

From stovepiped silos to NMCI, the Department of the Navy's integrated enterprise network

NMCI transitions to NGEN by 2014

By Michelle Ku

The Navy Marine Corps Intranet (NMCI) began as a revolutionary idea more than 10 years ago when the question was posed: What if the Department of the Navy (DON) consolidated all of its disparate information technology (IT) networks into one secure, fully functional enterprise network on a single technological platform with standardized hardware and software and integrated voice, video and data communications?

The idea further evolved into one of the most ambitious and transformational contracting initiatives ever undertaken when the DON competitively sourced a single industry partner to build, manage and maintain an entire intranet infrastructure, as well as software maintenance and deployment, and all at a lower cost than managing an enterprise network in-house.

Today, that network built by Hewlett-Packard (HP) Enterprise Services, formerly Electronic Data Systems, is the largest corporate intranet in the world with more than 700,000 users utilizing 384,000 workstations. The NMCI is second in size only to the Internet itself!

After 10 years of overseeing the NMCI, the DON is poised to take the next step — transitioning the innovative NMCI to the Next Generation Enterprise Network (NGEN) with full government ownership, including increased management and control.

The start of the transition began Oct. 1, 2010, when the NMCI Continuity of Services Contract (CoSC) took effect. Over the next four years, NMCI CoSC — the follow-on contract to the NMCI contract that ended Sept. 30 — will enable the DON to purchase the infrastructure, assets and the rights to use the intellectual property of the NMCI while increasing command and control (C2) of the network.

As the DON assumes enhanced visibility into the network, the NMCI will transition to NGEN, which will be acquired in

The NGEN Acquisition Strategy

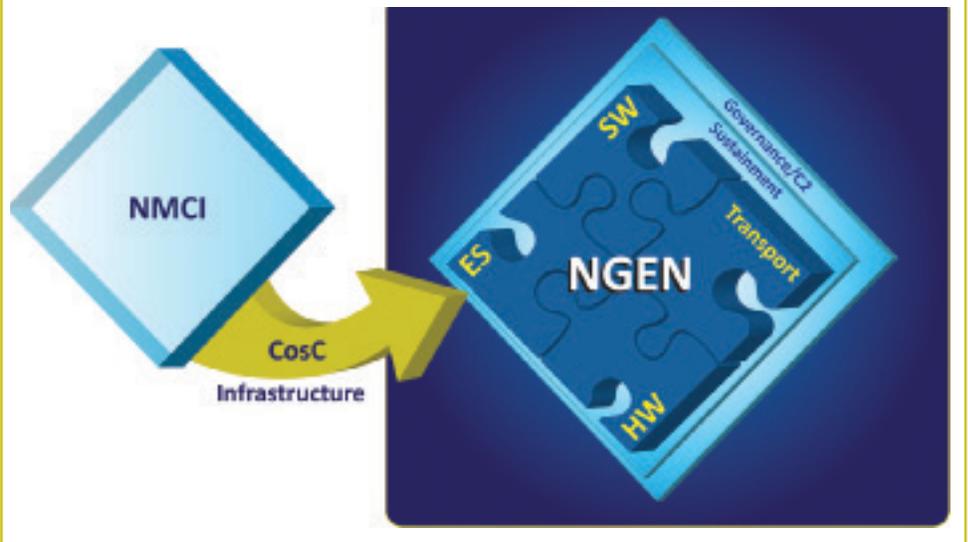


Figure 1.

a segmented approach allowing for the possibility of multiple vendors. The NMCI has been operated by a single prime contractor since it was stood up in 2000. During this fiscal year, Requests for Proposals (RFPs) for several NGEN segments will be issued to support migration of the first seats to NGEN in FY 2012; the full transition will be completed by 2014.

"NMCI was a hugely successful program for the DON in consolidating disparate, stove-piped networks into a single, modern, cost-effective enterprise network with a high level of service that meets mission critical needs," said Capt. Scott N. Weller, NMCI program manager.

With the end of the 10-year NMCI contract, the DON decided to change the way the network operates, Weller said. "For NMCI, the DON chose to have the prime vendor supply the infrastructure; under NMCI CoSC, we want the ability to purchase it. The NMCI CoSC vehicle provides the ability to transition pieces of NMCI services to multiple contracts, instead of a single contract."

The NMCI CoSC will enable the transition to NGEN, the next step in the evolution of the DON's secure, net-centric enterprise network. This strategy is illustrated in Figure 1. NGEN will con-

tinue the capabilities that are currently available in the NMCI while providing an increased level of government control, thus maintaining information security and remaining within budget.

NMCI Consolidates Assets

Not only was the decision to consolidate the naval networks revolutionary, the contracting vehicle used was also precedent setting. Prior to NMCI, a model did not exist in the Department of Defense (DoD) in which a private company was hired to build, manage and maintain an entire intranet.

Despite some early growing pains, NMCI quickly proved to be hugely successful, cost effective and reliable; it provided an unprecedented level of service and security for the DON and ensured a rich user experience, forever changing network security and IT management for the department.

The move to NMCI required users to change behaviors and eliminate poor security habits, such as loading unlicensed or unauthorized software onto government computers and using commercial e-mail accounts to conduct department business.

"The biggest change management obstacle we had was going from a

world where people felt that they had complete control, and they had a lot of autonomy in how they built, maintained and operated their networks. It may be a nice world to be in, but it is completely unsecure; there is no discipline from a spending perspective, and it doesn't meet any enterprise goals. That is the reason we transitioned to NMCI," Weller said. "Anytime you transition from where you have a high degree of localized control to a high degree of centralized control, which was by design and by definition exactly what we intended, there is going to be a natural tendency to resist the change."

NMCI standardized everything from

authorized use of government equipment and information.

"NMCI is not a 10-year-old network," Weller said. "The NMCI program is 10 years-old, but NMCI is a completely modern, five-minute-old network. We have upgraded and maintained NMCI with cutting-edge technology deployed on it since the beginning. All aspects of NMCI are state-of-the-art and state-of-the-shelf today."

The focus on security has made NMCI the most secure network in the DoD and beyond, said Capt. Timothy A. Holland, NGEN program manager. "If NMCI is not the most secure network in the world, it is certainly close. There is no shortfall

flexibility included the government's purchase of the right to use NMCI's intellectual property as the technical data, processes and procedures necessary to operate and manage the network and implement NGEN. It also included the ability to purchase segments of the network's services through multiple vendors instead of the current model of a single vendor for all services.

Many people view NGEN as a "new" network, but it isn't, Holland said. Rather, NGEN is a new acquisition model rooted in industry best practices and proven methodology, such as the Information Technology Infrastructure Library (ITIL) v3, a set of concepts and practices



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network operations and data security to technical support and real-time communications across every level of command in the Navy and Marine Corps. Standardization achieved a number of goals, including increased productivity, interoperability and security within the DON through the use of common hardware, software and operating systems and decreased costs through the elimination of redundant IT solutions and a reduction in the number of routers, switches, servers and legacy applications.

Cost savings were also achieved through centralized technical and help desk support which replaced local technical support centers.

NMCI is not a static network; it is continuously evolving with the introduction of new technologies, improved service delivery and enhanced security which included the use of authentication services — the combination of the Common Access Card/public key infrastructure logon and user credentials — to ensure

that we have to address [in transitioning to NGEN]."

Today, NMCI is a mature, secure enterprise network that has transformed from a business system to a battlespace enabler that meets the needs of war-fighters, supports information dominance and responds quickly to emerging needs.

Moving Toward NGEN

As the NMCI contract drew to a close, the DON decided the government should own the infrastructure and assets of the network as it evolves to its next iteration, NGEN. To transition between NMCI and NGEN, the DON signed the NMCI CoSC, a 43-month service contract with HP, on July 8, 2010.

The NMCI CoSC fulfills multiple requirements. It allows for the uninterrupted continuity of NMCI's level of service and performance, the government's purchase of the network infrastructure and assets in a phased approach and increased governmental flexibility. That

for information technology service management.

"What NGEN brings to the table, is modeling the acquisition after Fortune 500 CIO best practices, and I am not talking about technology providers, I am talking about the users of the technology. This industry best practice allows an individual organization, specifically the Department of the Navy, to manage its core competencies where it needs to manage them. Ultimately under NGEN, we want the ability to move rapidly toward other technologies if they make sense, where they make sense, for the right price," Holland said. "While NGEN begins with the NMCI solution or architecture, it won't end there."

A critical milestone in the transition to NGEN was achieved in early October 2010 when the DON purchased the "Government Purpose Rights" (GPR) to the network's intellectual property. Those rights allow the government to share HP's NMCI and NMCI CoSC intellectual property with potential third-party



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successor contractors and the rest of the Defense Department.

Currently, NGEN acquisition is divided into several segments explained below.

- The Local Transport Services segment includes network, Information Assurance security and testing services and infrastructure sustainment.
- The End User Hardware segment includes computers, monitors and keyboards. End user hardware will be introduced as government furnished equipment via the technology refresh cycle.
- The Enterprise Software License segment includes software for end users, such as operating systems and office tools, and a requirement to support on-demand purchasing.
- The Enterprise Services segment

includes seat services, such as desk side support and voice, video and data services, and non-seat services, such as e-mail and messaging, application integration and hosting services, portal services and data storage services.

At NGEN’s October 2010 Industry Day held to discuss the local transport services segment, Holland challenged industry participants to use new technologies to provide the same capabilities as NMCI does now at a lower price or more capabilities at the same price.

“I want industry to be able to tell me that segments of the network can be done better, with improved performance for the same price or the same performance for a lower price,” Holland said. “If a vendor can provide the same or better

experience than the end user expects, NGEN will incentivize [the vendor] for that new technical solution.”

A Look Ahead

As the transition to NGEN progresses, the majority of the changes will be internal, in a behind-the-scenes capacity, as the government takes over complete oversight, leadership and ownership of the network. With more than two years of preparation work already completed, the changeover from NMCI to NGEN will be seamless. CHIPS

Michelle Ku is a contractor who supports public affairs for the NMCI program.

The Department of the Navy's Program Executive Office for Enterprise Information Systems oversees a portfolio of enterprise-wide information technology programs designed to enable common business processes and provide standard information technology capabilities to Sailors at sea and Marines in the field, and for their support systems. The PEO ensures that these programs maximize value to warfighters by balancing cost with the capability delivered to the end user.

PEO EIS Programs

- (PMW 200) Navy Marine Corps Intranet (NMCI); BLII/ONE-NET provides secure, seamless and global computer connectivity for the Department of the Navy.
- (PMW 210) Next Generation Enterprise Network (NGEN) serves as the program office for the planned follow-on to NMCI.
- (PMW 220) Navy Enterprise Resource Planning (ERP) provides an integrated set of management tools that facilitate business process reengineering and interoperable data.
- (PMW 230) Global Combat Support Systems-Marine Corps (GCSS-MC) modernizes the Marine Corps' logistics systems.
- (PMW 240) Sea Warrior Program fields integrated and improved IT solutions across the enterprise that will enable the Navy's active duty enlisted and Reserve force to direct their own professional development while supporting a fleet readiness assessment.
- (PMW 270) Enterprise IT Services streamlines the acquisition and management of enterprise IT solutions and services and aligns the development, acquisition and deployment of enterprise IT solutions and capabilities to span across the U.S. Navy's enterprise networks, systems and programs of record.

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