

January 2001

# ED NEWSLETTER



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## *Salvage and Heavy Lift of USS Cole*

By CDR Patrick J. Keenan, OIC, SRU Bahrain

**O**n 12 October 2000, *USS Cole (DDG 67)* was attacked by terrorists while refueling in Aden, Republic of Yemen. A small boat detonated an explosive device portside amidships while *Cole* was moored to a fueling dolphin. Seventeen sailors were killed, 39 injured and the ship sustained significant damage. As Aden is in the Fifth Fleet Area of Responsibility, the Fifth Fleet Commander tasked Ship Repair Unit (SRU) Bahrain with damage assessment, salvage, remains recovery and ultimate removal of the ship from Aden Harbor. The Ship Repair Unit Element reported directly to the *Joint Task Force Determined Response* Operational Commander.

### **Initial Condition and Damage Assessment**

The SRU Bahrain Officer in Charge (OIC), Assistant Officer in Charge (AOIC) (both Engineering Duty (ED) Officers with Diving and Salvage qualifications) and Supervisory Marine Surveyor arrived on-scene ten hours after the attack, along with sizeable medical and force protection contingents, including an Explosive/Ordnance/Disposal (EOD) dive team. Initial damage assessment began immediately. Conditions 48 hours post-attack are summarized:

- Remains of twelve sailors entrapped onboard both in

flooded spaces and in severely damaged main deck compartments.

- Nine meter longitudinal by 12 meter vertical hole in the portside shell-plate centered at frame 208 and extending five meters below the waterline. Significant radial cracking and dished plating emanating from and adjacent to the hole.

- MER1 flooded and in free communication with the sea. Blast damage to equipment extending to amidships in MER1 and significant damage to adjoining main deck and first platform spaces.

- AUX2 flooded to a level equal to the external waterline via cracks and tears in bulkhead 220, which separates MER1 from AUX2.

*See USS Cole, page 18*



*Above: USS Cole (DDG 67), aboard Norwegian heavy transport ship M/V Blue Marlin, en route to the United States after a terrorist attack while refueling in Aden, Republic of Yemen.*



## MESSAGE FROM VADM GEORGE P. NANOS, JR. COMNAVSEA AND SENIOR ED

**D**uring November 2000 I had a whirlwind trip that included a visit at the Toyota automobile manufacturing plant in Georgetown, Kentucky, and stops in Asia at four major shipyards—two in Japan and two in Korea. I gained a wealth of information from these visits that I would like to share.

At the Toyota plant, RADM Baugh (SEA 04) and I attended a seminar on lean manufacturing as it applies to shipbuilding. The seminar was sponsored by a group from the University of Michigan's World Class Manufacturing Model project. We got a birds-eye view of Toyota's Production System which uses many aspects of lean manufacturing. RADM Baugh and I were impressed not only with the seminar but also with the system.

The manufacturing practices at the yards in Korea and Japan revealed why these two countries alone account for 60 percent of the world's shipbuilding. They are lean and mean, with easily twice the output of our commercial yards. Much like my visit to the European yards, this trip left me both exhilarated and depressed. I end up asking myself questions like: What are we doing in our shipyards to catch up with the yards overseas? What are we doing with technology transfer to our yards and related businesses?

We face tremendous challenges in our Navy today. How do we leverage our engineering experience against these chal-



lenges? Are we really learning anything from what's going on in the world around us? I'm not happy with the answers that I'm coming up with either. I believe that we—the members of the ED Officer Community—need to challenge ourselves to find better answers. Not only do we need to bring innovations and new technologies to our yards, we need to bring a renewed energy in our search for answers to the incredible challenges we face. I believe with our knowledge and training, we can meet these challenges. We all have a sea story about how we earned our patches and that practical experience serves us well. But we didn't earn advanced degrees to use them as wallpaper for our offices. We need to make our education pay off and here are some ways we can do that.

- Expand our pursuit of the intellectual aspects of shipbuilding.
- Improve relationships with the National Shipbuilding Research

Program, academia, and other players, such as the Manufacturing Engineering Lab at the National Institute of Standards and Technology.

- Keep up with the open literature. Reports are available on National Shipbuilding Research Program projects. They involve academia and industry and offer an in-depth look at how to apply new technologies.

- Continue the education process. One of the initiatives that I'm working on now in NAVSEA is a course designed for both military and civilian personnel in the ship acquisition process. I want them to get more involved in shipbuilding technology, not just as practiced in the construction of warships today, but as it is practiced in the global marketplace. I think that it is through that education process that we will produce program managers who are in a better position to stimulate the kind of Navy involvement in shipbuilding that we need to have.

President Kennedy used to say that the fate of the Nation rested on education. Well, we need to educate ourselves to what the overseas yards are doing. We need to get out there and really know the business and the industry. We also need to take a fresh look at what the domestic

See *Nanos*, page 21



**MESSAGE FROM  
RADM KATHLEEN K. PAIGE  
ASN(RDA) CHIEF ENGINEER AND  
DIRECTOR FOR TAMD AND SYSTEMS  
ENGINEERING (PEO TSC-T)**

**“I**’m here because I like what I’m doing.”  
“I get to focus on what has an impact on the Fleet.”

“I have the opportunity to help make warfighters more efficient in completing their tasks.”

“We are the future.”

“For the surface combatant, all the new thinking is here, now.”

Those are the comments of CDR Dean Pedersen and CDR Gary May, two of the 35 Engineering Duty (ED) Officers currently assigned to the Program Executive Office, Theater Surface Combatants (PEO TSC). EDs in TSC serve in a variety of assignments including: six program managers; four deputy program managers; four directors, six systems engineers; three project officers; two test officers; two branch heads; three fleet liaison specialists; one DDG Class chief engineer; one manager; one integration manager; one availabilities officer; and one team leader.

CDR Pedersen is currently the Program Manager for the Area Air Defense Commander (AADC) Capability Program (PMS 467). CDR May is a Navy Area Theater Ballistic Missile Defense (TBMD) Engineer, assigned to the AEGIS Technical Director (PMS 400B).

CDR Pedersen’s sea assignments include tours aboard *USS Lynde McCormick (DDG 8)* and *USS Henry B. Wilson (DDG 7)*. His shore assignments include



COMOPTEVFOR, COMNAV-SURFLANT and Program Executive Office, Cruise Missile and Joint Unmanned Aerial Vehicle. He says working in his current PEO is especially challenging and rewarding. “I get to run my own program,” he says, “and the leadership here is unique because their approach is guidance and advice versus direction.” That makes all the difference.

The AADC Capability is an Engineering and Manufacturing Development (E&MD) Program to develop a new joint-theater, air-and-missile defense planning and execution tool. It supports near-real time planning, rapid replanning, real time theater-wide situational awareness, and tactical execution capability to an area commander in support of joint objectives. A prototype of this capability is currently fielded in *USS Mount Whitney (LCC 20)* and *USS Shiloh (CG*

67), providing valuable fleet support and feedback for the production system.

CDR Pedersen’s responsibilities as a program manager include budgeting; overseeing a team of uniformed, civilian and industry professionals; and ongoing interface with sponsors and the Congress, and senior leadership is paramount. “The PEO backs you in decisions, especially when you’re making a difference for change,” he says.

He adds that while a major part of his job is acquisition, being an ED has helped with the technical aspects of engineering development. “It’s more easily understood,” he says.

“I probably would have gotten out, if I hadn’t gone ED,” he says. It has provided him with the best of both worlds. First, there is the opportunity to have lasting impact in his Navy career, plus he has been able to spend more time with his family. “I’ve had the chance to apply my education and experience leadership responsibilities unequalled anywhere else,” he adds.

“Furthermore,” says CDR Pedersen, “with this PEO, family is number one.” “This is the Navy, and the Navy is vitally important,” he adds, “but family is for life.” CDR Pedersen, his wife Pamela and two daughters, live in Waldorf, Maryland.

*See Paige, page 21*



## MESSAGE FROM RADM WILLIAM R. KLEMM CINCPACFLT (N43)

**A**loha from paradise. In my last article, I talked about ADM Fargo's priorities for the Pacific Fleet and how the dedicated Engineering Duty (ED) officers and civilians in the Pacific Theater were getting the job done.

ADM Clark became Chief of Naval Operations (CNO) since my last installment to the *ED Newsletter* and he has a "TOP FIVE" priority list. If you compare them with ADM Fargo's, you'll find they are pretty similar and that is no coincidence. ADM Clark and ADM Fargo not only share a common vision for our Navy, but a personal and professional relationship that goes back to the days they served together in the Pentagon as LTs. With a CNO priority of **Current Readiness** coupled with the Pacific Fleet Commander's priority of **Maintaining Readiness**, I see good things ahead for our Sailors and ships, and EDs need to be out front leading the charge.

I also said that in my last article I would talk about the CINC's initiative to combine maintenance activities and place them under a mission funded financial system. In PACFLT, we call it



**Industrial Synergy.** With every-one mission funded, a Fleet or Type Commander only needs to

scrape up the bucks for an airline ticket to match work force to work load instead of hundreds of thousands of dollars. Why is **Industrial Synergy** important?

If you go back to 1989 and count Naval Shipyards (NSYs) and personnel and compare that capacity to today, you'll find an 80 percent reduction in facilities and manpower. Likewise, Intermediate Maintenance Activities (IMA) have been reduced by four. Only two of 18 tenders remain in service and only one of three Ship Repair Facilities (SRFs) are operational. If you fast-forward into our near future, we face one of the largest challenges presented to the ED community and the Navy, Submarine Depot Level Maintenance.

Given the back-to-back submarine inductions in all of our NSYs, it will only take a couple of schedule delays to lead us to a situation where we don't have enough operational submarines to accomplish their designated missions. In the absence of the surge capacity we use to rely on, **Industrial Synergy** gives the Navy the right tools for our ship maintenance toolbox.

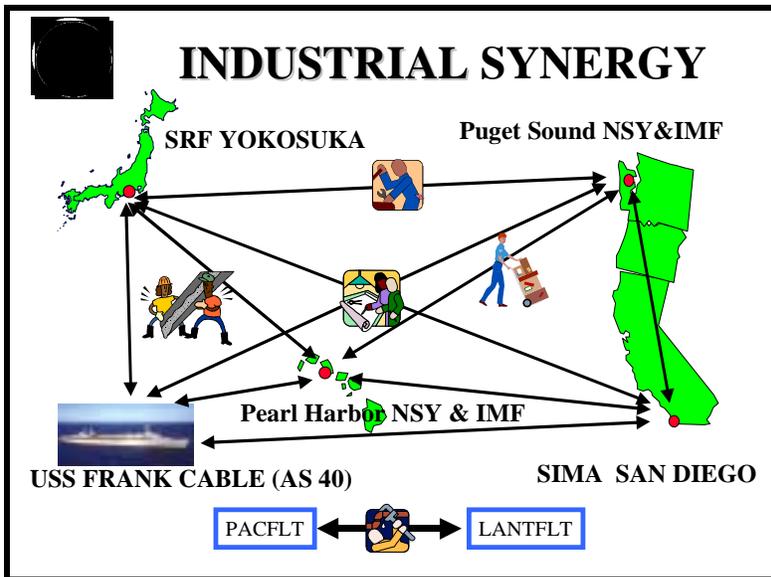


Figure 1: Shows maintenance facilities in the Pacific Area of Responsibility (AOR). It illustrates the exchange of equipment, personnel and engineering experience to meet a very dynamic regional workload.

See *Klemm*, page 21



## MESSAGE FROM RADM ANTHONY W. LENGERICH OPNAV (N43)

Greetings in this New Year! I'm no prognosticator, but my guess is that 2001 will mark a watershed for the U.S. Navy, particularly in the way we identify the resources required to achieve and maintain specific fleet readiness levels (i.e., C-Ratings). Within the Naval Operations (OPNAV) staff, the Chief of Naval Operations (CNO) has re-titled OPNAV N4 as the Deputy CNO for Readiness and Logistics. N43 has been designated as the "Voice of the Fleet" for readiness. In the Fleet, the lead/follow Type Commander (TYCOM) structure is being implemented with concomitant emphasis on deriving the "no-kidding" readiness requirements. These changes are significant.

OPNAV N43 (previously the Maintenance, Industrial Capacity and Acquisition Logistics Division) is now the Fleet Readiness Division. RADM Ken Heimgartner (2-star naval flight officer) came aboard on 1 October 2000 as the first Director, Fleet Readiness Division. Concurrently, N43's area of responsibility was broadened to include not just readiness requirements for surface ships and submarines, but also aviation readiness,



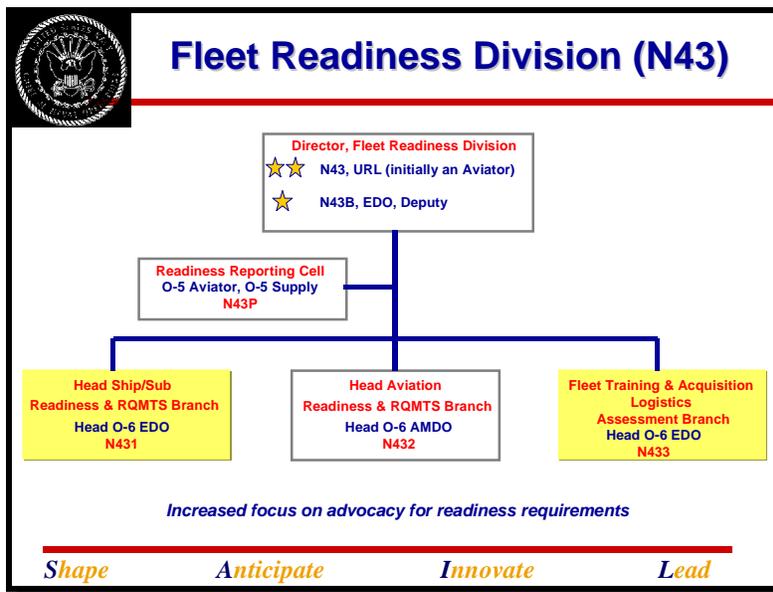
and supply communities have been added to the N43 staff. A simplified organization chart is attached for reference.

fleet training and battle group training. Since "readiness" includes not only maintenance but also consideration of spare parts, steaming/flight hours, training ordnance, training systems, training ranges, etc.; additional officers from the aviation, Aerospace Engineering Duty (AED)

and supply communities have been added to the N43 staff. A simplified organization chart is attached for reference.

Engineering Duty (ED) Officers are still core to the division. The Deputy Director, Fleet Readiness Division (N43B) is a 1-star ED Flag officer. In addition to primary oversight for all ship/sub related issues, the Deputy provides the acquisition expertise (Research, Development, Test and Evaluation (RDT&E), program management, systems engineering, and manufacturing) within N4. The Deputy represents N4/N4B in most acquisition related forums/decisions and is the Navy representative to DoD and various Joint Military Groups concerned with maintenance and sustainability. All Mission Need Statements (MNSs) and Operational Requirements Documents (ORDs) are reviewed within N43 for appropriate maintainability, sustainability and total-ownership-cost requirements.

An ED O-6, CAPT Clarke Orzalli, heads the Ship and Submarine Readiness Branch (N431). A staff of five civilian personnel (CIVPERS) and See *Lengerich*, Page 21



## Notes From the ED Detailer

By CAPT John A. Edwards, NAVPERSCOM (PERS-445)

**D**uring detailer visits to several locations, a few topics of interest to all EDs have been raised. I want to specifically talk about three topics.

### Fitness Reports:

I have received several questions about fitness report rankings versus officer transfer timing, and the impact of this on an officer's promotion success. The timing of an officer's transfer can be a factor on fitness report rankings since the total number in the competitive group on the ending date determines the number of officers permitted in each promotion category. Officers and detailers should and do consider this when determining duty assignments and transfer dates; however, performance will always be the single most important factor in determining an officer's competitiveness for promotion. Time served in rank or in a job results in valuable experience that will impact performance. Although there is an expected correlation between this and ranking, it is rarely the single factor. It is important for each officer to fully understand his fitness report marks and ranking and discuss them openly with their reporting senior. To assume an evaluation is based fully on seniority rather than discussing it with the reporting senior is ill advised.

### Promotion Zones:

There is a conscience effort on-going by the ED Community Managers to lower the flow points for promotion. Based on real and projected losses, the FY 02 FiveYear Promotion Plan indicates that flow points will be reduced a few months each fiscal

year. The result of this effort is a shorter period of time in each rank and possibly fewer fitness reports in each rank. Although the overall effect is positive, there is a possibility that each year the actual zone size will be different from the prior year's projection. Officers should be aware of this when making career decisions. It is my firm belief that the Navy's promotion system is fair and time proven. The officers that are promoted are those who consistently perform well when compared to their peers.

### Career Planning:

There is still a great deal of churn about core versus fleet tours. Remember we do not have any bad jobs, only bad timing. The fact is all our jobs are good jobs or we would not keep them as part of our community. One of the factors the detailers consider when proposing your next job is if you have the right mix of core and fleet jobs. Core jobs are those assignments where the Commanding Officer is in a billet to which you could be assigned in the future. Every officer needs to have enough core experience to be competitive for command in the career path of their choice. In a typical ED career, there is enough time for two or three fleet and broadening tours while completing the requisite number of core tours. Each officer's situation is unique based on their seniority at lateral transfer, length of education and pre-transfer assignments. The best way to make an informed decision is to complete the career planner (available from your detailer) and seek the advice of several mentors in your career

track. Fleet tours add perspective and valuable experience, and keep you current on important issues. The best record is one with the right mix of core experience and diversity.

If you haven't seen it yet, check out the Community information pitch recently added to our ED WEB page. Although the information was developed for those considering lateral transfer into our community it is also very useful for EDs considering orders to an unfamiliar activity. Pass the WEB address (<http://www.persnet.navy.mil/edo/>) on to a friend or colleague who may be considering a career in engineering.

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## ED Dolphin Program – Your Ticket to a Career in Submarines!

By RADM(Sel) Paul E. "Sully" Sullivan, PEO Submarines, PMS 450

**Y**ou don't have to be nuclear power trained to work on submarines as an Engineering Duty (ED) Officer. There is another route – the ED Dolphin Program. This program has been around since 1973, and has been providing highly-trained EDs for submarine overhaul, repair, design and construction since its inception.

### Why?

The ED Dolphin Program was instituted in order to train a cadre of officers who bring the ED perspective to the demanding world of nuclear submarine overhaul and construction. The exacting discipline of working on nuclear systems, and the uncompromising standards of the SUBSAFE Program require officers who have earned a warfare qualification in the submarine specialty. Since only a few officers lateral transfer to the ED community from the submarine line (1120) designator, an alternate qualification was necessary. The ED Dolphin qualification is more focused on design, overhaul, and technical standards than on submarine operations. With the ED Dolphin Program, the Navy gets a mix of line lateral transfers from the 1120 community and ED Dolphin qualified officers. This provides a suite of complementary skills for the submarine business.

### How?

The ED Dolphin qualification program normally takes about two years to complete. The NAVSEA instruction which covers the details of the program is NAVSEAINST 1520.2B and includes the following elements:

(1) **Satisfactory completion** of a



**radiation and submarine physical examination.**

(2) **Completion of the Submarine Officer Basic Course (SOBC)** at the Submarine School, SUBASE New London, Groton, CT. This is a 13 week course in submarine operations and systems that all submarine officers complete.

(3) **Completion of a patrol and refit cycle** on a deploying SSBN. This at-sea phase can be tailored based on the needs of the officer, the ships available, and the needs of the Navy. Candidates should expect to execute the complete patrol/refit cycle (**about 13 weeks**) or equivalent experience. During the underway portion of the program, the candidate is expected, as a minimum, to successfully complete qualification for Diving Officer of the Watch. Special arrangements can be made for female officers pursuing the ED Dolphin qualification.

(4) Approximately **one year of experience** working on overhaul or construction of submarines at a naval shipyard or Supervisor of Shipbuilding.

(5) **Assistant Project Superintendent Systems Class completion** at Puget Sound Naval Shipyard. This three week school provides training in the design, maintenance and modernization of submarine nuclear propulsion systems.

(6) **Completion of a qualification journal.** The journal is the record of the candidate's path to qualification. It consists of sec-

tions on operations, design, and maintenance. Each section has a set of assigned questions and a set of practical factors. When properly completed, this notebook becomes a great reference for the officer throughout his or her career.

(7) **Walk-through examination.** Prior to the oral board a walk-through examination is conducted aboard a submarine by a submarine qualified officer. This allows the candidate to demonstrate in a submarine environment his or her knowledge of systems, components and operational concepts.

(8) **Interviews.** Generally, ED Dolphin candidates spend a day or two at NAVSEA Headquarters for interviews with key submarine codes, including technical codes, program management offices, and Naval Reactors. These interviews are often combined with the oral board, but not always. The intent is to give the candidate a personal view from the key decision makers of the Navy's submarine programs.

(9) A **pre-oral board** is held at the candidate's command to ensure he or she is prepared for the oral board conducted at NAVSEA Headquarters.

(10) **Oral Board.** When all the requirements are complete and upon the recommendation of the candidate's commanding officer, the candidate's journal is reviewed and graded at NAVSEA Headquarters. After receiving the journal back with comments, the candidate is scheduled for an oral review board.

See *ED Dolphin*, page 22

## Puget Sound NAVSHIPYD Installs Fiber Optic Cable

By CDR Kent A. Fredrickson and LCDR Frank A. Arata , Puget Sound NSYD

**O**nboard the *USS Carl Vinson (CVN 70)*, Puget Sound Naval Shipyard (PSNS) is installing a fiber optic backbone using blown fiber technology which will provide the highway for *Vinson's* Integrated Shipboard Network System (ISNS) LAN and ultimately supports the future installation of the Integrated Communication Network (ICAN) system. The *Vinson* is currently undergoing a Docking Phased Maintenance Incremental Availability (DPIA) at the shipyard in Bremerton, Washington. The Project Team was under the direction of CAPT (Select) Joe Bradley who was the Project Superintendent. CDR Kent Fredrickson and CDR (Select) Frank Arata both played key roles in the installation. As the Aircraft Carrier Business Officer, CDR Fredrickson lead the effort that teamed with Puget Sound Naval Shipyard, Norfolk Naval Shipyard, Newport News Shipbuilding, COMNAVAIR-PAC, and COMNAV-SEASYSOM (PMS 312) under the Team One Initiative to obtain a subfranchise agreement, training and equipment from BICC General Cables Industry, Inc. CDR (Select) Arata is the Combat Systems Assistant Project Superintendent and has been intimately involved in the day to day deckplate coordination of the trades, Ship's Force and design to bring the installation to fruition. This first time installation has provided many interesting technical challenges that required active participation by CDRs Fredrickson and Arata. The Team One Initiative fosters an environment where lessons

learned; training and material are readily shared. The end result is a successful installation of a fiber optic backbone with "just-in-time" drawings, paperwork and material. The backbone consists of 45,000 feet of conduit, 400,000 feet of fiber optic cable, and six node rooms. The backbone provides a highway for both classified (up to the Sensitive Compartmented Information (SCI) level) and unclassified information from the ISNS LAN to be passed throughout the ship.

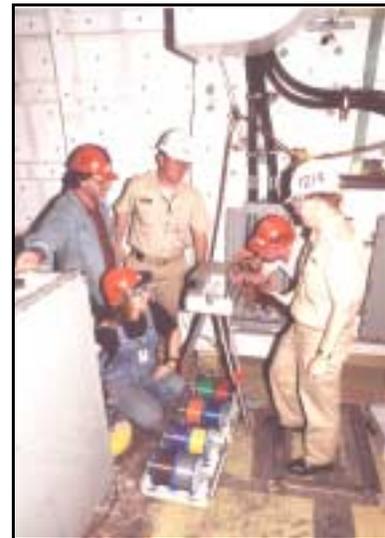
Unlike traditional fiber optic installations, this backbone uses air blown fiber, a relatively new process to the Navy and PSNS. The backbone is comprised of nearly nine miles of conduit which form horizontal loops on the 03 Level and 2<sup>nd</sup> Deck. A vertical loop is also formed in the island. The loops provide survivability and ensure connectivity between the stem and stern as well as from the 09 Level down to the 4<sup>th</sup> Deck. With air blown fiber, the conduit is installed only once providing significant growth capacity and future flexibility. The one-inch diameter conduit contains seven multi-ducts. Each multi-duct is one-quarter inch in diameter and may hold up to eight fibers. When needed, additional fiber can be blown and/or routes can be reconfigured with minimal expense and disruption. As improved fibers are developed, old fiber is blown out and new fiber is installed.

Fiber is blown using filtered low-pressure (LP) air. The viscous drag of LP air propels the fiber optic strands through the micro-duct conduit. Fiber comes in eight different colors, which

allows the installing activity to easily differentiate between multiple fibers in a single duct. The current install only uses fifteen percent of the duct capacity, which allows for extensive growth.

Each node room serves as a hub for the plant and provides a secure location for the backbone and switches. Four node rooms are located on the 03 Level, one on the 2<sup>nd</sup> Deck, and one on the 3<sup>rd</sup> Deck. Current design calls for up to three switches being located in each node room, with each room equipped with additional space, power, and chill water capacity some for up to

See *Optic Cable*, page 23



*Above top counter clockwise: CDR(S) Frank Arata, Combat Systems APS C/370; Bob Barkyoumb, Shop 51 Supervisor; Robin Wilcox, Shop 51 Mechanic; CDR Kent Fredrickson, Carrier Business Office, C/1214; and Paul Hudson, Shop 51 Mechanic observing the Fiber Optic Cable Installation. (Photo courtesy of Puget Sound NAVSHIPYD)*

## SUPSHIP Portsmouth – Servicing a Variety of Customers

By LT Gary L. Null, SUPSHIP Portsmouth

**S**UPSHIP Portsmouth (SPORT), commanded by CAPT Richard Schwarting, has a vision to become the provider of choice in executing shipboard availabilities in the private sector. Positioned outside of Norfolk, with the largest concentration of Naval ships in the world, SPORT is becoming a jack of all trades to a number of customers. Engineering Duty (ED) Officers assigned to SPORT for their first waterfront tour can expect to play a critical role as a project manager and team leader in many challenging availabilities and programs.

SPORT was involved in a number of major SHIPALTS on Aegis cruisers during FY-00. LT Angel Salinas was the project manager of the five-month, \$5 million, PRAV on the *USS Monterey (CG 61)*, with MHI at Norfolk Naval Station. As the Naval Supervising Activity (NSA) for this project, his key challenge was the coordination between MHI and over 12 organizations and 400 contractors involved with the enormous Smart Ship SHIPALT, led by Litton GCS.

LCDR Al Cuellar spearheaded the successful completion of the six-month, \$30 million, EDSRA on the *USS Leyte Gulf (CG 55)*, at NORSHIPCO. The availability consisted of 12 major SHIPALTS, including Hull Girder Strengthening, Forward Fuel Oil Tank Strengthening and the Shredder/Pulper installation. Guided by the strength of LCDR Cuellar's leadership, this availability completed on schedule and \$1.4 million below the predicted end cost.

Synergy was the critical factor in the completion of the eight-month, \$33 million, ROH on the *USS Gettysburg (CG 64)* at Newport News Shipbuilding. LT Gary Null led a SUPSHIP Portsmouth project team, along with members of SUPSHIP Newport News, through an intensive overhaul that included the first time cruiser install of the All-Electric Upgrade, as well as the Fuel Oil Tank Stiffening and Baseline 3A Computer and Console SHIPALTS. Despite nearly 40 percent growth, the overhaul completed two weeks ahead of schedule with zero major deficiencies over the 90-day warranty period.

The U.S. surface fleet is only one of a number of customers that SPORT services on a daily basis. LCDR John Funn was project manager of the six-month, \$16 million, DSCO on the *Shippingport (ARDM 4)*, at NORSHIPCO. Servicing COM-SUBLANT, LCDR Funn not only oversaw the extensive structural and mechanical repairs, but was also involved in coordinating the towing efforts of the dock to and from its homeport of New London, CT to the Norfolk-based shipyard.

Finally, LCDR Luis Ramos has been instrumental in one of the most challenging capstone assignments that SPORT has to offer new EDs – Officer in



*Above left to right: LCDR Al Cuellar and LTs Angel Salinas and Gary Null discuss lessons learned following the docking of Resolute (AFDM 10). (Photo courtesy of SUPSHIP Portsmouth)*

Charge of the Strategic Sealift Field Office. As the Program Manager's Representative (PMR) for PMS 325, he is responsible for post delivery issues on the fleet of 19 Strategic Sealift vessels around the world. LCDR Ramos has superbly managed over 10 repair projects worth over \$28 million during FY-99/00. He also created and led an Engineering Integrated Process Team which designed and manufactured new mooring systems, storage modifications, environmental waste management and navigational systems.



*Above Right: LCDR Luis Ramos inspects the underwater hull of the USNS Seay (T-AKR 302). (Photo courtesy of SUPSHIP Portsmouth)*

## SUPSHIP Jacksonville - We Fix Ships!

By LT Darren S. Harvey, SUPSHIP Jacksonville

**W**hat do we do at SUPSHIP Jacksonville (SJAX)? WE FIX SHIPS!

Teamwork, innovations and a customer-centric focus keep SJAX one of the highest rated SUPSHIPs in the Navy when it comes to customer satisfaction and we take pride in the quality of service we provide to the fleet. To no ones surprise, the Engineering Duty (ED) Officers of the command are at the forefront of implementing change, refining processes and evaluating methods and strategies to provide a superior service to all our customers. The products and services we provide are varied and diverse and touch virtually every aspect of the maintenance and repair community. The SJAX team is committed to doing its part in keeping the spear sharp and ensuring America's Navy remains #1 in the world! At this point I'm sure you're wondering what in particular we do and how we do it?

### WHAT IS SUPSHIP JAX?

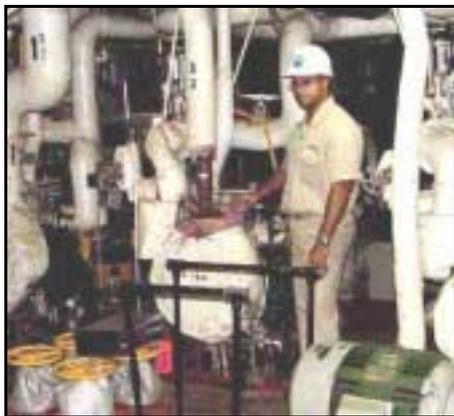
We are a Naval Sea Systems Command (NAVSEA) field activity, part of the NAVSEA Cor-

poration. SJAX is commanded by an ED, CAPT William D. Russell. SJAX plans, solicits, awards and administers contracts for repair of Navy vessels throughout a large part of the Southeastern United States and Caribbean. Our detachment in Ingleside, Texas supports the Mine Warfare forces there. SJAX also prepares Specifications for repair availabilities in other areas as the Ship Availability Planning and Engineering Center (SHAPEC) for FFG 7 class ships. We also administer Navy new construction contracts awarded to shipyards in our assigned geographical area but this responsibility has greatly diminished in the recent past. SJAX chairs the NAVSEA Standard Specifications for Ship Repair and Alteration Committee (SSRAC).

Our major focus is planning, contracting and providing oversight for depot level maintenance for the surface combatants and aircraft carrier homeported in Mayport Naval Station, Florida.

The primary customers are the ship's crew and type commanders who fund the work as well as the contractors actually performing the work.

Another of the exciting initiatives that is being implemented at SJAX is the development of the Southeast Regional Maintenance Center (SERMC). SERMC was formed to facilitate the regionalization of area maintenance activities in order to reduce redundancy and streamline maintenance processes thus becoming more responsive to the fleet while reducing overall cost. As a part of this effort SJAX is now collocated with Regional Support Group and SIMA Mayport. Collocation has helped streamline business processes and consolidation has reduced costs and created efficiencies. This has provided measurable savings in turnaround time and manpower savings. The initiative also provides major overall cost savings for each of the participating activities' budgets. The consolidation of warehouse



*Left: LCDR Pernell Jordan examines piping repair onboard USS John F. Kennedy during recent SRA. Center: LT Joseph Prisella accessing a tank to evaluate the status of the repair. Right: CDR (Sel) Paul Skogerboe along with Project Manager Carl Lemme and Shipbuilding Specialist Supervisor Don Boothe conduct an availability progress meeting aboard USS John F. Kennedy. (Photos courtesy of SUPSHIP Jacksonville)*

See *Fix Ships*, page 23

## PMS 325 – Opportunities in Diverse Program Management

By CAPT Robin Hiddemen, Deputy Program Manager, PMS 325B

**A**re you looking for an opportunity in Program Management like no other? Would you like to manage a fleet of over 2,300 small boats and launches? Does assisting foreign governments with their counter-drug war interest you? How about managing commercial shipbuilding programs for Sealift, Oceanographic or Combat Logistics ships – does that interest you? If your interest is not yet peaked, what do you think of supporting Navy SEALs in acquiring special warfare systems? All these opportunities and more are available in PMS 325. Without a doubt, PMS 325 is the most diverse program office and offers exciting career opportunities for Engineering Duty (ED) officers of all ranks.

Currently we are diligently working towards contract award for the new Underway Replenishment Ship - the T-AKE (Auxiliary Cargo and Ammunition Ship). It is intended to perform the roles of the current T-AE, T-AFS, and the AOE-1 Classes. New innovations in cargo handling system and multipurpose cargo holds are just some of the leading-edge features that are planned for this new class.



Above: USNS Soderman – A Strategic Sealift ship (Photo courtesy of PMS 325)

If new ships don't interest you – how about providing technical guidance and support to the Navy's oldest commissioned ship, the *USS Constitution*. Recently, she underwent a series of sea trials, successfully raised eight of her 11 sails for the first time since 1881 and participated in Sail Boston 2000. And we were there!

Our Special Warfare Project Office supports the Navy SEALs and Joint Special Operations Command (JSOC/SOCOM) by acquiring select items for missions of reconnaissance, coastal and riverine interdiction, and intelligence collection. These select items include tactical mobility platforms such as SEAL Delivery (SDV) Vehicles and Patrol Coastal (PC) ships; diver life and electronic mission support systems; night vision and electro-optic systems; weapons, ordnance and various classified efforts. This is the tip-of-the-spear project office!

Did you know that PMS 325 is responsible for the small arms procurement of all ships, submarines, shore stations, and ground mobile units of the Navy? This program engineers, maintains, repairs, distributes and inventories small arms. This puts us in the middle of the current Force Protection priority.

We are very proud of our Foreign Military Sales (FMS) work. Managing the Navy's FMS worldwide acquisition and support of boats and craft to over 20 different countries is never dull. Most of our FMS customers are valiantly fighting this hemisphere's drug wars.

One of our crown jewels is the award winning Strategic Sealift Office. This project has

been recognized by OSD as setting the acquisition reform standard. One of our contractors is delivering ships below target cost, well ahead of schedule and with zero deficiencies at delivery. The Strategic Sealift model is being translated into future programs in our newly formed Advanced Programs Division.

EDs on our staff are CDR John Braun, Project Manager for the Strategic Sealift Program; CDR Steve Markle, the Assistant Project Manager for the T-AKE Program; and CDR Steve Surko, who is leading the Navy's efforts to develop the Combat Logistics Force of the future. In our Special Warfare Project office, CDR Andre Maraoui just relieved CDR J. Rowland Huss as the Project Manager and LCDR Skip Vollweiler is an Assistant

See *Opportunities*, page 25



Above: The MK8 Mod 1 SEAL Delivery Vehicle (SDV) is a self propelled, free-flooding, combatant submersible that carries SEAL combat swimmers and their mission related equipment and can be launched and recovered from Dry Dock Shelter (DDS) equipped SSNs, stern ramp configured Patrol Coastal (PC) Class ships and vessels of opportunity. It provides Naval Special Warfare with the capability to conduct clandestine surveillance, reconnaissance and direct action missions in the littoral regions. (Photo courtesy of PMS 325)

## Make a Hole! 'Gater Navy Coming Through

By CAPT James R. "Jim" Wilkins, Program Manager, PMS 377

**E**lectric drive *and* the first major gas turbine propulsion upgrade since the *Spruce* Class? Revolutionary C4ISR mission systems for the future Joint Forces Command & Control Ship? 50-knot air cushion vehicles? A brand new platform optimized for LCACs, MV-22 and Joint Strike Fighter, and likely to include the future Multi-Function Radar (MFR) and Volume Search Radar (VSR) suites?

You bet! There couldn't be a more exciting time for the future development of the world's greatest expeditionary warfare assault ships and craft! And that's what we're about in PMS 377, the Amphibious Warfare Program Office within PEO Expeditionary Warfare.

Though many folks associate our Program Office with the continuing construction of the very successful *USS Wasp (LHD-1)* Class (the seventh of the class, *Iwo Jima (LHD 7)* will be commissioned this summer), most have no idea of the breadth and depth of the technology revolution about to burst within the 'Gator Navy, and that two brand

new major shipbuilding programs officially exist and are underway within PMS 377. A quick snap shot of our programs includes:

- **LHD 1 Class** -- How many of you naval engineering history buffs are aware that the last conventionally fueled steam powered warship, *Iwo Jima (LHD 7)*, with state-of-the-art combat systems and C2 will be commissioned on 30 June 2001. That's right -- the last of the mighty steam ships of the U.S. Navy! The next of the class, LHD 8, currently under detailed design contract, will be powered by two 36,000 horsepower "LM-2500+" engines, a new gas turbine design allowing one gas turbine to replace each boiler in the LHD. But what's really clever is the incorporation of two 5000 horsepower electric "loiter" motors, allowing fuel efficient use of four SSDGs for both ship service power and propulsion power for speeds up to 12 knots. The gas turbines will be used for the higher speed requirements, taking advantage of their fuel efficiencies at the higher horsepower regime. IPS-style electric drive and new gas turbines --

first to sea in the new 'Gator Navy!!

- **LHA Replacement (LHA (R))** -- This brand new program is envisioned to provide replacements for the five ships of the *USS Tarawa (LHA -1)* Class. The Marine Corps' new strategies of Ship To Objective Maneuver (STOM) and Operational Maneuver From The Sea (OMFTS) are hallmarks of the requirements to provide LCAC well deck operations, simultaneous MV-22 and Joint Strike Fighter operations, and a C4ISR suite and self-defense combat system unprecedented on amphibians. The Mission Need Statement is soon to be approved, followed shortly by an Analysis of Alternatives (AOA). Stay tuned!

- **JCC(X)** -- Imagine the challenges of harnessing the future revolution in C4ISR technology, and melding that to the needs of an afloat Joint or Coalition Staff engaged in either theatre warfare or massive humanitarian operations. The Joint Command and

See *Make A Hole!* Page 24



**Left:** Being a Program Manager doesn't mean being tied to a desk! CAPT "Jim" Wilkins test drives the LHD 7 well deck cargo monorail system during LHD 7 Builder's Trials off the coast of Pascagoula. **Right:** LCAC 85 entering LSH welldeck. (Photos courtesy of PMS 377)

## Fires Lit in the Navy's Final Combatant Steam Plant

By CDR Mark W. Thomas, SUPSHIP Pascagoula, LHD Test Officer

Fires were recently lit in the Navy's latest and final conventionally fired steam powered combatant, the multipurpose amphibious assault ship *Iwo Jima* (LHD 7). All future conventional U.S. combatants are envisioned to employ either gas turbine or diesel prime movers for propulsion.

Present at the event were several representatives of *Iwo Jima's* precommissioning unit, including CAPT J. T. Nawrocki, the ship's prospective Commanding Officer. "Light-off of *Iwo Jima's* first boiler on 19 August means achievement of another milestone on the road to LHD-7's arrival in the fleet," said CAPT Nawrocki. "I am very pleased with the superb cooperation of the government-industry team to date, particularly that of SUPSHIP Pascagoula and PMS 377. They have a tough job balancing cost and schedule against the Navy's requirements, and they're doing it well.

"The hard work of the Litton-Ingalls team is also very evident as you walk about the ship. Everything is falling into place. Construction remains on schedule; the PRECOMMUNIT and DET are manning up smartly. I look forward to successful trials, delivery, and especially commissioning in the coming months."

Mr. Lee Tuck, LHD Program Director for Ingalls, described the event as an auspicious beginning for the powerful plant. "Initial light off of the last steam propulsion system of the LHD class sounds like an end. Rather than an end, it represents the bringing to life of a proven system upon which LHD 7 will depend throughout her service to our country—really a begin-



ning," he said.

With this important milestone achieved, Ingalls and SUPSHIP Pascagoula will begin an aggressive drive to complete and test all of the ship's major systems in preparation for initial sea trials in December. Acceptance trials are currently scheduled for February '01.

CAPT David Bella, LHD Project Officer and PMS 377 representative at SUPSHIP, was on hand for the event, as was CDR Mark Thomas, the SUPSHIP LHD Test Officer. CAPT Bella noted the vital role played by Engineering Duty (ED) Officers in the preparations for this light off by praising the ship superintendent, LT Pete Ryan. "Pete's perseverance in ensuring that *Iwo Jima* got the latest completely electronic boiler control update will surely benefit the crew for years to come. It is a far cry from the purely manual controls of the first steam ship I worked on, the *USS Ajax*, a 400 lb. A-type boiler!"

"*Iwo Jima* will be the finest amphibious assault ship in the world when it is delivered to the fleet," said CAPT Harry Rucker, previous CO of SUPSHIP Pascagoula. "The ship building team can be very proud of their accomplishment in lighting fires for the first time in this, the last

conventionally powered steam plant that the U.S. Navy will build. I am especially proud of the role that EDs have played in the design and construction and now testing of *Iwo Jima*."

LHD 7 is the second U.S. Navy warship to be named for the famous World War II Battle of Iwo Jima, where more than 6,000 Marines lost their lives and more than 14,000 American troops were wounded in taking the island from the Japanese. The first ship to bear the name, LPH 2, was commissioned in 1961. She made six deployments to the Western Pacific and participated in over 30 amphibious landings in Vietnam. She served as the recovery ship for the crew of the Apollo 13 mission, participated in the second evacuation of civilians from Beirut, Lebanon in 1976, and was the first amphibious assault ship to deploy to the Persian Gulf in support of Operation Desert Shield. She was decommissioned in 1993.

The new *Iwo Jima* is the seventh Wasp class LHD built at Ingalls and the final ship on the current contract. The principle mission of Wasp Class ships is to move amphibious assault teams and their equipment from the sea to a land battle and to act as the command ship of an Amphibious Ready Group (ARG). These ships are capable of carrying a squadron of AV-8B Harrier II jets and a full range of Navy and Marine helicopters. They are equipped with a 13,600 square foot well deck that can be flooded to accommodate con- See *Fires Lit*, page 24

## ED at the Tip of the Spear

By LCDR Jeffrey R. Dunlap, USS TARAWA (LHA 1), Combat Systems Officer

**E**ngineering Duty (ED) Officers serve our Country at sea by accepting the responsibility to ensure that "one ship" is ready to deploy with all systems fully functional and the crew trained to fight. The Combat Systems Officer (CSO) Department Head position allows the ED to re-experience the challenges facing today's Navy and to positively impact war fighting readiness as she transitions from maintenance availability's, Inter Deployment Training Cycle (IDTC), to overseas deployment.

I was invited by the detailer to go back to sea after having completed tours at Charleston Naval Shipyard and SPAWAR Systems Center, San Diego. Once the initial shock subsided (a few weeks later), I accepted the task at hand and prepared to re-enter the sea going Navy. Many things had changed since my division officer days; I was older than 90 percent of the people on the ship, there was no Soviet Navy and women now served onboard combatants. Department Head School provided a much needed refresher on the core fundamentals learned many years prior at division officer Surface Warfare School. I observed first hand the transition of 48 junior officers, as they became tomorrow's leaders.

As I was preparing to meet *Tarawa*, she herself was being reborn by undergoing a massive service life extension program upgrade during a conventional overhaul period. After returning from the Persian Gulf deployment in 1998, *Tarawa* spent the next seven months in homeport completing the first phase of the split location overhaul. Heading

north from San Diego, *Tarawa* completed the final six-month phase at Puget Sound NSY. The Crew had been away from home 12 out of the last 19 months when I joined her in San Diego.

The prior CSO had been selected to start his journey as an ED and left for MIT the month prior to my arrival. Within hours of reporting onboard, I was in my first department head meeting, and as the XO kindly put it ".....Welcome onboard CSO, now get to work." The opportunity to lead a department of 136 sailors and make them ready for combat was now mine.

Many challenges faced *Tarawa* as she began her next deployment cycle. Due to funding shortfalls in the planning phase, many C4I installs were not completed during the Shipyard or ensuing planned maintenance availabilities:

- A late decision to upgrade West Coast LHA's to the Advanced Combat Direction System (ACDS) resulted in a three-phase installation, most of which occurred after leaving the Shipyard. As the leader of the Combat Systems Training Team, it was my responsibility to train the crew on a system that was not operational prior to the start of the IDTC. Many doubted *Tarawa's* ability to complete the install while training ourselves on how to operate a totally new

Combat System. Working closely with NSWC Dam Neck, ACDS lived up to it's potential and operated flawlessly as *Tarawa* passed the Final Evaluation Problem as scheduled.

- Challenge Athena (high bandwidth satellite access) was delayed five months by logistical problems and funding shortfalls. Offering both Video Teleconferencing and large pipes for many intelligence products, the end user decided to accept the risk of installing the system well into CNO's TCD. Design engineers visited *Tarawa* and "chalk marked" the forward dish position near the Close In Weapon System (CIWS). After seeing the chalk marks and the design plans, several questions were raised by the ship in regards to the CIWS firing safety cut outs for a soft structure (the dish) close to the line of fire. After performing bore scope measurements and reviewing the firing sector cutout diagram, ship's force determined that the position of the forward Challenge Athena would require an increase in port side firing cutout elevation; making CIWS ineffective against new generation sea-skimming missiles. After review, it was discovered that the installation planner had not consulted with the firing cut out engineer and would have required a more restrictive firing cutout sector to protect the Dish. After some careful planning by SPAWAR, a barrier was placed between the Challenge Athena Dish and CIWS to protect it



See *Tip of the Spear*, page 25

## She's Hard Aground

By LCDR Scott Mattingly, LCDR Gregg Baumann and LCDR "Sly" Mata (SEA 00C)

**S**HE'S HARD AGROUND!"...is most certainly a phrase the Captain and crew of any ship dread. However, it was recently the situation onboard the *USS La Moure County (LST-1194)* just off the coast of Cifuncho, Chile. In the pre-dawn hours on 12 September 2000, during a joint Chilean-U.S. amphibious landing exercise, *La Moure County* found herself hard aground on granite rocks and unable to free herself. Several hours later, with help from a flood tide and a Chilean ATF, *La Moure County* was off the rocks and dropping anchor while her crew fought a valiant Damage Control battle against hull ruptures in several spaces. Later that day the official request for Salvage Engineering assist was made via message traffic. In response, a combined salvage and Underwater Ship Husbandry (USH) team was mobilized consisting of three salvage and diving Engineering Duty (ED) officers (LCDR Jess Riggle (CINCLANTFLT), LCDR Rich Blank (COMNAVSURFLANT) and LCDR Scott Mattingly (SEA 00C) as well as the head of SUP-SALV's USH Division, Mr. Mike Dean. By mid-afternoon

on 14 September all of the initial salvage and repair team members had arrived onboard *La Moure County* and began to assess her structural condition as well as develop a salvage and repair plan.

With the help of Chilean Armada scuba divers, the salvage and repair team conducted an initial inspection of the underwater damage and determined that a 40-foot section of *La Moure County's* keel was broken amidships. In addition, the ship had suffered 25 to 30 hull breaches ranging in size from a few feet to several yards across and her entire stem was crushed below the waterline. Every fuel, ballast, CHT, and potable water tank forward of amidships was in communication with the sea and most were pressurized to their respective tank tops. In the area of the keel damage, the entire hull structure was holed from beam to beam and crushed ten-feet up against the 4<sup>th</sup> deck tank top. Using the NAVSEA Program of Ship Salvage Engineering (POSSE), it was determined that the hull was in a critical condition of stress and significant structural repairs would be required in allowing *La Moure County* to be towed from the area. At NAVSEA Headquar-

ters, ED diver LCDR "Sly" Mata and structural engineers from SEA 05P, developed a repair plan which included welding three, 3-ft. x 3-ft. x 72-ft. long box-girders underwater to the remaining shell plating on either side of the keel damage. Significant salvage type repairs were also required to regain buoyancy and remove fuel from damaged tanks in order to reduce the stress on the hull. To accomplish these salvage and repair efforts, Mobile Diving and Salvage Unit-2 (MDSU-2) and NAVSEA contract welder-diver teams were mobilized along with their respective equipment. To confront sensitive pollution abatement issues as well as accomplish fuel removal and lightering tasks, additional SEA 00C and NOAA personnel were mobilized along with technicians and equipment from the Emergency Ship Salvage Material (ESSM) base at Cheetham Annex. While waiting for all these resources to arrive, the salvage and repair team utilized 40 Spanish-speaking Chilean Armada

See *Hard Aground*, page 24



Left: *USS LA Moure County (LST 1194)* just off the coast of Cifuncho, Chile. Center: NAVSEA contract diver installs box girder on hull. Right: First box girder fabrication completed. (Photos courtesy of NAVSEA (SEA 00C))

## ED School – Active in EDQP!

By CAPT John R. Exell, ED School Commanding Officer

**D**uring the year 2000, the Engineering Duty (ED) Officer School staff attended oral boards for 16 of 31 officers who completed the Engineering Duty Qualification Program (EDQP) through November. As EDQP Program Coordinator, attending oral boards has given us not only a chance to ensure that high standards are maintained, but also to see how well we as a School are doing to prepare our students for their first ED tour. “Well done” and thank you to all of the commands who supported our efforts.

We have been very impressed with the quality and rigor of many of the boards we visited. From 18 months of visits, we have concluded that the **EDQP is “healthy”** and providing our new EDs a firm foundation in their new careers. Of course there is always room for improvement, and we have circulated a draft report for comment, asking for feedback on how we can make the program even better. We will revise the EDQP instruction, (NAVSEAINST 5400.55F) with recommended improvements. We hope to circulate it for review this spring.

I would like to use the rest of this article to share some of the “**best practices**” we have observed during our board visits.

- **Local instructions**, with comprehensive qual sheets to guide the candidates, greatly improve the process for qualification. Portsmouth NSY & SUPSHIP Newport News’ instructions are great examples.

- Some commands require officers to **visit other activities** in the same geographic area to

broaden their experience with other types of ED work. SPAWAR Systems Center, San Diego organizes a trip to Washington, DC for qualifying EDs to get a better understanding of ED issues inside the beltway.

- **Formal pre-boards** are used very effectively by many commands. Candidates who have been through tough questioning by an experienced audience at a pre-board typically display greater poise and confidence during the real thing. We also saw value in rehearsing tech papers during the pre-board for timing and confidence building.

- We believe **counseling officers** have the greatest impact on a candidate and on the success of a command’s program. The best are in contact frequently with their candidates, keeping them on track, guiding and providing encouragement when the going gets difficult. Good counseling officers also work hard to schedule boards well in advance of the due date, thus avoiding problems should things not go as planned.

- Many certifying officers take a few minutes, with the candidate out of the room, to explain their philosophy and **establish the ground rules** for questioning. Similar to precepts before a promotion board, this practice can be very helpful in running a smooth board.

- Most commands ensure their



*Left to right: CAPT Rick Hepburn, LT Brian Kelly and CDR Tim McCoy of SUPSHIP Bath and CDR Bob Vince of ED School celebrate the successful completion of LT Kelly’s EDQP Board.*

boards touch a **broad range of topics**. The EDQP should not be a stove-piped qualification for one career type. Inviting EDs from other commands and senior civilians (who have been briefed on the nature of the board) are great ways to avoid narrowly-focused oral boards. Another good idea is to include qualified junior officers on a board. Sitting on a board with several senior EDs can provide valuable training. After all, one has to learn how to ask good questions, as well as to answer them.

These are just a few of the good ideas we’ve seen throughout the community. I invite you to share your good ideas with others as well. Let’s all work together to keep EDQP rigorous and make it the best it can be for everyone.

## ED Recruiting Is For Everyone

By LCDR William C. "Bill" Greene, Puget Sound NSYD

**D**uring a recent family vacation to Florida, I paid a visit to my alma mater, the University of Florida (UF). I gave a short brief to the midshipmen and staff on the role of the Engineering Duty (ED) Community in the Navy and I talked about where Engineering Duty Officers come from. The idea for the brief came while I was at ED Basic School, where Captain John Exell (Commanding Officer of ED School) tasked all of us with being recruiters. As both a UF graduate and former UF Naval Reserve Officers Training Corps (NROTC) instructor, I knew first hand that the midshipmen get little, if any, exposure to our community. While the brief was professionally rewarding, this was also a good excuse to stop by the school bookstore for some

more t-shirts, catch a Gator basketball game, and wander around campus with my family for an afternoon. I had such a great time and was able to talk to so many potential candidates, I encourage all my fellow EDs to take the opportunity to conduct a similar brief the next time you visit your alma mater.

The following lessons learned are provided to help you get started:

- The brief was easy to put together as I used LCDR Dave Kohnke's Naval Academy Power Point brief as a starting point (Dave can be reached at p445d@persnet.navy.mil).

- ED Community handouts can be obtained by contacting Mr. Richard Todd at pers445f@persnet.navy.mil.

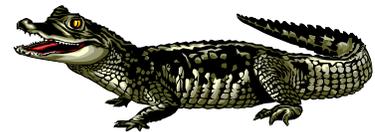
- Be sure to educate the class advisors and service selection offi-

cer on the ED Option Program if they do not attend the brief.

- This type of brief is complimentary to the NROTC Unit's mission of commissioning primarily surface, submarine and aviation unrestricted line officers.

- Don't forget there are good staff members (many working on graduate degrees) at NROTC Units who are candidates for lateral transfer.

If you have any questions or would like a copy of my brief, please contact me at greenewc@psns.navy.mil. Good luck and have fun!



*Left: LCDR Bill Greene and family outside of Van Fleet Hall on campus of University of Florida (UF). Right: UF mascot "Albert the Alligator" visits with Noah Greene (LCDR Greene's son) at a Gator basketball game. (Photos courtesy of LCDR Bill Greene)*

## USS Cole

*Continued from page 1*

- MER2 flooding progressively from AUX2 through the bulkhead 254 starboard shaft seal (30 gallons per minute).
- No electrical power.
- No firemain.
- Four degree port list.
- One half a degree (1.6 meter) trim by the bow.
- Midship bank compensated fuel oil storage tanks and portside service tanks and portside service tank 4-220-4-F ruptured.
- Port propulsion plant out of commission. Starboard plant status unknown.

An initial analysis by the OIC and AOIC using the Program for Operational Ship Salvage Engineering computed 200 tons of fuel outflow, 2300 tons of floodwater ingress, an overall sag condition and a positive transverse metacentric height (corrected for liquid free surface) of 0.4 meters. Section modulus in way of the damage had been reduced by 22 percent to the upper flange (main deck) and seven percent to the lower flange (keel). All analyses performed on site were relayed back to the Supervisor of Salvage and Diving (SEA 00C) for confirmation.

Project goals were established as follows:

- Stabilize situation by stopping progressive flooding, restoring electrical power and firemain and potentially reducing list and trim.
- Recover sailors' remains.
- Determine course of action for moving ship from Aden:
  - - patch and tow
  - - heavy lift
- Prepare ship for movement from Aden Harbor.

### **Stabilization and Remains Recovery**

During the initial assessment phase, two primary salvage and

repair teams were mobilized and arrived on scene with their respective equipment. Mobile Diving and Salvage Unit Two, Detachment Alpha brought surface-supplied diving capability. A team from Norfolk Naval Shipyard consisting of shipfitters, welders, riggers, structural and gas-free engineers provided the heavy industrial component. These teams conducted the parallel work of stabilizing *Cole*, and locating and recovering remains of the missing sailors. Initial actions included:

- The bulkhead 254 starboard shaft seal was patched from the flooded side during an internal dive into AUX2. This stopped the progressive flooding into MER2. Dockside air was then used to power a pneumatic pump and MER2—that had been flooded to the lower-level deck-plates—was dewatered.

- The NR3 SSGTG start air flasks were pressurized using a portable high-pressure breathing air compressor connected through a gage panel calibration line. Once the flasks were charged, ship's force started NR3 SSGTG and restored shipboard power. Firepumps were started and firemain provided throughout the ship.

- During an internal dive into the flooded Supply Department Store Room NR1 (3-220-01-A) high-pressure air valve AHP-V-67 was located and closed allowing HP air cross-connect between numbers two and three SSGTGs without loss of air to the atmosphere via ruptured piping in way of the damage. NR2 SSGTG was now available as a standby generator.

- Because of damage to the compensated fuel system, JP5 was transferred to the aft (300 group) service tanks to provide fuel for generator operations. Fuel from the port service tank was burned

and the starboard tank kept pressed up as much as possible thereby reducing dockside list to one degree port.

By the afternoon of 16 October the above actions were complete, and recovery of both submerged (MER1 and AUX2) and topside remains was in progress. During the next three days remains of all twelve sailors were located and recovered. Additionally, the bulkheads comprising the fore and aft flooding boundaries (174 and 254 respectively) were shored to reduce the potential for further progressive flooding. Underwater and topside structural surveys were completed and the results forwarded to the Naval Sea Systems Command to facilitate planning for ultimate repairs.

### **Development of Plan for Moving COLE from Aden**

While stabilization and recovery work progressed, a plan was developed for removing *Cole* from Aden where she remained under continual threat of a second attack. The SRU Bahrain Supervisory Surveyor inspected local repair facilities and concluded that they were not capable of fabricating or installing a patch that would seal the damaged compartments from the sea. If the patch and tow option were pursued, patch sections would need to be fabricated remotely and shipped to Aden and the industrial team would have to be augmented to fit and install the patch. A request to move *Cole* 1000 meters within the inner harbor to a pierside berth was denied by local commercial interests. Consequently, all repair

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## USS Cole

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work would have to be conducted at the fueling dolphin, which would require moving personnel and equipment to the site via boat and using a floating crane for all lifts. Based on this information, and the logistics difficulties experienced moving material and personnel from outside Yemen to *Cole* via the Aden airport, the initial estimate for installation of a patch was three weeks. A second option for moving *Cole* was heavy lift. SRU Bahrain had recently performed Docking Officer functions for a U.S. Navy heavy lift-transport and was aware that this lift vessel (the largest in the world) was still in the Arabian Gulf. Transit time from the potential lift vessel location in Dubai, United Arab Emirates (UAE), to Aden was five days and much of the docking preparations could be completed en route. Initial estimates were that a lift could be concluded in less than three weeks and lift vessel arrival by sea would eliminate airhead logistics problems. Additionally, the overall operational onshore footprint—a major force protection concern—would not have to be increased for a heavy lift as it would for installation of a patch. Consequently, the on-site team recommended that *Cole* be moved from Aden by the heavy-lift transport vessel *M/V Blue Marlin*. SEA 00C, Integrated Warfare Systems (SEA 05) and the Military Sealift Command (MSC) (MSC is the Navy's contracting agent for heavy lift) initiated dialogue with *Blue Marlin's* operating company, Offshore Heavy Transport Inc. (OHT). On 17 October OHT concluded that *Blue Marlin* could lift *Cole* in

her present condition and MSC entered into a contract with OHT to lift the destroyer and transport her to the continental United States.

### Heavy Lift Preparations

Lift preparations proceeded in parallel onboard *Blue Marlin* and *Cole*. A team of engineers and a contracting specialist led by a SEA 05 representative boarded *Blue Marlin* in Dubai and worked with the lift ship crew and OHT personnel to develop the docking and sea-fastening plan. *Cole* would be docked bow to stern at a 17.5 degree angle to *Blue Marlin's* pontoon deck because, at her damaged drafts, *Cole's* sonar dome would not clear the deck even at *Blue Marlin's* maximum submergence depth. To distribute load evenly and reduce overall metacentric height of the combined ship-on-dock, a continuous keel-block baseline height of 0.4 meters was selected. Consequently, holes had to be cut into the *Blue Marlin's* pontoon deck to accommodate *Cole's* propellers, which extend 1.65 meters below baseline. Two guide towers organic to *Blue Marlin* were repositioned to aid in alignment of *Cole* during loading and provide lateral support for the ship while in transit. Materials for the block build and sea-fastening were procured in Dubai. On 24 October *Blue Marlin* departed Dubai, en route Aden, via a bunkering stop in Fujairah, UAE. Build preparations were underway and continued during the ship's passage to Aden.

Onboard *Cole*, the on-sight team continued internal diving surveys and topside inspections to refine the structural analysis and initial damage assessment. Terminations of cracks emanating from the damage were drilled so the cracks would not propa-

gate under the increased stresses of an open-ocean tow and docking. Propeller pitch was inspected and found to be near zero, a computed requirement for the screws to fit in the pontoon deck cutouts. To lock propeller pitch and secure starboard shaft rotation, divers entered MER1 to engage the starboard shaft-locking lever and close the electro-hydraulic servo crossover valves. These measures were necessary to ensure that pitch would not change during the tow to the load site and that the bulkhead 254 starboard shaft seal patch would not be damaged by shaft rotation (causing MER2 to reflood). Keel deflection was measured by divers along the length of the ship using a Kevlar line rigged from aft of the sonar dome to the inboard shaft lifting tunnels. Readings confirmed a slight keel sag and the measurements were passed to the team on *Blue Marlin* for refinement of keel line blocking height. A guide plate fabricated locally was installed at frame 338 port to contact the aft alignment tower on *Blue Marlin* for fine control of longitudinal relative motion during loading. Hydraulic dewatering pumps were rigged into the spaces fore and aft of the flooding (AUX1 and MER2 respectively) in case of boundary bulkhead failure during ship movement.

Concurrent with these preparations, task force ships conducted weather reconnaissance and determined that the optimum loading site (proximity to Aden Harbor, 23 meter water depth

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## USS Cole

*Continued from page 19*

and protection from prevailing winds and seas) was at Bandar Imran Bay, 25 nautical miles west of Aden. Tides and winds were analyzed and a towing plan and timeline established. The goal was to minimize *Cole's* open-ocean exposure by coordinating her arrival at the load sight with *Blue Marlin* completing ballast down to maximum submergence.

### Docking and Sea Fastening

On 29 October, *Cole* was moved out of Aden Harbor by four Yemeni tugs. Once clear of the harbor she was taken under tow by *USNS Catawba (T-ATF-168)*, and the ships—escorted by two local tugs that would be used during loading—made way for the load site.

Final build inspections onboard *Blue Marlin* were completed on the evening of 29 October and the ship commenced pre-ballasting prior to arrival at the loading position. Upon arrival, *Blue Marlin* anchored and completed her ballast sequence attaining maximum submergence (10.2 meters over the pontoon deck) at 0500 on 30 October.

*Cole* arrived at the load position in the early hours of 30 October. *Catawba* broke tow and *Cole* was moved over *Blue Marlin's* deck via a combination of the two local tugs and lines to power from *Blue Marlin*. Divers monitored the position of *Cole's* screws with respect to the propeller pits during deballasting,

and after several adjustments of lift-ship list and trim and *Cole* longitudinal position, *Cole* was landed dead center on the keel line. Deballasting continued and by late in the evening on 30 October *Cole* was fully landed on the continuous keel build, six port and starboard side blocks and four port and starboard transverse cribs. Immediately following the satisfactory dock inspection, sea-fastening installation commenced.

*Cole* was now statically stable. However, significant work was required to ensure that she would remain secure during the dynamic loading imposed by 7 meter, 9.5 second period seas that would potentially be encountered during transit. Over the next six days the following sea fasteners were installed:

- 21 I beam side shores. These shores were positioned to contact *Cole's* hull on rubber pads at the intersections of transverse frames and longitudinal stiffeners to preclude localized shell plate damage. They were pre-compressed to ten tons using a hydraulic jack prior to base-plate weldment to the pontoon deck. The shores were further pre-loaded by installing the 11 starboard-side beams with *Blue Marlin* ballasted such that *Cole* was heeled 0.5 degrees to starboard and following the reverse procedure for installation of the ten port-side supports.

- Five stem chocks.
- Four stern chocks.
- Eight additional inner-row side blocks.

- 21 additional outer-row side blocks.

- A skeg chock and transom support tower.

- An I-beam shear-plate centered at frame 254 to eliminate longitudinal motions.

Final sea fastening inspection was completed on the afternoon of 5 November, and by that evening, *M/V Blue Marlin* with *USS Cole (DDG-67)* securely loaded, was underway for the United States.

### Conclusion

The challenge of removing a severely damaged ship from a remote location with no organic industrial capability was overcome through the combined efforts of many people acting both remotely and on-site. The logistics support and force protection provided by Joint Task Force elements were outstanding. The Naval Sea Systems Command Supervisor of Salvage and Diving (SEA 00C) afforded real-time technical assistance for the duration of the salvage and lift operation. Space precludes a complete listing of all sea and shore commands that participated. However, special recognition is due to the courageous crew of *USS Cole (DDG 67)*, Mobile Diving and Salvage Unit Two Detachment Alpha and the Norfolk Naval Shipyard industrial team for their superb efforts to control damage, ensure proper burial for our shipmates and prepare *Cole* for her journey home.

### Engineering Duty Officer on-site involvement in the salvage and lift of *USS Cole (DDG-67)*:

- Mr. Bob Wasalaski, NAVSEASYS COM (SEA 05), CAPT (USNR), Heavy-Lift Project Officer
- Mr. Gregon Gant, Guy Matthews & Associates Inc., CAPT (USNR), Independent Marine Surveyor
- CDR Patrick Keenan, COMSERVFOR6THFLT Ship Repair Unit Bahrain, Salvage & Docking Officer
- LCDR Matthew Long, COMSERVFOR6THFLT Ship Repair Unit Bahrain, Assist Salvage & Docking Off
- LT Shannon Terhune, Norfolk Naval Shipyard, Assistant Docking Officer

## Nanos

*Continued from page 2*

yards are doing, and we must challenge them to adopt new technologies. We need to take a hard look at industry—Toyota and the other manufacturers. This is where we can find the best measure of what is happening in shipbuilding and other manufacturing industries.

We bring a wealth of experience, education and training to the work that we do. We must continue to build on these strengths, and bring this knowledge to the tasks at hand. The seeds of success for our country's shipbuilding industry and for the Navy's future are right here at home, but we all have to be part of the solution. Let me underscore this—as EDs, we need to be the leaders.

## Paige

*Continued from page 3*

While the early morning commutes has its drawbacks, living in proximity of Washington, DC, with all of its cultural opportunities and the opportunity to be a program manager, more than compensates for the traffic.

Many of CDR Pedersen's sentiments are shared by CDR May. He says PEO TSC is exciting. "When you think surface combatants, this is the whole ball game," he says. "I get to do things in decision-making and managing Navy funds for TBMD capabilities that I wouldn't do elsewhere," he adds. "Furthermore," he says, "most of the big thinking is in this PEO."

Prior to coming to the PEO, CDR May had tours with Naval Air Warfare Center, White Sands Missile Range (WSMR), New Mexico; SUPSHIP Pascagoula, Mississippi; and the *USS Duncan (FFG 10)*. "Since becoming an ED, I get to do things that have more of an impact," he

says.

On a day-to-day basis, CDR May is involved in technical issues relating to TBMD capabilities and AEGIS ships. However, he hopes to move over to the Standard Missile program, within the PEO, when his current assignment is over. "I have some field experience, from my days at WSMR," he adds, "plus, working in AEGIS, I get both sides of the weapons picture."

Like CDR Pedersen, CDR May feels the Washington, DC tours have been advantageous for personal and professional reasons. "I recommend coming to DC to see the inter-workings of government and the budget," he says, "you don't get to see that in the field." "In addition, there's a lot to do here, and when you live in DC," says CDR May, "everybody comes to see you." CDR May, his wife Lisa, two sons and a daughter, live in Stafford, Virginia.

PEO TSC is the place for energetic, customer results-oriented EDs. But don't take our word for it. In the current Draft Annual Report to Congress, DOT&E's opinion is "Indeed, this PEO's approach could establish a pattern for emulation by other acquisition managers challenged with development and delivery of complex, highly interactive 'system of systems' that cut across...organizational boundaries."

For information on how you might be a part of this exciting team, contact RADM Kathleen K. Paige, ASN(RDA) Chief Engineer and Director for TAMD and Systems Engineering (PEO, TSC-T), 2531 Jefferson Davis Highway, NC2, Suite 9W62, Arlington, Virginia 22242-5165.

## Klemm

*Continued from page 4*

Senior Navy leadership is

still looking at the details of combining maintenance activities to include how we organize, operate, and fund them while minimizing the impact to fleet readiness. The CNO is looking to his Engineers to ensure today's fleet is ready to fight.

I had the opportunity to visit ships and our maintainers in WESTPAC this past December. I spoke with RADM Edwards at COMLOGWESTPAC in Singapore, RADM Chaplin, COMNAVFORJAPAN, and ship Commanding Officers (COs) in Yokosuka Japan, and representatives from the Seventh Fleet staffs onboard *USS Blue Ridge (LCC 19)*. In every case, they all touted the hard work EDs are doing in the Fleet. A special Bravo Zulu to CAPT Dave Armstrong, CO at SRF Yokosuka, and CDR Robin Belen, COS for Maintenance at COMLOGWESTPAC. The tip of the spear does not get anymore pointy than these two locations. EDs are getting it done. Work Hard, Play Hard and get to know what your fellow EDs are up to. Until next time, Keep Charging ...

## Lengerich

*Continued from page 5*

four O-5s (including our own CDR Stan Cunningham) support him. We anticipate adding another ED this summer. E-mail CAPT Orzalli if you are interested (orzalli.john@hq.navy.mil). Included among the lesser-known responsibilities of the division is resource sponsorship of the Navy's program for disposing of ships.

See *Lengerich*, page 22

## Lengerich

*Continued from page 21*

CAPT John Woodburn (an Aviation Maintenance Duty (AMD) Officer) heads N432, our Aviation Readiness Branch. Five CDRs and one LCDR, all aviators or AED/AMDs support him. Embedded in N432 is the responsibility for reporting current readiness within OPNAV.

N433, our Fleet and Battle Group Training Branch is headed by CAPT Dana Rowland, an ED with extensive program management experience. Although the billet is coded for an unrestricted line officer (URL), CAPT Rowland's programmatic expertise is ideal for standing up the requirements assessment methodologies that will be crucial to this branches' success. Several CIVPERS and four URL officers round out the staff of this branch.

At present we are fully engaged with Fleets in developing the Baseline Assessment Memorandums (BAMs) which when complete comprise the fundamental statement of "the requirement" with respect to resources necessary to achieve and support the desired readiness posture.

If you want to understand "the big picture", do a tour in OPNAV. Nowhere else can you get a better view of or be more engaged in shaping the Navy's future, and in doing so, your own future.

## ED Dolphin

*Continued from page 7*

The board consists of two submarine qualified EDs and one Line Submarine Officer (1120). Successful completion of the board is the last step of qualification.

### Why should I consider this program?

The program is rigorous, but it is absolutely unique in the

Navy, and certainly in the ED Community. It is your opportunity to earn a warfare qualification AS AN ED, and is UNIQUELY tailored for direct application to your job.

### Is there a future in this qualification?

The submarine business is certainly on the upswing. Consider the following programs going on right now:

- **Overhaul.** It is time to refuel and overhaul the Los Angeles Class. There are 35 refuelings/overhauls scheduled over the next five years. This major undertaking will require a cadre of EDs qualified in submarines in order for us to be successful.

- **SEAWOLF Program.** *USS Seawolf (SSN 21)* is going through OPEVAL. *USS Connecticut (SSN 22)* has just finished her PSA and is readying for deployment. *Jimmy Carter (SSN 23)* is still under construction, with a hull plug being added to convert her into a multi-mission platform. She delivers in 2004.

- **VIRGINIA Program.** The lead VIRGINIA class submarine delivers in 2004. Three follow ships are already under contract. These ships are being built at both Electric Boat Corporation in Rhode Island/Connecticut and Newport News Shipbuilding in Virginia. We are only at the beginning of a 30-ship class. The design has not quite finished, and there are major class upgrades planned for the future. Plenty of work at both headquarters and the field.

- **Other Programs.** The Navy has about 56 attack submarines and 18 SSBNs. Maintaining, overhauling, upgrading, and converting these ships is a huge undertaking. Note that the Navy is considering conversion of four OHIO Class SSBNs to the SSGN role, and is actively study-

ing replacement of the NR-1 research submarine. We will also be building the second Advanced Seal Delivery System (ASDS).

### Where can I learn more?

There are about 43 ED Dolphins on active duty. Look for people with the "SU0" qualification designator in the *ED Directory*. Speak to any one of us. There are two flags, 17 CAPTs, 16 CDRs and eight LCDRs. We serve in the following types of billets:

- IMA Repair Officer
- Shipyard Commander and Department Heads
- Supervisor of Shipbuilding
- VIRGINIA Class Program Manager (PM) (PMS 450)
- Attack Submarine Program PM and Assistant PMs (APMs) (PMS 392)
- Deep Submergence Program APMs (PMS 395)
- NAVSEA Subsafe Program Director (SEA 92Q)
- NAVSEA ship design managers

There are two qualified female ED Dolphins, CAPT(Sel) Mary Townsend-Manning (SEA 92Q) and CDR Geraldine Olson (COMSUBPAC).

There is flexibility in how some of the requirements of the program can be satisfied, so don't be discouraged if you think you can't meet all the requirements as stated in the NAVSEA instruction.

If you are interested in hearing more, contact your detailer, Ms Patsy Morgan, or one of the "Subba Bubbas" listed below:

- RADM(S) Sullivan – PMS 450
- CAPT Dullea – PMS 392
- CAPT Butler – ASN RD&A
- CAPT Heffron – SEA 92B
- CAPT Mason – SOS Groton

## Optic Cable

*Continued from page 8*

ten. The node rooms are classified vital electronic spaces and have been built to airtight specifications. The switches are the interface points between the ISNS LAN and the backbone. Current configuration calls for XLAN backbone switches which are capable of Asynchronous Transfer Mode (ATM) 655 MEGGA bytes per second and edge switches capable of 155 MEGGA bytes per second. Survivability and user densities were the two major factors that determined node room location.

The Team One Initiative provides an environment of trust and support which has allowed PSNS to design and install a fiber optic backbone on *Carl Vinson*. Although the fiber optic backbone installation is a large up front investment it will provide significant return for the foreseeable future. This installation supports future "smart carrier" initiatives that will reduce both manning requirements and workloads. The backbone will allow future installations and upgrades to the LAN to be accomplished in an economical, less disruptive, and timely manner without the large cost of removing and reinstalling new conduit. The Fiber Optic backbone is designed with a significant growth capacity in both amount of fiber and number of edge switches, which is a key to maintaining our Navy's battlefield dominance in a cost-effective manner. A successful installation of fiber optic backbone on board *Vinson* is a critical element in our navy maintaining information superiority that ultimately translates into battlefield dominance.

## Fix Ships

*Continued from page 10*

space has already led to a cost avoidance of nearly \$3.5 million.

### REPAIR PROJECT OFFICE

The Repair Department...this is where the rubber meets the road! Customers' opinions and perceptions of the maintenance community, SUPSHIP as well as the NAVSEA Corporation are formed at this level. Building positive perceptions is one of the major challenges an ED has during the execution of an availability. The experience gained at this level by actually touching the fleet enables an ED to view the product from the perspective of the customer.

The majority of ED billets at SJAX are in this department. The Department Head is an ED, Repair Officer CDR Michael Coleman. He is responsible for the actual execution of all maintenance contracts awarded by SJAX. The other ED billets in the Repair Project Office are Ship Repair Officers (SROs). These EDs are an integral part of the execution team that is on the deck-plates administering the contract and providing oversight of the contractor. The SROs' ability to relate and effectively influence all of the different entities during the execution of an availability is crucial to the overall success of a maintenance period. These are outstanding billets for junior EDs in the qualification process. Being an SRO is a highly visible job in that the SRO becomes the voice of the command to the Ship for its availability. As the SRO, you are the primary point of contact for all issues that concern the ship, varying from production to habitability. These positions allow EDs to gain valuable experience with virtually every aspect of the maintenance process.

### ENGINEERING AND PLANNING OFFICE

The Engineering and Planning Office is also headed by an ED, CDR "Hap" Chester. The department is divided by function into Advance Planning, Planning and Estimating (P&E), Combat Systems and Engineering and Design. As the SHAPEC planning activity for FFG 7 class ships, SJAX works as the availability planning team for every FFG 7 going into a CNO availability planning and engineering processes ultimately set the tone for the entire availability. How? If the entire process of planning and executing an availability is thought as a game, the planning department would be considered the makers of the rules for that game. The rules provide the foundation for the execution of the game. How well all the players are able to conform to the rules determines how successful an availability will be, in terms of cost and time.

### DETACHMENT INGLESIDE

Our Officer in Charge, CDR Pat Sudol (an ED) has a very similar organization providing oversight of Mine Countermeasure Ship maintenance in Texas. Though smaller, the departmental structures have the same responsibilities as their counterparts here. Ingleside also provides excellent opportunities for EDs to learn the waterfront operations.

### INNOVATION – SJAX KEYS TO SUCCESS

There is no doubt that here at SJAX innovation is king. EDs play leading roles in these initiatives. SJAX is an organization where EDs are encouraged to take on the challenges and responsibilities of doing what we do best! What is it we do at SJAX? WE FIX SHIPS!

## Make A Hole!

*Continued from page 12*

Control Ship program is all of that plus an opportunity to engage with industry as we sort through an acquisition strategy tailored to these unique requirements. The JCC(X) Program is in the final phases of its AOA, and ORD drafting will soon be underway. JCC(X) construction will be awarded in FY06, with delivery in FY11.

**Landing Craft Air Cushion (LCAC)** -- With recent delivery of the ninety-first (and last) LCAC of an historically successful production program, a new Service Life Extension Program (SLEP) phase will double the service life of these unique warcraft from 20 to 40 years. Maintaining operational speeds up to 50 knots, a new propulsion plant allows transport of a 72-ton M1A1 tank even on 100-degree F days, and a new integrated C4 and navigation suite provides unprecedented capability.

**Amphibious Assault Direction System (AN/KSQ-1)** -- Designed to cut through Clauswitz's "fog of war", the AN/KSQ-1 is a command and control system for the amphibious assault commander to use to ensure the high speed LCACs hit the right beach at the right time. AN/KSQ-1 provides accurate location and motion information by integrating the Army's Enhanced Position Locating & Reporting System (EPLRS) radios with GPS receivers. This proven system is a candidate for future integration with Cooperative Engagement Capability for an even greater situational awareness capability for the Fleet.

If forward reaching technology challenges and new acquisition strategies and execution

capture your attention, PMS 377 is the place to be. ***We do it all!***

## Fires Lit

*Continued from page 13*

ventional landing craft, hovercraft, or a combination of the two. Living area is sufficient for nearly 3,200 crewmembers and embarked troops, and includes accommodations for nearly 450 females of all ranks. LHD 7 is 844 feet long with a 106-foot beam. The two steam propulsion plants will develop a combined 70,000 horsepower, to drive the 40,500 ton ship in excess of 20 knots.

Additional ships are currently planned for the Wasp Class, but LHD 8 and future hulls will be redesigned to accommodate a gas turbine propulsion plant. A design contract for LHD 8 has recently been awarded to Ingalls.

After undergoing sea trials during December 2000 and February 2001, LHD 7 will be delivered to the Navy in April 2001 and commissioned in June 2001. Norfolk is *Iwo Jima's* ultimate homeport.

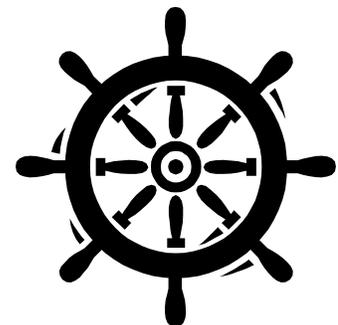
## Hard Aground

*Continued from page 15*

scuba divers to accomplish initial repairs using the industrial capability and materials onboard *La Moure County*.

Work progressed quickly once all of the salvage, repair, and pollution abatement resources were on-site. CAPT (Select) Phil Beierl, Commanding Officer of MDSU-2, assumed the role of Salvage Officer in Charge of the operation. The first issue confronting this newly formed salvage team was to determine how to safely

launch ten USMC AAVs from the tank deck of this crippled LST. After much preparation, the AAVs were successfully launched off the stern while divers closely monitored the motion of the hull across the damaged keel span using an improvised mechanical, "strain-gage." The Salvage and Repair team then focused all efforts towards preparing the *La Moure County* for a coastal tow. Two more SEA 00C officers, LCDR Gregg Baumann (ED) and LT Rob McClellan (Civil Engineering Corps Officer) (CEC)), were mobilized to Cifuncho to relieve members of the original team and supervise completion of both the salvage and structural repairs. On 28 October, the operation culminated with MDSU-2 and SEA 00C's towing specialists preparing and successfully towing *La Moure County* to Talcahuano, Chile for further decommissioning and disposition actions. In summary, the NAVSEA welding contractor spent 836 hours of bottom time installing the box girders, MDSU-2 divers spent 231 hours of bottom time and hundreds of hours in air-line hose masks patching fuel tanks, while the ESSM contractor safely recovered in excess of 300,000 gallons of oily waste.



## Tip of the Spear

*Continued from page 14*

without requiring modifications to the firing sector cutouts.

- Many other systems (IT21, ELB, TAC-VTC, ADNS, SINGARS, TVSS, TV-DTS, TSS, JSIPS-N, GCCS-M, TPX-42, HFRG, RADDs, TSIU) required daily progress tracking and intervention by ship's force while trying to focus on deployment preparations. The negative impact on the crew's inability to train in port was not addressed. As installs continued to slip to the right, a constant rip-apart/put-together cycle occurred each time the ship arrived pier side from an at sea deployment exercise. In the final stages, *Tarawa* literally got underway to conduct deployment training with installers working onboard.

Ships can rarely say "no" to an installation that will increase the fighting capabilities or situational awareness of her crew. Funding the planning and purchasing of material during the out years must become a priority as maintenance periods shrink in duration and the ability to delay

to the right is non-existent.

When installations complete past TCD, the impact is squarely on the crew as they try to learn a system en route to deployment. An honest risk assessment must be made that includes a detailed plan of action and milestones, addressing those items that are critical to fund in advance in order to make TCD.

As Tactical Action Officer during Determined Response (*USS Cole* response), I had seen first hand our superior war fighting capabilities, our ability to communicate real time with command authority and the ability to maintain situational awareness to remove confusion as we provide force protection assets to the region. We must continue to develop systems that enhance the Navy's ability to control previously uncontrollable situations with precision. *Tarawa* is "Proud Eagle of the Sea" and her crew deserves the best support and tools available to allow her to complete her mission and return home safely. Our sailors

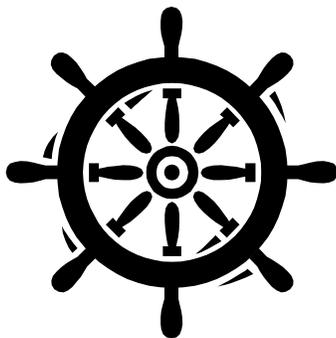
fight the ship every day, they are the customer and deserve the best systems and support possible from our ashore commands.

## Opportunities

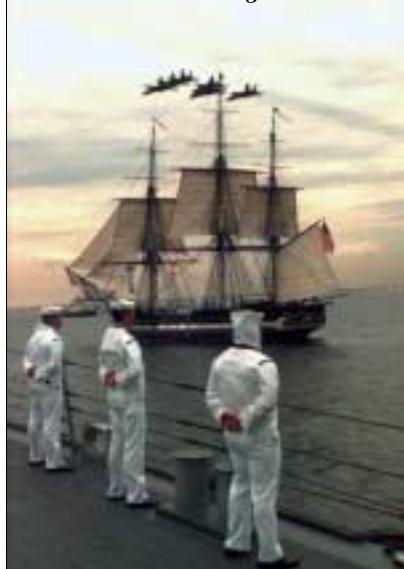
*Continued from page 11*

Project Manager. We have three officers supporting the Strategic Sealift Program as Program Manager's Representatives – CDR Jay Renkin in San Diego, LCDR George Bertsch in New Orleans and LCDR Bill Plott in Newport News.

Don't hesitate to call me or any of these officers if you have any questions. My phone number is 703-602-3507x103 and my e-mail address is [hidemenrl@navsea.navy.mil](mailto:hidemenrl@navsea.navy.mil). If you are looking for a challenging and always fun career choice – then PMS 325 is the place.



*USS Constitution during OPSail 2000*



**ENGINEERING DUTY OFFICER SCHOOL**  
**2000B-4 Basic Course/2000R-4 Reserve Course**  
**2 Oct - 9 Nov 00/2 Oct - 13 Oct 00**



EDO Basic Course 2000B-4. **Front Row (L to R).** LCDR Donna Fortin (USNR), LCDR Carlos Suarez, LCDR(S) Casey Moton, LT Pat Mack, LCDR Miguel San Pedro, LDCR Fernando Maldonado, LCDR Bruce Dickey, LT Brian Lawrence, LT Charles Marshall, LCDR Sally Van Horn, CAPT John Exell (CO). **Second Row (L to R).** LT Keith Beiter, CDR Bob Vince (Staff), LCDR Chris Meyer (Staff), LCDR Dave Ruley, LCDR(S) Bill Cobb, CDR Eric Haas (USNR), LCDR Skip Huck, LCDR Dennis Reinhardt, LCDR Bill Greene, LCDR Vic Reck, LCDR Marvin Campbell (Staff), DR. Mary Davidson (Staff).

### EDQP COMPLETIONS

- |                                  |                              |
|----------------------------------|------------------------------|
| - LCDR Canfield, Eugene C.       | SSP                          |
| - LCDR Crake, Kurtis W.          | Puget Sound NAVSHIPYD        |
| - LCDR Dill, Jay F.              | Norfolk NAVSHIPYD            |
| - LCDR Forster, David L.         | SUPSHIP Bath                 |
| - LCDR France, Frederick M., Jr. | Portsmouth NAVSHIPYD         |
| - LCDR Heller, Scott D.          | SPAWARSSYSCEN San Diego      |
| - LCDR Kiestler, William C.      | Pearl Harbor NAVSHIPYD & IMF |
| - LCDR Levesque, Christopher R.  | Portsmouth NAVSHIPYD         |
| - LCDR McGinnis, Biran R.        | Portsmouth NAVSHIPYD         |
| - LCDR Pace, Howard, Jr.         | SPAWARSSYSCEN San Diego      |
| - LCDR San Jose, Antonio P.      | Pearl Harbor NAVSHIPYD & IMF |
| - LCDR Stevens, Henry W., III    | Pearl Harbor NAVSHIPYD & IMF |
| - LCDR Trapp, Thomas A.          | Pearl Harbor NAVSHIPYD & IMF |
| - LCDR Vandroff, Mark R.         | SUPSHIP Pascagoula           |
| - LT Kelly, Brian L.             | SUPSHIP Bath                 |
| - LT LeGear, Russell E.          | SUPSHIP Pascagoula           |
| - LT Raphael, Roy A.             | DISA HQ Arlington            |

## OCTOBER 2000 LATERAL TRANSFER BOARD SELECTEES

<b>RANK</b>	<b>NAME</b>	<b>CURRENT DUTY STATION</b>
LT	ANDERSON, SEAN R.	COMARSURVREFSIXTHFLT SIGONELLA
LT	BLAIR, STUART R.	PEP CANADA-OTTAWA
LT	CARFF, PAUL F.	NTCTMAS PACW HI
LCDR(S)	CHIEN, STANFIELD L.	COMSURFWARDEVGRU LITTLE CREEK
LT(S)	CROCKER, ELROY S.	NSA/CSS COMSEC FORT MEADE
LT	DIDOSZAK, JAREMA M.	NAVCRUITRACOM GREAT LAKES
LT	DUDAR, STEPHEN W.	COMAFLOATRAGRUPAC SAN DIEGO CA
LT	ETTLICH, DANIEL W.	NROTCU UNIVERSITY OF ARIZONA TUCSON AZ
LT	ETZKORN, KEVIN L.	NROTCU UNIVERSITY OF ILLINOIS CHAMPAIGN IL
LT	FELICIANO, ALLAN S.	STU NAVPGSCOL MONTEREY CA
LCDR	GRENNEK, DAVID S.	SPAWAR FIELD ACTIVITY CHANTILLY VA
LCDR	HOLMES, CHRISTOPHER D.	USS LAKE ERIE (CG 70)
LT	LAWLER, GEORGE M.	STU NAVPGSCOL MONTEREY CA
LT	MILLER, JAMES H., JR.	NAVSEA (SEA 08)
LCDR(S)	MILLS, JAMES H.	OPNAV (N6A1)
LT	MONTI, DAVID A.	NORFOLK NAVSHIPYD
LT	MOON, RONNIE L.	COMOPTEVFOR NORFOLK VA
LCDR	NUGENT, DEVON C.	ACSF 7FLT COMCARGRU 5 YOKOSUKA
LT	PRENDERGAST, JULIA D.	PUGET SOUND NAVSHIPYD
LT	PRICE, JOSHUA S.	USS CARR (FFG 52)
LT	QUINN, KEVIN G.	SWOSCOLCOM NEWPORT RI
LT(S)	RAMTHUN, DAVID L.	USS THEODORE ROOSEVELT (CVN 71)
LT	RESTIVO, RICK A.	USS CORMORANT (MHC 57)
LT	RHOADS, JASON L.	USS DWIGHT D. EISENHOWER (CVN 69)
LTJG	ROACH, MICHAEL L.	COMDESRON 7
LT	ROSE, GREGORY D.	NAVNUPWRTRAU CHARLESTON SC
LT	SCHNEIDER, NATHAN A.	USS PAUL F. FOSTER (DD 964)
LCDR	SHARP, KELLOG C.	USS COMSTOCK (LSD 45)
LCDR	SMITH, CHARLES S.	COMAFLOATRAGRUPAC ATLANTIC NORFOLK VA
LT	WILLIAMS, CLIFTON J.	STU NAVPGSCOL MONTEREY CA
LCDR	YOUNG, FORREST	USS JOHN C. STENNIS (CVN 74)

*CHANGES OF COMMAND*

<b>DATE</b>	<b>COMMAND</b>	<b>OUTGOING</b>	<b>INCOMING</b>
19 OCT 2000	CO SPAWARCEN CHASN	CAPT JAMES. H. HOFFMAN	CAPT NANCY L. DEITCH
18 OCT 2000	OIC SPAWARCEN GUAM	LCDR KEVIN R. PETERSON	LCDR(S) PETER J. RYAN JR

*CHANGE OF DUTY*

<b>RANK</b>	<b>NAME</b>	<b>TO</b>	<b>REPORT DATE</b>
CAPT(S)	BAUN, LAWRENCE R.	PUGET SOUND NAVSHIPYD	NOV 2000
CAPT	PREISEL, JOHN H., JR.	PEO MUW (MUW-M)	OCT 2000
CAPT	ROSS, MICKEY V.	SPAWARSYSCOM SAN DIEGO	OCT 2000
CAPT	ROWLAND, DANA W.	OPNAV (N433)	OCT 2000
CAPT	RUCKER, HARRY J.	NAVSEA (SEA 04M41)	OCT 2000
CDR	BROWN, JAMES P.	USS NIMITZ (CVN 68)	OCT 2000
CDR	CUNNINGHAM, STANLEY	OPNAV (N431)	OCT 2000
CDR	DUMAS, RICHARD A.	NSWCD PORT HUENEME	OCT 2000
CDR(S)	ELKIN, LESLIE R.	SUPSHIP GROTON	OCT 2000
CDR(S)	FULLER, L. BRYANT, JR.	PORTSMOUTH NAVSHIPYD	OCT 2000
CDR	KERR, GIBSON B.	PEO SUB (PMS 401)	OCT 2000
CDR	LAWSON, JOHN E.	BALL MISSILE DEF ORG	DEC 2000
CDR	MCKERNAN, SCOTT J.	USS H. S. TRUMAN (CVN 75)	OCT 2000
CDR	MURPHY, BRIAN P.	NAWCWD WHITE SANDS	OCT 2000
CDR	PARKS, STEVEN A.	PEO CV (PMS 378)	DEC 2000
CDR	PIERCE, DAVID D.	SPAWARSYSCOM SAN DIEGO	OCT 2000
CDR	REILLY, KEVIN D.	USS CONSTELLATION (CV 64)	NOV 2000
CDR	STETTLER, JEFFREY W.	S PG MIT CAMBRIDGE	NOV 2000
CDR	TAYLOR, KEVIN B.	PUGET SOUND NAVSHIPYD	NOV 2000
CDR	VERBOS, ROBERT M.	NAVSEA (SEA 05H)	OCT 2000
LCDR	ABBOTT, WALTER D., III	DOE MIL APPLICAT GERMANTOWN	DEC 2000
LCDR	ANDERSON, EMORY A., III	S PG MONTEREY	DEC 2000
LCDR	BLANK, RICHARD P.	NAVSEA (SEA 05P)	OCT 2000
LCDR	CARLING, LEO J., IV	USMTM RIYADH SAUDIA ARABIA	OCT 2000
LCDR	COBB, WILLIAM E.	SUPSHIP SAN DIEGO	NOV 2000

*CHANGE OF DUTY*

RANK	NAME	TO	REPORT DATE
LCDR	CRAKE, KURTIS W.	EDO SCHOOL PORT HUENEME	NOV 2000
LCDR	CUNNINGHAM, RICHARD E.	SUPSHIP BATH	OCT 2000
LCDR	DICKEY, BRUCE A.	SUPSHIP PORTSMOUTH	NOV 2000
LCDR	GREENE, WILLIAM C.	PUGET SOUND NAVSHIPYD	DEC 2000
LCDR	HUCK, HUGH J., III	NORFOLK NAVSHIPYD	NOV 2000
LCDR	HYMAS, HEWITT M.	SPAWARSYSCOM SAN DIEGO	NOV 2000
LCDR	JONES, LLOYD H.	PINSURV S/D DET NOROFLK	DEC 2000
LCDR	MCCUE, TIMOTHY P.	COMNAVSURFPAC SAN DIEGO	OCT 2000
LCDR	MERRILL, CRAIG F.	NAVSEA (SEA 05HT)	DEC 2000
LCDR(S)	MOTON, CASEY J.	SUPSHIP PASCAGOULA	NOV 2000
LCDR	NEWTON, PETER J.	SOAC MACDILL AFB	NOV 2000
LCDR	PACE, HOWARD	SPAWARSYSCOM SAN DIEGO	NOV 2000
LCDR	PLOTT, WILLIAM G.	SUPSHIP PORTSMOUTH	OCT 2000
LCDR	POOR, CHRISTOPHER A.	PEO(W) (PMA 282)	OCT 2000
LCDR	RECK, VICTOR, JR.	SUPSHIP GROTON	NOV 2000
LCDR(S)	RIGO, MICHAEL J.	USS MOUNT WHITNEY (LCC 20)	DEC 2000
LCDR	ROMERO, NESTER E.	USS BELLA WOODS (LHA 3)	NOV 2000
LCDR	RULEY, DAVID C.	SHIPREPFAC YOKOUSKA	DEC 2000
LCDR(S)	RYAN, PETER J., JR.	SPAWARSYSCEN GUAM AS OIC	OCT 2000
LCDR(S)	STARR, JACK A.	PEP AUSTRALIA-SYNDEY	OCT 2000
LCDR	SUAREZ, CARLOS M.	SUPSHIP NEW ORLEANS	NOV 2000
LCDR	SWANK, DAVID P.	NSWC SHSES PHILADELPHIA	NOV 2000
LCDR	VANHORN, SALLY A.	SPAWARSYSCEN CHARLESTON	NOV 2000
LCDR	WIEGAND, MICHAEL J.	FTSCPAC SAN DIEGO	NOV 2000
LT	BEITER, KEITH A.	PUGET SOUND NAVSHIPYD	NOV 2000
LT	CARROLL, CARLOS J.	S PG MONTEREY	OCT 2000
LT	DOLLOFF, KATHERINE M.	S PG MONTEREY	DEC 2000
LT	LAWRENCE, BRIAN D.	PUGET SOUND NAVSHIPYD	NOV 2000
LT	MACK, PATRICK Y.	SPAWARSYSCEN SAN DIEGO	NOV 2000
LT	MARSHALL, CHARLES R.	NORFOLK NAVSHIPYD	DEC 2000
LT	SWISHER, DOUGLAS L.	S PG MONTEREY	DEC 2000

*Fair winds and following seas. . . . .*

CAPT	LANGAN, JOHN R.	PEO MINE WRF (PMS 303B)	01 OCT 2000
CAPT	NEILY, DAVID C.	NAVSEA (PMS 377J)	01 OCT 2000
CAPT	SCHEIB, TIMOTHY E.	CO NORFOLK NAVSHIPYD	01 OCT 2000
CDR	MICKELBERRY, KENNETH D.	PUGET SOUND NAVSHIPYD	01 OCT 2000
CDR	STANKO, STEPHEN W.	SUPSHIP SAN DIEGO	01 OCT 2000
CDR	STORM, MICHAEL A.	COMNAVSURFLANT	01 OCT 2000
CDR	BRESLIN, JOHN J., JR.	COMNAVSURFLANT	01 NOV 2000
CDR	COKER, HARRY JR.	SPAWAR FLD ACT CHANTILLY VA	01 NOV 2000
CDR	DEANGELIS, MARC S.	SSP WASHINGTON DC	01 NOV 2000
CDR	LEIGH, CHARLOTTE V.	BUPERS SEA DUTY	01 NOV 2000
CDR	MELVIN, MICHAEL E.	PEO TSC (PMS 451E)	01 NOV 2000
CDR	MYERS, ROBERT J.	PEARL HARBOR NAVSHIPYD & IMF	01 NOV 2000
CDR	PHILLIPS, MARK	BUPERS SEA DUTY	01 NOV 2000
CDR	SANCHEZ, BENJAMIN W.	OPNAV (N433F)	01 DEC 2000
CDR	SIGMON, DALE E.	OPNAV (N471E)	01 DEC 2000
LCDR	OLSEN, EDWARD	PUGET SOUND NAVSHIPYD	01 OCT 2000
LCDR	KRAGH, MELODY	SPAWARSYSCEN SAN DIEGO	31 OCT 2000
LT	KROLL, DARWIN E.	NORFOLK NAVSHIPYD	31 OCT 2000

## IN MEMORIAM

CDR John F. O'Toole, Jr., USN (Retired)  
8 Dec 1957 – 2 Jan 2001

The ED Officer community was saddened to learn of the passing of CDR John F. O'Toole, Jr., USN (Retired). CDR O'Toole graduated from Georgia Institute of Technology in 1980 where he received a bachelor of science degree in Architecture. In 1986, he obtained a masters degree in Mechanical Engineering from the U.S. Naval Postgraduate School. He earned the designation of "ED Qualified in Submarines" in 1990. His ED assignments included tours with: SUPSHIP, Groton, CT; COMSUBLANT, Norfolk, VA; PEO Submarines, SEAWOLF Program (PMS 350); and USS EMORY S. LAND (AS 39). At the time of CDR O'Toole's retirement in February 2000, he was Assistant Program Manager for Construction and Testing in the VIRGINIA Class Submarine Program Office (PMS 450).

## ED NEWSLETTER



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