





Report Documentation Page			Form Approved OMB No. 0704-0188			
maintaining the data needed, and c including suggestions for reducing	lection of information is estimated to completing and reviewing the collect this burden, to Washington Headqu uld be aware that notwithstanding ar DMB control number.	ion of information. Send comments arters Services, Directorate for Infor	regarding this burden estimate mation Operations and Reports	or any other aspect of th , 1215 Jefferson Davis	is collection of information, Highway, Suite 1204, Arlington	
1. REPORT DATE 2003		2. REPORT TYPE N/A		3. DATES COVE	RED	
4. TITLE AND SUBTITLE			5a. CONTRACT NUMBER			
Transformation SPAWAR C4I Community Annual Report 2003			5b. GRANT NUMBER			
			5c. PROGRAM ELEMENT NUMBER			
6. AUTHOR(S)				5d. PROJECT NUMBER		
				5e. TASK NUMBER		
				5f. WORK UNIT NUMBER		
	RFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) ce and Naval Warfare Systems Center 53406 Woodward Road San go, CA 92152 8. PERFORMING ORGANIZATION REPORT NUMBER					
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)				10. SPONSOR/MONITOR'S ACRONYM(S)		
				11. SPONSOR/MONITOR'S REPORT NUMBER(S)		
12. DISTRIBUTION/AVAII Approved for publ	LABILITY STATEMENT ic release, distributi	on unlimited				
13. SUPPLEMENTARY NO The original docum	otes nent contains color i	mages.				
14. ABSTRACT						
15. SUBJECT TERMS						
16. SECURITY CLASSIFICATION OF:		17. LIMITATION OF	18. NUMBER	19a. NAME OF		
a. REPORT unclassified	b. ABSTRACT unclassified	c. THIS PAGE unclassified	ABSTRACT UU	OF PAGES <b>34</b>	RESPONSIBLE PERSON	

Standard Form 298 (Rev. 8-98) Prescribed by ANSI Std Z39-18

# CONTENTS

Transforming Network Centric Capabilities for Warfighters	7
Current Readiness	7
Future Readiness	12
Aligning to Enable Transformation	17
Building Partnerships	18
Building Connections with SYSCOMs PEOs, and Naval C4I Partners .	20
Building Internal Alignment	21
Partnering with Industry and Academia	22

A Culture of Efficiency to Build Sea Enterprise	23
Harvesting Efficiencies	23
Attacking Costs	27
Maximizing Common Tools	30
Generating Efficiencies through Innovation	31
Recognizing the Reason Behind our Success: Our People	32
Challenges of the Future	34

SPAWAR GeoSat Follow-On Satellite



#### A MESSAGE FROM THE SPAWAR C41 COMMUNITY

In 2003, the SPAWAR Command, Control, Communications, Computers, and Intelligence (C4I) Community engaged in new roles and responsibilities which placed us in the forefront of U.S. Navy C4I transformation initiatives. We instituted organizational realignments and process improvements to enhance the efficiency of our business operations and more effectively develop, acquire, and support C4I, Information Technology (IT), and Space capabilities. Our successes tangibly advanced the Department of Defense (DoD) vision of a Joint, collaborative, interoperable C4I environment for network centric warfare. Most significantly, we delivered critical C4I capabilities to the Joint warfighters which helped United States and Coalition Forces to achieve decision superiority in Operation Iraqi Freedom (OIF).

The SPAWAR C4I Community is comprised of the Space and Naval Warfare Systems Command (SPAWARSYSCOM), the Program Executive Office for Command, Control, Communications, Computers, Intelligence and Space (PEO C4I & Space), the Program Executive Office for Information Technology (PEO IT), and the Director, Navy and Marine Corps Intranet (DNMCI). Together, we are focused on executing FORCEnet, which will integrate information, sensors, platforms, and warfighters to form a core element of the Chief of Naval Operations (CNO's) Sea Power 21 vision. As the designated Chief Engineer (CHENG) for FORCEnet, CHENG for C4I, and acquisition agent for Navy C4I, IT, and Space systems, the SPAWAR C4I Community leads the way toward achieving this vision. Accomplishing the Navy C4I transformation is a massive undertaking that requires unprecedented levels of collaboration within the Navy as well as strategic alignment with Joint forces and supporting organizations. To this end, we are continuing to develop proactive alliances with the Joint Forces Command (JFCOM), Naval Network Warfare Command (NETWARCOM), Office of the CNO (OPNAV), other Systems Commands (SYSCOMs), other PEOs, the Fleet, the National Reconnaissance Office (NRO), as well as other Joint Services and DoD agencies, Industry, and Academia. The SPAWAR C4I Community is leveraging these working relationships and coordinated contributions to optimize the timely and cost-effective fielding of transformational, Joint interoperable C4I capabilities.

The SPAWAR C4I Community is fostering a culture of efficiency within the Navy. We are continuing to strengthen internal ties, improve our work processes and establish meaningful, performance-based metrics for monitoring progress towards our strategic and operational goals. To achieve efficiencies on a larger scale, SPAWAR teamed with other Navy SYSCOMs through the Virtual SYSCOM initiative to develop streamlined business processes and improve readiness. During its inaugural year, PEO C4I & Space restructured its acquisition business processes to reduce costs and cycle times while maintaining or improving capabilities delivered. PEO IT derived a structured approach for assessing, prioritizing, and resourcing enterprise IT requirements to provide the Navy with the best value for IT funds. During 2003, DNMCI made substantial progress in achieving efficiencies while implementing improved IT services for Navy commands.

As 2004 gets under way, we welcome the challenges of delivering FORCEnet capabilities, strengthening our partnerships, and realizing greater innovations and efficiencies. The SPAWAR C4I Community will continue leading Navy efforts to develop, deliver and support improved, interoperable C4I capabilities to the Fleet and Joint warfighters. We are proud of our accomplishments in 2003 and will continue to work to transform C4I to achieve the vision of the 21<sup>st</sup> century warfighter.

SPRING'S

Kenneth D. Slaght Rear Admiral, U.S. Navy Commander, Space and Naval Warfare Systems Command

Dennis M. Bauman Program Executive Officer Command, Control, Communications, Computers, Intelligence and Space

Steven M. Ehrler

Program Executive Officer Information Technology

um C. L. Munns

Rear Admiral, U.S. Navy Director NMCI

Rand H. Fisher Rear Admiral, U.S. Navy Commander, SPAWAR SSFA

MMCI

## THE SPAWAR C4I COMMUNITY

#### INTRODUCTION

The SPAWAR C4I Community has global reach to support our deployed forces. We perform our mission with 7,600 government and military employees and an annual budget of \$5.8 billion from Navy and Joint sources.

Our mission is to develop, acquire and support C4I, IT, and Space systems that enable warfighter decision superiority and business efficiency. SPAWAR Headquarters and its strategically integrated systems centers and field activities, PEO C4I & Space, PEO IT, and DNMCI have a vast resource base of experts committed to supporting this mission.

The SPAWAR C4I Community is a uniquely valuable asset to the United States. Our collaborations with Services and Agencies, Industry and Academia provide the technology leverage of an extensive network of experts and unique facilities to deliver C4I solutions. Our proximity to the Fleet on both coasts keeps us in constant touch with the warfighter and helps us develop and deliver better C4I, IT and Space applications.

## SPAWAR Systems Command, Headquarters (HQ), San Diego



SPAWAR Headquarters' primary focus is on FORCEnet implementation and support to PEO C4I & Space, PEO IT, and DNMCI in delivering C4I, IT and Space capabilities to the Joint warfighter. As the Navy's C4I Chief Engineer and FORCEnet Chief Architect, SPAWAR provides the architectures and standards to drive Navy, Joint and Coalition C4I interoperability. SPAWAR HQ leads its three SPAWAR Systems Centers (SSCs) and other field activities in developing, fielding, and maintaining C4I, IT, and Space systems. SPAWAR's Washington Liaison Office works closely with sponsors and stakeholders in the Capital region.

## Program Executive Office for C4I and Space (PEO C4I & Space)



PEO C4I & Space acquires, integrates, delivers and supports interoperable C4I and groundbased space capabilities, enabling seamless operations for Fleet, Joint, and Coalition warfighters. They are the principal provider of C4I products and services to the Fleet.

## Program Executive Office for Information Technology (PEO IT)



PEO IT is the Navy and Marine Corps acquisition lead on non-tactical information technology services and solutions, including the Navy Marine Corps Intranet (NMCI) and other enterprise solutions.

#### Director Navy and Marine Corps Intranet (DNMCI)

DNMCI is the central point of authority and accountability for NMCI implementation across the enterprise.

## THE SPAWAR C4I COMMUNITY

SPAWAR Systems Center, San Diego (SSC San Diego)

SSC San Diego is SPAWAR's R&D arm and the Navy's center for C4I research, development, test, evaluation, and engineering. They provide FORCEnet concept definition and rapid fielding of Joint C4I innovations, as well as Fleet technical support.

SPAWAR Systems Center, Charleston (SSC Charleston) SSC Charleston is SPAWAR's C4I production and delivery lead and performs development, acquisition, and life cycle support of integrated C4I, IT, and Space systems. They also provide near real time C4I solutions for Joint and Homeland Security forces.

SPAWAR Systems Center Norfolk (SSC Norfolk) SSC Norfolk provides global "cradle-to-grave" software support and in-service engineering for Fleet information systems support to business processes afloat and ashore.

SPAWAR Information Technology Center (SPAWAR ITC) SPAWAR ITC delivers full life cycle support for integrated information management and information technology solutions and is a key enabler to Sea Warrior.

 SPAWAR Space Field Activity
 SSFA provides operational support to space systems that support Joint and Naval operations and leverages National Security Space (NSS) Systems' capabilities for the Navy by providing staffing to the National Reconnaissance Office (NRO) and other NSS organizations.

#### Delivering C4I in Operation Iraqi Freedom(OIF)

SPAWAR's enhanced C4I systems had a decisive effect on the success of OIF. For the first time, Coalition Forces exercised coordinated command and control of air, ground, sea, and Special Operations Forces from 7,000 miles away! We achieved unprecedented real-time situational awareness and force connectivity. Today's C4I capabilities allowed precision-guided munitions to strike targets with low collateral damage – an important national objective during OIF.

OIF battle demonstration of the SPAWAR C4I Community's capabilities included:

>> Chat Tools. Chat Tools such as IR Chat, MS Chat, and Sametime relieved voice networks and command and control bandwidth requirements in a congested Central Command area of operations. These systems demonstrated an operational availability (Ao) of over 98%.

# TRANSFORMING NETWORK CENTRIC WARFIGHTERS

- >> Tactical Information Broadcast Service (TIBS). USS Higgins (DDG-76) demonstrated a "combat-first," using enhanced C4I capabilities to conduct track validation and early warning, and leveraged cueing technologies in support of U.S. and Coalition defenses. Using TIBS, a tactical broadcast which provides timely distribution of Theater Ballistic Missile threat information to users, HIGGINS detected Iraqi SCUD missiles and passed early warning and tracking data to U.S. Patriot missile batteries ashore to engage the SCUDs. This theater early warning capability was passed directly to the warfighter faster and more accurately than national sensors, establishing the Navy as a critical player in the Theater Ballistic Missile Warning Defense mission.
- >> Coalition Enterprise Regional Information Exchange System (CENTRIXS). We delivered CENTRIXS to all OIF Strike Groups. CENTRIXS achieved significant success as the primary global coalition network, providing secure and robust Internet Protocol data transfer for web-based collaboration, chat, and email services between the United States and its international partners.

The C4I Community supports our warfighters' combat effectiveness, business processes and quality of life. We play a vital role in ensuring the current and future readiness of our forces.

OIF battle demonstration of the SPAWAR C4I Community's capabilities included:

- >> Naval Combat Support System (NCSS) and Asset Tracking Logistics and Supply System (ATLASS II+). NCSS significantly improved operational logistics support to warfighters on the front line by providing maintenance and supply personnel with visibility of weapons system assets and readiness data. These improvements increased availability of Navy combat systems, munitions and skilled personnel who delivered ordinance on target with high accuracy. NCSS also enabled Fleet medical units to track Anthrax and Small Pox vaccinations, ensuring that Navy and Marine Corps combat personnel entering theater were protected against possible biological agents. ATLASS II+ established a warehousing system in Kuwait which enabled Marine Corps supply and maintenance personnel to process 640% more supply and maintenance issues and handle 1,230% more receipts than in peacetime operations.
- >> Web-Enabled Scheduling System (WEBSKED). WEBSKED, a webbased employment scheduling application designed to support current and long-range scheduling, force planning, fuel planning and budgeting, was designated as the Fleet's primary scheduling tool. Using desktop equipment and software through a web interface, WEBSKED reduced planning time and training requirements. By using WEBSKED, schedule approval process was reduced from an average of two weeks to four hours, class time was reduced from two days to onehalf day and scheduling is now conducted near real-time in a single, collaborative environment.

Internet cafes provided OIF warfighters contact with their families through voice and email connections.

- >> Satellite Communications Support. SPAWAR enabled a 20% increase in bandwidth available to our military forces by providing critical surge capacity on the Ultra High Frequency Follow-On (UFO) satellite and the commercial Leased Satellite.
- >> Accelerated Installation Schedules. The USS Theodore Roosevelt Installation Tiger Team, comprised of representatives from the SPAWAR C4I Community, accelerated the installations of over 80 C4I systems in the USS Theodore Roosevelt Strike Group and other amphibious ships. Installation timeline was compressed from four months to less than four weeks, and included the latest C4I capability in systems such as the Next Generation Network, CENTRIXS, Theater Battle Management Core System, RADIANT ETHER, and Local Area Network expansions. These installations significantly increased the warfighting capability of the USS Theodore Roosevelt Strike Group ships and enabled them to deploy early in support of OIF.

#### **RECOGNIZING OPPORTUNITIES FOR IMPROVEMENT**

Continuing to improve the operational readiness of our C4I systems is one of our key goals for 2004. The Integrated Shipboard Network System (ISNS) is increasing the operational availability (Ao) and maintainability of afloat network systems by migrating the Fleet from an Asynchronous Transfer Mode to a Gigabit Ethernet backbone and placing ISNS core network components on ships' vital power. We are also taking steps to improve Satellite Communications (SATCOM) terminal Ao from 85% to 95% in 2004 and to 97% in the next three years for commercial satellite systems.

"As C4I increasingly takes on a combat system's role, it must also take on a combat system's reliability." - Rear Admiral John Kelly (Commander, Abraham Lincoln Carrier Strike Group)

During OIF, the Meteorological Mobile Facility Replacement system (METMF(R)) provided Marine Air-Ground Task Force units a full range of weather forecasting capability contained in one deployable shelter. SPAWAR upgrades to the METMF(R) systems allowed the units to post radar images on the Secure Information Protocol Router network home page.

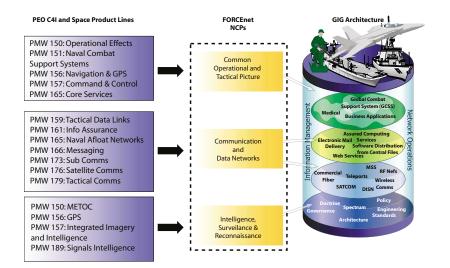


DELIVERING FORCENET CAPABILITIES TODAY

"FORCEnet is the centerpiece of our roadmap to the future. Once implemented, FORCEnet will effectively give warfighters the knowledge of the battlefield to 'know first' and 'act first' – taking advantage of knowledge superiority over an adversary to prevail in battle."

- Admiral Vern Clark, Chief of Naval Operations

FORCEnet is the "key enabler" of Sea Power 21, unifying the operational concepts of Sea Strike, Sea Shield, and Sea Basing. Rather than a traditional acquisition program, it is a framework and evolutionary process that aligns and integrates individual acquisition programs to deliver needed C4I capabilities to the warfighters. FORCEnet provides a roadmap for standardization, structure, and interoperability that will integrate sensors, networks, decision aids, warriors and weapons. We already are fielding a cadre of systems compliant with Joint, FORCEnet architecture and standards guidelines. In FY03, 20% of the systems assessed were found to be fully compliant with defined FORCEnet criteria. The C4I Community is building FORCEnet by aligning current and planned Navy C4I and IT product lines with specific Naval Capability Packages (NCPs) and the Global Information Grid (GIG) Architecture.



Aligning our products. Our programs are aligned to specific FORCEnet Naval Capabilities Packages (NCPs) that contribute to the Transformation of the Global Information Grid (GIG).

#### DELIVERING HOMELAND SECURITY (HLS)/ HOMELAND DEFENSE CAPABILITIES

To support HLS, the SPAWAR C4I Community provides engineering and program management support to the United States Northern Command, the Department of Homeland Security & Transportation Security Agency Command Centers, the Navy Shore Emergency Operation Command Centers, and the Joint Harbor Operation Centers.

We also provide support at the state and local levels. The Department of Homeland Security's Office for Domestic Preparedness has funded SSC San Diego to provide C4I technical leadership to local public safety organizations nationwide. This effort, in conjunction with the Urban Area Securities Initiative seeks to enhance Local, State and Federal inter-agency communication capabilities in response to terrorist threats and includes 50 Urban Areas and 56 States and Territories.



#### DELIVERING INTEGRATED LOGISTICS SUPPORT (ILS)

In 2003, SPAWAR established a new ILS certification process in partnership with the Naval Sea Systems Command (NAVSEA) and its Ship Program Managers to enhance C4I sustainment support effectiveness. Using the streamlined process, we completed 85% of system installations during availability periods in spite of accelerated deployment schedules.

#### Delivering Fleet Warfighter C4I/ Information Technology (IT) Awareness and Training

SPAWAR and PEO C4I & Space conduct the Naval C4I and (IT) Orientation Seminar to familiarize Navy personnel with Strike Groups' C4I and IT systems capabilities and implementation processes. Since its inception, the Fleet-focused seminar has served over 1,000 participants at 24 sessions. Representatives from the SYSCOMs, OPNAV, Commander, Pacific Fleet (COMPACFLT), Commander, Atlantic Fleet (COMLANTFLT), all numbered Fleet Commanders, and all Type Commanders share in an information exchange that enhances collaboration and technical understanding to improve operational warfare readiness.

#### THE SPAWAR OPERATIONS BRIEF

SPAWAR's weekly Operations Brief brings together (via video teleconference) senior leadership from the SPAWAR C4I Community and operational stakeholders at the Commander Fleet Forces Command (CFFC), COMPACFLT, and Naval Network Warfare Command (NETWARCOM) to address real-time issues, monitor progress, and prioritize resources for action. This forum strengthens our collaboration with our customers and focuses efforts to continuously improve our support to the Fleet.

#### SATELLITE COMMUNICATIONS (SATCOM)

In 2003, President George W. Bush addressed the nation from the deck of USS ABRAHAM LINCOLN (CVN-72). A Commercial Wideband SATCOM Program terminal, sponsored by the Navy

SATCOM office, made his television broadcast possible.

#### SERVING AS NAVY C41 CHIEF ENGINEER (CHENG)

SPAWAR, as C4I CHENG, is identifying solutions for FORCEnet current readiness - and also for the Navy's future readiness needs. Flag Officer leadership at the SPAWAR Chief Engineer's Office ensures that SPAWAR is well positioned to execute its roles in architecture and standards development, requirements analysis and assessments, and systems engineering and integration. In 2003, the SPAWAR C4I Community collaborated with stakeholders to author fundamental documents defining FORCEnet, including a FORCEnet roadmap and the first two volumes of the FORCEnet Architecture & Standards.

#### SERVING AS FORCENET TECHNICAL AUTHORITY

A single FORCEnet Technical Authority will ensure that all C4ISR systems fielded across the Navy are "born Joint" and guarantee interoperability. In October 2003, the leaders of the Naval Systems Commands (NAVSEA, NAVAIR, NAVSUP, and SPAWAR) signed a letter designating SPAWAR as the Technical Authority for FORCEnet. The SYSCOMs and PEOs have defined responsibilities, procedures, and a Plan of Action and Milestones for FORCEnet implementation. In 2004 selected pilot programs will be used to refine C4ISR architectures and standards guidance to further shape FORCEnet and the future of Naval C4ISR.

### SEA POWER 21

#### SEA SHIELD Projecting Defensive Assurance... assure allies, deter adversaries, sustain access



FORCEnet is the "key enabler" of Sea Power 21, unifying the operational concepts of Sea Strike, Sea Shield and Sea Basing.

"SPAWAR is doing very well in the traditional SYSCOM role; they are fielding excellent capabilities on time, on budget." - Admiral William J. Fallon, U.S. Navy Command, U.S. Fleet Forces Command

#### ACCELERATING FORCENET CAPABILITIES

#### TRIDENT WARRIOR 03: 25-30 SEPTEMBER 2003

Trident Warrior 03 was a Fleet C4ISR experiment cosponsored by CNO, NETWARCOM, and SPAWAR to demonstrate FORCEnet capabilities with existing Navy C4ISR products. This first large-scale Sea Trial event focused on "speed to capability" for initial FORCEnet delivery to a Joint operational environment, by exercising robust, dynamically reconfigurable networks to support integrated fires and command and control for the ESSEX Expeditionary Strike Group. The results successfully demonstrated significant performance improvements compared to existing operations. Trident Warrior 04 will continue this experimentation and demonstrate prototype FORCEnet systems in a realistic warfighting scenario.

Trident Warrior 03 provided practical demonstrations of a wide range of FORCEnet capabilities, including:

- >> Bandwidth optimization through allocation, load distribution and line-of-sight data transfer.
- >> Distributed and collaborative command and control capabilities, with a focus on Blue Force Tracking.
- >> Multi-tiered sensor and weapon information used to generate joint calls for fire.

#### TRANSFORMATION TO ENTERPRISE RESOURCE PLANNING (ERP)

NAVSEA, NAVAIR, NAVSUP and SPAWAR are partnering through the Virtual SYSCOM to converge their ERP pilots and transition Navy from legacy business systems to enterprise-wide solutions. Through the first Navy ERP pilot, SSC San Diego transformed its business operations and will serve as a model for other centers in the future. As the Chief Engineer for FORCEnet, SPAWAR, in cooperation with PEO C4I & Space and the Naval Tactical Command Support System, will partner with the ERP Program Management Office to identify IT and business modifications in support of the afloat architecture to facilitate a smooth transition of afloat legacy systems to enterprise-wide solutions.

An Oliver Hazard Perry class frigate fires a Standard Missile during an anti-ship missile defense training evolution. FORCEnet capabilities will lead to dramatic improvements in warfighter reaction time.

#### FORCENET COMPOSEABLE ENVIRONMENT (FNCE)

The SPAWAR C4I Community will more effectively incorporate new technologies into future programs by demonstrating and validating emerging C4ISR capabilities within the FnCE. The FnCE will provide a flexible, comprehensive capability to assess new C4ISR technologies by emulating the operational environment with networks, applications, simulations, architectures and capabilities across the Navy SYSCOMs, Warfare Centers, Joint laboratories, the Naval Research Laboratory, the Navy Sea Based Battle Lab, and Industry partners.

#### JOINT RAPID ARCHITECTURE EXPERIMENTATION (JRAE) CONFERENCE

SPAWAR and NETWARCOM co-hosted the JRAE conference for representatives from all Joint Services, Defense Information Systems Agency, Joint Interoperability Test Command, and Joint Forces Command (JFCOM). JRAE examined tactical interoperability between services, alignment of existing efforts, and traceability to service transformational architectures. In FY04 the Joint community will reconvene to conduct a series of multiservice C4ISR exercises under the designator "Joint Raptor," focusing on distributed services interoperability.

#### COMMERCIAL AREA ANNOUNCEMENT (CAA)

In October 2003, SPAWAR and PEO C4I & Space submitted an innovative new Commercial Area Announcement (CAA) process for public review and comment to aid in the acceleration of FORCEnet capabilities. The C4I Community instituted the CAA process (integrated with the FORCEnet JRAE and Trident Warrior processes) as a means to identify and expedite the acquisition of the latest commercial and demonstrated technology by requesting technical concept papers, product capability statements, and demonstrations.

"FORCEnet will enable the Naval Service to employ a fully netted force, engage with widely distributed combat forces, and command with increased awareness and speed as an integral part of the joint team."

> - Admiral Vern Clark, Chief of Naval Operations

#### THE FLEET RESPONSE PLAN

PEO C4I & Space and SPAWAR are deeply involved in the Navy's Fleet Response Plan (FRP), which will improve Fleet surge response capabilities through focused management of Fleet modernization. The SPAWAR C4I Community and Fleet representatives have been using composite fielding plans and budget information for a collaborative process of prioritizing capabilities and installation schedules. By refining this process and gathering Fleet fielding input early in the budget cycle to forecast potential execution problems, we have increased C4I program stability.

#### NMCI AS A PILLAR OF FORCENET

In his April 2003 statement before Congress, the CNO singled out NMCI as a key component of the FORCEnet construct. NMCI will give the Navy and Marine Corps secure, universal access to integrated voice, video and data communications, afford pierside connectivity to Navy vessels in port, and link more than 340,000 desktops across the United States as well as sites in Puerto Rico, Cuba and Japan.

#### SATELLITE COMMUNICATIONS (SATCOM) READINESS

Narrowband SATCOM capability will continue for many years due to the successful launch of the UHF Follow-On (UFO) satellite on December 17, 2003. The Mobile User Objective System (MUOS), planned for a 2009 launch, will replace UFO.

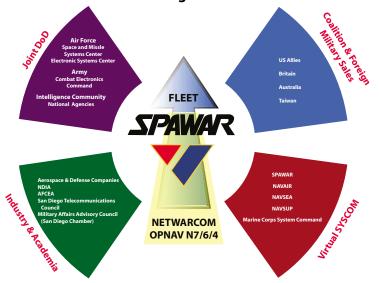
#### LEVERAGING NATIONAL CAPABILITIES

The SSFA's Naval NRO Coordination Group (NNCG) assisted the National Reconnaissance Office's (NRO's) Operational Support Office in providing the Navy with National capabilities at the tactical level. The QUICKBOLT Advanced Concept Technology Demonstration provided High-Speed Anti-Radiation Missile enhancement utilizing the Embedded National Tactical Receiver.

SPAWAR UFO launch, December 2003

# ALIGNING TO ENABLE TRANSFORMATION

The SPAWAR C4I Community has shifted engineering processes away from "Service Platform-Centric" operations to "Joint Net-Centric" operations. We strengthened our alignment to Joint Forces Command (JFCOM) through our Combatant Command Interoperability Program Office (CIPO), which works with Army and Air Force counterparts in helping JFCOM assume responsibility for Joint Battle Management Command and Control, as directed by Management Initiative Decision (MID) 912. In 2004, our Joint focus will include strengthening our ties to JFCOM and increasing our partnerships with the DoD, Marine Corps, Army, and Air Force.



Joint Warfighter JFCOM

We have increased collaboration with partners and stakeholders and aligned to enable transformation.

PEO C4I & Space, PEO IT, and SPAWAR field activities are driving aggressively towards Jointness. We are engaged in a myriad of Navy and DoD efforts directly supporting Jointness, including the Defense Logistics Agency Fuel Handling System (a storage tank monitoring system), a Transportation Security Agency Command Center, the U.S. Army's Morale Welfare and Recreation Internet Cafes, and the Joint Tactical Radio System (JTRS) program. The Navy and Air Force have forged a new partnership for the development of their respective versions or "clusters" of JTRS. This effort will provide a common, Joint acquisition approach, maximizing the commonality of hardware and software to develop a secure voice, video, and data communications capability. In addition to enhanced interoperability, both services will yield significant budget savings over the life of the radio.

Of PEO C4I & Space products, 57% are already Jointly interoperable. Another 39% of PEO C4I & Space products interface, interoperate, or enable other Service systems. Joint Interoperability Certifications for our C4I systems have increased 61% over the past 18 months.

PEO IT works with SPAWAR ITC in developing the Defense Integrated Military Human Resources System (DIMHRS) - a Joint system that will replace hundreds of aging, single-purpose legacy personnel systems. DIMHRS will enhance Joint, Command-level decision making by providing single-source, authoritative, current personnel information. SPAWAR ITC also provides planning, management, testing and technical support to the Joint Air Logistics Information System, a multi-purpose, on-demand, automated scheduling program for Operational Support Aircraft and Navy Unique Fleet Essential Aircraft.

### >>Building Partnerships

#### SERVICES AND AGENCIES

Each of the Services, while working towards Jointness, also has its own C4I architectural effort underway as a cornerstone strategy to drive transformation – the Army's Enterprise Architecture, Air Force's Command and Control Constellation, and Navy's FORCEnet. For these efforts and associated architectures to

become truly Joint, we must converge them as soon as possible. Our C4I Community has initiated efforts with both the Army and the Air Force to identify areas of commonality between these C4I frameworks, and we are working together to develop Joint architecture products from the outset.

> SPAWAR's CIPO, with Army and Air Force counterparts, enhanced integration and interoperability between the Services' various command and control efforts. Also, SPAWAR is involved in the DoD National Security Space Acquisition Policy framework through its procurement of MUOS.

The Defense Advanced Research Projects Agency (DARPA) is SSC San Diego's second largest resource sponsor. SSC San Diego oversees most of DARPA's extensive contracting activities, providing funding to universities and industry research organizations. While funding is provided to universities and industry research organizations, SSC San Diego reviews their final products—reports, papers, technologies—to ensure they meet sponsors' expectations. In 2003, SSC Charleston worked together with DARPA to develop and field advanced, rapid insertion technologies such as the Pocketscope Infrared Unit. These night vision devices have aided Army Special Forces, Airborne, and other units throughout OIF, and the FBI and Justice Department have deployed them for use in HLS operations.

"We have tested one of your Pocketscopes over here in Baghdad and in the words of one of my soldiers, 'it's the bomb.' It's a great system and surprisingly affordable."

> - Major Eric Arnold, V Corps

### >>Building Partnerships

#### SERVICES AND AGENCIES

PEO C4I & Space is collaborating with the Air Force Electronic Systems Command in the Common Link Integration Processing (CLIP) program. CLIP will provide a tactical networking and gateway capability between Joint Tactical Radio System waveforms and legacy tactical data links.

SPAWAR Space Field Activity (SSFA) strengthened and broadened the Navy's partnership with the National Reconnaissance Office (NRO), including Air Force counterparts. As a result, the SSFA is well positioned to support FORCEnet efforts to embrace the inherently Joint National Security Space architectures and to make effective use of the transformational capabilities that space systems bring to the warfighter. In particular, the SSFA's Naval NRO Coordination Group (NNCG) worked with the NRO to support OPNAV's requirements processes in the modeling of National and Tactical ISR systems.

The Net-Centric Enterprise Solutions for Interoperability effort will consolidate the Navy's Reusable Application Integration and Development Standards (RAPIDS) project with the Air Force's Command and Control Enterprise Reference Architecture. This collaboration between the Navy and Air Force will define software application development standards for Navy and Air Force C4I programs.

#### ALLIES AND COALITION PARTNERS

In FY03, the Foreign Comparative Testing program provided \$2.4 million to the SPAWAR Comparative Testing Office (CTO) to test and evaluate several projects that demonstrate potential to expeditiously and economically meet U.S. military requirements. The CTO tested several promising technologies from foreign-based companies. Of particular note, the Corona Monitoring System (Israel, South Africa) consists of remote cameras that provide early detection of damaging solar corona formations, to prevent unplanned outages in high power Very Low Frequency and Low Frequency communications to submerged submarines. The Shipboard Anti-Jam Global Positioning System (GPS) Antenna project (United Kingdom) will evaluate an anti-jam antenna to be used for U.S. Navy surface ship applications.

In FY04, we're testing several new projects as well, including the Improved Specific Emitter Identification System (United Kingdom), which is evaluating new processor alternatives for passive identification and fingerprinting of electronic emitters in naval applications. Additionally, the Mobile Acoustic Support System (Canada) will evaluate a mobile, ground-based system used for post-flight analysis of sonar buoy acoustic data.

PEO C4I & Space, under the auspices of a Security Assistance/ Foreign Military Sales case with Taiwan, will provide a Link 16 tactical data link system and a common tactical picture to support Taiwan Defense Forces. This system, referred to as Po Sheng, will be an island-wide, multi-node, interoperable network connecting various types of platforms, including ships, aircraft, ground-based mobile tactical sites, fixed command centers, and static nodal sites. The program will provide Taiwan with an Early Operational Capability by the end of 2005.

### >>Building Connections with SYSCOMs, PEOs and Naval C4I Partners

#### THE VIRTUAL SYSCOM

In Spring 2002, the Commanders of NAVAIR, NAVSEA, SPAWAR, and NAVSUP implemented the Virtual SYSCOM initiative. Virtual SYSCOM objectives include:

- >> Provide an integrated and responsive voice to the Fleet
- >> Work collaboratively to achieve Navy Sea Enterprise objectives
- >> Manage product line spheres in a manner that influences and shapes outcomes that are in the Navy's best interest

As a Virtual SYSCOM member, SPAWAR links more effectively with ASN (RD&A) and CNO to build interoperability, to mold the future shape of the Navy and to unify transformation efforts with the Fleet and Fleet Type Commanders.

The Virtual SYSCOM is a key enabler of standards and architectures development and compliance. SPAWAR works closely with its NAVSEA, NAVAIR, and NAVSUP partners to develop common processes and funding strategies, and to craft cross-SYSCOM/PEO approaches for the implementation of FORCEnet. For example, the Virtual SYSCOM signed a memorandum articulating SPAWAR's additional duty role for C4I systems, providing SPAWAR with the visibility and influence that will ensure all C4I capabilities and systems fielded across the SYSCOMs are fully interoperable and built to the standards that will define the Joint C4I architecture of the future.



### >>Building Internal Alignment

The C4I Community builds internal alignment and collaboration through several key mechanisms, including three primary leadership forums. The SES Strategy Group, comprised of Senior Executives from SPAWAR, PEO C4I & Space, PEO IT, and SPAWAR field activities, meets bi-weekly to craft strategy for the C4I Community, focusing on efforts to successfully plan, execute, and measure strategic objectives. The SPAWAR Corporate Board of Directors (CBOD) comprised of the SES Strategy Group, military members, and DNMCI, meets quarterly to establish and promulgate broad policy guidelines, direct the development, promulgation and execution of the Corporate Strategic Plan, establish and implement corporate business development processes, address broad planning, funding, and execution issues, and to review the progress of the SES Strategy Group. The SPAWAR Weekly Staff VTC is another important tool for maintaining internal alignment. Tactical in focus, the Staff VTC brings together key Community leadership to discuss operational issues. In July of 2003, the SPAWAR executive team established the Enterprise Leadership Advisory Team (ELAT) to foster improved performance throughout SPAWAR and PEO C4I & Space through the increased use of best business practices and the application of proven business theories and techniques. This action-oriented, knowledge sharing forum consists of senior level executives from SPAWAR, PEO C4I & Space, and DNMCI, working together to promote readiness, efficiency, effectiveness, and value in our workforce.

### >>Partnering with Industry and Academia

The SPAWAR C4I Community utilizes strategic partnerships to access the best ideas and brightest innovators in Industry and Academia. The San Diego region in particular is a hotbed of technology, research and development, engineering and science, and SPAWAR is ideally situated to capitalize on the developments of leaders in these fields.

SPAWAR has established a Memorandum of Agreement with the University of California, San Diego (UCSD) to provide a framework for collaborative research and technology development. SSC San Diego partnered with UCSD, San Diego State University (SDSU), and Industry members to form the Center for Commercialization of Advanced Technology in order to identify technologies that have potential for DoD, with special focus on Homeland Security, crisis consequence management, missile defense, and other government technologies. In 2003, SSC San Diego awarded the California Institute for Telecommunications and Information Technology a cooperative agreement to support research in the areas of command and control, communications, and sensor concepts. This partnership joins SPAWAR with faculty from UCSD, University of California, Irvine, SDSU, and over 60 industrial partners.

PEO C4I & Space, in concert with SPAWAR, renewed its support for the Rear Admiral George F.A. Wagner Chair at the Naval Postgraduate School (NPS) in 2003. The Chair will serve as a coordination mechanism across the NPS faculty and student body, providing research and analytical services on C4I, Space, and IT issues. Specific areas of study include communications bandwidth, Transformational Communications, Naval / Joint networks of the future, Information Operations, and Joint acquisition approaches and challenges. In turn, PEO C4I & Space will provide annual input to NPS regarding faculty work and student research and thesis areas. This partnership provides a unique opportunity to combine technology and academic resources in support of fleet requirements.

As a result of our industry partnering with the National Defense Industrial Association and the Armed Forces Communications and Electronics Association, we updated policies on Organizational Conflict of Interest, Non-Disclosure Agreements, and Mitigation Plans to improve and streamline business with our prime contractors.

The SPAWAR C4I Community nurtures technical innovation and entrepreneurship through ongoing relationships with small businesses. Over the past three years, small business received over 30% of SPAWAR contracted dollars. This record of achievement played a key role in SPAWAR winning the DoN Outstanding Small Business Contracting Award.

UCSD Geisel Library

# A CULTURE OF EFFICIENCY BUILDING SEA ENTERPRISE

### >>Harvesting Efficiencies

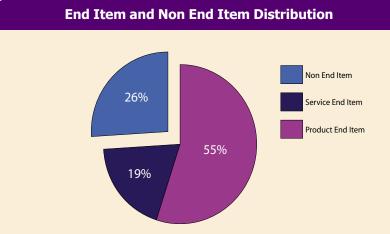
#### SPAWAR INDUSTRY BENCHMARKING

Over the past three years, SPAWAR embarked on initiatives focused on analyzing the costs of business operations. Extensive work was done to collect financial data at a comprehensive level of detail. This data proved to be powerful...and provided a platform to examine SPAWAR's efficiency and effectiveness.

Dollar for dollar, the products and services provided by the SPAWAR C4I Community constitute a great value to our customers. For every dollar that SPAWAR receives, 74 cents goes to an End Item – a tangible product or service that directly benefits our warfighters.

In order to assess our cost drivers against standards, we examined financial information from public sector IT and aerospace/defense companies as well as other DoD organizations. This "industry benchmarking" study provided the clarity that was needed to determine SPAWAR's cost performance relative to industry. The study concluded that SPAWAR is well within the upper and lower control limits when compared to the industry average in both end-item and non-end item measures.

Though the comparison of public and private sector organizations is not flawless, it provides us a valuable perspective along the path to change. Our goal is to continue to employ various strategies, both internally and externally, that enable us to understand and identify our costs. We can then employ this information to leverage our approach to business and drive toward becoming a more effective and efficient organization.



Non End Item Service Category	% of Total NEI
Engineering	26.1
Acquisition Management	15.7
System Development Test & Evaluation	6.8
Indirect Program Mgmt Support	6.5
Logistics Management	5.7
Administrative Support	4.8
Indirect Systems Eng Support	4.1
Indirect ADP Support	3.6
Indirect Logistics Support	2.9
ADP Support	2.1
NonEnd Item <2% each	21.7
Total Non End Item	100.0

### >>Harvesting Efficiencies

#### LEVERAGING NON-NAVY DOLLARS

The SPAWAR C4I Community's strength is bolstered by the flexibility and funding diversification provided to its Navy Working Capital Fund (NWCF) organizations, SSC San Diego and SSC Charleston. Non-Navy customers represent over 38% of SPAWAR's NWCF revenue. This allows us to benefit from the talent and intellectual capital of other personnel working C4I. The success of our NWCF activities in a true marketplace environment demonstrates that we are the C4I provider of choice to a large body of customers. These customers could have gone elsewhere, but they came to us because of our technical expertise, responsiveness, efficiency, and effectiveness.

In addition to the non-Navy funding provided by our NWCF activities, the SPAWAR Space Field Activity (SSFA) leverages National Reconnaissance Office (NRO) investments to offset workforce costs. This year, the SSFA further solidified its partnership with NRO by placing SPAWAR personnel in key NRO leadership positions.

The use of Foreign Military Sales, Foreign Cooperative Development, and other international funding initiatives under the Defense Security Cooperation Agency Security Assistance umbrella are also valuable sources of non-Navy funding that are leveraged across the SPAWAR C4I Community to offset and supplement workforce costs and system development, fielding, and logistics support.

#### INCREASING PROGRAM STABILITY

To streamline efficiency within PEO C4I & Space, we identified program stability as a primary cost driver. As such, we have instituted the processes necessary to minimize program re-baselining during the execution year, while retaining the flexibility to adjust to emergent requirements. Increasing program stability in the execution year has been a big win, but we must continue these efforts into 2004.

#### ADDRESSING INSTALLATION COST

During 2003, the SPAWAR C4I Community continued adapting our installation business processes to satisfy rapidly changing requirements. We are developing planning and installation criteria and assessing cost impacts to support the Fleet Response Plan and its goal of achieving maximum surge readiness. By actively engaging in the Fleet-initiated SHIPMAIN effort, we are redefining waterfront maintenance and modernization processes for the future. We continue to focus on improved cost performance measurements by establishing new tools and procedures that provide increased visibility into installation requirements and associated cost drivers. In 2004 and beyond, we will continue refining these tools and processes to improve overall management of our programs to reduce C4I installation cost while achieving long-term efficiencies.

### >>Harvesting Efficiencies

#### PLANNING AND EXECUTING EFFECTIVELY

The SPAWAR C4I Community strategic management process provides a framework for effectively planning and executing our mission through strategic planning, annual performance planning and execution, and performance measurement.

Our success depends on a workforce that not only understands the goals and strategies of the SPAWAR C4I Community but also possesses the necessary expertise, resources and motivation to execute the plan. Our continuing challenge is to assess changing future mission requirements and adapt to meet these needs through the right size and mix of military, civilian and contractor personnel.

By aligning our goals and strategies with Navy, DoD and Joint guidance we are able to focus our resources and efforts to achieve results. Progress is monitored through metrics displayed on a "Heads-up Display" (HUD) organized by the key performance areas of Personnel, Readiness, FORCEnet, Acquisition and Finance. The HUD tracks progress against both strategic and critical tactical goals.

Each organization within the SPAWAR C4I Community manages its business and drives change with performance measures, which are reported and analyzed in a variety of forums, from organizational off-sites to one-on-one meetings between senior executives. Utilizing metrics, leadership stays focused on progress and exchanges key information with stakeholders. For example, SPAWAR's weekly Operations Brief with Fleet customers entails a review of metrics to drive informed discussion related to C4I capability.



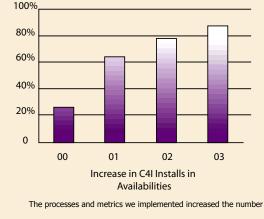
#### The SPAWAR C4I Community Strategic Management Process

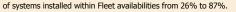
### >>Harvesting Efficiencies

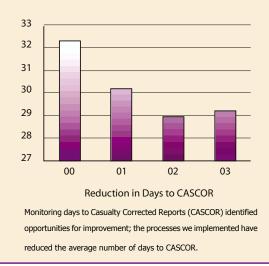
#### MEASURING OUR PERFORMANCE

We implemented the Acquisition Program Baseline (APB) Compliance metric to ensure that all PEO C4I & Space programs are managed within the cost, schedule and performance thresholds established in their APB. Installation metrics continue to mature and increase our ability to improve our installations business; as we have routinely met customer goals for completing installations within availabilities, we have shifted our focus to measuring the efficiency and effectiveness of our installation process. Our Command Center Integration team is successfully tracking two major shore installations using DoD level Earned Value Management project controls; more projects are being transitioned to EVM next year. The CASREP (Casualty Report) Free Time metric is a readiness measure that provides the Fleet valuable data in assessing our systems' reliability. Our Defense Acquisition Workforce Improvement Act (DAWIA) Certification metric monitors our certification rates against the Assistant Secretary of the Navy's certification goal. The Human Resources' Civilian Manpower metric allows SPAWAR to plan and shape the workforce in accordance with the current and future transformation initiatives within the C4I Community.

#### 100% 80% 60% 40% 20% 0 Jun-03 July-03 Aug-03 Sept-03 Oct-03 Nov-03 Dec-03 81% 81% 88% 85% 80% 78% **APB** Compliance 81% 34 of 42 34 of 42 36 of 41 35 of 41 33 of 41 32 of 41 Program # 34 of 42







#### Measuring Our Performance in Acquisition and Installation

### >>Attacking Costs

As part of our drive toward creating a culture of efficiency, we are aggressively attacking costs and generating savings. Our cost savings and efficiency efforts include:

#### THE DEFENSE MESSAGING SYSTEM (DMS)

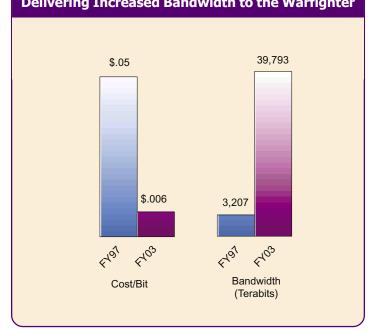
In 2003, we achieved significant cost savings and cost avoidances for the Navy within the DMS program by renegotiating the Navy share of the Joint DMS software maintenance contract, streamlining and centralizing the DMS Mail List architecture, and by developing and testing a time saving, automated DMS Business Utility software application. Total estimated cost avoidance across the DMS Five-Year Defense Plan is \$11 million, in addition to hundreds of thousands of labor-hours saved annually across the Navy.

#### SATCOM BANDWIDTH

We dramatically increased the bandwidth capacity for the warfighter while significantly increasing efficiencies and dramatically reducing costs. From 1997 to 2003, our delivery of SATCOM capacity realized a 1,200% increase in bandwidth - the measure of throughput available for voice, video, and data - while we reduced the cost per bit by 89%.

#### CLONING

We continue to reduce software installation time and cost by "cloning," an automated process that minimizes manual labor to reproduce computer software loads. Cloning has increased labor efficiency by 86% and reduced typical software installation time from 3 hours to 25 minutes. In a six-month period, this process has yielded a total cost avoidance of \$5.4 million.



#### **Delivering Increased Bandwidth to the Warfighter**

### >>Attacking Costs

#### INTEGRATED SHIPBOARD NETWORK SYSTEM (ISNS) TRAINING

We reduced ISNS training costs by 70% over three years through process standardization, resource consolidation, product collaboration and training transition policy. We accomplished this by eliminating redundancies, transitioning appropriate training outside of SPAWAR, cross-training instructors, leveraging personnel resources across multiple projects, and the development of training simulators. Between FY01 and FY03, we reduced annual training costs by \$1.8 million.

#### DELIVERING NMCI

NMCI changed the paradigm for Navy IT acquisition, by outsourcing Navy IT needs to private industry. In 2003 we continued our pioneering efforts - with help from many quarters - to move the Navy from a local IT environment to an enterprise-focused IT organization. We placed a priority on reducing the numbers of dual desktops and legacy applications, which impose a significant financial burden on Navy business operations. In 2003, we eliminated 70,000 legacy IT applications and partnered with the NMCI prime contractor to craft constructive solutions for making the implementation of NMCI successful.

NMCI provides opportunities for savings in three key areas: applications, networks and seat costs. Reducing costs of Government-Off-The-Shelf applications maintenance and Commercial-Off-The-Shelf updates can yield an estimated savings of \$712 million over a five-year period. Elimination of legacy networks will realize an estimated \$3.3 billion cost avoidance in capital investment. A planned 15% seat price reduction (FY08-10) will lead to annual cost avoidance of \$380 million.





### >>Attacking Costs

#### NAVY EXTREMELY HIGH FREQUENCY SATELLITE COMMUNICATIONS PROGRAM (NESP)

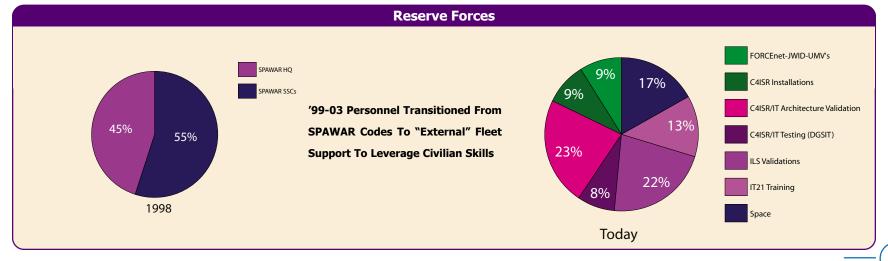
In FY03, the NESP program realized a cost savings of \$350,000 due to a not-to-exceed unit cost reduction negotiated with the vendor. We reinvested the savings in additional capability for electromagnetic interference fixes.

#### SUPER HIGH FREQUENCY (SHF) PROGRAM

By consolidating FY02 terminal buys with Surveillance Towed Array Sensor System antenna requirements and creatively using the contract's structure, we were able to save almost \$600,000 compared to individual item purchases. We reinvested the savings in the Enhanced Bandwidth Efficient Modem (EBEM), a joint development effort with the Army; an additional benefit of EBEM is its reduction of military SATCOM modems from three to one.

#### SEAMLESSLY INTEGRATING OUR RESERVE FORCE

Our strategic use of the U.S. Navy Reserve Forces also generates cost savings. SPAWAR's Reserve personnel once provided internal, non-essential 'SPAWAR Code' support. Now they are organized as a matrixed workforce that is aligned directly to the Fleet. Highly qualified IT Reserve teams now embark on deploying platforms to fill and augment IT requirements within the Fleet Response Program construct. They provide support in critical areas including IT21 Training, Integrated Logistics Support Validation, Battle Group Systems Integration Test, and Installation. In 2003, 62% of the SPAWAR Reserve workforce deployed on Naval vessels provided C4I support. In 2003 alone, SPAWAR Reserves received seven 'Bravo Zulu' messages from ships for providing 5,100 student hours of support. Over 40 reserve instructors provided the contractor equivalent of \$1.2 million in support, at an actual cost to the Navy of only \$222,000 – a 5:1 return on investment.



### >>Maximizing Common Tools

Fiscal integrity is critical to our business. In the last year, we have continued to refine our disciplines of financial management in order to reduce duplicative work, generate repeatable common processes, and standardize tools. In the past, organizations throughout the command used a variety of financial management tools, perpetuating inefficiencies and generating churn. Today, the Financial Management Information System (FMIS) is the single financial management system across all PEOs and program offices. In 2003, SPAWAR HQ institutionalized use of the FMIS application and a common work breakdown structure, which increased visibility into our finances, workload, tasking, and products and services delivery. In FY04, we plan to implement the task-planning portion of FMIS at NWCF activities. Standard reports from our NWCF commands will generate efficiencies by reducing the custom reporting currently provided to program offices.

The SPAWAR C4I Community is maximizing efficiencies by adopting additional common business processes. The Acquisition Program Structure Guide enables acquisition managers to structure programs in accordance with governing regulations and directives. The Business and Financial Manager's Manual highlights the important stages, documents, best practices, and common tools available. The Program Objective Memorandum Analysis Collaborative Tool provides a standardized approach and unified database for program managers to quickly enter required program information for annual POM planning input. In FY03, PEO C4I & Space and SPAWAR began implementation of the Resource Tracking System (RTS), an online tool that tracks daily workforce activities in all business areas. RTS facilitates monitoring of resource levels and mix of functional skills, providing the visibility needed for management to determine if particular efforts should be continued, limited, or discontinued. RTS data will serve as a baseline for linking labor investment to output and as a method for planning effectively and managing our resources efficiently.



Early data from RTS reflected significant labor hours expended in the area of IT projects, such as web-site maintenance. This visibility allowed us to right-size the labor investment in these projects, reducing monthly labor hours from an average of 275 in 2002 to 150 in 2003\*.

\*RTS data taken from Navy SATCOM Office of PEO C4I & Space

### >>Generating Efficiencies through Innovation

#### SKUNKWORKS AND DISINVESTMENT

The rapid pace of change in the C4I Community demands the frequent evaluation of new technologies and processes. SPAWAR uses established, well-defined processes to assess the value of Programs of Record (PORs) and to fast-track new initiatives that hold the promise of bringing significant increases in business efficiency. The SPAWAR Skunkworks Efficiency Process provides a template for identifying, assessing, and executing concepts and technologies that yield efficiencies. Conversely, the POR Disinvestment Process provides us a guide for evaluating "sunset" PORs. Together, these processes will generate substantial savings by FY05.

#### DATA REPLICATION FOR COMBAT SUPPORT SYSTEMS

Adaptation of commercially available data replication technologies enables nearly instantaneous, "hands free" availability of operational logistics data to supporting shore installations, which allows more focused and timely logistics support of our operating forces. SSC Norfolk deployed data replication solutions for aircraft maintenance and configuration data, aircraft carrier supply and financial data, and Marine Corps ground logistics data.

#### REUSABLE APPLICATION INTEGRATION AND DEVELOPMENT STANDARDS (RAPIDS)

With the RAPIDS initiative, the C4I Community gains efficiencies by pursuing collaborative C4I software development with other PEOs, SYSCOMs, Services, and the Fleet. For example, we established a working relationship with the Air Force Electronic Systems Command to ensure commonality between RAPIDS and their Command and Control Enterprise Reference Architecture. Employing such multi-service development standards for C4I capabilities promotes increased flexibility and portability of C4I products and fosters the development of similar architectures and standards so that software code can more easily be reused by each Service. In the long run, this will save time and money DoD-wide.

#### MAJOR SERVICES ACQUISITION (MSA)

Since 1999, SPAWAR has consolidated program management services acquisitions through a consolidated Program Management Team Omnibus Contract. In 2003, SPAWAR initiated the acquisition strategy for the next-generation contracting vehicle, which will revolutionize the way we procure services. This acquisition is designed from the beginning to be performance-based, small business friendly, and competition-enabled. These enhancements, along with various incentives and performance metrics, will ensure that we control costs. MSA is scheduled for award in the summer of 2004.

# THE REASON BEHIND OUR SUCCESS: OUR PEOPLE

#### GROWING AN ENDURING WORKFORCE

The SPAWAR C4I Community is committed to developing professionals, wherever their careers may carry them. The SPAWAR C4I Community has placed considerable focus on establishing the best processes to recruit, train, and reward the workforce. For example, iSSC Charleston established a workforce optimization team to focus on sustaining and developing a world-class workforce, and implemented a comprehensive command-wide employee development and assessment plan. These efforts are paying off; SPAWAR enjoys a stable 92% retention rate. Of the SPAWAR acquisition workforce, 89% of our civilian members are certified in their functional areas. As a "launch pad" for careers, our success in attracting new talent has increased; between FY00 and FY03, new professional acceptance rates increased by 28%.



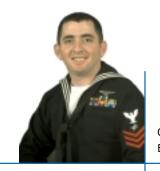
#### MANAGING MORE EFFICIENTLY

Meeting increased workload demands while carrying out mandated personnel cuts and end strength reductions is a tough challenge. "Workforce shaping" actions continue throughout the C4I Community, to ensure we employ personnel with the right mix of knowledge, skills, and abilities. These efforts involve a mix of reassigning and retaining employees, reducing the workforce in skill areas no longer critical, and hiring new talent to fill gaps and meet projected skill mix needs. Although we are reducing overall staffing levels, we also need to hire in critical skill areas to meet mission requirements. SSC Charleston "reshaped" 10% of its billets without resulting in any employee terminations. Through the judicious use of separation incentives, SPAWAR ITC reduced its staff by 17%, without resorting to involuntary separations. SSC Norfolk's plan provides a good example of workforce shaping for greater alignment. At the beginning of 2003, SSC Norfolk's civilian population was concentrated in the IT Program Management series. To meet SPAWAR's new responsibilities to NETWARCOM and JFCOM, we are planning to reshape the Norfolk workforce to more specific technical areas in Systems and Software Engineering, Computer Science, and Program/Acquisition Support.

32

#### KEEPING THE LINES OF COMMUNICATION OPEN

We encourage the open flow of communication. Ongoing forums include C4I Community All Hands, which keep our workforce current on C4I Community business. These meetings serve as an important forum for recognizing employee accomplishments, addressing topics such as corporate business strategy review, and providing a first hand, groundlevel view of OIF. RADM Ken Slaght regularly joins employees to share his view of SPAWAR's direction and for informal discussion on topics ranging from technology issues to SPAWAR's parking policy. Command Surveys gauge the satisfaction and concerns of our workforce and customers. Survey results form the basis of action plans intended to address areas that require improvement. The SPAWAR Knowledge Center is a widely used, on-line resource available to Command members, providing command news, organizational and program information, and research material.



Our Sailor of the Year for 2003 was ET1(AW) Ricardo S. James (SSC Charleston).

#### ACKNOWLEDGING SUCCESS: MERITS & REWARDS

Our individual and team efforts continue to garner accolades across the larger C4I Community. External award nominations in 2003 included three Distinguished Civilian Service Awards, four Copernicus awards, and an ADM Stan Arthur Excellence in Logistics award, as well as 12 NDIA Fleet Support awards.

Within the SPAWAR C4I Community, leadership and peers recognize outstanding achievements with numerous team and individual awards, including cash incentives and time off. SPAWAR scored high on benchmarks for Federal organizations in the areas of employee recognition and training. Among 2003's prestigious nominees at PEO C4I & Space, SPAWAR HQ and the SSCs, five civilian employees were nominated for Superior Civilian Service Awards, and 34 civilian employees were nominated for Meritorious Civilian Service Awards. Outstanding SPAWARRIORs are commended on a quarterly basis. A SPAWAR award for logistics excellence is bestowed annually to individuals and teams who epitomize professionalism and excellence in logistics. RADM Slaght presented Lightning Bolt team awards to 15 honored groups in 2003.



# CHALLENGES OF THE FUTURE

The SPAWAR C4I Community embraces the challenges facing us in 2004 and beyond. We are inspired by our role in Naval Transformation and our role to realize the Sea Power 21 vision. We are encouraged by our considerable progress and substantial successes in program execution and process improvement. Most importantly, we are committed to providing superior C4I capabilities to the joint warfighter.

To meet our challenges for transformation and FORCEnet execution, we must further accelerate our speed-to-capability for the Naval warfighter in the Joint arena, optimize the responsiveness of our Fleet modernization and support efforts, and increase our interoperability, efficiency, and cost effectiveness. We must attain these goals by continuing to nurture a culture of efficiency, improving our organizational alignment, and leveraging the collaborative advantage of our growing partnerships across the Navy and

the Joint community. We will gauge our performance through metrics and customer feedback. We will strive to achieve and maintain program stability, which is paramount to efficiently and economically executing FORCEnet. We must attain this without sacrificing the flexibility vital for responding to essential, emergent Fleet requirements. Finally, we will continue to develop and restructure our workforce to keep core capabilities aligned with changing mission requirements by continuing to find better ways to develop, engage, and reward our people.

Our efforts this year in alignment, collaboration, and efficiency already have demonstrated large returns on small investments. The progress we have achieved this year in transforming our C4I Community, streamlining our processes, and accelerating our delivery of integrated, supportable systems — makes us well positioned for 2004.

