the primary goal for EDS was to avoid financial disaster by focusing solely on rolling seats. Local IT managers recalled that EDS was in survival mode; "[e]verything was measured on how many seats were rolled this month." According to a NMCI employee that was around at the time, the immense push to roll seats and "worry about the details later" caused seat installers to develop a "cowboy" attitude that had them cutting corners and taking short-cuts:

> [They had] every good intention of trying to do the right thing, but if the software didn't work, they tweaked the system to make it work… if the boundaries were stopping things, they would tweak the boundaries. It was good intentions at the time, but what it did is cause a lot of problems down the road when go to replace software or you go to push new software through a boundary that's not standardized, it causes all kinds of headaches.

In addition to the technical problems associated with the fast rollout at SPAWAR, NMCI officials are also currently struggling with asset management issues, which are largely attributed to missing records and the filing of inaccurate or incomplete paperwork.

b. Playing the Game

SPAWAR's scientists and engineers did not want to give up their legacy seats because they sincerely felt as though their research efforts would be negatively impacted. So, in an attempt to make it seem as though they were cooperating, many SPAWAR personnel went along with a scheme that fooled NMCI installers to think they were replacing their legacy seat, when they were really replacing an older, bogus computer:

> …we were told that we had to turn in an old computer, and then move all the files. So, what everybody did is… we found old computers… we said "OK here's my old, sort of commodity computer," whatever, and, "ya know it's got a few files on it, so yeah you can move those files." So it wouldn't do any damage to us, 'cause we kept all of our critical files on the research computers. And so they would come in, they'd do their snapshot, what's there was there… and when they came in to install the new computer they'd move the files that were on there… [and] took the old computer away. They weren't any the wiser, [and] we weren't seriously impacted by losing our files and other critical applications. So in many cases it was just, ya know, we found computers in the junkyard and that's what we gave them. We couldn't afford to do anything else.

The workaround described by a NMCI user above was the interim solution to the problem that was partially resolved near the end of 2002, about six months into the rollout process at SSC San Diego. A senior SPAWAR manager concluded that although all Navy personnel were required to have an NMCI account, this did not mean that everyone had to be exclusively on NMCI; therefore, NMCI officials unveiled a new CLIN called "Terminal Services." A user with a Terminal Service account did not have an NMCI workstation; instead, these individuals logged onto their NMCI accounts from a computer outside of the NMCI network. This solution mitigated part of the dual-desktop problem at SPAWAR, but it certainly did not save the organization money. In fact, after adding all of the additional costs associated with supporting a Terminal Services seat, it is the most expensive seat that EDS has to offer. Approximately fifty percent (i.e., 2,000 of

the 4,000 employees) of the personnel located at SSC San Diego connect to NMCI exclusively through a Terminal Services "window."

5. User Frustration Continues

a. The Fight to Keep R&D Networks

From the very beginning, the scientists and engineers at SPAWAR recognized that NMCI could not support the applications that they needed to perform certain research tasks. For example, NMCI workstations were not suitable to handle processor intensive experiments like simulations, the testing of new software, or the evaluation of complex IT systems. In an attempt to ensure that they did not suffer from a degradation in service, SPAWAR researchers initiated a movement to add new CLINs to the NMCI contract to accommodate its R&D needs. The RDT&E Working Group was formed to identify and present these research needs to EDS for evaluation. After analyzing the data that was gathered by the RDT&E Working Group, EDS reported that they could only meet a small percentage of the requirements, and furthermore, they were not particularly interested in the R&D business. As a result, influential SPAWAR personnel were able to convince the local military leadership to retain ownership of its R&D networks until the Navy and EDS could formulate a reasonable plan regarding the migration of SPAWAR's high-end, specialized information systems into the NMCI environment.

b. Additions to the Laundry List

The users of NMCI at SPAWAR experienced the same problems that were outlined in the NAS Lemoore section; however, some additional difficulties surfaced due to the differences in how the average user at SPAWAR used his or her computer resources and because the typical SPAWAR user was usually more technologically knowledgeable.

(1) No Offline Service. Many of the researchers at SPAWAR frequently traveled to other cities to attend meetings, participate in conferences, or gather research. Because users could not work offline on their NMCI laptops, they often brought a personal laptop on trips so that they could review documents and/or work on presentations while en route (i.e., they brought two laptops with them). Once users

arrived to their destination, they could then log into NMCI via dialup, but the connection was so slow that many users considered the service unusable.

(2) Small Mailbox Sizes. Another problem that SPAWAR researchers had with NMCI was the 50MB mailbox storage limit. This limit could be increased for select personnel (e.g., some heavy users were allowed 100MB, and the Admiral at SPAWAR is allotted 1GB), but when a person receives 50 to 100 emails per day, which is the case for many of the researchers, the extra time it takes to manage a 50MB mailbox quickly became a hindrance. (Incidentally, at the time of this writing most email Internet services are offering 1GB to 5GB of storage space for free, and users on the SPAWAR research network are allowed 3GB).

(3) Slow Mail Servers. In addition to spending a large amount of time managing their NMCI mailbox sizes, users were also forced to "click and wait." Sometimes the NMCI email server was so slow that users had to wait two or three minutes after they clicked on an email before it would open, if it would open at all. For a busy user that receives a lot of email throughout the day, time delays, lockups, and limitations became extremely frustrating.

(4) The Use of Suboptimal Hardware and Software Solutions. Because many of the researchers at SPAWAR are experts in IT, they also had strong opinions regarding the hardware and software that the Information Strike Force used to maintain and protect the network. Since the ISF consists of a select group of private business partners, NMCI managers were reluctant to employ solutions (albeit superior) that were developed and distributed by industry competitors; therefore, the NMCI was arguably less safe and therefore more vulnerable to attacks.

c. Widespread Dissatisfaction

Even though this chapter only addresses the implementation difficulties that occurred at two sites, the problems associated with NMCI were fleet-wide. Appendix D, Part D shows the results of a Government Computer News (GCN) survey compiled from 100 subscriber responses. This survey shows that even more than three years after implementation had begun (the survey results were published at the end of

February 2004), users harbored negative feelings towards NMCI. In addition to the survey results, GCN also posted some of the respondents' raw answers to the following two questions:

- In your opinion, what can be done to improve the rollout of NMCI?
- Do you have any further thoughts or comments on any aspect of NMCI?

Most of the answers to these questions were extremely negative, yet also insightful (see Appendix D Part E). It may be true that these GCN subscribers may not represent the average user in the Navy; however, these responses do give a glimpse into the world of the thousands of users that remain dissatisfied with the NMCI program.

6. NMCI Today

The fight over what to do with the SPAWAR legacy networks ended after the Navy leadership finally agreed, at the end of 2004, to allow SPAWAR to operate an RTD&E network separate from NMCI as long as certain provisions were followed. For example, SSC San Diego still needed to migrate its business servers (i.e., non-research applications) to the NMCI network. To facilitate this process, a new network was built separately from the R&D network that consisted of all the computers that would eventually transition to NMCI. The SPAWAR personnel labeled this new network of approximately 250 computers and servers "the legacy network." In addition to these legacy machines, the computer seats at SSC San Diego consisted of 3,400 NMCI seats and 7,700 officially approved RDT&E seats.

Although the attitudes towards NMCI at SPAWAR have historically been negative, some users are impressed with the recent improvements to network usability and security. For example, EDS now provides a broadband remote access solution and the company has also begun to implement the long awaited cryptographic logon requirement. NMCI officials are confident that once Tech Refresh is complete in the winter of 2007, user satisfaction will reach new highs.

D. CONCLUSION

The purpose of this chapter was to give the reader a view of the NMCI program from the perspective of those who received NMCI workstations and used them on a daily basis. This comparative case study showed that although the implementation process was

largely the same at both sites, perceptions and attitudes differed based on both the level of user IT competence and the site's pre-NMCI computing capability. Even though there were fundamental differences between both sites, this chapter revealed that the two sites were related since users shared similar frustrations and complaints.

Building on the foundation that was provided in the history and implementation chapters, the next chapter outlines specific steps leaders can take to include users in a transformation process, and it provides some basic tools that leaders can use to ensure that a particular program or initiative is not at a disadvantage before implementation begins. The next chapter shows how leaders can leverage the art of communication to build support for a program in its earliest stages of development. The final chapter also offers topics for future investigation and research.

IV. TRANSFORMATION AND CHANGE

A. INTRODUCTION

Over the last few decades, leaders in the field of organizational behavior have offered numerous academic solutions to managing transformation and change. This chapter will explore some of these approaches and relate the relevant arguments to the NMCI program. This chapter will draw upon content from previous chapters to make the case that the NMCI program was not managed properly with regard to change, and after the supporting analytical observations are presented, this chapter will give the reader a sense of what could have been done to mitigate NMCI's user resistance problems, and more importantly, the actions that future managers can take to ensure their programs do not meet a similar fate. This chapter will provide evidence that an organization can indeed plan for change and it will make the case that leaders in the Navy should consider user resistance as the most formidable obstacle to success.

This chapter was structured primarily after John Kotter's eight steps to transforming an organization. Kotter, a Harvard professor and an expert on leadership and organizational change, uses the following eight steps to represent the most significant responsibilities that executives have when embarking upon a transformation initiative:

1. Establishing a Sense of Urgency
2. Forming a Powerful Guiding Coalition
3. Creating a Vision
4. Communicating the Vision
5. Empowering Others to Act on the Vision
6. Planning for and Creating Short-Term Wins
7. Consolidating Improvements and Producing Still More Change
8. Institutionalizing New Approaches

Each one of Kotter's steps will be introduced and compared to actual events that transpired over the history of the NMCI program. Also, within each section that examines Kotter's ideas, input from other prominent figures in the academic community will be included to provide further support for the claims that are presented within this thesis.

B. KOTTER'S EIGHT STEPS

1. Establishing a Sense of Urgency

a. The Difference between IT-21 and NMCI

The move to create a shore-based intranet was largely fueled by the success of the Navy's IT-21 initiative. IT-21 gave upper level management the confidence that a large-scale program, which was designed to overhaul a significant portion of the Navy's telecommunications network, was not only possible, but also affordable and welcomed. Leaders did not have to cajole those who worked aboard ships that IT-21 would make their lives better because it was widely known that the systems already in place had serious limitations. For example, in the early '90s, ships from different battlegroups could not send secure documents to each other electronically, and bandwidth availability and size was unsatisfactory for warships conducting operations in the dawn of the information age.

At shore-based facilities, the robustness of Navy information systems varied at each location. Depending upon the spending habits of the command, it was not uncommon for users to enjoy to the most recent computing technologies, seamless LAN connectivity, and high-speed Internet access. These commands were considered the "haves" of the Navy (e.g, SPAWAR). But, if a commander did not prioritize the purchase of IT systems or if operational spending eclipsed the need to refresh antiquated computers, then that command became technologically disadvantaged; these commands were the "have-nots" (e.g, NAS Lemoore). Although the long-term goal of a Navy-wide intranet was to raise the status of the "have-nots" to that of the "haves," opponents of the program would argue that what NMCI really did was lower the "haves" closer to the "have-nots."

Another implementation factor that differed between NMCI and IT-21 was workforce composition. A shipboard crew consists of active duty Sailors that interact in an environment requiring unique coordination and cooperation that is driven by tradition and the current mission, whereas the Navy's shore-based commands arguably operate at a slower, deliberate pace, and the workforce is made-up of not only Sailors, but also federal workers and civilian contractors. Civilians, although some may have prior military experience, may not fully appreciate military culture; therefore, the command-

and-control approach to leadership in which "orders" and "duty" have special meaning may not work when managing a mixed workforce. In other words, the do-it-because-I-told-you-to leadership style will more than likely elicit a different response from a civilian worker than from a person in the military.

b. Change Management in the Navy

Even though there were many technical parallels between IT-21 and NMCI, the few non-technical differences illustrated in the paragraphs above suggested there was going to be some potential problems with user acceptance. Consider the weight of the arduous task that the Navy faced: the Navy needed to persuade a workforce that consisted of both military and civilian personnel that a new, enterprise IT solution was the best decision for the Navy's future, and that the attempt to eliminate legacy systems and reduce the number of applications to a manageable level would, in the long run, be worth the initial drop in productivity and rise in frustration. For the "haves," this would be a hard sell, but instead of trying, the Navy's leadership did little or nothing to prepare its employees for the impending IT transformation. This lack of communication was not surprising since the Navy's traditional idea of a change management plan is to introduce change as fast as possible so that people do not realize what is going on until the process is over; then the people will only have one choice: accept it and move on. According to several people involved in the program in the early days, this was the exact methodology that was promoted by some senior Navy officials.

A change management approach on the other hand is markedly different and less risky. Change management is about including people in the process, and it is about creating buy-in and influencing people to drop their guard and lend a helping hand. Ultimately, managing change is about leadership, and all good leaders usually have one common trait: they can communicate effectively. For communication to be effective, it must come from a trusted source, and it should be as frequent as possible. Duck offered additional guidance for leaders to follow when designing a communication strategy:

> It is important for messages to be consistent, clear, and endlessly repeated. If there is a single rule of communications for leaders, it is this: when you are so sick of talking about something that you can hardly stand it, your message is finally starting to get through. People in the organization may need to hear a message over and over before they believe that this time,

> the call for change is not just a whim or a passing fancy. It takes time for people to hear, understand, and believe the message. And if they don't particularly like what they hear, then it takes even more time for them to come to terms with the concept of change. (Duck, 61)

The communication campaign of a transformation initiative should begin during the planning process, in parallel with the technical design. This early start allows leaders to get a jump on the difficult task of garnering support and it eliminates the counterproductive atmosphere of silence and secrecy. If done properly, communication in the infancy stages can act as a barometer for change; feedback from the users will indicate the amount of effort that the top level of management will need to be invest in the overall change management effort.

c. Urgency Creates Motivation

Kotter stated that "if the renewal target is the entire company, than the CEO is key" (Kotter, 4). Because NMCI would affect every Sailor, the CNO's voice was a necessary part of laying the groundwork for implementing NMCI, but the CNO, like most admirals, operate in the strategic realm of the Navy where nearby assistants and aides pepper them with "yes ma'ams" and "aye, aye sirs" at their every request. Admirals are not used to feeling resistance because, more often than not, it occurs too far down the chain. This disconnect between the desires of upper management and the needs of employees at the bottom explains why appeals for urgency are often ignored.

> …executives have frequently underestimated the wrenching shift – the internal soul-searching that – that goes hand in hand with a break from the present way of thinking and operating. And because executives have not understood this as they announced their grandiose "strategic intentions," employees have often ignored the call to arms. (Goss et al., 86)

The quote above suggests that people must be motivated by a compelling force before they consider changing. Kotter made the observation that "without motivation, people won't help and the effort goes nowhere" (Kotter, 4). When introducing a transformation initiative, Admirals need to find out whose help is needed and how they are motivated. In the case of NMCI, the major stakeholders included Congress, the Navy's executives, and most importantly, the end users. Each one of these groups needed to understand why NMCI was important and why it needed to be implemented as soon as possible.

Establishing urgency means convincing people that the course of action recommended from the top is not only necessary but also time critical. For NMCI, leaders needed to stress the fact that the gap between the technology available for purchase and the technology owned by many Navy commands was growing at an unacceptable pace, and they needed to articulate the dangers of allowing this trend to continue. Leaders also needed to portray inaction as more dangerous than action and that choosing a future without NMCI was mistake with dire consequences. Admiral Johnson attempted to convey this message in 1999 when the intranet idea began to build momentum, but it simply was not accepted by the organization – that is, his message was not *established*.

2. Forming a Powerful Guiding Coalition

a. A Critical Mistake

In most organizations, it is impossible to successfully bring an idea from conception to realization without the support of others. This statement holds true for the lowest manager all the way up to the CEO. Positional authority helps, but there is no substitute for good leadership and the merits of the idea itself. In the Navy, the situation is similar. Even Admirals must be able to build coalitions to accomplish their goals. Admiral Archie Clemins was one leader who understood the importance of coalition building; he took a proactive approach to building support for the IT-21 project, and he took similar steps when he spearheaded the movement to create a Navy-wide intranet.

Admiral Clemins' "Archie Camp" at the Center for Naval Analysis in May of 1999 was a good example of an attempt to create buy-in and form a united front within the upper echelon of the Navy and Marine Corps. This conference not only served to solicit support for the intranet program, but it also acted as an information marketplace where new ideas could be shared and debated. After NMCI became a reality, the Navy's leadership took further steps to ensure NMCI's success by creating a special office where numerous agencies could work together during the rollout process. According to the NMCI website, the Program Executive Office for Information Technology (PEO-IT) "was established to develop and implement the Navy-Marine Corps Intranet" (www.nmci.navy.mil, accessed May 2006). The purpose of this office was to create a "working partnership" with several organizations within the Department of the Navy. It

would seem that the Navy was off to a good start in forming a powerful coalition, but there was one major flaw: unlike a private organization, the Navy did not have complete control over its resources; therefore, the coalition lacked the invaluable participation of Congress.

As outlined in the chapter on NMCI's history, Congress became a main hindrance to NMCI's progress. Because the Navy planned to circumvent Congressional involvement by transferring and reprogramming previously allocated funding to pay for the new intranet, Congress, more specifically the House of Representatives, became very critical of the program, and they subsequently made the NMCI implementation process very drawn-out and difficult to execute. The Navy took an unnecessary risk by not including Congress in NMCI's planning and approval process. The ensuing backlash could be partially attributed to Congress' desire to have ultimate control over the Navy's finances, but the other reason for Congress' unfavorable reaction to NMCI was undoubtedly triggered by a violation of trust.

b. The Importance of Trust

Kotter suggested that all parties involved in the coalition need to "develop a shared assessment of their company's problems and opportunities, and create a minimum level of trust and communication" (Kotter, 6), and Duck stated that "[w]hen each side understands the needs, capabilities, and objectives of the other, trust can be built" (Duck, 72). The importance of trust in any relationship is paramount; trust is the glue that holds coalitions and partnerships together. When Congress learned that the Navy was planning to make a multi-billion dollar commitment without its consent, the perception of deceit began to surround NMCI, and Congress consequently questioned the Navy's ability to manage the program objectively; therefore, strict oversight was imposed. The Navy's executives should have realized the importance of Congress as a supporting stakeholder and the threat that Congress could bear if they became an adversary. If it were not for the Navy's healthier relationship with the Senate, the NMCI program would probably not exist today.

Although Congress was important because they controlled the resources, the most important stakeholders in the NMCI program, as in any transformation initiative, were the end users. The lack of acceptance from the workforce can cause any

program to die a slow and painful death (which is costly financially as well as emotionally). The end users have strength in numbers; therefore, for a transformation effort to be successful, it:

> …must encompass a critical mass of stakeholders – the employees "who really make things happen around here." Some hold sway over key resources. Others are central to informal opinion networks. The group may often include critical but seldom-seen people like key technologists and leading process engineers. The goal is a flywheel effect, where enough key players get involved and enrolled that it creates a momentum to carry the process forward (Goss et al., 102).

Including the end users as a stakeholder is a difficult task that can only be accomplished through persistent communication and a willingness to constantly reach out and ask for user input. In fact, requesting input and feedback can serve multiple purposes: it creates a sense of ownership, it informs people of what is coming, and, if the users provide worthwhile responses, it can potentially improve the program. However, even consistent communication between management and the employees is not enough if there is no trust.

According to Duck, "[t]rust in a time of change is based on two things: predictability and capability" (Duck, 70). Employees will base their decisions on past experiences and the reputation of the organization. Leaders need to be honest. Telling employees that, "this is going to be hard" and "we may lose efficiency while we are in the transition process" is a perfectly acceptable strategy, but making false promises or ignoring implementation difficulties can lead to bitterness and resistance. Many users of NMCI have complained loudly that the new intranet does not provide the advertised capability, and because of the actual or perceived problems with the program, it is difficult for Sailors to envision a future that includes NMCI. Reversing this type of sentiment well into the implementation process is extremely difficult, which is why the proactive steps of coalition building and establishing lines of communication are so important when it comes to introducing a large change initiative.

c. Balancing the Mobile

In addition to Congress and the end users, there were other important stakeholders that the Navy also had to contend with in one form or another. These

organizations included, but were not limited to, DISA, OMB, OSD, and NMCI's primary contractor, EDS. Because of the sheer size of the NMCI contract award, each one of these agencies had an avid interest in the way the NMCI program was managed. In an attempt to remove barriers, the Navy tried to satisfy each piece of the stakeholder pie (to be fair, some of this placating was mandated by Congress), and while the technical and financial aspects of the program received all of the attention, the non-technical issues of resistance and change were not addressed. Duck argues that change cannot be managed in the traditional, mechanistic fashion; "with change, the task is to manage the dynamic, not the pieces" (Duck, 57). Change management involves an understanding of the big picture and allowing the non-technical aspects of a situation enable the technical. The metaphor that Duck used to illustrate how a leader should manage change is the balancing of a mobile: "In managing change, the critical task is understanding how pieces balance off one another, how changing one element changes the rest, how sequencing and pace affect the whole structure" (Duck, 58). The Navy needed to understand the changes that each coalition member faced as a result of implementing NMCI. A thorough stakeholder analysis should have been used to identify opportunities and threats, so that a competent change management plan could have been formulated and implemented.

3. Creating a Vision

a. NMCI vs. Sea Power 21

As indicated in the history chapter, the original vision for a Navy-wide intranet was created at the Center for Naval Analysis during the NI conference led by Admiral Clemins. That vision described the new intranet as:

> A Department of the Navy enterprise-wide network capability that provides end-to-end, secure, assured access to the full range of voice, video and data services by 2001. The Naval Intranet enables and enhances enterprise-wide work, training, and quality of life for every Navy and Marine Corps service member and employee. (Skibitski, 5 Jul 99)

With the exception of the impracticable completion date of 2001, this vision is very similar to another version that was published shortly after the NMCI contact was awarded. According to the NMCI Execution Plan, a document that was released in October of 2000 and designed to facilitate the new intranet's implementation process, the vision of NMCI is:

> …to secure seamless, global, end-to-end connectivity supporting both warfighting and business functions that will allow our people to focus on the mission rather than IT services, and that will enable new processes and technologies such as knowledge management, distance learning, and telemedicine to improve the quality of life of all service members and employees. (NMCI Execution Plan, 1-2)

Although the architects of NMCI offered these two statements as visions, experts would more than likely label them as "purposes." A purpose answers the question, "what is NMCI supposed to do?" A vision, however, is a graphic description of what the program will look like in the future. The difference is subtle and some would argue unimportant, but what a vision should really do is stimulate the imaginations of those in the organization by describing a future that is exciting and worth the employees' sacrifice.

Another term that is often confused with vision is "mission." A mission is what the organization does today to reach tomorrow's vision. For example, the Navy's core mission is "to maintain, train, and equip combat-ready naval forces capable of winning wars, deterring aggression, and maintaining freedom of the seas" (www.navy.mil, accessed May 2006). Maintaining, training, and equipping are the active verbs that describe what the Navy is presently doing to accomplish its goals and meet its future obligations. The mission of an organization is the path to the vision; it is the means by which the vision is achieved. Without a clear vision, missions have less meaning, and the employees will lack a sense of purpose and direction.

Kotter stated that "a vision says something that helps clarify the direction in which the organization needs to move" (Kotter, 6). In other words, the vision must represent an attractive destination for employees so that they will want to move from their present position, away from the status quo. The following vision for Sea Power 21 is an excellent example of a vision that influences Sailors in a particular direction; it sets an exciting course for U.S. Navy, and it forecasts a bright and successful future:

> The 21st century sets the stage for tremendous increases in naval precision, reach, and connectivity, ushering in a new era of joint operational effectiveness. Innovative concepts and technologies will integrate sea, land, air, space, and cyberspace to a greater extent than ever before. In this unified battlespace, the sea will provide a vast maneuver area from which to project direct and decisive power around the globe.

> Future naval operations will use revolutionary information superiority and dispersed, networked force capabilities to deliver unprecedented offensive power, defensive assurance, and operational independence to Joint Force Commanders. Our Navy and its partners will dominate the continuum of warfare from the maritime domain—deterring forward in peacetime, responding to crises, and fighting and winning wars.
>
> By doing so, we will continue the evolution of U.S. naval power from the blue-water, war-at-sea focus of the "Maritime Strategy" (1986), through the littoral emphasis of ". . . From the Sea" (1992) and "Forward . . . from the Sea" (1994), to a broadened strategy in which naval forces are fully integrated into global joint operations against regional and transnational dangers.
>
> To realize the opportunities and navigate the challenges ahead, we must have a clear vision of how our Navy will organize, integrate, and transform. "Sea Power 21" is that vision. It will align our efforts, accelerate our progress, and realize the potential of our people. "Sea Power 21" will guide our Navy as we defend our nation and defeat our enemies in the uncertain century before us. (Clark, Oct 02)

In contrast to the vision presented for NMCI, this vision for Sea Power 21 is much more compelling and vivid. The most important aspect of the Sea Power 21 vision is the suggestion that the success of the Navy is linked directly to the ability of our nation to win wars and defeat our enemies. This connection serves to draw out an emotional response that can be used as a trigger to motivate people towards action.

b. Building a Vision

Creating a vision for an organization or a transformation initiative like NMCI is a methodical task that involves careful research and organizational analysis. According Collins and Porras, the process of constructing a vision begins with an introspective look into the organization's reason for existence, or "core ideology." Once the core ideology is understood, the next step is to build what Collins and Porras call the "envisioned future." The products of these two components are then combined, and the resultant output should begin to resemble the framework of a well conceived vision.

The identification of the core ideology answers "what we stand for and why we exist" (Collins and Porras, 23). This is one element of the organization that should never change. The core ideology is made up of the organization's core values and its core purpose. As an example, the core values of the Navy are honor, courage, and

commitment. These values are pillars of the Navy's code of conduct, and they are not likely to change, ever. Like the Navy's core values, its core purpose of winning wars and deterring aggression will also remain unchanged; these are the reasons that the Navy exists in the first place.

The envisioned future of the organization represents "what we aspire to become, to achieve, to create – something that will require significant change and progress to attain" (Collins and Porras, 24). Building the envisioned future begins with setting overly ambitious goals and then simultaneously ensuring that these goals have some possibility of realization. The following list outlines the steps that planners need to take when building an envisioned future:

- Set Stretch Goals. Collins and Porras called these goals BHAGs (pronounced bee-hags), or Big, Hairy, Audacious Goals. These goals are defined as having 10-30 year lifetime that consist of graphical descriptions of the future that are oftentimes unattainable, but are nonetheless worthwhile and exciting to pursue and possibly achieve.
- Convey Commitment. Collins and Porras warned that "it's not only the audacity of the goal but also the level of commitment to the goal that counts" (Collins and Porras, 47). Commitment can be expressed with words or action. Although financial support is key, the importance of verbal support cannot be understated. Commitment should come from all leaders within the organization, but it must start at the top.
- Create a Vivid Description of the Future. Collins and Porras claimed that an envisioned future needs a "vivid description – that is vibrant, engaging, and specific description of what it will be like to achieve the BHAG" (Collins and Porras, 42). This description needs to depict a future that is exciting for everyone within the organization, especially the main workforce. A positive view of the future can have a direct affect on employee motivation.
- Ensure Alignment. A properly aligned idea should "preserve the core and stimulate progress" (Collins and Porras, 49). Ensuring alignment is closely related to assuring compatibility with the organization's core competencies and capabilities.

Once the organization sets well-aligned, stretch goals that do not violate the core ideology, strategic planners are then prepared to craft a meaningful and provocative vision.

Because NMCI is a program that will help support the Navy's mission and therefore assist in accomplishing the Navy's long-term objectives, the vision for NMCI

should complement the vision for the entire Navy. The most recent vision for the Navy was outlined in Sea Power 21, so that document will be used as a starting point for building a vision for NMCI. (Note: Although Sea Power 21 was published approximately 2 years after the NMCI contract was awarded, the importance of information technology to the future of naval warfare was universally understood and accepted well before the turn of the century. Therefore, using Sea Power 21 as the backdrop for creating a vision for NMCI is an intellectual exercise with a practicable outcome.)

The vision for Sea Power 21 alluded to the mastery of information warfare as a critical component in the Navy's ability to assure operational dominance. For example, Sea Power 21's vision stated that "[i]nnovative concepts and technologies will integrate sea, land, air, space, and cyberspace to a greater extent than ever before," and that "[f]uture naval operations will use revolutionary information superiority and dispersed, networked force capabilities to deliver unprecedented offensive power, defensive assurance, and operational independence." By using key words like "technologies," "cyberspace," and phrases like "information superiority," and "networked force," the author of Sea Power 21 (incidentally, the author of Sea Power 21 is listed as Admiral Vern Clark, the 27th CNO) suggested that the proliferation of information technology will be a vital contributor in deterring aggression and winning wars. Therefore, the most powerful vision for NMCI would include a logical link between the success of the new intranet and accomplishing this mission. For maximum effectiveness, the vision for NMCI must illustrate how it will contribute to warfighting.

Having established this strategy, the next step is to articulate an envisioned future that is in line with the Navy's core ideology. We will follow the guidance of Collins and Porras by creating vivid and ambitious stretch goals, and then we will discuss the best way for leaders to ensure alignment and demonstrate the necessary level of commitment. The following BHAGs for NMCI test the boundaries of feasibility, but they are nonetheless worthwhile aspirations that stimulate emotion, anticipation, and excitement:

- Become the most secure, robust, and reliable network first in the DoD, then in the world.

- Provide second-to-none customer service and problem resolution facilities during the rare occasion that a user needs assistance.
- Offer consistent and seamless connectivity that rivals that of industry's top-performing networks.
- Ignite a culture that understands network centricity and uses this knowledge to make the Navy a stronger, more agile and lethal force.
- Reduce the Navy's application inventory to less than 2,000 and eliminate the need to operate costly and inefficient legacy networks and servers.
- Achieve unparalleled cost savings and economies of scale from employing an enterprise approach to the purchase of software, hardware, and data transfer services.
- Provide the highest quality of service (qos) video, voice and data services currently available on the market.
- Enjoy continuous technology refresh at a rate that equals or surpasses industry standards.
- Facilitate the use of web-enabled applications to increase productivity, efficiency, and the overall effectiveness of the Navy's daily operations.

These goals will form the foundation of NMCI's vision that will be created shortly. Although the language used in list above is powerful and provocative enough to get the receiver's attention, it is important to note that these goals, and hence the vision, are meaningless without the pervading perception of support. Upper management is responsible for building faith in the initiative, so they must use every tool available to them to convince users that the organization is completely supportive of the program.

c. Commitment and Alignment

The best way to show commitment is to give a program financial security. The financial investment that the Navy intended to make in NMCI was more than substantial enough to satisfy this requirement (recall that the original contract award was $6.9 billion over eight years), but the Navy also needed to demonstrate commitment through the non-tangible actions of its leaders. This type of commitment most often comes in the form of verbal and written support. Leaders needed to communicate the benefits of NMCI often, and they needed to let their subordinates know that their help was crucial in making the program a success. Without supporting communication from leaders at all levels, the NMCI program lost credibility.

Even the best display of commitment cannot guarantee success for a program that is misaligned. Collins and Porras stated that "[b]uilding a visionary company requires 1% vision and 99% alignment" (Collins and Porras, 49). The same is true for a transformational program like NMCI. Alignment means ensuring that the program is not disadvantaged from the beginning because its goals are not in line with the purpose and mission of the organization. Some would argue that the fact that NMCI was purchased as a service instead of being built and operated solely by the Navy caused an alignment problem that the Navy has not been able to overcome. The evidence of NMCI's troublesome existence suggests that there may be some truth to this claim; however, many of NMCI's implementation difficulties could have also been the product of negative, self-fulfilling prophecies. The implementation problems that the Navy has experienced with NMCI prove that the alignment strategy of new innovations will more than likely require a proactive communication campaign to ensure employees make the proper connections and are not led astray by the cynics and pessimists.

d. A Sample Vision for NMCI

After years of researching hundreds of organizations, Kotter concluded that a good vision meets three criteria: 1) it sets a direction, 2) it is sound and sensible, and 3) it is easily communicated. (Kotter, 6) The following sample vision for NMCI is in keeping with Kotter's criteria and the guidance provided by Collins and Porras:

> The United States Navy has earned an extraordinary reputation. Reliable and flexible, naval forces can respond faster and can remain on station longer than any other U.S. service or coalition partner, and when called upon to inflict a lethal blow, the Navy consistently delivers with the necessary power and precision.
>
> In an effort to maintain this position of dominance, our Navy has recently adopted the concept of network centricity as a means of enhancing the decision making process inside and outside of the operational arena. This data intensive approach to warfare will not only require an increased investment in communications hardware and infrastructure, but also a willingness of Sailors to embrace change.
>
> The procurement of the Navy-Marine Corps Intranet is a positive step towards this transformation process. Once fully operational, the NMCI will offer Sailors seamless connectivity in a secure and reliable networking environment. The standardization and availability of the

> NMCI will serve to increase productivity, efficiency, and the overall effectiveness of the Navy's daily operations.
>
> The NMCI will eliminate the need to operate costly, disparate networks, and the purchase of the NMCI as a service will allow our Navy to achieve unprecedented economies of scale, which will translate into billions of dollars saved. These savings will then be used to recapitalize the fleet, making our Navy stronger and better prepared to defeat our current and future enemies.

The above vision is far more effective that the Navy's version because it uses vivid language to provide an explicit connection between NMCI and the success of the Navy. Whether it is an increase in productivity or saving money for recapitalization, the main focus of this vision is on increasing the strength of the Navy as a fighting force. The promotion of a strong Navy is aligned with the Navy's core mission: to deter aggression and win wars.

4. Communicating the Vision

a. Excluding the End Users

After a vision has been written and approved, the next step is to communicate it to the entire organization. Because of the large number of people serving in the Department of the Navy and the fact that naval forces are dispersed throughout the world, reaching the whole organization with any message can be a challenging task, but it is also a task that must be accomplished to facilitate success. Duck stated that "[e]ven in large organizations, which depend on thousands of employees understanding company strategies well enough to translate them into appropriate actions, leaders must win their followers one by one" (Duck, 56). For NMCI, the campaign to win support from the strategic tier of the Navy began in the summer of 1999, at the conclusion of the NI conference.

The most interesting and news-making item that came out of the NI conference was the decision to outsource NMCI to a private contractor. This controversial move by the Navy spurred much debate throughout the fleet which, on a positive note, served to spread the knowledge that a new intranet was coming, but because this conversation took place at higher levels, the typical end user remained unaware. In fact, when EDS first began to install workstations in early 2001, many of the

recipients of the new systems had never even heard the NMCI acronym. Sailors were excited to receive new computers, but they did not initially understand that they would be working on a new, more restrictive network. Operating within the confines of the new NMCI network represented a huge change for the Sailors and civilian employees, but most of them had never heard the NMCI vision statement. Naturally, users began to resist, and the implementation problems were amplified. Kotter warned that:

> Transformation is impossible unless hundreds or thousands of people are willing to help, often to the point of making short-term sacrifices. Employees will not make sacrifices, even if they are unhappy with the status-quo, unless they believe that useful change is possible. Without credible communication, and a lot of it, the hearts and minds of the troops are never captured. (Kotter, 7)

Almost overnight, the information infrastructure at major Naval commands changed, and the persons who were most affected by this change had no idea why the transformation was even taking place.

The failure of the Navy's leadership to communicate NMCI's vision was a combination of the following two factors: 1) many leaders at the top of the Navy did not agree with the notion that sharing a vision was necessary to facilitate the success of a military program, and 2) the Navy's leadership did not use all of their available tools to deliver a consistent and persistent message. The sections below explain how these factors negatively affected NMCI's acceptance by the end users.

b. The Importance of Vision Sharing

Visions are tools that are used by leaders to help them communicate an envisioned future in a clear and provocative manner. Because a vision is created on behalf of the people in the organization whose actions shape the future, not sharing this vision makes little sense. Many organizations put an incredible amount of time and effort into formulating a vision; staff members spend hours writing, wordsmithing, chopping, and rewriting a vision statement to ensure that it captures the imagination of its readers in an easily understandable format. However, when the final product is presented for approval, some executives mistakenly believe that the vision was written just for them. Visions are not created just to make the strategic leaders feel better about a large

investment or a risky decision. Visions are made for the entire organization, so they should be shared with the entire organization.

When a vision is passed from leader to subordinate, the leader communicates many implicit messages. First, the leader substantiates the importance of the vision's premise; when leaders take the time to communicate something, they unwittingly add credibility and support. Secondly, the leader implies a call for assistance. Visions are usually addressed to the organization as a whole, so upon receiving the vision, employees will know that their help will be needed to make it a reality. Finally, a new vision suggests that current operations will need to be changed and realigned to support the organization's new direction. Recall that a vision represents a final destination; therefore, it will be the responsibility of the leaders to chart a new course and answer the question "how will we get there from here?"

c. How are Messages Communicated in the Navy?

Although the vision itself is a communication piece, it cannot propagate through the organization's lines of communication without a conscious effort from leaders at all levels. Kotter stated that "[i]n more successful transformation efforts, executives use all existing communication channels to broadcast the vision" (Kotter, 7). Navy leaders have a variety of choices when it comes to communicating a message, but in the case of NMCI, these options were either underutilized or ignored. As an example, the following "channels" were available to Navy executives before and during NMCI's implementation process:

- Releasing a Navy message
- Using the chain-of-command
- Publication in a Periodical
- Requiring mandatory or optional training
- Navy-wide stand-downs

With the exceptions of stand-downs, each one of these communication methods is used quite often in the Navy. The paragraphs below discuss how each one of these methods were used (or not used) to communicate NMCI's vision.

(1) Messages. The Navy released hundreds of messages pertaining to NMCI, but the primary focus of most of these messages was on

implementation guidelines and requirements, not change management issues. However, there were two messages that were released by the acting Secretary of the Navy that articulated not only a vision for NMCI, but also NMCI's expected benefits and how Sailors, Marines, and Civilians could help to make the program a success. Recall from the chapter on NMCI's history that the first of these messages was written by Secretary Danzig and released on October 6, 2000, the day of the NMCI contract award (see Appendix C, Part A), and the second ALNAV was written by Secretary England and released one year later, October 5, 2001 (see Appendix C, Part D). With the exception of the opening and closing paragraphs, some minor editing, and two paragraphs in the second message that describe some "lessons learned" from the first year of NMCI's implementation process, the two documents are identical. Although each message is a good example of communication from the top to the entire organization, the frequency of these ALNAVs was too low to have a lasting impact.

(2) Chain-of-command. It is difficult to determine to what extent the chain-of-command was used to disseminate NMCI's vision, but the if widespread user ignorance of the program during the initial rollout stages can be used as an indication, then it is safe to conclude that the chain-of-command was ineffective at best. The prevailing attitude of naval personnel at the beginning of NMCI's delivery process was largely apathetic. Most of the Sailors and Civilians thought NMCI was just another way to purchase new computers and hardware; few people understood that NMCI was a separate network that would reduce user autonomy. To facilitate acceptance and the implementation process, leaders at the lowest levels needed to receive NMCI's vision from their superiors, and they, in turn, needed to educate and prepare their troops for the impending change.

(3) Publications. Publications are a powerful medium that can help spread a message within a widely-dispersed organization. Aside from news publications like *Federal Computer Week*, and *Inside the Navy*, whose articles mostly reported the current progress or problems of the intranet program, *Proceedings* Magazine, *Sea Power* and *Signal* have published some interesting and thought provoking pieces regarding NMCI, some of which describe how the program enables change and transformation. Although the quality of these articles was exceptional, the number of

articles published was markedly less impressive. For example, using "NMCI" in a keyword search of the *Proceedings* archive yields only three articles: "It's more than e-mail," written by Archie Clemins and published in February of 2000, advocated a healthy relationship between IT-21 and NMCI; "A global Navy needs a global network," written by Charles Munns and published in January of 2003 (recall that Admiral Munns was the first military Director of the NMCI program), outlined the present progress of NMCI and its future challenges; and "Change how info is managed and controlled," written by Commander Feza S. Koprucu and published in August of 2004, provided an in-depth analysis of the Navy's IT culture and why it needs to change to support future operations. Because these authors were experienced and high-ranking, credibility was not an issue; however, three articles over a six-year timeframe do not constitute frequent communication. (Note that *Sea Power* and *Signal* published a similar number of articles pertaining to NMCI, but it is doubtful that a significant number of readers subscribe to all three magazines, and even if they did, ten articles over six years still represent a small percentage of the overall communication potential of the channel).

(4) Training. The NMCI Program Office created a NMCI Fleet Liaison Team that traveled to installations ahead of its NMCI rollout date. Team members worked closely with IT managers to help them with the tedious logistical process of ordering workstations, but little was done to prepare users for change. Although the Fleet Liaison Team held special sessions on the NMCI implementation process that were open to everyone, because of the aforementioned feeling of apathy, few Sailors and civilians attended, and those who did come were usually IT professionals whose participation was mandated by their command or supervisor. In short, the Fleet Liaison Team did little to facilitate the much needed cultural change associated with the acceptance of the new intranet. (Fleet Liaison Teams are discussed in more depth later in this chapter).

(5) Stand-downs. Navy-wide stand-downs have historically been reserved for sensitive, Navy-wide topics like sexual harassment and safety related issues. Although this communication tool is probably the most powerful in the list, the fact that the Navy must essentially "shutdown" for a day also makes this option very costly. In retrospect however, an NMCI stand-down would have been a worthwhile attempt to

buttress support for the multi-billion dollar program. An NMCI stand-down would have allowed the Navy's top leaders and IT experts to explain why NMCI was important to the Navy and how every Sailor's help was needed to transform the Navy's communication culture. A stand-down would have reached almost everyone simultaneously, and it could have served to open the dialogue and suppress some counterproductive rumors.

5. Empowering Others to Act on the Vision

a. The Legacy Application Problem Revisited

One method used by leaders to empower others is the delegation of authority. Giving commanders the freedom to make their own decisions regarding financial resources and command assets affords them the flexibility to innovate and take calculated risks, but the NMCI program offered little room for negotiation or tailored solutions. Participation in the program was mandatory. It did not matter if the command was a complex research facility that claimed it required self-control over its computing and network systems to accomplish daily tasks or if the command was more inclined to use NMCI for just email and word processing, the hardware and services provided by EDS via NMCI were supposed to do the job. This one-size-fits-all approach alienated the "haves" of the Navy who, incidentally, continue to operate their expensive legacy networks in parallel with NMCI (a situation that is obviously more costly).

The problem outlined above was identified early on in the program's development, and its existence was then confirmed once NMCI's rollout process began. As predicted, users felt that it was absurd to expect the entire Department of the Navy to have similar IT needs. The Navy's attempt to consolidate its IT expenses by implementing an enterprise solution was understandable from the standpoint of security and cost management, but from a change management perspective, the plan represented an emotional time bomb. Implementers knew that they would be removing long enjoyed freedoms and privileges from many users, and that this action would cause user resistance. It is difficult to "empower" users when, by its very nature, NMCI's standardization and strict guidelines necessitates disempowerment; therefore, empowerment must come in a different form. For NMCI, empowerment needed to be facilitated by removing barriers to the delivery process itself.

Kotter stated that "[t]oo often, and employee understands the new vision and wants to help make it happen. But an elephant appears to be blocking the path" (Kotter, 8). According to Kotter, empowering others means clearing the path of obstacles, and by far the largest obstacle in the path of NMCI's implementation was the unexpectedly high number of legacy applications that needed to be certified and migrated to the new network. This problem became such a hindrance that the fate of the entire program fell into jeopardy on numerous occasions. Congress repeatedly used the application problem, and the other problems that were spawned by it (e.g. dual desktops) as a reason for either shutting down the program or slowing its implementation. Recall that eight months into NMCI's delivery process, Admiral Richard Mayo, acting as the Navy CIO, sent an administrative message to top level commanders addressing the legacy application problem (see Appendix C, Part C). In the memo, Admiral Mayo identified legacy application certification as "the critical path for NMCI transition," so the major thrust of his message was the encouragement of application reduction. Even though commanders were instructed to provide rationalized lists for the applications that they wanted to keep, the number of so-called "critical" or "mission essential" applications remained high because users were reluctant to cooperate. Instead of being empowered to act, users felt powerless, and because no other option was presented to them, many felt that the path of resistance was their only recourse.

b. Leadership Begets Ownership

In any transformation process, some of the changes that leaders will want to make will involve extreme sacrifices from not only themselves, but also many other individuals within the organization. For example, because the Navy's goal is to reduce its application inventory to less than 2,000, Sailors and Civilians were asked to eliminate their use of unnecessary programs. This goal was very ambitious since NMCI officials eventually discovered over 70,000 applications installed on Navy computers and servers. This sudden, unexpected change of slashing the number of applications by ninety-seven percent would undoubtedly cause resistance, frustration, and anger. These negative feelings are unavoidable, but with the proper type of communication, they can be mitigated. Communication serves to empower users through knowledge. Knowledge

removes uncertainty, and if leaders are savvy enough, they can also use the spreading of knowledge as a means to create buy-in and a sense of ownership.

The desired product of empowerment is employees whose actions support the goals or mission of the organization. These people believe in what the organization is trying to accomplish because the problem and the solution have been explained to them by leaders that they trust. These are the leaders that not only share the vision with their subordinates, but they also make honest and logical assessments of the task at hand, which helps answer the question "how do we get there from here?" Consider the following statement made by Joe Cipriano, the first NMCI program director, approximately six months prior to NMCI's official contract award:

> No matter how clever we are with how we do this, the transition from what we've got to this is going to be painful. We've told everybody – expect this not to be fun when we first do it. We believe this is worth it, and the pain is worth it. It's something that is necessary for the Navy to perform to the levels the secretary expects in the 2000s. So we're going to do it. (Bohmfalk, 7 Feb 00)

These candid remarks regarding the difficultly of transformation never made it to the lower levels of the organization; therefore, users operated on the assumption that NMCI was supposed to be something really great, really fast. These false expectations only served to increase the eventual negative impact of disillusionment and decrease the credibility of anything "NMCI."

The fact that Cipriano's statement was truthful and straightforward was a good start, but without a plan to convince others to help, it was also incomplete. If a leader was to repeat this message to his or her subordinates, a few more lines need to be added to the end. Those lines would communicate a simple request for assistance. A possible addition could have been the following:

> Because we are committed to this difficult task, we will need everyone's help. We are asking people to make short-term sacrifices to ensure long-term prosperity. Positive attitudes and positive action are critical to the success of NMCI. Everyone's participation is necessary to further enable the Navy transform into the force that will be necessary to successfully operate in the 21st century.

Not all communication from the Navy's leadership lacked this necessary call to arms. For example, in Secretary Danzig's message to the Navy (also repeated in England's ALNAV), he stated that "we are going to move forward because we cannot stand still. We initiate this system with a commitment to change the way we think and operate. That is asking a lot of our Sailors, Marines, and Civilians. That is in the best tradition of our Navy and Marine Corps" (see Appendix C, Part A). As stated previously, Secretary England's message was similar to Danzig's, but England added a very poignant conclusion: "I am personally committed to making NMCI a reality for all our Sailors and Marines, and I expect your full support. Be a leader. Embrace the NMCI change and lead our naval services into the future" (see Appendix C, Part D). It is obvious from these excerpts that both Secretary Danzig and Secretary England not only knew the difficulty that comes with transformation and change, but also that leadership would be the most important ingredient in NMCI's success. This message never reached the critical mass of the organization.

6. Planning for and Creating Short-Term Wins

a. Hoping Versus Creating Short-Term Wins

On the day of the NMCI contract announcement, the Secretary Danzig stated that NMCI would unfold "quarter-by-quarter" and that "the major milestones will be every three months" (DoD News Briefing, 6 Oct 00). The plan to rollout NMCI incrementally was aligned nicely with the prospect to create short-term wins, but the constant delays triggered by problems in the program continuously eclipsed its important accomplishments. Even as major milestones were reached, the significance of these successes was lessened since they usually occurred months behind schedule. The "wins" rarely materialized. Kotter explained how this situation can lead to further difficulties:

> Most people won't go on the long march unless they see compelling evidence within 12 to 24 months that the journey is producing expected results. Without short-term wins, too many people give up or actively join the ranks of those people who have been resisting change. (Kotter, 8)

In addition to BHAGs, the Navy's planners also needed to set easily attainable goals, and once these short-term successes were achieved, they needed to be paraded in front of all stakeholders, namely the end users and Congress, to fight the negative press and the counterproductive effect of harmful rumors and outright falsehoods.

Kotter stated that it is not enough to *hope* for short-term wins, short-term wins must be *created*. Those who just hope for short-term wins may provide the necessary support for success, but they have a sit-and-wait attitude. They hope for something noteworthy to happen, and if and when it does, they are happy to report the good news. However, creating short-term wins is different because it is an active approach to ensuring a program's success. If a win is "created," then by definition it cannot fail. It is important to realize that any type of failure can be detrimental to a program because of the possibility of producing negative perceptions. Negative perceptions are dangerous since people will naturally not affiliate themselves with a troubled program.

Some might argue that "creating wins" is more akin to "engineering wins," which could be construed as dishonest or unethical. This concern is reasonable; however, Kotter (or this thesis for that matter) does not advocate the fabrication of results. The creation of short-term wins simply involves the continuous, proactive search for ways to improve the program and the opportunity to then publicize achievements once they have been realized.

b. Long-Term Losses

The key metrics that the Navy and EDS implementers used to monitor the success of NMCI's rollout process was the number of seats in AOR and the number of seats in cutover (recall that AOR or Assumption of Responsibility is when EDS assumes responsibility of a command's existing information systems, and cutover is achieved when new workstations are physically installed and connected to the NMCI network). At the beginning of 2000 when the delivery process first began, the Navy's leaders expressed the desire to execute an aggressive cutover schedule with the aim of installing thousands of seats every month, but as actual events unfolded, leaders slowly realized that the goal of having NMCI fully operational within two to three years after the implementation process began was not going to happen. The legacy application problem coupled with strict Congressional oversight were the two major causes of the delivery slowdown. These highly visible setbacks damaged the program from a change management perspective because they emboldened the critics and increased the ranks of

the dissenters. Below is a partial list of NMCI's major milestones and goals that suffered from severe delays and when they were finally completed.

- A Navy-wide intranet delivered by 2001 – Both Admiral Jay Johnson and the original vision for a Navy-wide intranet expressed the desire to have NMCI up and running by the end of 2001, but as of February 2006, approximately 60,000 seats (near 15% of the total) remained to be installed.
- IOC attained by the end of 2001 and then FOC by the end of 2002 – The final RFP listed this goal for initial and full operational capability. IOC, which is defined in the NMCI contract as the "successful completion of proof of concept testing and evaluation," was achieved after NMCI passed the OPEVAL in December of 2003, and FOC, which is defined as "the steady state contract guaranteed number of users having the ability to receive ordered services," has yet to be declared.
- NMCI Contract awarded by May 2000 – The projected contract award date incrementally slid to throughout the summer until it was finally awarded in the first week of October 2000.
- First site cutover (NAF Washington) accomplished in June 2001 – The first NMCI seats were cutover in the August/September timeframe with the first person to login to NMCI occurring on September 7, 2001.
- A six-month delivery process (from AOR to cutover) – Even though NMCI advertised a 6-month AOR period, this deadline was almost never met. As an extreme example, NAVAIR was one of the first commands to begin the rollout process, and as of December 2005, cutover was still not finished.
- A 20,000 to 30,000 seat per month installation rate – This was the necessary rate that implementers needed to reach if the Navy was to meet the two to three-year delivery time, and it was the rate that NMCI officials advertised they could sustain after the initial testing and evaluation phase, but actual rates did not even come close. In fact, as of May 2002, approximately eighteen months into the implementation process, only 4,000 seats had been cutover to the NMCI network. (For comparison purposes, note that as of February 2006, EDS had delivered over 275,000 seats – this number corresponds to an actual cutover rate less of than 5,000 seats per month.)

Most of these goals were never realized because of the legacy application problem, and because NMCI officials tied a large number of goals to NMCI's delivery rate, when these goals fell short, the entire program became enveloped in a cloud of failure and uncertainty.

c. NMCI and IT Industry Symposiums

One bright spot in the history of change management and the NMCI program was the attempt by the PEO-IT, the NMCI Program Office, and EDS to facilitate communication and continuous improvement by sponsoring yearly conventions that focused on the procurement of NMCI and other IT related services. These conventions became an effective vehicle to advertise the program's progress and to foster a sense of community among the numerous people whose daily jobs consisted of making the NMCI program better. Listed below are the four symposiums/conferences that have been held to date:

- NMCI Industry Symposium 2003 (June 17-19)
- Navy IT Industry Symposium 2004 (June 20-23)
- Navy Enterprise IT Industry Symposium 2005 (August 8-11)
- 2006 Winter NMCI Enterprise Conference (January 31- February 2)

It is interesting to note that the event name has changed slightly from year to year. As noted in the chapter on NMCI's history, the "NMCI" acronym was dropped after the first year, but then it was added in the most recent conference title. The word "enterprise" was eventually added to emphasize the Navy's overall enterprise strategy regarding its IT acquisitions.

NMCI conferences were important for several reasons. First, these events served to educate the participants on the current and future status of the program. This direct communication from the NMCI Program Office served to quell rumors and to disperse important information that, for one reason or another, never reached to lower levels of the organization. Secondly, symposiums and conferences were excellent mediums that leaders could use to create and celebrate short-term wins. Leaders at these events solicited ideas, presented awards, and shared new goals. Lastly, conference attendance revitalized a sense of urgency and purpose. According to Kotter, "[w]hen it becomes clear to people that major change will take a long time, urgency levels can drop. Commitments to produce short-term wins help keep the urgency level up and force detailed analytical thinking that can clarify or revise visions" (Kotter, 9). Re-commitment initiatives are necessary to create new interest and to encourage continued effort.

7. Consolidating Improvements and Producing Still More Change

a. Change Management Defined?

At the very beginning of NMCI's lifetime, some of the program's leadership publicly recognized that the road to success would be long and arduous not only from a technical standpoint, but also from a non-technical point of view. In fact, early in the process, Rick Rosenburg, the head of the NMCI Industry Team, aptly noted that "the greatest challenges in the project deal with change management and the cultural shifts that the Navy Department employees must make, not the technical aspects of the project" (Bohmfalk, 29 Jan 01). This sentiment was also echoed by Joe Cipriano and others within the ranks of the PEO-IT and the NMCI Program Office, but this knowledge of the importance of change management was never internalized or adequately shared with those on the front lines of the implementation process. As an example of how change management was absent from the vernacular, Figure 15 shows how it was defined in Appendix A of the NMCI Execution Plan – a document that was "designed to provide a comprehensive guide for the Navy and Marine Corps Intranet (NMCI) execution" (NMCI Execution Plan,1-1).

Change Management	Change Management refers to those events and processes that are required to upgrade/downgrade hardware or software on the network (i.e., SMS or technical refreshment plan). These processes may be manual (i.e. technical refreshment plan) or automated (i.e. SMS). Change Management is also described as the proactive process of managing all moves, adds and changes in the IT, telecom or facilities assets that the organization uses in the delivery of it's product.

Figure 15. Definition of Change Management. (From: NMCI Execution Plan, A-45)

It is obvious from Figure 15 that NMCI's implementers did not understand change management or how its principles should have been applied to the NMCI program. The Navy can no longer afford to deny acquisition professionals the training that will help them recognize the significance of change management practices.

b. The NMCI Fleet Liaison Team

The most important aspect of change management is credible and frequent communication. As addressed previously, the Navy did a poor job in utilizing its traditional communication channels, and in the case of one channel in particular, the

NMCI program managers missed the perfect opportunity to spread NMCI's vision and communicate its purpose and benefits. The NMCI Fleet Liaison Team was officially created in December of 2001 in response to loud complaints by local IT managers who claimed that the NMCI implementation process was too complicated to execute without more help from outside experts. This team began with twelve members who deployed on Site Visit Teams that traveled from command to command to answer questions, deliver up-to-date implementation literature, provide logistical and seat ordering assistance, and share lessons learned.

The NMCI Fleet Liaison Team members created numerous pamphlets, guides, checklists, plans, procedures, and lists that they disseminated during their site visits. The team also eventually produced and distributed a CD-ROM with an assortment of helpful documents and Internet links to NMCI-related websites. With the exception to two Excel spreadsheets and four PowerPoint files, the document content of the CD-ROM is listed below:

- Common Access Card Quick Reference Guide (4 pages)
- CLIN Catalog (148 pages)
- NMCI Contract (141 pages)
- Customer Project Manager (CPM) Guide (33 pages)
- Deployable Break Fix Support (54 pages)
- Deployables Checklist and Lessons Learned (22 pages)
- NMCI Deployables Support Plan (49 pages)
- Problem Resolution Escalation Procedure (6 pages)
- NMCI Release Development and Deployment Guide (211 pages)
- NMCI Government Aide to Deploy (37 pages)
- Gold Disk Contents (5 pages)
- Integrated Support Center Brochure (1 page)
- Updated Legacy Application Transition Guide (245 pages)
- NMCI Local Registration Authority (LRA) List (2 pages)
- Microsoft Outlook Web Access User's Guide (32 pages)
- Outlook Web Access Quick Reference Guide (2 pages)
- PKI Certificate Download Quick Reference Guide (2 pages)

- NMCI Public Key Infrastructure (PKI) User Guide (25 pages)
- Remote Access Service Quick Reference Guide for Use With Laptops (4 pages)
- Remote Access Service (RAS) User Guide (36 pages)
- Ready, Set, Go Overview (7 pages)
- NMCI Site Deployment Guide (65 pages)
- NMCI Site Integration Lead Guide (32 pages)

Buried within the 1,163 pages of these documents, there are only two references to change management. The NMCI Site Deployment Guide includes a "Cultural Change Management Communications Plan" requirement in the deliverable section of the Pre-Cutover checklist, but this plan is not mentioned anywhere else in the literature, and there is no guidance as to how to write this plan or what it should look like once it was prepared. The other document that addresses change management is the NMCI Site Integration Lead Guide. The first version of this thirty-two page document was published in June of 2003, and the following excerpt can be found under the section entitled "Key Guidance:"

> NMCI represents a major change to the way people interact on and with their computer/network; therefore effective change management is critical. One tool to help ease the transition in a major change is communication, communication, and communication. Change requires energy and the end users need to know why they need to change, what are the benefits, and the shortcomings. They need to know how long it will take. One vehicle that provides this communication is the Site Visit Team. The Site Visit Team can make your job significantly easier by being an effective tool for change management. (i.e., Answer the Why, What, and When questions) Other tools and resources are the Site Deployment Guide and CPMs. (NMCI Site Integration Lead Guide, 8)

Although this guidance was provided to local managers more than two years after the NMCI rollout process began, this new attention to change management served not only as an acknowledgment that NMCI implementers viewed resistance as a problem in the early years of the program, but it also indicated that NMCI officials had the desire to improve the implementation process. Continuous improvement is an important aspect of change management, but if leaders really want their new plans to work, much more effort and communication would be required than one paragraph in an obscure guidebook. The

NMCI Fleet Liaison Team was the logical choice to undertake this task, but it was too small and its members lacked the requisite power and resources to make lasting changes; however, a fully funded Transition Management Team (TMT) is exactly what the NMCI program needed. Among a host of other duties explained below, an effective TMT can circulate the important messages that facilitate improvement and change.

c. Transition Management Teams

According to Duck, a Transition Management Team is most effective when the team is headed by influential leaders whose sole responsibility is to manage change. These leaders are essential to the change management process because of the special role that they serve between the executives and end users.

> Managing change means managing the conversation between the people leading the change effort and those who are expected to implement the new strategies, managing the organizational context in which change can occur, and managing the emotional connections that are essential for any transformation. (Duck, 58)

The best way to manage this conversation is to be an integral part of the dialogue. TMTs allow leaders to have "eyes and ears" at the local and user level. This situation creates a direct line of communication between the program managers and the people who are implementing the new system. For maximum effectiveness, Duck stated that the TMT must be bestowed with the following eight primary responsibilities; however, the TMT cannot be entirely accountable for accomplishing all of these tasks:

(1) Establish Context for Change and Provide Guidance. The TMT needs to ensure that everyone in the organization "shares a common understanding" of the vision. (Duck, 78) This task can be achieved by communicating the vision to leaders and users across the organization so that positive steps can be taken to align mission objectives to the new direction. The TMT is an ideal medium to distribute information since members can be on site to answer questions and receive direct user feedback.

(2) Stimulate Conversation. Established and formal lines of communication may exclude some people from receiving valuable information; therefore, the TMT needs to promote early and frequent conversation to facilitate the movement of

information across what Duck called “old and obsolete boundaries” (Duck, 78). As experienced in the Navy, tradition and norms can be major obstacles to change, so the TMT needs to be on the lookout for any communication barrier that impedes transformation processes, and they need to be armed with the necessary power to remove these barriers.

(3) Provide Appropriate Resources. Since the TMT is typically, by design, on the front lines of the organizational transformation, TMT members have the opportunity to acquire first hand knowledge of the real problems experienced by those who are most affected by the change initiative. Because of this close proximity to “the problem,” the most effective TMTs are those with the authority to allocate or de-allocate resources. If TMTs do not have direct financial power, then it should be understood amongst all parties that they still have indirect influence via proposals and recommendations.

(4) Coordinate and Align Projects. “The TMT has two tasks: coordinating and aligning the projects into building blocks that fit together; and communicating to the whole organization how the pieces align so that others can see the larger picture and appreciate that there is a coherent plan” (Duck, 79). Alignment for NMCI means communicating the long-term goals of the program and ensuring that command tasks and the unit’s overall mission are supporting these goals.

(5) Ensure Congruence of Messages, Activities, Policies, and Behaviors. Duck says that the TMT must “be on the lookout for inconsistencies that undermine the credibility of the change effort” (Duck, 79). A TMT needs to closely monitor the conversation since they have the responsibility and credibility to quell rumors and fight disinformation.

(6) Provide Opportunities for Joint Creation. The TMT must invite the assistance of other leaders that want to help make the change process a success. The hope is that these leaders will help spread the TMTs messages further into the organization and even across the boundaries into other agencies. The history chapter showed that NMCI is a model example of a program that needed inter-agency cooperation to facilitate success.

(7) Anticipate, Identify, and Address People Problems. Duck correctly observed that "people issues are at the heart of change" (Duck, 80). The TMT should be well equipped to help local commanders prepare for the negative emotions that are commonly encountered with any change process. The TMT should continue to stress that communication is the key to anticipating and managing personnel problems that arise from uncertainty and change.

(8) Prepare the Critical Mass. Duck stated that this step involves "educating, training, and preparing the organization to think, feel, and act differently" (Duck, 81). Every transformation process challenges and eventually modifies the organization's current culture; leaders must recognize that this change is occurring so that they can balance the dynamic of the entire process instead of focusing on individual pieces. (Duck, 81) For NMCI, the critical mass was the end users, and because the end users represent the entire Navy, communication using the Navy's broadcast channels (covered previously) needed frequent utilization.

8. Institutionalizing New Approaches

a. Passive Resistance

Employees can express resistance in multiple ways. Some people are very vocal with their opinions and feelings, whereas others are more reserved and quiet. On the surface, it would seem that the loudest resistors pose the greatest danger to the change effort since their overt attacks might invoke participation from others, but this is not always the case. In fact, the quiet resistors can be equally dangerous because their negative disposition slowly and silently hurts the program. Duck referred to these types of people as "change survivors." Change survivors are "cynical people who've learned how to live through change programs without really changing at all" (Duck, 63). Change survivors are everywhere in the Navy. These are the people who pretend to go along with the new change initiative, but what they are really doing is waiting; they wait for a new Commanding Officer to arrive, they wait until they can transfer to another command, or they wait until they can retire; all the while, these people privately hope for the program to fail. Even though change survivors do not actively resist, their lack of acceptance quietly sabotages the program. Passive resistance is extremely dangerous to any initiative; however, creating a culture that embraces change can combat this problem.

b. Changing the Culture

The Department of the Navy consists primarily of the Navy and the Marine Corps, but each one of these services is comprised of multiple communities that have distinct subcultures. For example, the Navy is often divided into the Surface Warfare, Aviation, Subsurface, and Special Operations Communities. Similarly, the Marine Corps' culture differs slightly across its Aviation, Combat Service Support, and Combat Arms units. Among these specialized communities, pockets of differing cultures exist. In the Navy's Aviation Community for example, subcultures have formed within the various aircraft platforms that the Navy operates; members of jet, helicopter and propeller plane squadrons commonly exhibit platform-specific norms and attitudes that are easily recognizable to other aviation personnel. Because of this complexity, defining one culture for the Navy is an impossible task; however, dissecting each subculture does bring out some recurring themes and commonality.

Finding common ground is the first step in modifying an organization's culture. Leaders must recognize what is uniform across their organization, and then use this knowledge to fabricate a strategy that begins to change the culture. As mentioned at the beginning of this chapter, the Navy's traditional strategy for introducing change involves fast implementation with minimal communication. This method puts the new system in place quickly so that the user has no choice but to accept the change and move on. Conventional wisdom would have one believe that this technique decreases resistance since employees have little time to react, but what really happens is the following: because the users' frustrations never get resolved, negative feelings are allowed to fester; these feelings then begin to manifest into a form of resistance; then the actions of both the active and passive resistors begin to affect the system's performance; and finally the program either dies a slow and costly death or it simply never reaches its designed potential.

Ignoring change only increases resistance; therefore, leaders need to take active steps to promote acceptance. Kotter identified two factors that are important in fostering a change culture. These factors represent deliberate steps that leaders must take to facilitate the process of institutionalizing change. The first factor is "a conscious attempt to show people how the new approaches, behaviors, and attitudes have helped

improve performance" (Kotter, 10). In addition to facilitating short-term wins for the NMCI program, leaders needed to continuously communicate a program's progress, and they also needed to show how positive action and strong leadership have produced lasting results. The NMCI conferences and Industry Symposiums served as an effective medium for this type of communication since it gave leaders the opportunity to recognize and reward the program's top performers in a venue that was highly visible to the NMCI mid-management community.

The second factor that Kotter proposed is "taking sufficient time to make sure that the next generation of top management really does personify the new approach" (Kotter, 10). NMCI's success is dependent upon the actions of leaders everywhere in the Navy, not just those who manage the program; therefore, Sailors at all levels of the Navy's leadership should be held accountable for how they deal with change issues. Kotter suggested that this task could be accomplished by tying the success rates of change initiatives to personnel promotion decisions. For Naval Officers, this could mean including a new section on Officer Fitness Reports that allows an evaluator to grade individuals on their ability to manage change and facilitate transformation.

Kotter warned that "[u]ntil changes sink deeply into a company's culture, a process that can take five to ten years, new approaches are fragile and subject to regression" (Kotter, 9). For this reason, the actions described above must be either performed regularly (as in the case of yearly conferences) or institutionalized (e.g. changing the Navy's Officer Fitness Report form). This continuous attention a willingness to make permanent adjustments communicates one important message: the Navy is wholly committed to the change.

C. CHAPTER CONCLUSION

The purpose of this chapter was to illustrate how Kotter's eight steps can be used to ease a transformation process. Kotter's steps lay the foundation for a sound change management plan because they are based on years of researching organizational behavior and change. The close study of Kotter's steps shows that planning for change consists of careful preparation that is related not only to a specific program, but also to the organization's underlying culture. Leaders must be able to recognize situations that may

lead to employee resistance, and they must be trained in change management practices to deal with the common issues associated with any change process.

D. ADDITIONAL RESERCH TOPICS

While conducting research for this thesis paper, several other rich topics have surfaced that are worthy of further investigation and study. These topics are described in more detail in the subsections below.

1. Optimal Network Size

Navy leaders have often touted the size of NMCI to imply not only the large amount of effort it took to build the network, but also the difficulty in managing such an expansive system. The question that arises is this: "is NMCI too large to manage effectively?" In an effort to reduce IT costs, the Navy felt that an enterprise strategy would allow them to exploit the notion of economies of scale, but what other factors must be considered before reaching this conclusion? For example:

- Security – Can a huge system be successfully compartmentalized so that a successful attack can be isolated? Are the security devices and techniques being used by NMCI scalable to a large number of hosts?
- Manageability – How large does a network have to be before it becomes unmanageable by a single entity? Should NMCI be broken into pieces; should these pieces be managed by different contractors? Should the pieces be separate geographical regions or should the network be virtually divided?
- Performance – What is causing the degradation in service? Does NMCI have enough network operations centers? Are there a sufficient number of hardware components supporting the network?
- Cost – Is there a point where adding another node to a network actual produces diminishing returns? What is the optimal network size and what factors contribute to this size?

There are very few intranets that approach the size of NMCI, so in a sense the Navy is on unfamiliar ground. A detailed study of the NMCI in conjunction with a few other large intranets (e.g., IBM or GM) may provide some insight for the questions listed above.

2. The Cost of NMCI

The Navy has conducted several studies to determine the cost of IT and the cost effectiveness of NMCI. Whether it was the original business case analysis or the more

recent studies conducted by two independent firms, the result has been the same: the Navy is indeed saving money by using NMCI. Despite these reports, there are still some questions regarding the real cost of NMCI. The following areas of interest could use some clarification:

- Seat Costs – The base price of a seat cost does not include a number of additional services that the Navy can purchase. After including the price of these optional services and other maintenance costs, the price of a seat can nearly double.
- Deployed Units – When a Marine unit or a Navy Squadron deploys, they take their NMCI workstations with them. Even though they are no longer using the NMCI network, there is still a monthly fee.
- Terminal Services – Terminal Services users access their NMCI account from another computer, not on NMCI. Although the terminal service seat does not include a physical computer, it is the most expensive seat that EDS offers.
- DISN – The original contract bids included the cost of data transfer, but the Navy was pressured into using DISN as well. In some cases, the Navy is paying for data transfer twice.

If the Navy is really saving money by using NMCI, then investigating the disparities above may give Navy leaders the opportunity to lower its overall IT-related budget even more.

3. NMCI Security

One of the goals of NMCI was to make Navy networks more secure, but many have argued that NMCI is nothing more than a "hard shell with a soft, gooey center." In other words, once an attacker gets in, they can cause massive damage before being detected and blocked. Research in this area can determine whether or not the security used in NMCI really does meet industry standards, or if the system is a prime target for would-be attackers. A thesis on NMCI's security can also include recommendations to make the data within the intranet more secure, and it can strengthen procedures that operators need to take once a security breach is discovered or when an attack begins to cause damage. (It is important to note that due to the sensitive nature of this subject, a thesis that explores the strength of NMCI's security policies, procedures, and practices may need to be classified.)

4. Navy IT Knowledge and Skills

The realm of Information Technology has been identified as the battlespace of the future. If this statement is correct, then why has the Navy decided to outsource its IT services? One of the arguments for purchasing NMCI from an outside contractor (recall the build vs. buy controversy) was that the Navy's personnel needed to concentrate on its core competencies; that is, fighting and winning wars. But if IT is the future enabler of warfare, shouldn't IT be an important core competency? A thesis in this area could explore these questions and investigate whether or not the Navy's IT knowledge base is suffering due to the elimination of IT-related jobs and the atrophy of important IT-related skills.

5. Modularization

Some critics of NMCI suggest that many of the program's core problems could have been avoided if the Navy had adopted an implementation approach that focused on modularization; that is, building the system module by module, working out the bugs in one module before moving onto the next one. Instead, the NMCI implementation process has been characterized as "Big Bang." This type of acquisition approach almost always results in disasters because in a system that is implemented using the Big Bang approach, nothing works until it all works.

Part of the problem was the Navy's leaders did a poor job in defining what they meant by "intranet." Was the intranet the telecommunications infrastructure (e.g., routers, switches, and the data transfer medium) or did the intranet include all of this plus the end user systems (e.g., desktops and servers)? The data presented in this thesis suggests that Navy officials meant the latter, and if this was the case, a modular approach would have allowed the Navy to concentrate on the major pieces incrementally (e.g., base structured wiring and Network Operating Centers).

A thesis in this area could explore why NMCI officials strayed from the milestone-based, evolutionary design process that the Navy's acquisition system was built upon. Using IT-21 as an example of how modularization can pay dividends, this thesis can also formulate an acquisition strategy for implementing a large-scale project like NMCI. Specific details of the thesis can investigate the following:

- In what order should the modules be developed? Are some modules prerequisites for others? Can some be developed in parallel?
- Which of these modules are transparent to the users? Which will need to be accompanied with a competent change management plan?
- Can each module adopt a different acquisition strategy? If so, what are these strategies?
- Which modules should be contracted out and which should stay in house? Should the Navy use one contractor for all modules or should each module have a different contractor?

A thesis that focuses on these aspects of modularity could provide implementers with a concrete plan for dealing with complex systems that are too financially significant for failure to be an option.

E. THESIS CONCLUSION

Like most military procurement programs, the history of NMCI is full of stories that describe internal battles, external struggles, and some degree of user dissatisfaction; however, unlike many programs, NMCI touches (or will touch) almost every member of the Department of the Navy. This is a unique situation because almost everyone in the organization can be considered an end user – even some of the designers and implementers. The purpose of this thesis was to show that it is these end users, not Congress or any other government entity, who have the ultimate control over a program's fate, and how leaders can use knowledge to craft a plan that focuses on the inherent problems with a person's natural tendency to resist change.

The most important lesson to be learned from this thesis is that communication is key. The users at both locations described in the case study chapter suffered from information deprivation, and, in turn, the implementation process suffered. It is important to note that this thesis is not suggesting that the technical problems encountered by the users would have been erased by good communication – only that the ensuing backlash and the subsequent institutionalized resistance could have been kept at a more manageable level had leaders been more involved and forthright.

Persistence and patience are the two most important qualities for leaders to exhibit during an organizational transformation process. Leaders must execute a relentless and

persistent communication campaign to ensure that their messages reach everyone within the organization on a frequent basis. Patience is also necessary because it is impossible to change the culture of an organization in a short period of time. In fact, Kotter observed that leaders of successful transformation efforts "understand that renewal efforts take not months but years" (Kotter, 9); it will take time for Navy personnel to forget their legacy systems and to accept NMCI as a permanent part of the Navy's future. Because of this time requirement, the success of NMCI will more than likely need to be measured over the course of a decade, rather than the last six years.

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APPENDIX A. NAVY CORRESPONDENCE

A. MAYO LETTER TO PEO-IT, DATED 27 OCT 1999

DEPARTMENT OF THE NAVY
OFFICE OF THE CHIEF OF NAVAL OPERATIONS
2000 NAVY PENTAGON
WASHINGTON, D.C. 20350-2000

IN REPLY REFER TO

N6 Ser/9U554999
27 October 1999

From: Director, Space, Information Warfare, Command and Control (N6)
To: Program Executive Officer, Information Technology (PEO-IT)

Subj: NAVY/MARINE CORPS INTRANET

Ref: (a) Department of the Navy (DoN) Information Management & Information Technology (IM/IT) Strategic Plan FY 2000-2001

1. The prime goal of the Department of the Navy (DoN) IM/IT Strategic Plan for FY 2000 and 2001, reference (a), is to "develop, implement, operate, and govern a global infrastructure to provide transparent and seamless interoperability and end-to-end connectivity to all our people. A robust information infrastructure is the foundation of achieving information and business process superiority. Based upon common architecture and technical standards for hardware, software, computing, and telecommunications, this infrastructure will result in the Naval Intranet, a key component of the DoD Global Information Grid (GIG), and a critical element of interoperability with joint and combined forces." Another goal of reference (a) is to "ensure the reliability, availability and integrity of DoN information, information systems, and critical infrastructure needed to protect, defend, and secure our mission-critical capabilities."

2. Currently, multiple commands throughout DoN procure, administer, and operate information systems, an approach that is both vulnerable and inefficient. Additionally, procuring multiply networks with differing capabilities and architectures is expensive and difficult. Finally, uniquely trained personnel are required to operate, maintain, and integrate multiple differing systems. The variety of applications and security mechanisms impede sharing of knowledge and information, and increase our training costs. Differing levels of capability and security drive network operations to the lowest common denominator.

3. To support the objectives of reference (a), DoN requires an enterprise-wide network capability that provides secure, end-to-end service with assured access to the full range of voice,

video, and data services by 2001. The Navy/ Marine Corps Intranet (N/MCI) must provide:

a. Security to protect the network and information, and to detect and respond to intrusions with no loss of information or network capability;

b. Interoperability and reliability;

c. Efficiency in order to reduce the cost of manning and training, and to reduce the time to incorporate new technology, techniques and processes; and,

d. Network operation and maintenance to guarantee network response time, and implement enterprise-wide policies, procedures and training to maintain interoperability and currency.

4. Program Executive Officer, Information Technology, is directed to acquire the N/MCI as a service. Infrastructure maintenance should be the responsibility of the provider based on key measures of performance, applied against a design reference mission, at a fixed price per seat cost. The measures of performance and schedule of services shall be approved jointly by Department of the Navy Chief Information Officer, Marine Corps A/C C4I and OPNAV N6.

R. W. Mayo
Rear Admiral, U.S. Navy
Director,
Space, Information Warfare,
Command and Control

Copy to:
Department of the Navy, Chief Information Officer
Assistant Chief of Staff, Command, Control, Communications, Computers, and Intelligence
(A/C C4I)

B. NMCI MEMORANDUM FOR COMMANDING OFFICERS, DATED 19 JAN 2000

DEPARTMENT OF THE NAVY
OFFICE OF THE CHIEF OF NAVAL OPERATIONS
2000 NAVY PENTAGON
WASHINGTON, D.C. 20350-2000

IN REPLY REFER TO

19 JAN 00

MEMORANDUM FOR COMMANDERS, COMMANDING OFFICERS AND OFFICERS IN CHARGE

Subj: NAVY/MARINE CORPS INTRANET

The Secretary and I have directed the establishment of a Navy/Marine Corps Intranet (N/MCI) to provide enterprise-wide, end-to-end information network capability. Currently, many commands throughout the DoN procure, administer, and operate their own information systems; an approach that is expensive, vulnerable, and inefficient. This approach also results in the need for uniquely trained personnel to operate, maintain, and integrate what are often totally disparate systems. This variety of applications and security mechanisms impedes the sharing of knowledge and information, and increases training costs.

The N/MCI will provide improved voice, video, and data service to all naval activities, enabling process improvements in warfare and warfare support. The Program Executive Officer, Information Technology (PEO-IT), has been directed to procure N/MCI as a service, based on key measures of performance, applied against a design reference mission, and at a fixed price per seat cost. The Reinvestment in Infrastructure (RII) group, composed of senior leadership from each of the DoN's claimants, has been tasked with identifying the funding for this effort.

In order to achieve these objectives and implement the N/MCI as we have planned, subscription to this service will be mandatory for all Navy commands. Once the contract has been awarded, commands will transition from their current network to the N/MCI. The particular details will be worked out via transition plans formulated by the PEO and claimants, working in conjunction with the selected contractor. In the interim, any Navy command entering into a contract with a vendor for N/MCI-like services will ensure that the contract can be terminated after one year in order to expedite the transition to N/MCI.

I know that you all share these aims and your support is critical to our success.

J. L. JOHNSON

C. NMCI MEMORANDUM OF AGREEMENT, DATED 08 MAR 2000

Memorandum of Agreement

The purpose of this Memorandum of Agreement is to document agreements between the staffs of the Offices of the DON CIO, the Assistant Secretary of the Navy (RDA), and the Assistant Secretary of Defense (C3I) regarding the acquisition and Chief Information Officer (CIO) oversight of the Navy Marine Corps Intranet (NMCI). The key elements of those agreements are as follows:

1. Clinger-Cohen Act (CCA) is applicable to the NMCI.
2. Before award of the NMCI contract, the Navy Acquisition Executive or the DON CIO will certify to the DOD CIO that NMCI is CCA compliant, and the DoD CIO will provide notification of the certifications to the congressional defense committees.
3. The acquisition oversight framework developed by our offices for NMCI uses DoDD 5000.1 and DoD 5000.2-R principles as a baseline tailored to recognize the unique and innovative nature of the NMCI Initiative. DON will provide evidence of the approach taken to accomplish the following activities:
   a. Requirements definition
   b. Business Case Analysis, including Analysis of Alternatives and calculation of Return On Investment
   c. Performance measurement
   d. Test and evaluation
   e. C4I support planning
   f. Baselining the initiative
   g. Ensuring information assurance
   h. Incremental fielding and implementation
   i. Risk mitigation
4. To ensure resolution of all issues in a timely manner, the integrated product team (IPT) process will be used. PEO(IT) in his capacity as Enterprise Acquisition Manager for IT (EAMIT) will establish the following WIPTs in coordination with OASD(C3I):
   a. Interoperability
   b. Information Assurance
   c. C4I Support
5. DON and OASD(C3I) have developed a streamlined oversight process that includes decision reviews by the ASD(C3I) before award of the contract, and appropriate reviews after contract award.

Paul Brubaker 3/8/00
Paul Brubaker date
Acting Deputy DoD CIO

Dale Uhler 3/8/00
Dale Uhler date
DASN (C4I/EW/Space)

Ron Turner 3/8/00
Ron Turner date
Deputy DON CIO for Infrastructure
Systems & Technology

D. NMCI MEMORANDUM OF AGREEMENT, DATED 17 AUG 2000

August 17, 2000

Memorandum of Agreement for Navy Marine Corps Intranet

Among the Assistant Secretary of Defense for Command, Control, Communications and Intelligence (ASD(C3I))/Department of Defense Chief Information Officer, the Department of the Navy (DON), and the Defense Information Systems Agency (DISA)

Background: The purpose of this Memorandum of Agreement (MOA) is to achieve the goals and objectives associated with implementation of Navy Marine Corps Intranet (NMCI), as discussed during the week of August 14, 2000. In furtherance of these goals and objectives, the parties have agreed as follows:

a. The DON, in cooperation with DISA, will implement the NMCI Alternative 2 DISN Augmented solution. Both parties intend to preserve the functionality and capabilities of that solution.
b. The NMCI security architecture will comply with the DoD Defense in Depth model. NMCI will meet DoD network certification and accreditation (C&A) requirements and comply with applicable DISA Circulars. Also, the NMCI will comply with the Global Information Grid (GIG) Information Assurance (IA) and Network Operations Guidance and Policy Memoranda (G&PM).
c. The NMCI will maintain interoperability with the DoD and Service components in accordance with DoDD 4630.5, GIG Overarching G&PM, and other applicable DoD policies.
d. The DON will obtain Internet access exclusively via NIPRNET.
e. The DON will ensure NMCI contractor personnel have access only to that data on the SIPRNET required to fulfill their contractual obligations. Necessary access protections will be developed and approved jointly by ASD(C3I), DON, DISA, Joint Staff, and Defense Security Service personnel.
f. The Defense Information Systems Network (DISN) will be maximally utilized to meet NMCI functionality, schedule, and performance (e.g., Service Level Agreement (SLA)) requirements, including such improvements to the DISN as may become available during contract performance.
g. During contract performance, DISA will have the first opportunity to satisfy all wide area network (WAN) requirements. The NMCI contractor will provision the balance of the requirements.
h. As NMCI is initially implemented, there may be instances where DISA is not able to meet some service requirements. Until DISA is able to provide that service, commercial augmentation will be allowed. The parties expect that DISA will work to meet these requirements. DISN will be substituted for commercial augmentation as the DISN meets the requirements.
i. The NMCI contractor is required to measure SLA compliance. Methods of measurement approved for contractor use in determining SLA compliance will also be used to measure DISN performance under the contract. Compliance with SLAs is required for continuance of each DISA-provided service.
j. The contractor is expected to take action to maintain established performance levels at all times. If such action includes commercial augmentation, the NMCI contractor will notify the DON, who will notify DISA of the action. Such actions will be evaluated by both DON and DISA for restoration or substitution of DISN service within a reasonable time. To the maximum extent possible, problems will be

anticipated and resolved by actions between DISA Regional/Global Network Operations and Security Centers and NMCI Network Operations Centers.

k. Both DISA and DON will provide to one another near-real time network visibility and performance information as necessary to ensure end-to-end performance. Additionally, the DON will provide DISA access to measurement data that provides timely indication of DISN performance.

l. DISA will be present and support DON in post-award conference and future interactions as needed to ensure maintenance of optimum working relationships. DON and DISA will involve each other in relevant matters of provisioning of regional communications and neither party will take unilateral actions affecting agreed upon service. There is no substitute for common sense, good faith behavior, and coordination.

m. DISA will establish a project office (PO) to support NMCI implementation; the DON will provide onsite representation to the DISA PO; DISA will likewise provide onsite representation to the NMCI Project Management Office.

n. The GIG waiver board will focus on long-term DISN utilization trends under the NMCI contract. DON and DISA will provide consolidated quarterly updates to the GIG waiver board, including a gap analysis of NMCI services required versus those provided by DISA.

o. Because the augmentations described in this MOA are temporary, they are considered variances to the architecture and do not require a GIG waiver.

This MOA shall remain in effect during the life of the NMCI contract.

Approved by the undersigned.

Assistant Secretary of Defense for Command, Control, Communications and Intelligence/Chief Information Officer, Department of Defense

Assistant Secretary of the Navy (Research, Development, and Acquisition)

Director, Defense Information Systems Agency

8/17/2000

Department of the Navy Chief Information Officer

E. OMB LETTER TO THE SECRETARY OF DEFENSE, DATED 12 SEP 2000

EXECUTIVE OFFICE OF THE PRESIDENT
OFFICE OF MANAGEMENT AND BUDGET
WASHINGTON, D.C. 20503

September 12, 2000

THE DIRECTOR

The Honorable William S. Cohen
Secretary of Defense
The Defense Pentagon
Room 3E880
Washington, D.C. 20301

Dear Mr. Secretary:

The Office of Management and Budget (OMB) has reviewed the Navy's pending contract award for the Navy-Marine Corp Intranet (NMCI) project. Given your role in crafting the Clinger-Cohen Act of 1996, I know you support the goal of maximizing the value and reducing the risks of information technology (IT) acquisitions. As outlined below, we are approving the NMCI project, subject to compliance with certain conditions.

As you know, Subdivision B of the Clinger-Cohen Act of 1996 seeks to improve the way federal agencies acquire and manage information technology (IT) resources. It requires that IT investments be integrated with the budget process, provide quantifiable performance benefits, and demonstrate a positive return on investment. OMB Circular No. A-11 helps implement these requirements. In reviewing IT budget proposals, OMB takes care to ensure that the project is consistent with applicable Clinger-Cohen and OMB principles. We fully support innovative approaches to information technology acquisition and management.

The NMCI project represents a major IT system within the meaning of OMB Circular No. A-11, and thus must be consistent with the provisions in this Circular. Since the NMCI project has come to us for review on an off-cycle basis and was not reviewed as part of the regular budget process, we have needed to give it special attention. We share your desire to ensure that the NMCI project is properly planned, integrated with the budget, and likely to improve measurably the Navy's performance of its mission. However, we have concerns about whether full implementation of the NMCI project would be consistent with Clinger-Cohen and A-11, or would yield the anticipated performance benefits on schedule or within budget. We also have questions as to whether full implementation would be modular, consistent with Administration policy on information technology investments. While we have concluded that in this case, an adequate justification exists for conducting the pilot phase of the NMCI acquisition, future acquisition programs of this type should be submitted to us for review consistent with the policies that govern the regular budget process.

Additionally, OMB wants to ensure the concerns on small business participation and contract bundling are monitored throughout the resultant contract. We are pleased that the Navy has placed a mandatory requirement that 35% of the contract price be performed by small businesses -- including financial incentives for exceeding the percentage and penalties if the

requirement is not achieved. Adherence to this requirement should be monitored to ensure that this percentage is accomplished.

With this as background, OMB would support issuance of the NMCI contract as currently structured with the following conditions:

- In accordance with OMB's capital programming and budget policy, the Navy must conclude the planning phase of the NMCI acquisition before proceeding further. This should take place after successful completion of the pilot implementation at the Naval Air Systems Command (NAVAIR), when the project achieves Initial Operational Capability (IOC).

- The Navy must not proceed beyond the initial phase of the contract to Full Operational Capability (FOC) until review and acceptance by OMB of the following:

  - The Navy and OSD assessments of actual project performance (NAVAIR pilot) against the cost, schedule and performance goals established for the acquisition and contained in the NMCI contract;

  - Full certifications by the Navy and OSD that the NMCI acquisition complies with the Clinger-Cohen Act; and

  - An updated business case analysis and return on investment analysis based on actual results of the first phase (completion of the IOC).

  - An NMCI project system security plan, with responses directed at each requirement found in OMB Circular A-130, Appendix III A(3)(a)(1)-(4) and A(3)(b)(1)-(4).

- The Navy must ensure the contractor meets the mandatory subcontracting requirement. Given that the contractor is required to meet the percentage no later than six months following contract award, the Navy must provide a report to OMB reflecting the status of the subcontracting requirement within seven months after contract award.

- The Navy FY 2002 budget estimate submission to OSD/OMB must include the following:

  - A capital asset plan (Exhibit 300b). As Navy will be reporting NMCI for the first time with the FY 2002 submission, all parts of Exhibit 300b must be completed. All subsequent budget estimate submissions for the life of NMCI should include an updated capital asset plan.

  - Demonstration of the NMCI project's compliance with OMB Memorandum M-00-07, *Incorporating and Funding Security in Information Technology System Investments*, February 28, 2000, and OMB Memorandum M-00-13, *Privacy Policies and Data Collection of Federal Web Sites*, June 22, 2000.

We appreciate the cooperation and teamwork among OMB, DOD, and Navy staff. OMB will continue to work with you to help ensure that the NMCI project meets the conditions outlined above, and receives both priority attention and appropriate support.

Sincerely,

Jacob J. Lew

F. OSD MEMO TO THE SECRETARY OF THE NAVY ET AL, DATED 15 SEP 2000

OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE
6000 DEFENSE PENTAGON
WASHINGTON, DC 20301-6000

COMMAND, CONTROL, COMMUNICATIONS, AND INTELLIGENCE

MEMORANDUM FOR SECRETARY OF THE NAVY
UNDER SECRETARY OF DEFENSE (COMPTROLLER)
INSPECTOR GENERAL OF THE DEPARTMENT OF DEFENSE
ASSISTANT SECRETARY OF THE NAVY (RESEARCH, DEVELOPMENT AND ACQUISITION)
DIRECTOR, ACQUISITION TECHNOLOGY AND LOGISTICS, OUSD(AT&L), S&TS/DT&E
DIRECTOR, OPERATIONAL TEST AND EVALUATION
DIRECTOR, PROGRAM ANALYSIS AND EVALUATION
DIRECTOR, JOINT STAFF
DIRECTOR, DEFENSE INFORMATION SYSTEMS AGENCY
CHIEF INFORMATION OFFICER, NAVY
CHIEF INFORMATION OFFICER / ASSISTANT CHIEF OF STAFF FOR C4I, HQMC
PROGRAM EXECUTIVE OFFICER, INFORMATION TECHNOLOGY (PEO-IT)

SUBJECT: Navy Marine Corps Intranet (NMCI) Decision Memorandum

My office, in collaboration with other elements of the Office of the Secretary of Defense, the Joint Staff, the Department of the Navy, and the Defense Information Systems Agency, has completed its pre-award review of the NMCI effort. Based on that review, I authorize the Department of the Navy to implement the NMCI, subject to the conditions contained in the attachment to this memorandum.

We will review progress made on implementation of the NMCI after completion of the first increment. After the Strategic Pause, I expect the Department of the Navy will proceed to full implementation of the NMCI.

Arthur L. Money
DoD Chief Information Officer

G. WELLS MEMO TO NMCI PROGRAM EXECUTIVES, DATED 29 JUN 2001

June 29, 2001

MEMORANDUM FOR ASSISTANT SECRETARY OF THE NAVY (RESEARCH, DEVELOPMENT, AND ACQUISITION) CHIEF INFORMATION OFFICER, DEPARTMENT OF THE NAVY DIRECTOR, SPACE INFORMATION WARFARE, COMMAND AND CONTROL/CHIEF INFORMATION OFFICER, DEPARTMENT OF THE NAVY CHIEF INFORMATION OFFICER/ASSISTANT CHIEF OF STAFF C41, HQMC PROGRAM EXECUTIVE OFFICER, INFORMATION TECHNOLOGY (PEO-IT)

SUBJECT: Navy Marine Corps Intranet (NMCI) Schedule

The PEO-IT's brief to the Information Technology Overarching Integrated Product Team (IT OIPT) on June 27, 2001, presented a significant slip in the NMCI implementation schedule as well as the events and activities required to exit from the Strategic Pause, including the operational evaluation and updated Business Case Analysis. It now appears that the last of these activities will occur in October/November 2002 rather than in October/November 2001 as previously planned. A schedule impact of this magnitude usually indicates that major problems exist. The decision points that we established last fall as a result of Congressional and OMB guidance are critical in determining if moving forward with your proposed schedule is the best path.

The IT OIPT chair has asked the IT OIPT members to review your new schedule to determine its impact on the requirements expressed by the Congress, the OMB, and the DoD CIO. The IT OIPT chair also asked the DoN to fully explore a range of options for the way ahead. The two options presented at the OIPT -- terminate the contract or obtain full authority to proceed before October 1 -- seem to be extremes. Termination ends all NMCI efforts. Congress and OMB have stipulated conditions under which full authority to proceed can occur, and your proposed schedule delays satisfying these conditions until October/November 2002.

As the DoD CIO, I want you to know I fully support the DoN's efforts, but these issues must be resolved before I can provide the mandated Clinger-Cohen Act certification to Congress. I want to reassert the call for the DoN to explore a range of options and their impacts, and be prepared to brief the senior leadership no later than July 12, 2001. In advance of your presentation, I have asked the IT OIPT Chair to meet with your representatives, and discuss the range of options available, including the dependent and independent variables and explicit and implied assumptions. This will ensure that the OSD staff understands the DoN's progress and is prepared to address any concerns and offer recommendations as needed.

Finally, I don't want to lose sight of the Defense Information System Network's (DISN) use in NMCI. The August 17, 2000 Memorandum of Agreement (MOA) requires that DISA have "the first opportunity to satisfy all wide area network (WAN) requirements."

The MOA further states that only in instances where DISA is not able to meet the service requirements, "commercial augmentation is allowed." By all appearances, augmentation has taken on the scope of an entire data services network, rather than augmentation only where DISN can not provide the required service. I request that you prepare a plan that implements the priority scheme contained in the MOA. This should be a part of your discussion with the IT OIPT chair, and your briefing to the senior leadership.

Linton Wells II
Acting
cc:
Director, Program Analysis and Evaluation
Director, Operational Test and Evaluation
Director, Joint Staff
Deputy Director, Developmental Test and Evaluation

H. OSD MEMO TO THE SECRETARY OF THE NAVY ET AL, DATED 05 SEP 2001

OFFICE OF THE SECRETARY OF DEFENSE

1000 DEFENSE PENTAGON
WASHINGTON, DC 20301-1000

5 September 2001

MEMORANDUM FOR SECRETARY OF THE NAVY
UNDER SECRETARY OF DEFENSE (COMPTROLLER)
INSPECTOR GENERAL OF THE DEPARTMENT OF DEFENSE
DIRECTOR, OPERATIONAL TEST AND EVALUATION
UNDER SECRETARY OF THE NAVY
ASSISTANT SECRETARY OF THE NAVY (FINANCIAL MANAGEMENT)
ASSISTANT SECRETARY OF THE NAVY (RESEARCH, DEVELOPMENT AND ACQUISITION)
DIRECTOR, ACQUISITION TECHNOLOGY AND LOGISTICS, OUSD(AT&L), S&TS/DT&E
DIRECTOR, PROGRAM ANALYSIS AND EVALUATION
DIRECTOR, DEFENSE INFORMATION SYSTEMS AGENCY
DIRECTOR, JOINT STAFF
CHIEF INFORMATION OFFICER, DEPARTMENT OF THE NAVY
CHIEF INFORMATION OFFICER / DIRECTOR C4, USMC
PROGRAM EXECUTIVE OFFICER, INFORMATION TECHNOLOGY (PEO-IT)

SUBJECT: Navy Marine Corps Intranet (NMCI) Decision Memorandum

In collaboration with other elements of the Office of the Secretary of Defense, the Joint Staff, the Department of the Navy (DoN), and the Defense Information Systems Agency (DISA), we have reviewed the efforts completed to date on the NMCI first increment implementation and associated strategic pause. After reviewing progress to date, we authorize the DoN to proceed with NMCI, subject to the following conditions:

a. No more than 60,000 NMCI seats shall be ordered until the ASD(C3I)/DoD CIO and PDUSD(AT&L) senior level review decision at the end of customer test and evaluation (CT&E3), based on assessment of the results.

b. At the direction of the DoD CIO, an independent Test & Evaluation (T&E) review will be conducted to ensure the T&E effort – the development and execution of the test, and the assessment of its results - is viable. The independent team's efforts shall start immediately, and continue through the assessment of the milestone designated in Paragraph E. below. The scope of their review includes sufficient DoN operational and business processes; joint

interoperability and information assurance T&E to indicate the probability of successful operations; and assessing the CT&E efforts and results in terms of their accuracy, realism, sufficiency/adequacy, statistical significance, and scalability implications. The Department of the Navy will provide all information required to conduct this assessment to the independent team and keep the team current throughout the term of the independent review. The independent team will provide continuous updates on their progress throughout the period of engagement and will report their assessments to the ASD(C3I)/DoD CIO, the PDUSD(AT&L), and the DON CIO, within 2 weeks after the receipt of the CT&E3 report, and then again two 2 weeks after the DoN report on the results of the milestone in Paragraph E. below.

c. DoN shall provide the ASD(C3I)/DoD CIO and PDUSD(AT&L) with the results of the customer test and evaluation 3 (CT&E3) at NAF Washington, NARCEN Lemoore, NAS Lemoore, and the test population at NAVAIR Headquarters. The DoN shall also provide the results, in contractor format, of CT&Es 1 and 2 shortly after conclusion of each. At the same time the DoN will provide an analysis of the test results for each of the CT&Es, including scalability implications and statistical significance.

d. ASD(C3I)/DoD CIO and PDUSD(AT&L) will conduct a senior level review and provide a decision within 3 weeks of receipt of the CT&E3 report. The review will be based on CT&E3 performance results. Based on a successful review of the test results, and a positive decision from the ASD(C3I)/DoD CIO and PDUSD(AT&L), the DoN will be allowed to order an additional 100,000 seats.

e. Within 3 weeks of DoN notification that a total of 20,000 seats are cut over to the NMCI environment, tested, and meeting service level agreements (SLA), ASD(C3I)/DoD CIO and PDUSD(AT&L) will convene a senior level review to review results. Based on a successful review of the performance results from those 20,000 seats, and a positive decision from the ASD(C3I)/DoD CIO and PDUSD(AT&L), the DoN will be allowed to order an additional 150,000 seats.

f. After the operational evaluation (OPEVAL), expected in June 2002, ASD(C3I)/DoD CIO and PDUSD(AT&L) senior level will review the results and render a decision within 30 days of receipt of the required Quick Look results report of the OPEVAL.

g. Until the DoD CIO certifies compliance with Sec 814 (b) (3)(B) of PL 106, no more than 15 percent of the workstations will be provided. "Workstations provided" is defined as a workstation that is transitioned to the NMCI environment and is in use providing access to network services.

h. The OPEVAL must evaluate/demonstrate the ability of the NMCI infrastructure and services to support DoN operational and business functionality and processes (finance, personnel, logistics, etc.) as well as office functionalities (MS Outlook, Help Desk, etc.) OPEVAL must also evaluate the effectiveness and suitability of the NMCI to support mission accomplishment.

i. When 85 percent of the NMCI is installed and on-line, the DoN will conduct a stress test of the system to determine if the NMCI can meet the performance requirements. This to be accomplished before the decision is required for exercising the option term. The target for this test will be Fiscal Year 03.

j. The DoN will prepare an updated Business Case Analysis (BCA) and return on investment analysis. Cost savings and other benefits actually achieved by NMCI must be determined and compared with those presented in the NMCI BCA and in the DoN's Clinger Cohen Act (CCA) Certification, dated September 6, 2000. This will require a comparison of actual pre-NMCI direct costs, technical performance, and mission performance data with actual post-NMCI direct costs, technical performance, and mission performance.

1. Interim NMCI BCA cost information and cost data required by the ASD(C3I)/DoD CIO decision memorandum and OMB will be initially provided for the Senior Level Review conducted subsequent to CT&E3. This cost information and cost data is for the designated CT&E test sites (to include: NAF Washington, NAVAIR Headquarters, NARCEN Lemoore and NAS Lemoore) and the BCA overlap sites (to include: NSWC Crane Division, SECNAV/CNO, and SPAWAR System Center San Diego).

2. NMCI BCA performance report required by ASD(C3I)/DoD CIO decision memorandum and OMB will be delivered on completion of the OPEVAL. The OPEVAL will be conducted at the following test sites: NAF Washington, NAVAIR HQ, NARCEN Lemoore and NAS Lemoore. The report will include mission performance information, data, and analysis based on SLA measurements.

k. The following five items from the September 15, 2000 DoD CIO decision memorandum are still valid and required to be met at the specified dates:

1. No later than September 30, 2001, the DoN shall:

a. Develop the derived NMCI C4I supportability requirements,
b. Describe any shortfalls and plans to remove or mitigate those shortfalls, and

c. Provide the supportability shortfall analyses and associated mitigation plans to the Interoperability/C4I Support WIPT for review and concurrence.

2. No later than September 21, 2001, the DoN shall provide a Test and Evaluation Strategy Plan (TESP) in accordance with the DOT&E memorandum of August 25, 2000, to the Information Technology Overarching Integrated Product Team (IT OIPT) Leader and the Director, Operational Test & Evaluation (DOT&E). The TESP shall include:

a. the technical and operational requirements definition
b. test objectives and limitations
c. technical test events verifying critical SLAs
d. appropriate OT events
e. success criteria for major test events; and
f. resource requirements to include participating commands and test sites. The requirements definition will include a requirements correlation matrix that provides traceability from operational requirements to the technical requirements, to determine the NMCI's mission effectiveness and suitability.

3. DOT&E shall complete an assessment and provide recommendations to the DoD CIO regarding the results of the T&E.

4. The DoN and the DISA shall successfully implement the actions stated in the ASD(C3I), DoN and DISA NMCI MOA, dated August 17, 2000.

5. The OASD(C3I) along with the DoN, and other elements of the OSD, shall comply with the conditions in the Director, Office of Management & Budget letter to the Secretary of Defense, dated September 12, 2000.

Michael W. Wynne
Principal Deputy
Under Secretary of Defense
(Acquisition Technology
& Logistics)

John P. Stenbit
DoD Chief Information
Officer

I. OSD MEMO TO THE SECRETARY OF THE NAVY ET AL, DATED 07 MAY 2002

OFFICE OF THE SECRETARY OF DEFENSE
WASHINGTON, DC 20301

May 7, 2002

MEMORANDUM FOR SECRETARY OF THE NAVY
UNDER SECRETARY OF DEFENSE (COMPTROLLER)
INSPECTOR GENERAL OF THE DEPARTMENT OF DEFENSE
UNDER SECRETARY OF THE NAVY
ASSISTANT SECRETARY OF THE NAVY (FINANCIAL MANAGEMENT)
ASSISTANT SECRETARY OF THE NAVY (RESEARCH, DEVELOPMENT AND ACQUISITION)
DIRECTOR, ACQUISITION TECHNOLOGY AND LOGISTICS, OUSD(AT&L), S&TS/DT&E
DIRECTOR, OPERATIONAL TEST AND EVALUATION
DIRECTOR, PROGRAM ANALYSIS AND EVALUATION
DIRECTOR, JOINT STAFF
DIRECTOR, DEFENSE INFORMATION SYSTEMS AGENCY
DIRECTOR, NAVY MARINE CORPS INTRANET, DEPARTMENT OF THE NAVY
CHIEF INFORMATION OFFICER, DEPARTMENT OF THE NAVY
CHIEF INFORMATION OFFICER / DIRECTOR C4, USMC
PROGRAM EXECUTIVE OFFICER, INFORMATION TECHNOLOGY (PEO-IT)

SUBJECT: Navy Marine Corps Intranet (NMCI) Decision Memorandum (DM)

In collaboration with other elements of the Office of the Secretary of Defense, we have reviewed the efforts completed to date on the NMCI first increment implementation, including the results of the contractor test and evaluation. Based on the assessment of progress and the results, we authorize the Department of the Navy to order an additional 100,000 seats and proceed to the next decision point subject to the following condition.

Within 45 days of the date of this memorandum, the Department of the Navy shall submit, through the Integrating Integrated Product Team, for approval by the undersigned, a Plan of Action to proceed to the next NMCI decision point (described below). The Plan of Action shall contain:

a. A plan and schedule to produce an updated Test and Evaluation Strategy Plan (TESP) defining a clear and disciplined test regimen leading to the next NMCI decision points. The updated TESP shall include exit criteria; metrics to be

used in the evaluation; a discussion of how scalability will be tested, and a definition of the stress test to be applied to NMCI.

b. A plan and schedule defining the actions and activities necessary to address the ongoing legacy application issue.

c. A plan and schedule to complete the performance report portion of the Business Case Analysis, and the final report on the cost portion.

The next NMCI decision point is defined in paragraph e. of the September 5, 2001, Decision Memorandum:

> " e. Within three (3) weeks of DoN notification that a total of 20,000 seats are cut over to the NMCI environment, tested, and meeting SLAs, ASD(C3I)/DoD CIO and PDUSD(AT&L) will convene a Senior Level Review to review results. Based on a successful review of the performance results from those 20,000 seats, and a positive decision from the ASD(C3I)/DoD CIO and PDUSD(AT&L), the DoN will be allowed to order an additional 150,000 seats."

Michael W. Wynne
Principal Deputy Under
Secretary of Defense
(Acquisition Technology and Logistics)

John P. Stenbit
DoD Chief Information
Officer

J. STENBIT MEMO TO THE SECRETARY OF THE NAVY, DATED 02 JAN 2003

DEPARTMENT OF DEFENSE
6000 DEFENSE PENTAGON
WASHINGTON, DC 20301-6000

F INFORMATION OFFICER

January 2, 2003

MEMORANDUM FOR SECRETARY OF THE NAVY

SUBJECT: Certification of Navy Marine Corps Intranet (NMCI) Operational Testing

Section 814 (b) Public Law 106-398, also known as the National Defense Authorization Act for Fiscal Year 2001, limits the number of workstations to be provided under the NMCI contract to no more than fifteen percent of the total number to be procured under the contract until specified requirements are met. More specifically, Subparagraph (b)(3)(A) requires the Secretary of the Navy to conduct operational testing of the first increment of implementation of NMCI and Subparagraph (b)(3)(B) requires that the Chief Information Officer of the Department of Defense certify that the results of that operational test are acceptable.

In September and October 2002, the Commander, Operational Test and Evaluation Force, the Navy's independent operational test activity, conducted an Operational Assessment of NMCI. In addition, from June to November 2002, the Director, NMCI conducted testing of NMCI. On December 11, 2002, the Director NMCI reported the results of these tests to my office, the Office of the Director, Operational Test and Evaluation (OSD DOT&E), and the Office of the Deputy Director, Development Test and Evaluation (OUSD(AT&L)). His report provided the root cause of deficiencies identified, the progress made on corrective actions, and the plans for future action. Based on the Director, NMCI's report, an acceptable testing process has been implemented and the results of the testing demonstrated that the NMCI project is sufficiently capable of identifying issues and implementing appropriate mitigation activities, corrective actions, and program improvements as the program continues to evolve. While some issues remain, the program is displaying the requisite stability and positive test results to proceed beyond the limitation stipulated in P.L. 106-398.

Based on the information provided by the Director, NMCI, and the Commander, Operational Test and Evaluation Force, I certify that the results of the operational test are acceptable.

John P Stenbit

John P. Stenbit

K. NMCI DIRECTOR MEMO TO OSD, DATED 17 JAN 2003

DEPARTMENT OF THE NAVY
DIRECTOR
NAVY MARINE CORPS INTRANET OFFICE
2231 CRYSTAL DRIVE
CPK 3, SUITE 400
ARLINGTON, VA 22202-3721

3961
Ser NMCI/00002
17 Jan 03

MEMORANDUM FOR PRINCIPAL UNDER SECRETARY OF DEFENSE (ACQUISITION, TECHNOLOGY AND LOGISTICS) ASSISTANT SECRETARY OF DEFENSE (COMMAND, CONTROL, COMMUNICATIONS, AND INTELLIGENCE) (ASD C3I)

Subj: DECEMBER 2002 REPORT OF NAVY AND MARINE CORPS INTRANET (NMCI) SERVICE LEVEL AGREEMENTS (SLA)

Ref: (a) Office of the Secretary of Defense Memo of 5 Sep 01 Subj: Navy Marine Corps Intranet (NMCI) Decision Memorandum
(b) Office of the Secretary of Defense Memo of 7 May 02 Subj: Navy Marine Corps Intranet (NMCI) Decision Memorandum (DM)

Encl: (1 CD ROM containing NMCI Service Level Agreement Reports for December 2002

1. The Navy Marine Corps Intranet (NMCI) project now has more than 20 thousand seats meeting applicable Service Level Agreements (SLAs). Enclosure (1) is provided as a report of the most recent SLAs data.

2. The enclosed data is forwarded to satisfy the requirements of references (a) and (b) that 20 thousand seats are meeting SLAs.

C. L. MUNNS
Director, Navy
Marine Corps Intranet

L. OSD MEMO TO NMCI DIRECTOR, DATED 04 FEB 2003

OFFICE OF THE SECRETARY OF DEFENSE

WASHINGTON, DC 20301

FEB 4 2003

MEMORANDUM FOR SECRETARY OF THE NAVY
DIRECTOR, NAVY MARINE CORPS INTRANET

SUBJECT: Authorization to Acquire Additional 150,000 Navy Marine Corps Intranet (NMCI) Workstations

Section 362 of Public Law 107-107, also known as the National Defense Authorization Act for Fiscal Year 2002, permits the Secretary of the Navy to order an additional 150,000 workstations under the Navy Marine Corp Intranet contract with approval of the Under Secretary of Defense for Acquisition, Technology, and Logistics, and the Chief Information Officer of the Department of Defense. Preceding the approval, 20,000 workstations must be transitioned to the NMCI environment and achieving the applicable, contractually-specified Service Level Agreements (SLA). In addition, the statute requires the Chief Information Officer of the Navy to certify that the results of the SLA based performance evaluation are acceptable.

In memorandum of January 17, 2003, the Director, Navy Marine Corps Intranet, stated that 20,000 NMCI seats were meeting applicable SLAs. The memorandum also provided data in support of his statement. In memorandum of February 3, 2003, the Navy's Chief Information Officer certified the results of the SLA performance evaluation as acceptable

Given the above, we authorize the Navy to order no more than an additional 150,000 NMCI seats. To date, the total authorization is 310,000 seats.

Michael W. Wynne
Principal Deputy Under
Secretary of Defense
(Acquisition Technology and Logistics)

John P. Stenbit
DoD Chief Information Officer

M. OSD MEMO TO OSD MEMO TO THE SECRETARY OF THE NAVY ET AL, DATED 23 OCT 2003

OFFICE OF THE SECRETARY OF DEFENSE

1000 DEFENSE PENTAGON
WASHINGTON, DC 20301-1000

OCT 23 2003

MEMORANDUM FOR SECRETARY OF THE NAVY
ASSISTANT SECRETARY OF THE NAVY
(RESEARCH, DEVELOPMENT & ACQUISITION)
DIRECTOR, NAVY MARINE CORPS INTRANET

SUBJECT: Authorization to Acquire the Final 35,000 Navy Marine Corps Intranet (NMCI) Seats

This memorandum authorizes the Department of the Navy to procure and deploy 35,000 additional seats under the NMCI initiative, representing the final increment of seats to be acquired under the contract.

FOR
Michael W. Wynne
Principal Deputy Under
Secretary of Defense
(Acquisition Technology
and Logistics)

John P. Stenbit
DoD Chief Information Officer

N. NMCI DIRECTOR MEMO TO OSD, DATED 09 APR 2004

DEPARTMENT OF THE NAVY
DIRECTOR
NAVY MARINE CORPS INTRANET OFFICE
2231 CRYSTAL DRIVE
CPK 3, SUITE 400
ARLINGTON, VA 22202-3721

4200
Ser NMCI/00013
9 Apr 04

MEMORANDUM FOR PRINCIPAL DEPUTY UNDER SECRETARY OF DEFENSE
(ACQUISITION TECHNOLOGY AND LOGISTICS) AND
DEPARTMENT OF DEFENSE CHIEF INFORMATION OFFICER

Via: ASSISTANT SECRETARY OF THE NAVY (RESEARCH, DEVELOPMENT AND ACQUISITION)

Subj: AUTHORIZATION TO ORDER REMAINING NAVY MARINE CORPS INTRANET (NMCI) WORKSTATIONS

Ref: (a) Section 814, Floyd D. Spence National Defense Authorization Act for FY 2001 (Pub. L. 106-398), as Amended by Section 362, National Defense Authorization Act for FY 2002 (Pub. L. 107-106)

(b) Principal Deputy Under Secretary of Defense (Acquisition, Technology and Logistics) and DoD Chief Information Officer Memorandum, Subj: Authorization to Acquire the Final 35,000 Navy and Marine Corps Intranet (NMCI) Seats of 23 Oct 2003

1. The Department of the Navy (DoN) previously reported the completion of all statutory requirements specified by reference (a) related to the NMCI contract. Per reference (b) the DoN is currently authorized to order 345,000 NMCI workstations. 340,000 workstations are currently on order. Of these, the contractor has completed assumption of responsibility (AOR) for 305,000. Of the workstations in AOR, 165,000 have transitioned and are operating on the NMCI network.

2. The provisioning of the DoN with NMCI will require 455,000 workstations. Orders in excess of the current 345,000 workstation authorization need to be submitted in May 2004. Accordingly, we request authority to order an additional 110,000 workstations for a total authorization of 455,000 workstations.

C. L. MUNNS
Rear Admiral, U.S. Navy
Director, Navy Marine Corps Intranet

O. JORDAN LETTER TO THE SECRETARY OF THE NAVY, DATED 08 SEP 2004

Chief Executive Officer

5400 Legacy Drive
Plano, Texas 75024-3199

September 8, 2004

The Honorable Gordon R. England
Secretary of the Navy
1000 Navy Pentagon, Room 4E562
Washington, DC 20350

Dear Mr. Secretary:

Thank you for the time on August 20 to discuss the potential and future of the NMCI program.

As you know, EDS has invested over $2.4 billion in NMCI. The company has reported losses of $1.6 billion. During the same time period, EDS has received approximately $1.1 billion in total revenue from the Navy. This financial imbalance cannot be sustained and I am committed to engage with you on how we can together change the direction of this program to both our benefit.

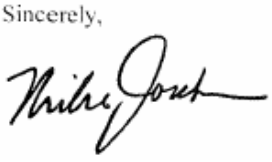
The fundamental issue is how to get the program's revenue and expense in balance within the annual appropriation. We suggested a monthly payment against the annual appropriation for the program rather than continue to suffer financially from the assorted variables under Navy control which have resulted in a continued loss of significant cash by EDS. We continue to provide critical services that we are not being paid for and have seen minimal progress on these issues for a couple of years. I would appreciate urgent action by Admiral James Godwin with Mike Koehler to answer this proposal no later than September 22, 2004.

Three other central issues remain open questions about the program and its finances. First, Service Level Agreements have been a topic of mutual concentration for the past eight months and some labor over three years without conclusion. I ask for your support in the SLAs efforts, which dictate our ability to bill for seats at 100% and achieve greater customer satisfaction levels. This is EDS' most visible public commitment and absolutely vital to our future. To ensure this, the Commercial SLA Mod needs to be executed by September 30. Second, the issue of contract minimums – already a subject of some correspondence between us – needs to come to some conclusion. Third, we asked to engage on a contract modification to deal with systemic contractual issues that are adversely affecting NMCI for both the Navy and EDS on a daily basis. After three years of implementation experiences and disappointments, both sides should focus on a contract modification to remove identified mutual barriers to success.

I am attaching a copy of the briefing document from our August 20 meeting. I believe we need a focused meeting on the fundamental issues before October 1, the start of the new fiscal year. EDS is available whenever your schedule permits such a session.

EDS remains committed to NMCI, but we must collectively chart a course to positively execute the program to support the men and women of the Navy and the Marine Corps without the continued severe detrimental financial damage to EDS.

Sincerely,



P. OSD MEMO TO THE SECRETARY OF THE NAVY ET AL, DATED 23 SEP 2004

OFFICE OF THE SECRETARY OF DEFENSE
WASHINGTON, DC 20301

SEP 23 2004

MEMORANDUM FOR SECRETARY OF THE NAVY
ASSISTANT SECRETARY OF THE NAVY
(RESEARCH, DEVELOPMENT & ACQUISITION)
DIRECTOR, NAVY MARINE CORPS INTRANET

SUBJECT: Assignment of Navy Marine Corps Intranet (NMCI) Program Oversight to Department of the Navy; Final OSD Authorization to Acquire NMCI Seats

On September 2, 2004, we received a program status report from the Director, NMCI. The information provided indicates the program is now stable. Based on the status report, it also appears as though the Navy has instituted effective internal management and oversight structures, and is steadily progressing toward its goal of implementing the NMCI across the entire Department of the Navy (DoN).

Based on the information provided, we approve the Navy's request and authorize procurement of an additional 110,000 seats. This increases the total seats authorized by our offices to 455,000 seats.

In addition, we delegate responsibility for oversight of the NMCI program to the Assistant Secretary of the Navy for Research, Development, and Acquisition, subject to the following conditions:

- The DoN shall provide quarterly assessments of NMCI status to our offices, beginning in November 2004. The report shall address metrics important to the success of NMCI, to include, at a minimum, status of seats; customer satisfaction; information assurance measures; reduction of legacy desktops and applications; achievement of service level agreements; and the current status of the DoN and NMCI contractor's partnership.

- The DoN Chief Information Officer shall conduct a NMCI Post Implementation Review (PIR) as addressed in DoD Instruction 5000.2 and related guidance. The PIR shall be completed within 60 days of completion of the NMCI Enterprise Assessment, planned in fourth quarter FY 2006. The final PIR Report shall be provided to the ASD (NII)/DoD CIO.

- The DoN shall establish future NMCI seat requirements through the Department's Planning, Programming, and Budgeting System.

Michael W. Wynne
Under Secretary of Defense
(Acquisition, Technology & Logistics)
Acting

Linton Wells II
DoD Chief Information Officer
Acting

Q. DRPM NMCI APPOINTMENT MEMO, DATED 23 MAY 2005

THE ASSISTANT SECRETARY OF THE NAVY
(RESEARCH, DEVELOPMENT AND ACQUISITION)
1000 NAVY PENTAGON
WASHINGTON DC 20350-1000

MAY 0 6 2005

MEMORANDUM FOR DISTRIBUTION

SUBJECT: APPOINTMENT OF NAVY MARINE CORPS INTRANET DIRECT REPORTING PROGRAM MANAGER

As part of an ongoing effort to improve the effectiveness and efficiency of t e DON acquisition structure, I am appointing RADM James Godwin as Direct Repo ing Program Manager (DRPM) for Navy Marine Corps Intranet (NMCI).

DRPM NMCI will have complete accountability for the management of all spects of NMCI. DRPM NMCI will work with Space and Naval Warfare Command and ıe Marine Corps Systems Command and propose appropriate restructuring of the two current NMCI Program Offices. In order to efficiently accomplish the tasks in the CNO Guidance for 2005 and SECNAV FY 2005 IT Objective and to build towards an e icient naval enterprise approach addressing all Navy and Marine Corps business IT, DRI M NMCI will work with Program Executive Officer for Information Technology to r view initiatives such as server consolidation and legacy network reduction for systems t at touch NMCI and propose appropriate realignments. Deputy Assistant Secretary o the Navy (Command, Control, Communications, Computers, Intelligence and Space) ill coordinate these discussions on my behalf. I want to review the Plan of Action an Milestones, a status of implementation, identification of resources required to fulfi any additional responsibilities, and charters for the new organizational structure within 30 days.

John J. Young, Jr.

Distribution:
CNO (N09B, N1, N2, N4, N6/N7, N6F, N8)
CMC (C4)
ACNO-IT
DON CIO
Director, NMCI
ASN (FM&C) (FMB)

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APPENDIX B. CONGRESSIONAL COORESPONDENCE

A. BATEMAN LETTER TO SECRETARY DANZIG, DATED 4 FEB 2000

BOB STUMP, ARIZONA
DUNCAN HUNTER, CALIFORNIA
JOHN R. KASICH, OHIO
HERBERT H. BATEMAN, VIRGINIA
JAMES V. HANSEN, UTAH
CURT WELDON, PENNSYLVANIA
JOEL HEFLEY, COLORADO
JIM SAXTON, NEW JERSEY
STEVE BUYER, INDIANA
TILLIE K. FOWLER, FLORIDA
JOHN M. MCHUGH, NEW YORK
JAMES M. TALENT, MISSOURI
TERRY EVERETT, ALABAMA
ROSCOE G. BARTLETT, MARYLAND
HOWARD P. "BUCK" MCKEON, CALIFORNIA
J.C. WATTS, JR., OKLAHOMA
MAC THORNBERRY, TEXAS
JOHN N. HOSTETTLER, INDIANA
SAXBY CHAMBLISS, GEORGIA
VAN HILLEARY, TENNESSEE
JOE SCARBOROUGH, FLORIDA
WALTER B. JONES, NORTH CAROLINA
LINDSEY GRAHAM, SOUTH CAROLINA
JIM RYUN, KANSAS
BOB RILEY, ALABAMA
JIM GIBBONS, NEVADA
MARY BONO, CALIFORNIA
JOSEPH R. PITTS, PENNSYLVANIA
ROBIN HAYES, NORTH CAROLINA
STEVEN T. KUYKENDALL, CALIFORNIA
DON SHERWOOD, PENNSYLVANIA

COMMITTEE ON ARMED SERVICES

U.S. House of Representatives

Washington, DC 20515–6035

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ANDREW K. ELLIS, STAFF DIRECTOR

February 4, 2000

Honorable Richard Danzig
Secretary of the Navy
The Pentagon
Washington, D.C. 20350-1000

Dear Mr. Secretary,

I am writing to express my concerns with your current initiative referred to as the Navy Marine Corps Intranet. It is my understanding that the Navy is seeking proposals to contract out all of its communication requirements, to include all telephone, video, and related computer services. Under the contract, the contractor will own, operate, and maintain data transmission, voice and video communication. It appears to me that this project is enormous in scope and dollar value, and will have numerous policy implications.

I understand the Navy is proceeding with this program prior to the final development of all requirements and prior to completing a business case analysis or a cost/benefit analysis. Initiatives of this proportion need a complete financial analysis and a thorough discussion and resolution to policy issues. The Navy has done neither.

I also find the funding for this initiative disturbing. It is my understanding that the Navy Marine Corps Intranet is not funded in the fiscal year 2000 budget and will not be part of the fiscal year 2001 budget request. I have also been informed that the Navy has taxed its information technology systems $20 million in order to fund the initiative for this year. If this is accurate, I expect the Navy will submit the proper reprogramming documents.

Programs and initiatives of such large proportions must be analyzed and reviewed thoroughly. For this reason, I request that you delay the acquisition and implementation of this initiative until it is fully developed, is included in the future budget request, and receives the proper level of Congressional oversight.

Sincerely,

Herbert H. Bateman
Chairman
Military Readiness Subcommittee

HHB:mef

B. DANZIG LETTER TO BATEMAN, DATED 8 MAR 2000

8 March 2000

The Honorable Herbert H. Bateman
Chairman, Military Readiness Subcommittee
Committee on Armed Services
House of Representatives
Washington, DC 20515

Dear Herb:

I appreciate your interest in the Department of the Navy's intranet initiative. The initiative stems from recognition of three facts. First, we are now operating more than a hundred different data and communication networks. Managing our network capabilities under a single commercial service provider can yield great economies of scale, improvements in compatibility, and more effective and efficient communication and data exchange. Second, commercial internet technology is changing with remarkable rapidity. A well-structured procurement, like the Request for Proposal (RFP) we issued, should give us the benefit of participation in this commercial revolution, by providing for continuous updating of information services by a commercial vendor focused on our needs. Third, the present state of the market for internet services permits us to procure these services from the commercial sector just as we buy other types of utilities (e.g., water, telephone, and electricity).

Under our concept, adopted from and proven successful in the commercial sector, the information service provider will own and operate the infrastructure necessary to provide our information services (just as a utility does now) and will continually refresh it as part of the service agreement. The dollars involved are substantial, in large measure because existing DON expenditures for IT infrastructure and services are already substantial. For example, in FY 2001 two of our fleets were planning to spend nearly $200M (combined), and one of our major system commands was planning to spend $250M. These IT funds are currently distributed across a broad range of programs and activities throughout our organizations. Their visibility will be enhanced by bringing them together in a single contract. Most fundamentally, by applying these funds to the centralized purchase of services we will provide better end-to-end service, security, and interoperability. Furthermore, an approach that retains the current piecemeal methodology would result in continually escalating maintenance costs with neither a concomitant increase in capability nor a timely refreshment of technology.

Numerous discussions and briefings have taken place with DOD policy makers on the Navy Marine Corps Intranet. The major policy issue was related to exclusive use of the DISN for long haul communications; and an approach to resolve it was developed prior to RFP release. All parties also agree that a business case could not be completed without input from industry. Consequently, the data required to complete the business case was requested as part of the RFP. The contract will not be awarded until the business case is

completed and results are understood by both the Department and DoD. Our market research shows that in the commercial sector an approach similar to the one we are pursuing has produced consistent savings and performance improvements.

The requirements definition for the Navy and Marine Corps Intranet (NMCI) is complete and involved all Navy and Marine Corps commands. This definition effort was overseen by a governing body, which was led by the Department of the Navy Chief Information Officer (CIO), the Navy CIO, the Marine Corps CIO, the PEO (IT) and both Fleet Commanders. The requirements are customer driven, and the individual commands will budget for and order the NMCI services they need to support their assigned missions. Nominal requirements have been included in the NMCI RFP as a performance specification. Industry has been asked to bid to these requirements, and also to propose a best value solution. These requirements will be finalized prior to award through negotiations with industry after we have reviewed their best value proposals.

Our budget already includes dollars for IT Infrastructure and services. The current method of applying those resources results in numerous contracts and technical approaches, which in turn can induce inefficiencies and/or technical interoperability problems. Because we are buying an end-to-end service under our NMCI concept, such difficulties will be eliminated. Thus, it is our plan to use these same resources to buy services from the NMCI service provider. In FY 2000, approximately $$20 million of the Operation and Maintenance (O&M) monies appropriated to satisfy IT requirements has been identified and reserved to support the NMCI initiative. Once the NMCI contract is awarded, these resources will be released to buy services under the contract. For FY 2001 and beyond, a detailed financial analysis of NMCI is being prepared that includes the identification of specific O&M funding to apply to those costs. Should any reprogramming or realignments be needed, they will be identified and I will ensure that you are kept fully apprised as we proceed.

I believe we are ready to proceed through the next steps leading up to the NMCI implementation decision. To assure agreement on this point, we continue to work closely with your staff on this important initiative. We will certainly provide the oversight-related information that the professional staff members have requested.

If I can be of any further assistance, please do not hesitate to contact me.

Sincerely,

Richard Danzig
Secretary of the Navy

C. BATEMAN LETTER TO SECRETARY DANZIG, DATED 16 MAR 2000

HERBERT H. BATEMAN
1st DISTRICT, VIRGINIA

COMMITTEES:
ARMED SERVICES
CHAIRMAN, SUBCOMMITTEE ON MILITARY READINESS
CHAIRMAN, MERCHANT MARINE PANEL
MEMBER, SUBCOMMITTEE ON RESEARCH AND DEVELOPMENT
MEMBER, MORALE, WELFARE AND RECREATION PANEL
TRANSPORTATION AND INFRASTRUCTURE
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MEMBER, SUBCOMMITTEE ON WATER RESOURCES AND ENVIRONMENT

CO CHAIRMAN, EMERITUS, CONGRESSIONAL AVIATION AND SPACE CAUCUS

Congress of the United States
House of Representatives
Washington, DC 20515–4601

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675 MAIN ST., SUITE A
P.O. BOX 931
WARSAW, VA 22572
(804) 333–1412

IN VA CALL TOLL FREE
1–877–253–0088

March 16, 2000

The Honorable Richard Danzig
Secretary of the Navy
The Pentagon, Room 4E686
Washington, DC 20350

Dear Mr. Secretary:

Thank you for your March 8, 2000, response to my concerns with the acquisition of a Navy Marine Corps Intranet (NMCI). Your response and the Memorandum of Agreement, also signed March 8, indicate positive steps toward an acquisition strategy with the proper level of oversight.

I am still concerned, however, that the Navy has yet to identify the O&M funding which will be put toward the contract in fiscal years 2000 and 2001. As indicated in the March 8 hearing, the Navy Marine Corps Intranet is an initiative that has the interest and attention from members of both the Military Readiness subcommittee and the Research and Development subcommittee.

As you are aware this session of Congress is moving at an expedited rate. I hope that the Navy will be able to provide to me as quickly as possible the specific sources for the Navy Marine Corps Intranet.

Let me add that the substantive merit of NMCI is not questioned. The problem is it is a program that requires large sums redistributed from other accounts, or consumes sums from accounts that are thus stripped of what is required to operate the existing legacy system that cannot be replaced quickly enough.

With kind regards, I am

Sincerely,

Herbert H. Bateman
Member of Congress

D. DANZIG LETTER TO STEVENS REGARDING THE NAVY'S NMCI REPORT TO CONGRESS, DATED 30 JUN 00

DEPARTMENT OF THE NAVY
OFFICE OF THE SECRETARY
1000 NAVY PENTAGON
WASHINGTON D C. 20350-1000

30 June 2000

The Honorable Ted Stevens
Chairman, Subcommittee on Defense,
Committee on Appropriations
United States Senate
Washington, DC 20510

Dear Chairman Stevens,

I am pleased to provide you, in the notebook enclosed to this letter, a full spectrum report on the benefits anticipated from our proposed Navy Marine Corps Intranet and the funding, personnel, acquisition and management oversight matters associated with this project.

In providing this material, I would like to emphasize the exceptional promise the project holds for us. A single intranet, replacing over a hundred separate nets within the Department of the Navy, will be better managed, better manned, more secure, more technologically updateable, and more effective than our present duplicative and fragmented systems. Beyond this, it will provide a much better value for taxpayer dollars invested in information systems. Above all, it will permit inter-net applications that will share critical information in real time and on an interactive basis among those with a need to know throughout the Department. Experience in private corporations shows that transforming information management will transform all management. This will generate rewards through the whole range of our business and mission activities.

We are proud to be the first federal entity to undertake such an important initiative. Your support in this regard means a great to deal to me personally and to us as an organization. Concomitantly, we recognize an obligation to work diligently with your Committee Members and staff to provide detailed information on this project. Consistent with discussions with you and these members and staff and in response to the House and Senate Armed Services Committees' language, in § 332 of H.R. 4205, H.R. 106-616, and in § 810 of S.R. 2539, S.R. 106-292, I am pleased to submit the enclosed report.

I hope we can look forward to your support for our time line, which would allow the Department of the Navy to award the NMCI contract by September 2000 and start performance in October 2000. A similar letter has been sent to Chairman Warner, Chairman Lewis and Chairman Spence. As always, if I can be of further assistance, please let me know.

Sincerely,

Richard Danzig

Enclosure

cc:
The Honorable Daniel K. Inouye
Ranking Minority Member, Subcommittee on Defense,
Committee on Appropriations

E. GENERAL JONES LETTER TO STUMP, DATED 27 AUG 2001

27 August 2001

The Honorable Bob Stump

Chairman, Committee on

Armed Services

U.S. House of Representatives

Washington, DC 20515

Dear Mr. Chairman,

I am writing this letter to assure you and the members of this committee that the Marine Corps is committed to the Navy Marine Corps Intranet (NMCI) initiative. We are scheduled to transition to NMCI during the third and fourth quarters of FY-02 and have programmed our budget to support this transition. Any exclusion of the Marine Corps from NMCI would exacerbate the degraded condition of our information technology infrastructure that has not been modernized for almost two years awaiting NMCI.

We have recently updated our affordability analysis for NMCI and under the present conditions of the contract we are confident that is affordable for the Marine Corps. We are concerned, however, by the potential of an increased cost burden resulting from the required use of the Defense Information Systems Network (DISN), and we will continue to work closely with the Department of the Navy to resolve that issue.

I hope this information is helpful with regard to the Marine Corps' position on NMCI and, of course, I stand ready to answer any questions you or your colleagues may have. I am providing a copy of this correspondence to Congressman Skelton and am writing similar letters to the Chairman and Ranking Member of the Senate Armed Services Committee.

Thank you for your continued support of your Corps of Marines.

Semper Fidelis,

James L. Jones

General, U.S. Marine Corps

Commandant of the Marine Corps

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APPENDIX C. NAVY MESSAGES PERTAINING TO NMCI (REMARKS SECTION ONLY)

A. SECRETARY DANZIG NMCI ALNAV MESSAGE, DATED 06 OCT 2000

R 061811Z OCT 00 ZYB MIN PSN 408700J19

FM SECNAV WASHINGTON DC//SN//

RMKS/1. THE CHIEF OF NAVAL OPERATIONS, THE COMMANDANT OF THE MARINE CORPS AND I ARE PLEASED TO ANNOUNCE THAT TODAY WE WILL AWARD THE CONTRACT FOR THE NAVY/MARINE CORPS INTRANET (NMCI).
2. THE NMCI IS AN IMMENSE ACHIEVEMENT AND IT OUTFITS THE NAVY AND MARINE CORPS FOR THEIR VOYAGE THROUGH THE 21ST CENTURY. THIS "NET" IS ESSENTIAL, BUT IT ONLY FACILITATES CHANGE, IN MUCH THE SAME WAY THAT TELEGRAPHS AND TELEPHONES OPENED OPPORTUNITY BUT WERE THEMSELVES MEANS, NOT ENDS.
3. NMCI WILL MAKE INFORMATION INSTANTLY ACCESSIBLE TO ALL CERTIFIED USERS THROUGHOUT THE DEPARTMENT. THE CONSOLIDATION OF SCORES OF SEPARATELY PURCHASED AND MAINTAINED SYSTEMS WILL YIELD VALUABLE SHORT-TERM GAINS IN ECONOMY, EFFICIENCY AND SECURITY. OUR DECISION TO CONTRACT FOR GUARANTEED LEVELS OF SERVICE FROM A PRIVATE MANAGER (BUYING INFORMATION CONVEYANCE AS THOUGH IT WERE A UTILITY, LIKE ELECTRICITY), TRANSCENDS OUR OFTEN-CUMBERSOME PROCUREMENT TECHNIQUES AND LINKS US TO THE RAPIDLY EVOLVING PRIVATE SECTOR. WE HAVE THEREFORE FOUND A MECHANISM FOR GREATLY INCREASING THE SPEED AND FLEXIBILITY WITH WHICH THIS TECHNOLOGY WILL BE REFRESHED.
4. BUT, SUBSTANTIAL AS THESE BENEFITS ARE, THEY ARE DWARFED BY IMPLICATIONS OF EMPOWERING INSTANTANEOUS INFORMATION ACCESS THROUGHOUT THE WHOLE DEPARTMENT OF THE NAVY. A HIGHLY STRUCTURED, STOVE-PIPED, HIERARCHICAL ORGANIZATION HAS PUT ITSELF ON THE PATH TO BEING HIGHLY FLEXIBLE, INTIMATELY INTEGRATED AND ORGANIZED IN FLAT NETWORKS.
5. WE KNOW THE CONSEQUENCES OF THIS COMMITMENT. THOUGH WEB-BASED COMPANIES ARE PRESENTLY THOUGHT OF AS TYPICALLY SMALL "DOT COM" START-UPS, WE BELIEVE THAT THE MOST REWARDING APPLICATIONS OF "THE WEB" ARE FOR LARGE COMPLEX ORGANIZATIONS OPERATING ON A GLOBAL BASIS. THE DEPARTMENT OF THE NAVY IS THE WORLD'S LARGEST GOVERNMENT ORGANIZATION (OTHER THAN THE DEPARTMENT OF DEFENSE ITSELF). WE VALUE SPEED, UNITY OF EFFORT AND ECONOMY OF EFFORT AT LEAST AS MUCH AS (OFTEN MORE THAN) ANY COMMERCIAL ENTITY.
6. THE CHALLENGE OF THE NEXT MONTHS, YEARS, AND PERHAPS DECADES, IS WHETHER WE CAN SEIZE THE ADVANTAGES OF THE SYSTEM WE ARE PUTTING IN PLACE. THIS WILL REQUIRE CHANGES THAT TRANSCEND TECHNOLOGY - THEY ARE CHANGES IN THE WAY WE DO THINGS. TO SEIZE THE BENEFIT OF WHAT WE ARE TODAY CREATING, WE WILL NEED TO DECENTRALIZE WHERE HISTORICALLY WE HAVE CENTRALIZED, FLATTEN DECISION-MAKING THAT HAS HISTORICALLY BEEN HIERARCHICAL, INTEGRATE WHERE WE ARE OFTEN NOW SEPARATED, CUSTOMIZE WHAT WE ONCE STRUGGLED TO STANDARDIZE, AND USE PRIVATE INDUSTRY TO PERFORM FUNCTIONS WE HAVE PREVIOUSLY JEALOUSLY GUARDED.
7. THERE ARE LEGITIMATE OBJECTIONS AND INHERENT DIFFICULTIES IN WHAT WE ARE TRYING TO DO. THESE MUST BE RESPECTED. OUR DECISIONS

ABOUT OUR USE AND GOVERNANCE OF THIS SYSTEM MUST TAKE INTO ACCOUNT THAT WE ARE A MILITARY ORGANIZATION IN THE 21ST CENTURY - WE MUST EMBRACE THE OPPORTUNITIES INHERENT IN THIS TECHNOLOGY CHANGE OR PUT OURSELVES AND THE NATION AT RISK. WE ARE GOING FORWARD BECAUSE WE CANNOT STAND STILL. WE INITIATE THIS SYSTEM WITH A COMMITMENT TO CHANGE THE WAY WE THINK AND OPERATE. THAT IS ASKING A LOT OF OUR SAILORS, MARINES, AND CIVILIANS. THAT IS IN THE BEST TRADITION OF OUR NAVY AND MARINE CORPS.
8. RELEASED BY THE HONORABLE RICHARD DANZIG, SECRETARY OF THE NAVY.//

B. IMPACT ON CIVILIAN PERSONNEL MESSAGE, DATED 01 FEB 2001

R 011900Z FEB 01 ZYB ZYW

FM DON CIO WASHINGTON DC//CIO//

RMKS/1. NOW THAT THE NMCI CONTRACT IS IN PLACE, THE DEPARTMENT OF THE NAVY (DON) HAS REACHED AN AGREEMENT WITH THE WINNING VENDOR, ELECTRONIC DATA SYSTEMS (EDS), THAT IS KEY TO THE SUCCESS OF THE TRANSITION. THE FIRST HIRE PROCESS IS INTENDED TO ALLOW OUR GOVERNMENT EMPLOYEES IMPACTED BY THE IMPLEMENTATION OF THE CONTRACT THE OPPORTUNITY TO SEEK NMCI-RELATED JOBS WITH EDS, AND WITH THE SUBCONTRACTORS WHOSE BUSINESS EXCEEDS $500,000. THE DON HIGHLY VALUES THE KNOWLEDGE, SKILLS, AND ABILITY OF OUR INFORMATION TECHNOLOGY WORKFORCE, AND PRO-ACTIVELY SEEKS TO REASSIGN PEOPLE WHOWOULD LIKE TO CONTINUE TO PURSUE A CAREER IN FEDERAL GOVERNMENT.FOR THOSE WHO CHOOSE TO LEAVE, THE FIRST HIRE PROVISION HELPS TO ENSURE THAT WE RETAIN THE CORPORATE KNOWLEDGE REQUIRED TO SUSTAIN HIGH-QUALITY OPERATIONS.
2. EDS IS INTERESTED IN HIRING THE IMPACTED PEOPLE AND HAS OFFERED A VERY ATTRACTIVE PACKAGE:
A. A 15 PERCENT INCREASE IN SALARY
B. GUARANTEED EMPLOYMENT FOR THREE YEARS
C. A SIGNING BONUS
THE PROCESS FOR PLACING DON EMPLOYEES WITH EDS IS SUMMARIZED AS FOLLOWS:
A. GOVERNMENT POC AT EACH NAVY ACTIVITY/MARINE CORPS COMMAND COMPILES A LIST OF EMPLOYEES WHOSE POSITIONS ARE ABSORBED BY NMCI. IN THE EVENT THAT A SITE MUST CONDUCT A REDUCTION IN FORCE, A SECOND LIST WILL BE PREPARED AND SUBMITTED AT THE TIME THESE EMPLOYEES ARE IDENTIFIED.
B.GOVERNMENT POC PROVIDES IMPACTED EMPLOYEES WITH INFORMATION ON HOW TO CONTACT EDS.
C. EDS MEETS WITH THOSE INTERESTED EMPLOYEES TO EXPLAIN COMPANY POLICY AND BENEFITS. THOSE INDIVIDUALS WHO REMAIN INTERESTED ARE ASKED TO APPLY FOR EMPLOYMENT.
D. EMPLOYEES WHO ARE QUALIFIED FOR EDS WORK WILL BE OFFERED A SPECIFIC JOB DURING A ONE-ON-ONE MEETING. THOSE INDIVIDUALS WILL HAVE 48 HOURS TO RESPOND.
DETAILS OF THIS PROCESS WILL BE INCORPORATED INTO REF B.
3. THIS FIRST HIRE POLICY OFFERS GREAT POTENTIAL FOR A THREE-WAY WIN FOR THE GOVERNMENT, EDS, AND OUR IMPACTED EMPLOYEES. PLEASE ENSURE CLOSE COORDINATION WITH YOUR HUMAN RESOURCES ORGANIZATION TO MAXIMIZE THESE POTENTIAL BENEFITS AND HELP US ACHIEVE THIS GOAL.//
BT
#0252

C. NAVY MESSAGE REGARDING LEGACY APPLICATIONS, DATED 03 AUG 2001

R 031345Z AUG 01 ZYB PSN 765023F23

FM CNO WASHINGTON DC//N09T//

RMKS/1. THIS IS NAVY CIO MESSAGE 005/01 WHICH PROVIDES MANDATORY REQUIREMENTS FOR NMCI LEGACY APPLICATIONS TRANSITION, AMPLIFYING REFS A THRU D. LESSONS LEARNED SHOW THAT LEGACY APPLICATION CERTIFICATION IS THE CRITICAL PATH FOR NMCI TRANSITION. WE HAVE MORE COTS AND GOTS APPLICATIONS CURRENTLY IN USE THAN IS EITHER EFFICIENT OR AFFORDABLE. NMCI TRANSITION OFFERS AN OPPORTUNITY TO PROFOUNDLY IMPROVE THIS, BUT REQUIRES IMMEDIATE ACTION. ECHELON II COMMANDERS ARE EACH RESPONSIBLE FOR THE IDENTIFICATION, RATIONALIZATION, AND SUBMISSION FOR CERTIFICATION OF APPLICATIONS, VIA A PROCESS THAT INCLUDES INTEGRATION, CONSOLIDATION, AND ELIMINATION OF APPLICATIONS AND DATABASES. INDIVIDUAL SITE COMMANDERS ARE RESPONSIBLE FOR MEETING PRESCRIBED DEADLINES AND GOALS IN SUPPORT OF THEIR ECHELON II COMMANDERS.

2. ACTION:
A. ALL ECHELON II COMMANDERS MUST SUBMIT A REPORT, INCLUDING AN INITIAL APPLICATION INVENTORY, IAW REF A. A REPORT TEMPLATE WILL BE PROVIDED SEPARATELY. IOT SUPPORT NMCI SCHEDULES, THIS REPORT IS NOW REQUIRED NLT 01OCT01.
B. REFS B THRU D DETAIL THE TRANSITION PROCESS FOR LEGACY APPLICATIONS TO NMCI, AND IS AMPLIFIED BELOW. WAIVERS TO THESE REQUIREMENTS WILL BE AT THE DISCRETION OF THE NAVY CIO, OPNAV 09T.
(1) 120 DAYS PRIOR TO ASSUMPTION OF RESPONSIBILITY (AOR) BY THE INFORMATION STRIKE FORCE (ISF), COMMENCE THE TRANSITION PROCESS TO INCLUDE VALIDATION OF THE SITE APPLICATION INVENTORY. PRIOR TO THIS, INITIAL RATIONALIZATION AGAINST MISSION REQUIREMENTS AND COMMON BUSINESS RULES (PROVIDED SEPARATELY) AND PRESURVEY QUESTIONNAIRES (PSQ'S) MUST BE COMPLETED. DELIVERY TO ISF OF THIS RATIONALIZED LIST OF APPLICATIONS SHOULD ALSO COMMENCE.
(2) 60 DAYS PRIOR TO AOR DELIVER THE COMPLETED LIST OF ALL COTS AND GOTS APPLICATIONS THAT WILL BE REQUIRED TO OPERATE ON NMCI. 50 PERCENT OF ALL GOTS APPS MUST BE DELIVERED TO THE ISF CERTIFICATION LABORATORY AND ACCEPTED.
(3) 45 DAYS PRIOR TO AOR, 75 PERCENT OF IDENTIFIED APPLICATIONS (COTS AND GOTS) SHOULD BE DELIVERED AND ACCEPTED FOR CERTIFICATION.
(4) 30 DAYS PRIOR TO AOR ALL REMAINING IDENTIFIED APPLICATIONS (COTS AND GOTS) MUST BE SUBMITTED AND ACCEPTED FOR CERTIFICATION. APPLICATIONS NOT SUBMITTED BY THIS DEADLINE WILL NOT TRANSITION TO NMCI AT THE SCHEDULED CUTOVER DATE.
(5) ALL FIRST INCREMENT SITES THAT HAVE NOT DELIVERED THEIR SURVEYS/INVENTORIES AND APPLICATIONS MUST COMPLETE AND DELIVER THEM WITHIN 30 DAYS FROM RECEIPT OF THIS MESSAGE.
(6) SOME SECOND INCREMENT SITES WITH AOR IN OCT/NOV 01 ARE ALREADY WITHIN THE 120 AND/OR 60 DAY DEADLINES. FOR THESE SITES, INVENTORY MUST BEGIN IMMEDIATELY, AND RATIONALIZED LISTS ARE DUE NO LATER THAN SCHEDULED AOR DATE. ALL APPLICATIONS MUST BE PROVIDED TO ISF AND ACCEPTED NO LATER THAN 30 DAYS AFTER AOR.

3. THE NMCI LEGACY APPLICATIONS TRANSITION PROCESS PROVIDES ECHELON II COMMANDS THE OPPORTUNITY TO ACHIEVE DISCIPLINE IN THEIR IT APPLICATIONS ENVIRONMENT. SOME COMMANDS ARE ALREADY SUCCEEDING AT THIS AND HAVE REALIZED SUBSTANTIAL LEGACY APPLICATION REDUCTIONS. PROACTIVE PARTICIPATION AND COLLABORATION WITH THE ISF IS ESSENTIAL. COMMANDERS ARE ACCOUNTABLE FOR THE SUCCESSFUL OPERATIONAL TRANSITION OF THEIR COMMANDS AND COMPLIANCE WITH THE PROCEDURES OUTLINED IN THIS MESSAGE AND REFS A THRU D. SPECIFIC COMMAND AOR SCHEDULES ARE AVAILABLE AT [QUOTE] WWW.EDS.COM/NMCI/TRANSITION.HTM [UNQUOTE] ALL LOWER CASE.

4. I WILL BE INDIVIDUALLY CONTACTING EVERY ECHELON II COMMANDER IN THE NEXT WEEK TO EMPHASIZE THE IMPORTANCE OF THIS MESSAGE. YOUR PERSONAL FEEDBACK IS ENCOURAGED AT ANY TIME. RELEASED BY VADM R.W. MAYO,
NAVY CIO.//

BT

D. SECRETARY ENGLAND NMCI ALNAV MESSAGE, DATED 05 OCT 2001

R 051506Z OCT 01 ZYB MIN PSN 396870S33

FM SECNAV WASHINGTON DC//SN//

RMKS/1. ALTHOUGH WE ARE ALL CONSUMED WITH DEALING WITH THE EXTRAORDINARY EVENTS OF SEPTEMBER 11, IT IS ALSO IMPORTANT THAT WE DAILY CONTINUE TO CHANGE AND IMPROVE OUR OPERATING PROCESSES.
2. THIS MESSAGE REINFORCES AND UPDATES THE NMCI POLICIES PREVIOUSLY STATED BY THEN NAVY SECRETARY DANZIG.
3. I WANT TO REITERATE TO EACH PERSON HOW IMPORTANT OUR NAVY MARINE CORPS INTRANET (NMCI) INITIATIVE IS TO THE FUTURE OF OUR NAVY AND MARINE CORPS, AND WHAT WE HAVE DISCOVERED IN OUR ONGOING IMPLEMENTATION OF NMCI. NMCI IS THE FOUNDATION PROGRAM TO PROVIDE THE NAVY AND THE MARINE CORPS A SECURE, INTEROPERABLE, AND USER FRIENDLY "INFORMATION SUPERHIGHWAY". IT IS THE RIGHT THING TO DO - AND WE ARE PROCEEDING TO MAKE IT A REALITY.
4. NMCI IS AN IMMENSE ACHIEVEMENT, AND IT OUTFITS THE NAVY AND THE MARINE CORPS FOR THEIR VOYAGE THROUGH THE 21ST CENTURY. THIS INTRANET IS ESSENTIAL, BUT IT ONLY FACILITATES CHANGE, IN MUCH THE SAME WAY THAT TELEGRAPHS AND TELEPHONES OPENED OPPORTUNITY BUT WERE THEMSELVES MEANS, NOT ENDS.
5. NMCI WILL MAKE INFORMATION INSTANTLY ACCESSIBLE TO ALL CERTIFIED USERS THROUGHOUT THE DEPARTMENT. THE CONSOLIDATION OF SCORES OF SEPARATELY PURCHASED AND MAINTAINED SYSTEMS AND APPLICATIONS WILL YIELD VALUABLE SHORT-TERM GAINS IN ECONOMY, EFFICIENCY AND SECURITY. OUR DECISION TO CONTRACT FOR GUARANTEED LEVELS OF SERVICE FROM A PRIVATE MANAGER (BUYING INFORMATION CONVEYANCE AS THOUGHT IT WERE A UTILITY, LIKE ELECTRICITY) TRANSCENDS OUR OFTEN-CUMBERSOME PROCUREMENT TECHNIQUES AND LINKS US MORE DIRECTLY TO THE PRIVATE SECTOR. WE HAVE THEREFORE FOUND A MECHANISM FOR GREATLY INCREASING THE SPEED AND FLEXIBILITY WITH WHICH THIS TECHNOLOGY WILL BE REFRESHED.
6. BUT, SUBSTANTIAL AS THESE BENEFITS ARE, THEY ARE DWARFED BY IMPLICATIONS OF EMPOWERING INSTANTANEOUS INFORMATION ACCESS THROUGHOUT THE WHOLE DEPARTMENT OF THE NAVY. A HIGHLY STRUCTURED, STOVE-PIPED, HIERARCHICAL ORGANIZATION HAS PUT ITSELF ON THE PATH TO BEING HIGHLY FLEXIBLE, INTIMATELY INTEGRATED AND ORGANIZED IN FLAT NETWORKS.
7. NMCI WILL BE AN ESSENTIAL INGREDIENT IN THE ABILITY OF OUR BUSINESS ORGANIZATIONS TO BE EFFICIENT AND EFFECTIVE, PROVIDING VALUE AND CAPABILITY FOR WARFIGHTERS.
8. THE MOST REWARDING APPLICATIONS OF "THE WEB" ARE FOR LARGE COMPLEX ORGANIZATIONS OPERATING ON A GLOBAL BASIS. THE DEPARTMENT OF THE NAVY IS THE WORLD'S LARGEST GOVERNMENT ORGANIZATION (OTHER THAN THE DEPARTMENT OF DEFENSE ITSELF). WE VALUE SPEED, UNITY OF EFFORT AND ECONOMY OF EFFORT AT LEAST AS MUCH AS (OFTEN MORE THAN) ANY COMMERCIAL ENTITY.
9. THE CHALLENGE OF THE NEXT MONTHS AND YEARS IS WHETHER WE CAN SEIZE THE ADVANTAGES OF THE CAPABILITY WE ARE PUTTING IN PLACE. THIS WILL REQUIRE CHANGES THAT TRANSCEND TECHNOLOGY - THEY ARE CHANGES IN THE WAY WE DO THINGS. TO SEIZE THE BENEFIT OF WHAT WE ARE TODAY CREATING, WE WILL NEED TO DECENTRALIZE WHERE HISTORICALLY WE HAVE CENTRALIZED, FLATTEN DECISION-MAKING THAT HAS HISTORICALLY BEEN HIERARCHICAL, INTEGRATE WHERE WE ARE OFTEN NOW SEPARATED, CUSTOMIZE WHAT WE ONCE STRUGGLED TO

STANDARDIZE, AND USE PRIVATE INDUSTRY TO PERFORM FUNCTIONS WE HAVE PREVIOUSLY JEALOUSLY GUARDED.
10. THERE IS CHANGE AND THEREFORE DIFFICULTY IN WHAT WE ARE TRYING TO DO, BUT WE ARE STILL GOING FORWARD BECAUSE WE CANNOT STAND STILL. NMCI WAS INITIATED WITH A COMMITMENT TO CHANGE THE WAY WE THINK AND OPERATE. THAT IS ASKING A LOT OF OUR SAILORS, MARINES, CIVILIANS AND ORGANIZATIONS SO YOUR FULL SUPPORT IS CRITICAL TO SUCCESS. THAT IS IN THE BEST TRADITION OF OUR NAVY AND MARINE CORPS.
11. ELECTRONIC DATA SYSTEMS (EDS), OUR PRIME CONTRACTOR, HAS ASSUMED RESPONSIBILITY FOR OVER 42,000 SEATS ACROSS FIFTEEN COMMANDS IN THE TEN MONTHS SINCE THE NMCI CONTRACT WAS AWARDED IN OCTOBER 2000. WE HAVE LEARNED MANY VALUABLE LESSONS FROM OUR EFFORT. ONE OF PARTICULAR VALUE HAS BEEN THE REALIZATION OF HOW MANY DIFFERENT LEGACY APPLICATIONS WE IN THE NAVY AND MARINE CORPS CURRENTLY OWN AND USE (WE ARE IN THE TENS OF THOUSANDS AND COUNTING). NMCI IMPLEMENTATION HAS FORCED US, AS A DEPARTMENT, TO TACKLE THIS ISSUE - THE SOLUTION TO WHICH (REDUCTION OF THE APPLICATIONS WE USE) IS ALREADY PAYING BIG DIVIDENDS IN COST REDUCTIONS, INTEROPERABILITY, AND EFFICIENCY.
12. A SECOND LESSON LEARNED IS EDS' SPEED OF REACTION TO PROVIDE SUPPORT. AFTER THE 9/11 ATTACK ON THE PENTAGON, APPROXIMATELY 1300 SAILORS, MARINES AND CIVILIANS WERE FORCED TO MOVE OUT OF THE PENTAGON. MANY OF THEIR INFORMATION SYSTEMS WERE DESTROYED. EDS SUPPORTED NEW NETWORKS AND PROVIDED NEW HARDWARE AND SOFTWARE TO ALL OF THESE PEOPLE, ALLOWING THEM TO BECOME OPERATIONAL AGAIN WITHIN DAYS OF THE ATTACK.
13. WE ARE "UNDERWAY, MAKING WAY" TOWARD THE GOAL OF FULLY IMPLEMENTING NMCI ACROSS THE DEPARTMENT BY 2003. ANY CHANGE OF THIS MAGNITUDE IS CHALLENGING - BUT I AM PERSONALLY COMMITTED TO MAKING NMCI A REALITY FOR ALL OUR SAILORS AND MARINES, AND I EXPECT YOUR FULL SUPPORT. BE A LEADER. EMBRACE THE NMCI CHANGE AND LEAD OUR NAVAL SERVICES INTO THE FUTURE. THANKS AND GOD BLESS.
14. RELEASED BY THE HONORABLE GORDON R. ENGLAND, SECRETARY OF THE NAVY.//

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APPENDIX D. MISCELLANEOUS DOCUMENTS

A. THE GOLD DISC CONTENTS FROM NMCI WEBSITE, POSTED 15 DEC 03

Gold Disk Contents

GOLD DISK CONTENTS		
SERVICE	**SOFTWARE DESCRIPTION (MINIMUM VERSION)**	**VENDOR**
Basic		
Operating System	MS Windows 2000 SP3	Microsoft
Office Suite	Standard Office Automation Software Included on the Gold Disk: • MS Word • MS Excel • MS PowerPoint • MS Access	Microsoft
Desktop Management	Diskeeper 7.0413	Executive Software
E-mail Client	MS Outlook 2000	Microsoft
Internet Browser	Internet Explorer MS 5.5 SP-2 128bit	Microsoft
Virus Protection	Norton A/V Corp Edition v7.5	Symantec
PDF Viewer	Acrobat Reader v5.05	Adobe
Terminal Emulator - Host (TN3270, VT100, X-Terminal)	Reflection 8.0.5 – Web Launch Utility	WRQ
Compression Tool	WinZip v8.1	WinZip
Collaboration Tool	Net Meeting v3.01 (4.4.3385)	Microsoft
Multimedia	RealPlayer 8 (6.0.9.450)	RealNetworks
Multimedia	Windows Media Player v9	Microsoft
Internet Browser	Communicator 4.76	Netscape
Electronic Records Mgmt	Trim Context	Tower
Plug-ins		
Web Controls	Macromedia Shockwave v8.0	Macromedia
Web Controls	Flash Player 5.0	Macromedia
Web Controls	Apple QuickTime Movie and Audio Viewer v 5.0	Apple
Web Controls	iPIX v6,2,0,5	Internet Pictures

GOLD DISK CONTENTS		
SERVICE	**SOFTWARE DESCRIPTION (MINIMUM VERSION)**	**VENDOR**
Security Apps		
Security	Intruder Alert v3.6	Symantec
Security	ESM v5.1	Symantec
Agents		
Software Management	Radia Client Connect v.2.1	Novadigm
Inventory, Remote control	Tivoli TMA v3.71	IBM/Tivoli
Remote Connectivity (Notebooks)		
Dial-up connectivity	PAL v4.3	MCI/WorldCom
VPN	VPN Client v4.1	Alcatel

B. NMCI USER/ASSET INFORMATION FORM, DATED 28 JUN 2002

STRIKE FORCE

User/Asset Information Form

You must provide the information below to the Help Desk to identify yourself as an NMCI system user when you call. This information will help prevent unauthorized users from having your password reset and gaining access to the NMCI network. Remember this private identification information.

Section I. Asset Information

If you have received your NMCI workstation and completed migration to the NMCI environment, record the following information to register your NMCI workstation:

The all-numeric 10-digit asset number is: 3000020732
(The asset number is on the silver tag on the CPU, not the monitor.)

The network port/jack number I am connected to is: 00040-369c-012 D1
(The network jack is the wall connection for the network cable plugged into the back of your workstation.)

The computer name is: WDSPSC000002
(Click once on the My Computer icon located on your desktop. Your computer name is in parentheses.)

Section II. User Identification Information

Fill in the following two items for identification if either:

- You have gone through migration to the NMCI environment, and must validate your personal information.

OR

- You are a new user on the NMCI.
- Your workstation has already been registered.
- You need to validate your personal information.

1. 4-Digit PIN

2. Secret Word (6-10 characters):

If you encounter any additional problems you must submit a separate request to the NMCI Help Desk:

1-866-THE-NMCI (843-6624) phone or 1-877-FAX-NMCI (329-6624) fax

You are responsible for backing up the files created on the local hard drive of your NMCI workstation. The *Workstation Migration Countdown Go Guide* includes instructions on how to back up files on your NMCI workstation hard drive.

Section III. User Contact Information

Last Name:	**First Name:**	**MI:**
Contact Phone Number (w/Area Code):		**Rank/Title: dp III**
Base: SSC SD **Building:**	**Floor:**	**Room:**
Supervisor Name:	**Supervisor Contact Number:**	
Date:		

Comments:

Users East of the Mississippi River should e-mail this form to: HelpDesk_NRFK@nmci-isf.com - Norfolk, VA	Users West of the Mississippi River should e-mail this form to: HelpDesk_SDNI@nmci-isf.com - San Diego, CA

Version 2.0 28 June 2002

Return this form to NMCI Help Desk within 3 business days of receipt.

C. NMCI REQUEST FOR SERVICE (RFS)

STRIKE FORCE

NMCI Request for Service (RFS) RFS #

The website version of this document is controlled; all other versions are uncontrolled.

Claimant: Please fill out all fields in the Claimant section (up to item 32), then submit this form to NMCI.
Important: Make sure to fill in all Claimant fields. If no information is needed, put N/A.

FILLED OUT BY CLAIMANT

1. Site Transition Manager:	Phone:	E-mail:

Claimant IT Manager

2. First Name:	Last Name:	Phone:
3. E-mail:		
4. Unit / Command Address:		

Application User / POC

5. First Name:	Last Name:	Phone:
6. E-mail:		
7. Unit / Command Address:		

Application Vendor / Central Design Agency

8. Company:		Company Phone:
9. POC Name:	POC Phone:	POC E-mail:
10. Website:		

Application Information

11. COTS / GOTS?	Application ID:
12. Application Name:	Application Version:
13. Application License Type: License / Shareware / Freeware	
14. License Serial Number (if needed):	
15. Required Patches / Updates / Service Packs:	
16. Release Date (M/d/yyyy):	
17. Installation Key:	
18. Software Dependencies:	
19. Hardware Dependencies:	
20. Hardware Minimum Requirements: ☐RAM (MB):_____ ☐CPU:_____ ☐HDD:_____ ☐Other:	

STRIKE FORCE

NMCI Request for Service (RFS) RFS

The website version of this document is controlled; all other versions are uncontrolled.

FILLED OUT BY CLAIMANT (CONT.)

Installation Information

21. Installation Instructions:
22. Type of Installation: Full / Minimum / Laptop / Custom / Other Description:
23. Installation Network Configuration: Client / Server / Both
24. Installation Package Type: MSI / Non-MSI Non-MSI Description:

Current Configuration Information

25. Server Drive Mapping:
26. Manual Test Scripts Required:
27. Additional Instructions:
28. Special Access / User Privileges:

Shipping Information

29. Shipping Carrier: UPS / FedEx / Airborne / DHL / US Post Office / Hand delivered (Select One) If Other:
30. Mode of Transportation: Air / Ground (Select One)
31. Tracking / Shipping Number:
32. Date Shipped: (yyyy-MM-dd)

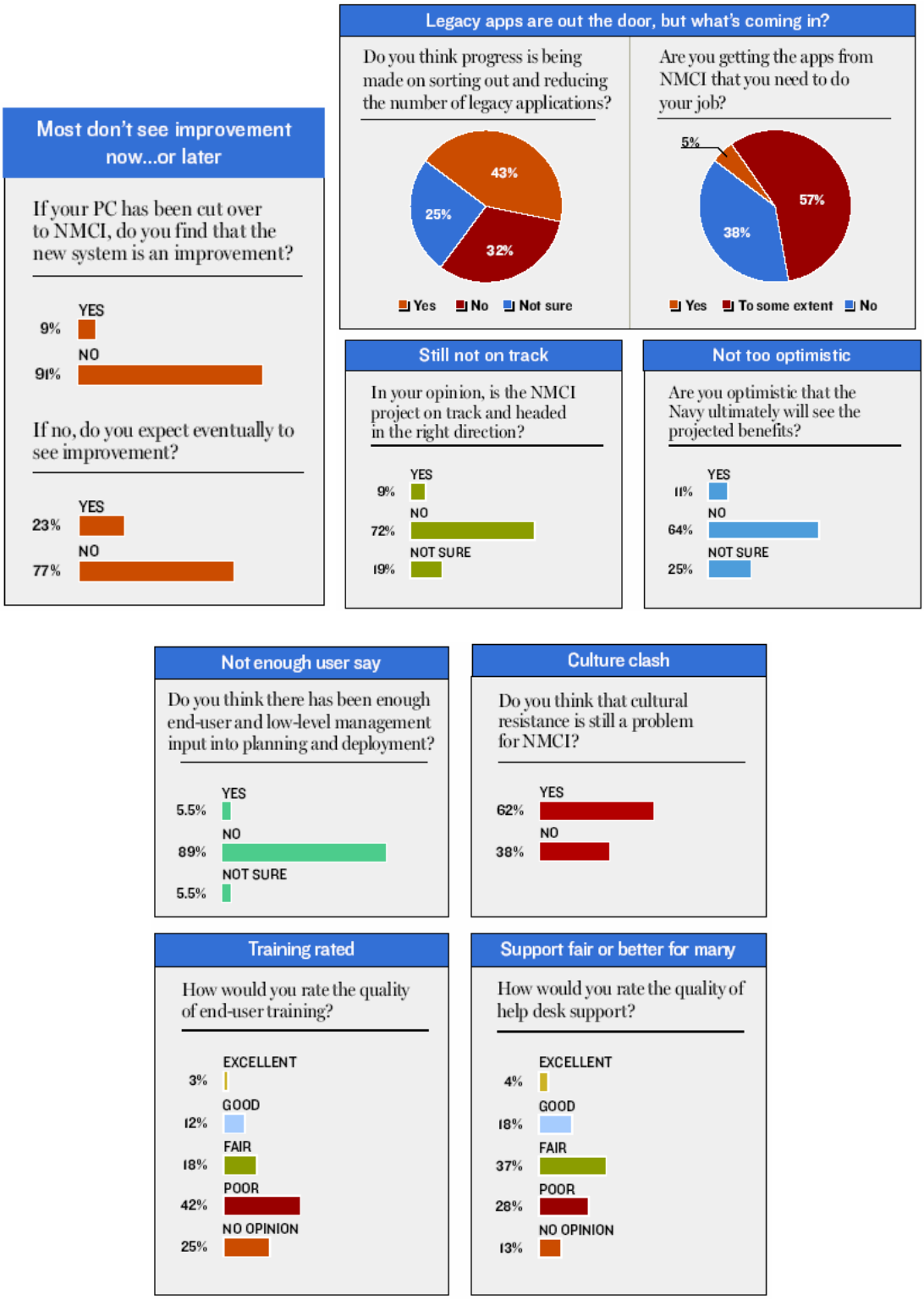
FILLED OUT BY LAB SCHEDULER

33. Does the application meet NMCI's acceptance criteria? Yes / No (Select One) Issues (if 'No'):		
34. RFS Number:		
35. Date and Time RFS Submitted: (M/d/yyyy), (h:mm am/pm)	Date:	Time:
36. Date and Time RFS Completed: (M/d/yyyy), (h:mm am/pm)	Date:	Time:
37. Site:		

RFS Review by Lab Scheduler

38. Is this RFS form sufficiently complete and accurate? Yes / No (Select One) Issues (if 'No'):

D. GCN READER SURVEY RESULTS, DATED 23 FEB 2004



E. GCN READER RAW COMMENTS, DATED 23 FEB 2004

In your opinion, what can be done to improve the rollout of NMCI?

Too expensive.

Better planning before trying to take on a job of this scope. Reduce the number of subcontractors working on the project.

Stop and fix all of the current issues, upgrade the applications, the baseline is too old.

Change contractors.

NMCI needs more empathy for end user needs. There are many productivity losses by constraining applications and IT support. And, there are still many security issues behind this private network.

Collect true performance data and require actual performance as originally touted. The vast majority of users did not need a new email and document system they needed technical tools.

Cancel NMCI.

Communicate with the end users and care about their work. The Puget Sound Naval Shipyard building I am [at] has been condemned and everyone will be moving to a new building in a couple of weeks and then the demolition begins. NMCI people were running network cables and they didn't stop work when I let them know about our building. They said they didn't care, they were just collecting a pay check. I finally found someone in their organization that cared and the worked stopped.

The horse is already out of the barn thus it is too late to close the door.

There doesn't seem to much of a learning process going on. They seem to have to reinvent the wheel. Incomplete user data slows the building of PCs. Incomplete infrastructure also slows down the deployment of PCs.

Put more effort into solving the numerous problems. Currently all effort has been put into installing seats in order to meet a quota.

Allow R&D folks who require cutting-edge systems too continue purchasing their own systems as required by the projects.

At some point I believe they [the Navy and EDS] are going to have to sit down and rethink what they are trying to achieve. The goal of a secure networked environment spanning the Navy and Marines is good. The implementation has been lousy. Many features of the system add nothing to the security or networking goals and seem to be chosen as the least investment path for EDS versus the best way of accomplishing the Navy's goals.

Spend more time evaluating current Navy/Marine networking issues. Also provide more and clearer guidance to end users regarding NMCI.

I work in CAD-related area. The addition of tools needed to do my job is not there and isn't likely to be in the future.

First, they could find a schedule and stick to it. In typical contractor form they have slipped way to the right, and have held up our purchasing of technology that would have made the last two years a lot easier to deal with. There have been a lot of empty promises, and a lot of mistakes along the way, and the rollout is a constant headache. This continual "NMCI is coming, give us X information!" Chicken Little song and dance has been a waste of time, manpower, and money. I'm sure someone sees the benefits of NMCI, but no one around here does.

Maintain the legacy systems for a period of time (about six months) because the rollover to the new system takes some getting used to, especially remembering all the various passwords needed to log on.

Ensure they understand the needs of the folks who have a job to do.

Only a few NMCI computers should be installed until a command is satisfied that they are ready to make the change from legacy to NMCI. Having a legacy and NMCI computer on everyone's desk for over six months with mostly redundant features is not anyone's best interest except EDS.

NMCI needs to work more with the end user before rollout.

Recognize that the [science & technology] community needs a much more sophisticated set of software than is needed for admin purposes.

As more and more users are cut over, we see a drop in Internet response time.

Nothing.

Provide more human assistance in solving problems.

More input from the end users. Some of the programs I need are not offered through NMCI. It also takes for forever to get a program approved-more lost man-hours.

There are no less than six different types of printers in our working area. We are forced to maintain supplies for each of those printers. If a printer stops working they replace it with another printer and the supplies for the printer that broke are no longer usable and are taken as a loss to our budget. One type of printer would really help.

At this point, nothing. The rollout is so far into the process that most people are trying to make the best of a bad situation.

They need to be able to approve new software a lot faster than they do now. Should have a very flexible contract. (If it isn't in the contract they don't do it.) Government doesn't work well with non-flexibility.

Kill it.

Fix what is not working. Better response time. Better communication when issues have been resolved.

No comment.

Nothing. Abandon it.

Time and time again we have seen government programs and projects fail because of schedules that are moving targets. These schedules move to the right not because of changing government requirements, but because the contractor is unable to meet their own overly optimistic projections.

End contract now before it's too late.

Forget it.

Turn over the rollout to Navy employees.

The rollout for us was first-rate. EDS personnel were sharp and had the answers … even the Navy people they hired were better than they had been when they were working for us.

Place more emphasis on supporting people trying to accomplish their mission.

A competent prime contractor would improve service.

Stop the roll out.

Fire EDS and get another company.

Reduce the cost for individual needs (e.g.: R/W CD players to be able to back up your hard drive should be no additional cost; Microsoft Project [should be] available to all users.)

Go back to the old ways.

Cancel the rollout wherever R&D functions are being executed in DOD. The "business office" structure of NMCI fits poorly in R&D environments where PCs are often treated as research tools.

Thoroughly train the installers.

NMCI will not work because the Navy is not one-size-fits-all.

Give us the hardware and software we need to do our jobs and give it to us in a timely manner and at a reasonable price. AND, listen to the user's inputs as to what he or she needs.

No comment.

New employees sometimes have no computer or e-mail for a month or two-even though seats were ordered 1-2 months before they arrived. This would never be tolerated in the private sector.

More planning and better training would have been beneficial.

Take more time with rollout process instead of just deploy, deploy, deploy-while leaving messes behind.

Get on with it. The course has been set. May as well see what is on the other side of the train wreck.

Getting software/hardware is a major problem at NADEP NI [Naval Air Depot North Island, San Diego] even though your job may depend on it. All requests for this have to be approved by NMCI. This is ridiculous if one is an engineer and performs R&D work. Let's see: NADEP loves diversity and NMCI/NADEP on the other hand is too regulated and lowers computer efficiency. You people making decisions just don't get it!

Establish some consistency in performance. Make personnel follow-up to truly debug each system. Mine has never worked correctly since the [Remote Access Server] push.

Let people know what the rollout and deployment time tables are and what is causing delays.

Allow involvement at the local level rather than dictating configuration by EDS and top brass.

Limit NMCI to the fleet and military squadrons. The corporate groups don't need it.

Nothing.

Continuous communication is a must. Leadership and communication will help to drive this project forward from both government and contractors.

They need to get more people who know how to load and start programs.

Train users. Make sure the trainers show the user everything on the NMCI machine they might need to use. Do something about the help desk menu-it can be confusing.

I don't work with this application so I can't tell you anything.

Put the customer, the Navy, first.

Bandwidth.

Be more organized, fulfill promises and schedules, be responsive to customers.

Completely abandon NMCI!

NMCI end-user support is lacking, to say the least. And I'm only under AOR [Assumption of Responsibility]-have not yet cutover to NMCI. It takes days to get a fix done that used to take minutes. I was told that after cutover, support will be even worse because they have fewer techs available to each command after cutover. You ask what can be done to improve NMCI-the whole concept is not achievable, in my mind. It's too vast, it's supposed to do too much too fast. It also doesn't have security for commands such as mine that have sensitive info that just anyone can't have access to. Many of their contractors who do have direct access to the Navy's data do not have clearances, although the contract says they do. It's just a bad idea any which way I look at it.

Terminate the contract.

The product that EDS is providing the Navy is a very basic service which generally meets the most fundamental IT requirements in the business and administrative functions. Beyond that basic product, EDS is struggling make any progress in providing a substantial service to the RDT&E [research, development, test and evaluation], intel, and C2 requirements. Actually they are still having problems rolling the basic seats. As for AOR, the American public is the big looser here, not just the Navy. AOR makes EDS responsible for the as-is IT assets at a given site. The old government help desk at this site received 3,000 calls per month per AOR. Now the same help desk is still receiving 1,400 calls per month. The local NMCI help desk is logging 800 calls, of which, they turn over one-third to the government to resolve. This is not saving the Navy, DOD, or the American people money.

Do you have any further thoughts or comments on any aspect of NMCI?

Poor planning, poor execution.

Quit forcing the issues down everybody's throats. Fix the problems first, instead of deploying a defective system.

Cancel or greatly modify the scope of NMCI.

Those of us who have locally developed GOTS [government off-the-shelf software] are being treated like ^&%$# by NMCI. You have to pledge your children to get anything done. NMCI has loaded an unbearable bureaucratic burden on us. Isn't that ironic, an outside contractor burdening government employees with red tape!

EDS was very inefficient in its rollout at my installation. Had to be overly costly. NMCI is quickly becoming more and more inflexible with order changes and meeting changing requirements. It seems it will become a very large and inflexible bureaucracy.

This project layers control away from those who need it to get their job done!

Funding and compliance with IT-21 [Information Technology for the 21st Century] was never given this amount of importance. If the decision-makers (who pushed NMCI through) had been able to fund and empower the local ITs, this could have been accomplished with a lot less growing pains.

I believe triage is a useful tool. Put it out of its misery until a definition is found for what is truly needed.

We were not given "industrial quality" printers. They are one step above "homeowner" quality. They are slow. They are falling apart mechanically. Neither the paper trays nor the cartridges have the capacity needed for production printing.

We have been given direction against saying anything negative.

This is a major endeavor, one that could possibly leave the Marine Corps in a bad position if satisfactory service is not provided. God help us all.

Desktop basic support is good in area of Microsoft Office applications. Everything else is very poor.

It would be nice it the whole thing were dropped.

More administrative rights could be given to the help desk technicians that would eliminate time-constraint problems.

It is basically a "no frills" system with absolute unresponsiveness to the slowness of retrieving, storing, and moving materials. Granted, our activity was computer literate, but it does no good to pull down every outstanding activity to the level of the poorest performers.

Better prepare end users for cutover and check if older programs will be compatible with the new system before putting the system on line. Some personnel are still trying to get needed programs to work. Daily, some personnel are in touch with NMCI personnel in different departments about making the system work. There is the issue one department within NMCI saying that is not their problem. NMCI is NMCI regardless which department it is. All have to work together to make it happen.

Like almost all such processes it will fail under its own weight.

They (EDS) do not have enough technical support staff on site. They seem to cut jobs, someone calls them on the lack of local support and new faces are hired.

NMCI punishes activities like mine that had a robust and modern network infrastructure to bring up to date activities that long ignored theirs.

The cost seems very high for any perceived benefits.

A better keyboard needs to be offered to people with carpal tunnel syndrome, like me.

The vast majority of problems encountered in NCMI deployment result from leadership failures on the Navy side. Mid-level managers have adopted a combative attitude rather than cooperating with EDS to get the job done. Navy underestimated the challenges of legacy application reduction and waited too long to establish the FAM [functional-area-manager] process. Feedback from the field level (those who are actually doing the implementation) is not being solicited and is generally ignored when offered. Higher echelon staffers do not understand how their actions (or inaction) are impacting users at the field/operational level.

I am surprised at the lack of sophistication of some of the hardware, such as a two-button mouse.

I get two to three new softwares a year that I need to use right away but the process to get it approved for use on NMCI takes way too long. I can't get a standalone computer because there is no money to buy it because computer money is tied into NMCI.

Kill it.

I don't know how it is better for us if we now maintain two workstations, need approval to load software, and are charged for additional software and hardware.

do not see the savings projected for this effort. Believe NMCI comes at a tremendous cost. Where will these [dollars] come from and what must be sacrificed to absorb the cost?

It's coming-congressionally mandated, no choice. So we're stuck again.

This is a great start for departments operating with overhead funding, not very well for direct funding projects. Process is process.

It is too costly, overrated, and the end user doesn't have all the tools or the flexibility to adequately do his job. The system frequently bogs down. The intent of NMCI was good, but there is too much control down to the working level for employees to accomplish their jobs in a positive manner.

Cultural resistance is more a problem because new customers are aware of the many problems associated with NMCI during rollout.

If the computers were given to sailors that didn't have one, rather than starting at headquarters, there might have been some benefit. But Remote Access Services are so bad that unless digital subscriber line/cable/network access was available (by the way, NMCI just shut off DSL!) the computers are of limited use. FTP Client and Telnet STILL don't work through RAS. I'm glad I'm retiring soon.

EDS didn't do due diligence when they entered their bid and now the government is paying a much higher price. We need to cut our losses and start over with internal resources or another company.

For reference, read the Gartner article, "Outsourcing Enterprise Network Services in the U.S.", dated 12 January 2004. In it they state not to overestimate the cost saving benefits of outsourcing because they may be difficult to quantify, and even harder to prove. Also read the companion article by Gartner entitled "Retain enough resources to manage outsourcing deals" dated 17 June 2002. The Navy is getting rid of 2210's with the knowledge of the legacy systems, not just network types. Who's going to be left to hold down the "fort" (or ship in this case)?

NETWARCOM [Network Warfare Command] is a major problem. They sent messages because they can't write instructions that comply with current instructions. Their messages are treated as instructions and the information within the message does not comply with current DOD or Navy instruction.

Cancel NMCI.

Hire technicians to take care of problems in a timely manner; having to wait 12 months for a hardware upgrade is unacceptable; service is far too expensive for such minimal support.

What a waste of resources. It has been like plowing under 4,000 family farms to create a single 500,000 acre corporate farm. And couldn't the Navy exercise more buying clout?

Question 6 [Are you optimistic that the department ultimately will see the projected benefits of NMCI?]: If the department sees benefits, it will be the benefits they're looking for, which won't necessarily reflect the worker's reality. Question 9 [Do you think that cultural resistance is still a problem for NMCI?]: Cultural resistance is still an issue to some degree but, if NMCI properly supported the worker's needs, this resistance would have melted away by now. Question 11 [How would you rate the quality of MCI End User Operational Readiness Training Sessions?]: I haven't been offered any training sessions, therefore, I can't rate them. Extremely costly for what we get, not flexible enough (equipment does not support engineering functions, only office and financial functions), takes too long to get legacy and new applications approved (or disapproved), too long between order and rollout, RAS connections are almost unusable (it takes me hours to download e-mail on travel), laptops weigh a ton.

Eliminating legacy systems that work is not always a good idea. My system is consistent and used the many times that the NMCI system has not been working. The speed of the connection is bad and the inability to access the legacy address system because they underestimated what was required is totally unacceptable.

This process is a nightmare at all levels. Hopefully the Navy will see benefits with the program down the line, but up to this point it has been WAY MORE trouble than it is worth. The price tag for this whole deal is also outlandish.

NMCI has been the 600-pound gorilla at our door for well over two years. Its principal effect has been to put a budgetary and political chill on all advancement. We have software nearly two years old that we have not been able to deploy over fears of what NMCI might mean. The Navy is trying to use the legacy apps thing as a way to pay for this white elephant and to buy time. If legacy apps throw away millions of dollars worth of software licenses only to go buy new licenses somewhere else, someone ring up 60 Minutes. Lean, consistent applications are fine but not by shotgun; not all at once.

This would be a great Dilbert book … "NMCI, My Life With The Invertebrates."

Provide applications such as Microsoft Project as standard software for schedule tracking to support all PMAs.

Allow more control by user.

NMCI is fundamentally flawed and cannot work. There is no possible way NMCI can function and still meet the security requirements necessary for government-level data processing. Also, the use of large server farms puts too many eggs in one basket in the event of a successful hack or contamination. No system can be 100 percent secure, so why put everything under one lock? This makes NMCI a HUGE target for hackers and terrorist. Say goodbye to NMCI before it's too late!

As far as I can see, NMCI is a major waste of taxpayer money. More government employees are assigned to supporting NMCI than EDS has hired to accomplish their contract. Many important/critical tasks are being left undone in order to expend valuable personnel to support a contract that is unnecessary to the majority of users. I would like to have an accounting of the combination of contract cost to EDS compared to the number of government employees being used to support this contract. I think the result would be very interesting!

I think it was a waste of government funding due to the complexity of IT infrastructure and end user's ability to understand the computing paradigm in general.

Although NMCI will NOT provide the cost savings estimated in the business case, the idea is valid. It will help consolidate disparate networks and get a handle on legacy applications. The planning and aggressive schedule, however, have created extreme cultural resistance. Limited communications do not help overcome these barriers. Perhaps the development of a communication plan would help break down the cultural barriers.

I think the Navy started this without thinking about the long-term problems. There are programs that we use that are no longer available because NMCI does not support the programs.

I believe that setting standards is a good idea. I also have found that standards have been hard to enforce. The good thing about contracting out is it costs to change so we will be forced to stay within standards. But the question is, at what cost? I work on data that is sensitive and contractors should not see. With the unclassified data on an NMCI network the contractor that might be part of the competition has one step up because as administrator they can look at all the data on my desktop.

No.

We were told we would always have the latest version of software. We get no upgrades unless we identify them, buy them and pay NMCI a couple of hundred dollars to load each one.

Great concept, but I think some planners fell short or else falsely projected the costs of this project.

It costs more money, is less useful, inflexible, and very bureaucratic.

NASA did the same thing the Navy is trying to do with NMCI a couple of years ago. They finally realized that one shoe did not fit all. The let their contract lapse and then did the right thing by contracting out to three different vendors for three different functions. The Navy needs to do the same. Re-scope the NMCI contract to handle primarily basic operating support seats only. Then the functions for other specific operational and engineering functions could be contracted out for those specific functions.

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