SPAWAR Shore Installations Focus

By Capt. Mickey V. Ross, USN

Background

Modern warfare is conducted at longer ranges and with greater precision than ever before. Overall mission effectiveness increasingly depends on systems and services external to weapons systems. At the heart of the U.S. warfighting doctrine are the systems of Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance (C4ISR). The purpose of C4ISR, and the mission of the Space and Naval Warfare Systems Command (SPAWAR), are to provide the battle force commander with knowledge superiority — the means to see the battlefield, understand its related ongoing activities, formulate effective courses of action, and transmit orders for action.

More than moving information, the real key to knowledge superiority is providing the right tools to warfighters — tools that will allow the warfighter to translate information, analyze it, then synthesize that information into decisive, actionable knowledge, and all in near real-time. SPAWAR is organized to deliver an integrated end-to-end capability. The entry point into SPAWAR is through a single financial office (Code 01), then to a central engineering and design code responsible for the creation and evolution of the capabilities (Codes 05 and 07). These capabilities are then delineated into core competency areas and sent to program offices for development and acquisition. At the production end another code combines these capabilities to form a single, integrated afloat and ashore interface for installation and life-cycle support (Code 04.)

The Importance of Ashore Communications

There are many lessons to be learned from the attacks of September 11, and one of them is the importance of the shore infrastructure. Once you have a sound architecture in place you can build the networks, systems and all the collaborative communication systems the warfighter needs. In essence this is my message: gone are the days when afloat installations took precedence over shore installations — now we all know that in order for essential fleet C4ISR systems to be successful we must pay equal attention to shore C4ISR systems. The Shore Installations Office (04N) of the SPAWAR Installations and Logistics Directorate (SPAWAR-04), San Diego, Calif., manages over $200 million of integrated capabilities and installations for our customers worldwide. Our expertise and technical competence have become the model for many Navy and joint commands to follow.

Our approach is designed around leveraging lessons learned and best practices while incorporating the adaptability to tailor capabilities, which create the best value for our customers. Rear Adm. David Antanitus, Director, SPAWAR-04, (Rear Adm. Antanitus is now SPAWAR 05, Chief Engineer) has implemented a program that relies heavily on metrics to measure customer satisfaction, logistic parameters, emergent upgrades and new installations capabilities — as well as their impact on existing systems. *We want to know if the install went as planned? Did it increase fleet capability? Have the customer's requirements changed after the installation?* We track CASREPS and pay careful attention to customer feedback. If a customer has a question we can't answer we consult our colleagues at SPAWAR. Our scrutiny of all aspects of the installations is what makes us so responsive.

We use the "IOC-30 process" (Initial Operational Capability), a flexible 30-month planning tool for design and installation integration reviews, and the SPAWAR 04N Shore Installation Process. An important tool is the SPAWAR Shore Installation Process Handbook. Since its inception in September 1999, this handbook has been instrumental in standardizing the installation procedures utilized by the SPAWAR field activities and headquarters organizations. This handbook has resulted in improved customer satisfaction and has been embraced by our customers who now know what to expect from a SPAWAR installation team. A recent handbook update further improves the process documentation and incorporates lessons learned over the past three years. Some of our best work includes:

- Consolidated C4I Installations at San Diego and Norfolk Fleet Training Centers. The Shore team's dedication, planning and execution of these unique installations had two very important results. The installations were professionally and quickly accomplished resulting in high customer satisfaction. And the installations proved the consolidated installation concept complements the new and streamlined training process giving the fleet better trained Sailors in the very latest C4I systems.
- Defense Messaging System Sectera Modem Installations 3.0. DMS is a dynamic program continually evolving to meet emergent engineering requirements. To correct a design deficiency, the SPAWAR team was given less than a month to develop plans, process funding and train installers for the new Sectera modems at 22 DMS Service Providers (DSP) sites to replace the legacy STU-III, a part of the original system design. We employed the unique "Battle Cell" approach, which enabled the SPAWAR Shore team to successfully accomplish the task.
- Bahrain Communications Upgrades. As preparations in the Persian Gulf began to accelerate, COMUSNAVCENT (Commander, U.S. Naval Forces Central Command) identified communications capacity and performance capabilities that needed to be addressed.

CHIPS: What role does the Shore Installation Process Handbook play?

Capt. Ross: The handbook is a customer tool that serves as an agreement between the customer and SPAWAR. It tells the customer what to expect of us, what we will use, what impact the install will have on existing legacy systems, how it will increase capabilities, and how much it will cost. It details the scope of the work, installation performance testing and system turnover. This gives the customer the opportunity to participate and understand what we are doing. It is a work plan for both of us to follow. After the installation is completed, we test the system with our customer right there by our side. Regional Shore Installations Managers (RSIMs) are located in the Installation Management Offices (IMOs) in the SPAWAR Systems Centers (SSCs), and are specifically dedicated to shore installations. They have project engineers who work very closely with them to ensure installations exceed our customer's expectations of excellence.

CHIPS: When I think of SPAWAR customers, I think of fleet customers.

Capt. Ross: Shore commands are my focus: the NCTAMS (Naval Computer and Telecommunications Area Master Stations) and Telecommunications Stations (NCTS), Fleet Training Centers (FTCs), and Command Centers for major Naval and joint commands. We perform new military construction (MILCON) installations, for example, at the USPACOM Nimitz-MacArthur Pacific Command Center (HQ-21). SPAWAR 04N developed the operating model for Corporate Command Centers, which incorporated the initiatives of the SSCs. The 04N team merged SPAWAR corporate processes with new procedures to set the path for the Command Center Design and Installations. This effort is resulting in a cohesive set of practices, which will be used for the Nimitz-MacArthur Pacific Command Center (HQ-21), COMUSNAVCENT OPCON/COMM Center (P903/904) and other command centers.

We perform the integration of over 100 critical C4ISR systems in support of emerging operational requirements for Operation Enduring Freedom. We also facilitated the COMPACFLT upgrade for the Fleet Command Center to better support the new mission requirements of the Joint Forces Command (JFC), C4I Headquarters. The original multi-year goal was to convert a briefing theater into an operational command center and more fully integrate existing systems to improve the evaluation capability of watchstanders. These long-term objectives were elevated significantly following the 9/11 terrorist attacks. To meet critical operational requirements, the first phase conversion effort was compressed from four months to four weeks.

CHIPS: How is it possible to compress four months of work into four weeks?

Capt. Ross: We can do this because we have a proven process. It is an in-depth process that takes careful planning and coordination. However, it has increased our efficiency and level of performance. When you have a well-trained team, with a strategic plan to follow and they collaborate with all the stakeholders of the project you can accomplish what may seem at first to be impossible. I have an excellent team of leaders directing the work: Bob Ireland, Command Centers; John Walker, Pacific; Milton Martinez, Atlantic; and Dick Majer, Eurcent. The SPAWAR Shore process, in my opinion, should be a Navy-wide process. I've discussed this with Capt. Jim Adams, deputy to Ms. Monica Shephard (Commander, Task Force Web and Director, C4 Systems, U.S. Atlantic Fleet), who agreed changes to the current installations policy should definitely include shore processes.

CHIPS: You said that ashore communications are just as important as fleet communications. Is this a new way of thinking?

Capt. Ross: The thinking has been there, but now there is a new emphasis. We all learned a lot from the events of 9/11. For example, what we do for the NCTAMS and their stations is centered on their 24 x 7 operation — they can't miss a beat. Their systems are "hot" and have to be at top performance at all times. Capt. Betsy Hight, Commanding Officer of NCTAMS LANT, has a tremendous responsibility to make sure communications capabilities stay online and operate to demand requirements. Her ship-to-shore capability is vital to the units afloat while at the same time her speed and capacity demands are ever increasing.

When important dignitaries visit a Naval base, they are usually also taken to commercial shipyards to see the incredible power of aircraft carriers and other Naval ships. Rear Adm. Antanitus visits the shipyards — and shore installation sites. I strongly recommend to any leader — go to the C4ISR shore sites. They are awesome feats of capability and engineering excellence. The new command center being built at PACOM is 274,000 square feet of integrated C4ISR systems. We installed these systems throughout the building. It typically takes five years to build a command center of this magnitude — an aircraft carrier takes eight years. The construction of a large deck ship is impressive, but the effort and level of complexity of constructing a C4ISR structure with a command center rival the engineering of a large deck ship — it is a massive undertaking.

CHIPS: What are the "100 critical C4ISR systems" that the Shore Installations Office installs?

Capt. Ross: I'll tell you in terms of capabilities. We install the capabilities for Telecommunications (Telecom), Technical Audio and Video Control, Radio Frequency Satellite Communications (RF/SATCOM), Special Intelligence Communications (SPINTCOMM), Joint Operational Capability (JOC), Brief and Display Video Architecture (BDVA) and Networks. To install these capabilities we collaborate with many acquisition program offices such as those within PEO C4I and DISA. We collaborate with many major commands within the Navy and joint commands prior to and during installations.

CHIPS: What is the "Battle Cell" approach?

Capt. Ross: There are emergent situations when our normal procedures and approaches are not sufficient to deal with the magnitude and urgency required. It is during these times that we empower a dedicated team of experts and senior managers to focus on and resolve the issues, real and political, to complete the effort. The first time we used this concept, we had been asked to do a very large number of installations in a seemingly impossible time frame. We succeeded, and the Battle Cell approach was born.

Capt. Ross is in the Navy's elite Engineering Duty Officer community. Under his leadership, the Shore Installations team has won three SPAWAR Lightning Bolt Awards over the past year, which is the highest level of team recognition at SPAWAR. He was a leader in the restoration of the Navy Command Center in the Pentagon and in the establishment of pier connectivity for the USNS Comfort, which was used as the alternate command post for the mayor of New York City after the 9/11 terrorist attacks. He was recently selected to attend the Maxwell School at Syracuse University for National Security Management (related to Homeland Security). A talented innovator and motivator, he has worked to consolidate shore installs, and reduce costs using earned value management to measure performance. Capt. Ross is a distinguished technical leader committed to enhancing opportunities for minority men and women in SPAWAR and the San Diego community. Capt. Ross was recognized as a Modern Day Technology Leader at the Black Engineer of the Year Awards Conference 2003.