



ON WATCH

NAVSEA
NAVAL SEA SYSTEMS COMMAND

2004

HUMAN SYSTEMS INTEGRATION

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◀ Pacific Ocean (Oct. 4, 2003) — Sailors “man the rails” of USS *John C. Stennis* (CVN 74) as the ship arrives in port during the annual San Diego Fleet Week parade of ships ceremony. U.S. Navy photo by Photographer's Mate 2nd Class Jayme Pastoric.

How can we support creation of a future Navy that is optimally manned, best equipped and the most capable in the world, at a cost that is affordable today, and sustainable in the future?

We are Sailor focused: It is our mission to place Sailor and Marine warfighting performance at the center of acquisition and support processes. We enhance overall Fleet readiness through the application and certification of Human Systems Integration.

Optimized Total System Performance is the focus, concern and thrust of the Human Systems Integration Directorate. We align human performance metrics with mission capabilities and organizational goals or objectives at the design stages to field systems that most fully enhance the war fighter's ability to perform successfully. Our mission crosses many boundaries, resides in many areas and affects critical decisions from program inception throughout the operational life of newly acquired capabilities.

HSI is an engineering discipline that has not received proportional attention in traditional acquisition processes. Introduction of Human Systems Integration expertise via SEA03 is a catalyst for a significant shift in the way Naval Sea Systems Command supports fleet operational requirements, and raises the profile of HSI throughout the Navy.

Like any significant change, implementing our vision for HSI in support of the Chief Of Naval Operations mandate for transformation under SEAPOWER 21 will require the right conditions for success. Our partners and customers must be afforded a clear understanding of the rationale, mechanics and measures of progress for the introduction of HSI into their activities. Cooperation and comprehension are important, but will not be sufficient to cement the requirement for Human Systems Integration in the acquisition process. Rather, a two-way partnership between SEA 03 and the executives and managers of acquisition programs will be required to effectively inject this engineering discipline into the design, acquisition and modernization of our Fleet and our warfighting capabilities.

It is with this goal that we publish our strategy for the implementation of Human Systems Integration.

We have a shared vision: To be recognized as the Navy's Human Systems Integration leader, providing effective and efficient technical and financial Human Performance and HSI solutions to the Navy. We will continually improve through collaboration and teamwork.

As a key partner in a shared endeavor, the HSI directorate is dedicated to providing the level of expertise in this discipline that is required to assist Navy Acquisition Professionals to meet certification requirements. We are committed to ensuring that the NAVSEA and PEO team can engineer Total System Performance, including that of the Sailor, to best meet the challenge of operating in a more complex warfighting environment with fewer people.



◀ Aboard USS *Carl Vinson* (Oct. 11, 2001) — A watchstander mans her station in the Combat Information Center (CIC) on board the U.S. Navy aircraft carrier USS *Carl Vinson* (CVN 70). The Combat Information Center is a critical part of the warfighting capabilities on Navy ships. *Carl Vinson* is conducting flight operations in support of Operation Enduring Freedom. U.S. Navy Photo by Photographer's Mate Airman Inez Lawson.



Human Performance is a critical dependent variable and will be key to mission effectiveness in the automated technology based optimally manned Navy of the 21st Century.

Our mission rests on the foundation provided by the Chief Of Naval Operations transformation vision in SEAPOWER 21 and his confirmation that “The warrior is a premier element of all operational systems.” In order to provide the nation with “superior war fighting performance at best cost” we are dedicated to introducing Human Systems Integration discipline wherever possible within existing acquisition programs, and at the inception of all new NAVSEA managed acquisition projects.

Our guiding principle is a spirit of cooperation and partnership codified by education and mutual respect. While change is inevitable, the effective management of change into progress will be one of the measures of our success.

SEA 03 contributes to mission effectiveness by certifying human performance metrics that demonstrate the capability of Sailors to successfully respond to, understand, operate, control, maintain, support, manage and master newly acquired system components in wartime or peacetime operations at sea.

< Aboard USS *Vandegrift* (FFG 48) Nov. 6, 2003 — Master helmsman Seaman Colt Amborn guides USS *Vandegrift* (FFG 48) safely through the ocean under the support of the guided missile frigate's helm safety officer Mike Saucedra. *Vandegrift* and her crew are steaming along side the Military Sealift Command ship USNS *Yukon* (T-AO 202) during *Vandegrift*'s 35th underway replenishment at sea (RAS) this year.

U.S. Navy photo by Photographer's Mate 3rd Class Gary B. Granger.

Taking advantage of new opportunities to leverage HSI expertise and application methods across the Systems Commands, we will avoid dysfunctional competition and artificial barriers and seek to implement Human Systems Integration engineering principles in a wide range of major programs.

We are staffed with experts, each of whom is devoted to providing superior service to NAVSEA, and to the fleet. Our people understand fully that without “highly motivated, and well-trained Sailors” and in the absence of “well-engineered and usable systems” we can't maximize our warfighting effectiveness.

SEA 03 strives to ensure that HSI tools and methodologies are imbedded in engineering processes, and in concert with our partners, we seek to provide our Sailors with the “Best Navy in the World” at a cost our nation can sustain.

> Naval Air Station North Island, California (Sept. 15, 2003) — Sailors man the rails while USS *Carl Vinson* (CVN 70) arrives at Naval Air Station North Island, Calif. While in port Carrier Air Wing Nine (CVW-9) will off load personnel and equipment. *Carl Vinson* will return to her homeport at Naval Station Bremerton, Wash., Sept. 19. The *Carl Vinson* Carrier Strike Group (CSG) is returning home this week, following an eight-month deployment to the western Pacific in support of Operation Iraqi Freedom.

U.S. Navy photo by Photographer's Mate 3rd Class Martin S. Fuentes.





< Pacific Ocean (Sept. 23, 2003) — Sailors conduct a Foreign Object Debris (FOD) walk down on the flight deck of USS John C. Stennis (CVN 74). FOD walk downs are important in preventing debris from being drawn into aircraft intakes and causing severe damage to equipment as well as injuring personnel. Stennis is conducting training exercises in the Southern California operating area. U.S. Navy photo by Photographer's Mate Airman Mark J. Rebilas.

NAVSEA's Human Systems Integration Directorate is organized to provide HSI and Human Performance guidance, direction, assistance and certification across the range of acquisition programs.



Naturally, new start or projected capability programs offer the best opportunity to design systems (and systems of systems) fully certified for human performance. With new projects there are few pre-conceived notions, HSI becomes an integral part of the design process, and the logic of placing Sailor capability at the heart of Total System Performance makes good engineering sense. Legacy systems and modernization present a greater challenge because, in all likelihood, Human Systems Integration cannot be cost effectively reverse-engineered in a late-stage program.

By leveraging technology, shaping our efforts based on best business practice, and applying the rigor that total system engineering demands, we will succeed as a team. In order to accomplish this complex challenge we rely on the dedication, quality and organizational diplomacy of our most singularly valuable asset - our people.

OUR PEOPLE

Understanding that Human Systems Integration is fundamental to Sailor Performance and how this relates to Total System Performance is critical to delivering warfighting capability in the 21st Century. SEA 03 is all about people and how their knowledge, skills and abilities must be considered as an essential element of system design, and how their capabilities must relate to the usability of any end product, system or system of systems. Our devotion to people, progress, partners and programs is profound and genuine.

We have built a team of highly competent, customer-oriented HSI experts. This group is recognized as the Navy's Human Systems Integration leaders, and we will support them with the means necessary to succeed: To that end we will

- Provide competent, demanding, performance oriented leadership
- Encourage personal and professional development to ensure our skills match or exceed requirements
- Recognize superior performance
- Focus on success and how best to attain it
- Foster internal and external relationships and encourage functional cooperation
- Create and sustain robust, two-way relationships with our partners
- Inform and educate the NAVSEA workforce in support of our common goals
- Institutionalize HSI within the acquisition and design process

Sailors are at the center and the start of every new design, and their performance will be the measure of our success - program by program. Progress can only be made with the understanding, acceptance and support of our partners. Effective communication will be the key factor in attaining our goals and accomplishing our mission.



> Arabian Gulf (Nov. 25, 2003) — Operations Specialist 1st Class Derrick L. Johnston from Meadville, Pa., tracks interceptions of aircraft and controls schedules for flight operations using the status board in the Combat Direction Center (CDC). CDC is the nerve center of the nuclear powered aircraft carrier, USS *Enterprise* (CVN 65). This is where information is collected, processed, displayed, evaluated, and disseminated from sources outside and inside the ship.
U.S. Navy photo by Photographer's Mate Rob Gaston.

We are a future oriented enterprise. We foster progress across a wide range of initiatives designed to make Human Systems Integration a 'Best Business Practice' at the Naval Sea Systems Command and a primary factor in SEA WARRIOR.

We strive to lower total system ownership costs and improve system effectiveness through enhanced individual and group performance.

We are currently:

- Developing and integrating HSI and Human Performance metrics into Acquisition Programs
- Educating and training the workforce on HSI and Human Performance
- Providing HSI Guidance (NAVSEAINST 3900.9)
- Introducing HSI Certification Criteria as a part of Total Ship Certification
- Using the HSI Virtual SYSCOM to explore new functional relationships
- Placing technical personnel at Learning Centers

As a key component of SEA WARRIOR, NAVSEA places Human Systems Integration at the confluence of skills identification in the five-vector model, the Career Management System and the Mission Planning System. This combination of Sailor and Warfighting initiatives properly arranged and managed will lead to optimized Sailor performance – a key goal in the Chief of Naval Operations vision for SEAPOWVER 21.

When allied with the Total Ship's Training Architecture for surface warfare training, the shape of future Navy training and professional development systems becomes clear... a tightly constructed pyramid of human performance building blocks derived from Sailor performance parameters cited in requirements documents to discreet skills identification, optimized system design and effective technical training for war-fighting superiority.

PARTNERS

Human Systems Integration cannot be institutionalized within NAVSEA, nor can it properly contribute to system design and ultimately war-fighting performance without the close, functional and transparent relationships our key partners provide.

Program Executive Officers

Program Managers

Resource Sponsors

NAVSEA Codes 00, 03, 04, 05, 06 and 07

ASN RD&A and ASN M&RA

CNP

N00T

Fleet Commanders

Task Force Warrior

NPDC

SYSCOMs

Shipyards

Defense Contractors and Industry Partners

Human Systems Integration assessment and certification is being applied across the spectrum of NAVSEA Acquisition Programs, with special concentration on new acquisition projects, which provide the greatest opportunity to engineer systems from a 'clean sheet' approach.



By embracing Human Factors Engineering (HFE) principles at the earliest stage of development, instilling values that reflect the Chief of Naval Operation's Total Ownership Cost philosophies in system procurement, and by creating robust and enduring partnerships with Program Executives and their Program Managers, SEA 03 will contribute to the transition from old to best business practices in NAVSEA.

Major programs of particular interest include but are not exclusive to:

FORCENET

LCS

DD-X

CVN-21

CG-X

Open Architecture Combat Systems

Next generation submarines

Total Ship Training Architecture

Cruiser Modernization

DDG Modernization

< Atlantic Ocean (Dec. 9, 2003) — Sailors from Explosive Ordnance Disposal Mobile Unit Six (EODMU 6) fast rope out of a HH-60H *Seahawk* helicopter assigned to the "Nightippers" of Helicopter Anti-Submarine Squadron Five (HS-5) onto the flight deck aboard USS *Elrod* (FFG 55). EODMU 6 is assigned to USS *George Washington* (CVN 73) preparing for an upcoming six-month deployment by conducting Composite Training Unit Exercises (COMPTUEX) with the Carrier Strike Group (CSG). U.S. Navy photo by Photographer's Mate 1st Class Brien Aho.

NAVSEA HUMAN SYSTEMS INTEGRATION INSTRUCTION

Program Managers have been tasked with optimizing total system performance, minimizing total ownership costs and ensuring that systems are built to enhance warfighting and Sailor performance.

NAVSEA and affiliated Program Executive Offices and Program Managers receive assessment and certification guidance for Human Systems Integration from the HSI Directorate. Providing technical assistance to improve Sailor performance and reduce life cycle costs is the primary focus of SEA 03, which serves as NAVSEA's designated warranted HSI technical authority.

To learn more about our responsibilities and authority or to read Naval Sea Systems Command's Human Systems Integration Instruction visit NAVSEA's website at www.navsea.navy.mil and gain a wider view of our command's mission.

Photo by Photographer J01 Preston Keres.





< Atlantic Ocean (Nov. 15, 2003) — Fire Controlman 3rd Class Scott Wills, left, assists Fire Controlman 3rd Class Nick Debricque, and Fire Controlman 2nd Class James Orounke, with loading a Close In Weapons System (CIWS) with 20mm ammunition aboard USS *George Washington* (CVN 73). *Washington* is conducting Composite Training Unit Exercise (COMPTUEX) in the Atlantic Ocean. U.S. Navy photo by Photographer's Mate Airman Konstandinos Goumenidis.

DODINST 5000.2, Operation of the Defense Acquisition System, Enclosure 7, Human Systems Integration (HSI)

SECNAVINST 5100.10H, Department of the Navy Policy for Safety, Mishap Prevention, Occupational Health and Fire Protection Program

OPNAVINST 1000.16J, Manual of Navy Total Force Manpower Policies and Procedures

OPNAVINST 1500.76, Navy Training Systems Requirements, Acquisition and Management

OPNAVINST 1500.57A, Surface Warfare Training Strategy

OPNAVINST 5100.23F, Navy Occupational Safety and Health (NAVOSH) Program Manual

OPNAVINST 9640.1A, Shipboard Habitability Program

CFFCINST 3501.3, Fleet Forces Command Fleet Training Strategy (FTS)

NAVPERINST 5839I, Manual of Navy Officer Manpower and Personnel Classifications

NAVPERINST 18068F, Manual of Navy Enlisted Manpower and Personnel Classifications and Occupational Standards

NAVSEAINST 3900.9, NAVSEA Policy for incorporating Human Systems Integration (HSI) in Acquisition and Modernization

NAVSEAINST 5400.97A

NAVSEAINST 5400 Ser 03/010

NAVSEANOTE 5400 Ser 10/251

ASTM F1166, Standard Practice for Human Engineering Design for Marine Systems, Equipment and Facilities

MIL-STD 882D, Standard Practice for System Safety

MIL-STD 1472F, Human Engineering



< SA Dena Olinger teaches MMCS(SS) Gerald Konkol the commands he will need to call during a funeral at Arlington National Cemetery. All commands must be called perfectly for the ceremony to run smoothly.

Creation of the "Virtual SYSCOM" Working Group for Human Systems Integration issues will facilitate alignment of the discipline across all Navy Systems commands.

It is the initial step of a cooperative inter-command relationship focused on the effect that HSI will have in relation to SEAPOWER-21 and one of the means by which HSI's broad influence on SEA WARRIOR will be gauged.

Ship maintenance processes have been under scrutiny as the Navy aligns to ensure best-business practice and maximum surge availability. Including HSI assessment and approval as part of the SHIPMAIN modernization initiative places SEA 03 at the crossroads of SEA ENTERPRISE, SEA WARRIOR and the Fleet Readiness Plan. HSI, and SHIPMAIN are closely related technically and support FRP and the CNO's operational requirement for surge capability.

Acquiring a better understanding of the purposes and responsibilities assigned to the Human Systems Integration Directorate demands a clear and concise explanation of the tenets of HSI and advertising the directorate's role in acquiring and developing new systems and altering existing ones. Because what we do affects a wide range of

issues at various levels of authority and influence, and in order to swiftly enlist as many partners as possible, we have developed a strategy to educate the workforce and raise awareness of HSI as a factor in NAVSEA acquisition processes and program management.

Clear, comprehensible and wide-ranging guidance has been created to assist anyone requiring the A-Z of HSI. Revised NAVSEA Instructions which have been updated to include consideration of HSI factors, precisely defined Program Performance* and Human Performance Metrics** as well as a Guide to HSI are all currently available. We have also defined HSI Certification Criteria and aligned our certification responsibilities to the Milestone Process.

* Programmatic Metrics: measure HSI Management, Funding and program performance in all HSI domains

** Human Performance Metrics include: Timeliness, Accuracy, Availability, Workload and Situational Awareness



SOME THINGS WE SEEK TO DO

We will engineer significant Total Ownership Cost savings by encouraging change to embrace up-front design investment in systems that optimize Sailor and warfighting performance through the application of Human Systems Integration engineering principles.

Provide compelling demonstrations of the long-term efficiencies in manpower and other associated total costs generated by Sailor-centric design. The acid test will be real-world examples of optimized war-fighting performance based on HSI-led system design.

We will seek to further institutionalize HSI in the acquisition process and share our success and lessons learned across the SYSCOMs via the Virtual SYSCOM and by validating Programmatic and Human Performance Metrics and exercising them in support of certified programs.

We will provide clear, concise explanations of how HSI and Sailor Performance factors inform Systems design and subsequently system performance, in venues and by means that work for most customers most of the time.

We will educate and participate with our partners as required to ensure success of our joint mission. As a team we will engineer mission accomplishment, encourage best business practices and expand the knowledge and discipline of HSI.

It is our goal working as a team member to improve warfighting effectiveness and to obtain superior performance at best cost.

< Aboard USS *Ingraham* (FFG 61) Aug 27, 2003 – Sailors man the rails of the guided missile frigate as it pulls into Kure, Japan for a brief port visit. USS *Ingraham* (FFG 61) is one of five ships assigned to the *Carl Vinson* Carrier Strike Group, which is deployed to the western Pacific as part of America's commitment to peace, stability and theater security cooperation in conjunction with friends and allies in the region. U.S. Navy photo by Photographer's Mate Airman Jonathan M. Cirino.



~ Aboard USS *George Washington* (CVN 73) Nov. 9, 2003 – Aviation Warfare Systems Operator 2nd Class Kenneth Hyman, from Waldorf, Md., loads a .50 caliber machine gun with ammunition in an SH-60F *Seahawk* assigned to the “Nighthoppers” of Helicopter Anti-Submarine Squadron Five (HS-5), The Norfolk, Va., based aircraft carrier is conducting Composite Training Unit Exercise (COMPTUEX) in the Atlantic Ocean.
U.S. Navy photo by Photographer’s Mate Airman Joan Krelschrmer.

- Guidance to NAVSEA Program Executive Offices and Program Managers
- Certification of NAVSEA Programs for HSI compliance
- Liaison with DOD and OPNAV Human Systems Integration and Resource Sponsors
- Interface and liaison with CFFE, N00T, CNPC/ BUPERS, NPDC, Navy Learning Centers, Human Performance Center and Fleet Training Commands
- Fleet and Force liaison and guidance
- Assistance and consultation with Designers, Systems Engineers and technicians
- Education: Briefings, lectures and speeches

BACKGROUND

The human must be engineered into the system from the earliest stages of “system of systems” design to optimize Sailor performance and “right size” unit manning. The CNO sees our future Navy as “smaller, faster, and more lethal” and has tasked us with accelerating our advantage over any adversary. NAVSEA’s HSI Directorate provides focus on maximizing Sailor performance and system effectiveness by placing the Sailor at the center of war-fighting capability.

Focusing on the Sailor during the initial Business Case Analysis (BCA) identifies the impact on performance, efficiency, and workload and is key to balancing the hardware, software, and human performance equation in the design and modification process. The HSI Directorate is NAVSEA’s warranted technical authority to ensure that human



~ Pacific Ocean (May 20, 2003) – The *Arleigh Burke*-class guided missile destroyer USS *Milvus* (DDG 69) underway while returning from a deployment in the Arabian Gulf. *Milvus* conducted multiple missions in supported of Operations Southern Watch, Enduring Freedom and Iraqi Freedom. Guided missile destroyers operate in support of carrier strike groups (CSG), and expeditionary strike groups (ESG). These destroyers are multi-mission Anti-Air Warfare (AAW), Anti-Submarine Warfare (ASW), and Anti-Surface Warfare (ASUW) surface combatants.
U.S. Navy photo by Photographer’s Mate 2nd Class Daniel J. McLain.

performance is measurable and certifiable. To help explain and describe Total Systems Performance, the Directorate has developed the necessary human performance and program performance metrics that NAVSEA Program Managers will use to measure how well ships and systems delivered to the fleet meet their warfighting requirements. HSI metrics also appear in SHIPMAIN Alteration and Modification processes. The evaluation of human performance will become a part of the Acquisition Program Test and Evaluation Master Plan (TEMP), Human performance data collected during tests and evaluations will be used to address HSI related problems and identify workload and situational awareness drivers.

SEA 03 has fostered a strong partnership with the Commander, Fleet Forces Command (CFFC) and the Human Performance Center (HPC) to resolve Fleet-wide human performance issues and leverage in-service units to conduct human performance testing. NAVSEA has also established a Human Performance Lab (HPL) at Naval Surface Warfare Center, Dahlgren, Virginia to provide a controlled and predictable testing environment. We plan to integrate the HPL with the Integrated Command Environment Lab, Command and Control Lab, Distributed Engineering Plant, Warfare Center Labs and the composable FORCENet Lab. This integrated “super lab” will provide the Navy and private industry with one of the finest and most robust human performance and total system testing infrastructures in the world.

> Central Command Area of Responsibility (Sept. 2, 2003) — A pilot assigned to the “Stingers” of Strike Fighter Squadron One One Three (VFA-113) enters Iraqi airspace in an F/A-18 Hornet during Operation Iraqi Freedom. The Stingers are embarked aboard USS Abraham Lincoln (CVN 72) with Carrier Air Wing Fourteen (CVW 14), and are conducting combat operations in support of Operation Iraqi Freedom. Operation Iraqi Freedom is the multi-national coalition effort to liberate the Iraqi people, eliminate Iraq’s weapons of mass destruction, and end the regime of Saddam Hussein. U.S. Navy photo.



speeches and presentations to your execu

Media Relations, and Communications services are provided by NAVSEA Public Affairs Branch code SEA 00D2, Ms. Shirley Copeland, Telephone: 202.781.2979

H S I - C L I P

Questions about Total System Engineering? The Human Systems Integration Clearinghouse for Issues and Policy website at [HTTPS://WWW.HSI-CLIP.ORG/](https://www.hsi-clip.org/) is your source for authoritative NAVSEA approved HSI issue and policy solutions! HSI-CLIP is a web-based forum to raise and vet issues, provide information and make recommendations about HSI. The site also answers related Manpower, Personnel and Training questions. HSI-CLIP is the single, official and historical repository for HSI/MPT issues, is endorsed by the Navy’s top decision makers and is available on the web now!

V I S I T U S

NAVSEA-HQ contact NAVSEA PAO Ms. Shirley Copeland Ext. 2979

NPDC contact NPDC HSI Liaison (Pensacola) Mr. Tim Smith 850.452.2826

HPC contact EA Ms. Carole Swartz on 202.781.3489

V I R T U A L U S

Teleconference/Videoconference

We are available to attend your meetings, events and technical sessions by video and audio hookup and shortly via the worldwide web. Our technical experts can virtually visit anywhere at your invitation (schedule permitting) to provide timely background or event specific advice, explanations and amplifying information. Contact our EA for more information.

Please see the NAVSEA Enterprise Guide for further contact and communications information.

Leadership

Deputy Commander for HSI:
Mr. Greg Maxwell, NAVSEA 03

Deputy to the Commander:
CAPT Steve Huber, USN, NAVSEA 03B

Technical Director:
Mr. Bob Bost, NAVSEA 03TD

Training and Fleet Support:
Mr. Gary Orski, NAVSEA 03C

Acquisition and Program Support:
Mr. Walt Koscinski, NAVSEA 03D

Business Financial Manager:
Ms. Ann Greer, NAVSEA 03F

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Customer Service

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Web

Visit NAVSEA, its commands and activities on our website at www.navsea.navy.mil and use “search” for information and links on NAVSEA HSI and the Directorate.

Speakers Bureau

Schedules permitting, we arrange subject matter expert speakers prepared to deliver tailored briefings,

speeches and presentations to your executive, management and staff. Our experts are also available to deliver research papers, answer symposia questions and sit conference panels. Contact our PAO for more information.

HSI Lectures

Our Technical Directorate presents classroom and lecture theater Human Systems Integration learning modules at the basic to intermediate levels of comprehension. Contact our PAO for more information.

PAO/Media Relations

HSI Public Affairs support and coordination:
Mr. David Lovato and Ms. Nicole Raymond, 703.413.3805 and 202.756.7348 or cellular anytime at 703.772.6733.

The Chief of Naval Operations has, on many occasions cited the superb quality of our Sailors as one of our Navy's greatest asymmetric advantages.



◀ Atlantic Ocean (Jan. 25, 2004) – Sailors assigned to G2 division in the weapons department aboard USS *George Washington* (CVN 73) conduct 50-caliber familiarization training on the fantail for the ship's force protection team. The Norfolk, Va. based nuclear powered aircraft carrier recently departed on a regularly scheduled deployment.

U.S. Navy photo by Photographer's Mate 1st Class Brien Aho.

NAVSEA recognizes the significance of this statement, and has established the means to maximize the effectiveness of the Sailor as a primary component of the war-fighting system. We are serious in our support to exploit this advantage, and see the Sailor at the center of hardware and software human interface solutions and at the heart of effective warfighting.

As the Navy faces the reality of a Global War On Terror, and the need to re-capitalize the Fleet, it is important to understand our place in these critical endeavors and where we are going with the Navy's transformation initiatives.

Today, the Navy operates within a frame of reference and with a force structure that was largely planned and created decades ago for a well-understood open ocean threat. Profound change stemming from political developments in the 1980's and 90's has not been accompanied by a proportionate change in the shape or the operational intent of our Naval forces.

In plain language, Navy leadership has determined that the force structure we built then is no longer maximized for the likely threat, and the costs to maintain that force must be reevaluated based on today's and future threats. It is time for change, properly managed and thoughtfully executed.

Having said that, it is equally accurate to say that our Navy is also the best in the world today. But it is not, according to the Chief of Naval Operations, everything that it can be, or must be in the near

future. It can and will be a markedly more efficient organization, manned by even better qualified, trained and motivated professionals operating state of the art sea, undersea and air systems optimized for war-fighting effectiveness.

It must be an overwhelming, persistent combat force with deep strike and flexible defense capabilities, a Navy readily able to prevail in conflict at sea, in the air and underwater. And a Navy able to lift and swiftly deliver powerful U.S. Marine forces "From the sea" while it must also be a credible force offshore and in the littorals.

NAVSEA's team of surface and undersea warfare program professionals has accepted the challenge of providing the systems instrumental to realizing the CNO's vision of a lean and lethal Navy. Streamlined, and faster, more agile, stealthy and deadly to confront, the Navy of the 21st Century is being built on the backbone of our Sailor's ability to perform. By optimizing manning through Human Systems Integration leveraged design and technology techniques, maximizing Sailor performance and professionalism, and streamlining logistics and maintenance operations, the Navy is placing itself in position to make good on the promise of measurably improved war-fighting capability through flexible response with decisive power.



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