U.S. Coast Guard
Engineering, Electronics & Logistics Quarterly
Summer 2009

The Yard's New Renewable Energy Center

A Coast Guard First

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Article and Photo Submissions:

Articles should be about 500 words long; however, C4IT, engineering, logistics and environmental specific articles can be up to 2,000 words -- all acronyms must be spelled out when first used. To have your article considered for publication, photo(s) must accompany each article. Articles can be submitted in Microsoft Word on a CD or e-mailed electronically. Please submit original photographs and graphics. All slides, photos, graphics and illustrations should be in color where possible. Please include **by-line** when submitting article. Let us know if you want your photos and graphics returned to you. Submit inquiries, letters, articles, and photographs to:

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***On the Cover**: The exterior of the Coast Guard Yard's new Renewable Energy Center dedicated on April 22, 2009. Read more about it on page 24.*

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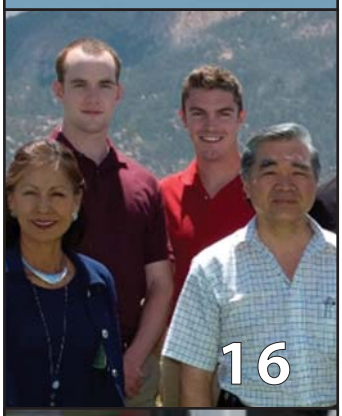

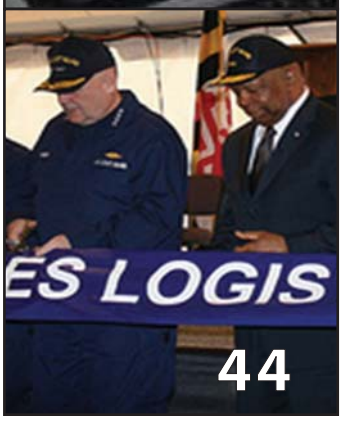

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***Back Cover*: 2009 U.S. Coast Guard Headquarters Earth Day poster.**

From the Assistant Commandant

These are truly exciting and historic times to be in the U.S. Coast Guard. We are rapidly and decisively changing our organizational structure and business processes to provide superior support for mission execution into the twenty first century. I am pleased to report that we have made significant strides toward implementing our modernization plans this year, notably, standing up the service centers and offices that will provide Coast Guard mission support under the new logistics business model. The Command, Control, Communications, Computers and Information Technology (C4IT) Service Center stood up on February 9, 2009 at the Telecommunication and Information Systems Command (TISCOM); the Shore Facilities Logistics Center (SFLC) stood up on January 26, 2009 at Coast Guard Yard in Baltimore, MD; the Shore Infrastructure Logistics Center (SILC) stood up on February 17, 2009 in Hampton Roads, VA; the Personnel Service Center (PSC) stood up on March 16, 2009 in Arlington, VA; and, the Asset Project Office (APO) stood up on January 26, 2009 at Coast Guard Yard in Baltimore, MD. We will be adding more capability in the coming months as we continue with our union bargaining.

Some of you may have already received letters of notification regarding the realignment of your position. In addition to identifying your placement, the notification is intended to ensure that no one is overlooked as a vital member of the modernized organization. As you review your notification, I ask that you take a moment to consider the significance of this modernization effort, to reflect on your personal role in the organization, and ask yourself the following questions:

- Why did I join/take a position with the Coast Guard?
- What is keeping me in/with the Coast Guard?
- What can I do to help the organization succeed?

Although your individual responses will likely be unique and varied, I suspect that many of the answers to the first two questions will share a common theme; that we take pride in the service that we perform for our country. No other organization has a greater impact on the daily lives of the people of this nation. However, as engineers and logisticians, no one knows better than you the significant challenges and degree of work associated with supporting the assets used to execute our diverse missions. Future organizational success will be achieved through your dedication to professionalism and duty, continued commitment to your fellow teammates, shipmates and crew and your willingness to embrace change for the opportunity to provide a better product or service.

I asked the staff here at headquarters these questions during a recent all hands, because I wanted to impress upon them that although their job description may not change due to modernization, the work to be performed on a daily basis will have a more direct impact on the field. I asked them, and I ask you, to reflect on your responsibilities and internalize how your efforts will support the execution of the operations that the U.S. Coast Guard performs on a daily basis. The modernized Coast Guard is designed, in part, to facilitate faster communication and improved decision making through more accurate and timely information exchange. Those of you transitioning to one of the five mission support organizations will be even closer to the operators and the impact of your work will have a direct affect.

The timing for logistics transformation is now. New assets, such as the CGC WAESCHE (page 10) and the HC-144A Ocean Sentry Maritime Patrol Aircraft (page 30) are currently rolling off the production lines, undergoing tests and being placed into operations. The engineering and logistics community has a unique opportunity to posture itself to better support these assets throughout their design life by utilizing modern management techniques and technology. Information technology will also play a vital role in our successful move to a modernized logistics system. The Port Engineer Electronic Performance Support System (EPSS) (page 3) and the Aviation Logistics Management Information System (ALMIS) are two examples of information management systems that reinforce the importance of collecting, maintaining accurate data and enable sharing of data across the enterprise.

As I continue to visit units, I invite you to ask questions and raise any issues or concerns that you may have with regards to modernization and logistics transformation. Also, I encourage you to visit the new CG-4 Blog, located on CG Portal at: https://cgportal.uscg.mil/lotus/myquickr/cg-4-blog/team-blog and share your thoughts, questions and ideas. I look forward to hearing from you.

Thomas Ostebo RDML, USCG
Assistant Commandant for
Engineering and Logistics

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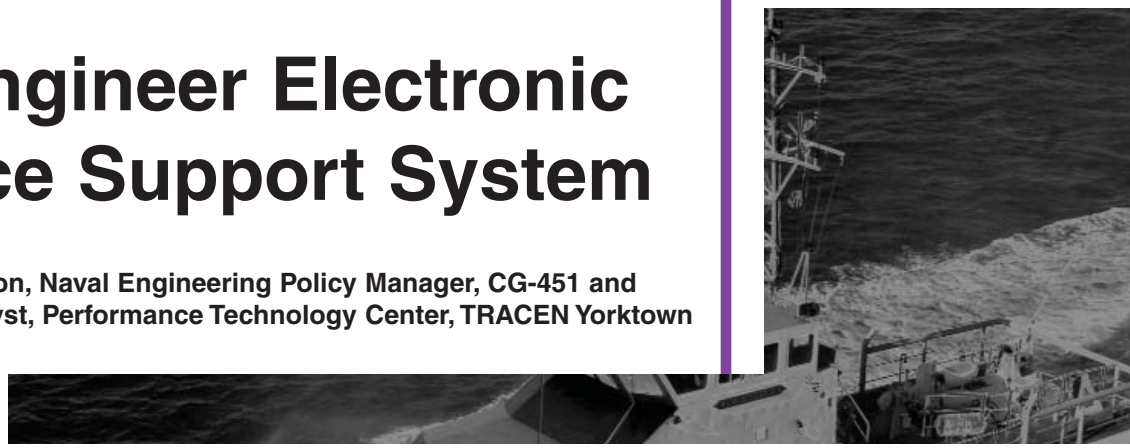
The Port Engineer Electronic Performance Support System



by LCDR James P. Thompson, Naval Engineering Policy Manager, CG-451 and Brittany Noelle Davis, Analyst, Performance Technology Center, TRACEN Yorktown

As the most recently assigned Port Engineer (PE) at your Naval Engineering Support Unit (NESU), you have studied and feel well prepared for your first solo maintenance availability. The cutter placed under your guidance begins a dockside maintenance availability next week. You are familiar with most of the scheduled repairs as a result of your experience as a Student Engineer and COTR training, but one project, the flight deck coating renewal, ventures into a unique specialty area. You know that flight deck renewal is executed differently from other coating projects, but your only experience is with standard deck preservation. As the PE, your highest priority is ensuring that the contractor is performing quality work and that the job is completed in accordance with contract requirements. What's next and what resources are available? You know of several available resources, such as the Maintenance and Logistics Command Atlantic's (MLCLANT) tutorial on flight deck preservation, but would like more in-depth guidance. A senior PE suggests the Port Engineer EPSS, which you discover provides the special tools, inspection points, and environmental requirements information you were looking for.

EPSS stands for Electronic Performance Support System. EPSS may sound unfamiliar and complicated, but the truth is you use EPSSs almost daily; each time you withdraw money from an ATM; when you check in for a flight at the airline self-help kiosk; and when you use tax preparation software. Although these examples of EPSSs illustrate variations in terms of purpose and format, they, like all EPSSs, are doing the same thing -- providing the user with the information and guidance required to accomplish a specific task when the user needs it.

Armed with an EPSS, you do not need an accounting degree to prepare your taxes. Instead, you can "hit the ground running" because the help you need is built into the tool and packaged in a logical way. This is the beauty and value of a well-built EPSS.

With an understanding of what an EPSS is about, you can see how the Port Engineer EPSS can help you perform your job more effectively and efficiently. Using the PE EPSS, you can gauge the contractor's performance of the "near white blast" on the deck, based on procedures and criteria in the applicable standard (in this case Steel Structures Painting Council (SSPC-SP-10)). You will be able to determine the "dry film thickness" of the applied coatings and verify that the depth is within acceptable standards. You know the temperature range at which paint coatings may be applied and can ensure that the contractor is not painting at inappropriate times. You also know what engineering calculations are involved in dry-docking and why they are important. You can identify what special tools are required to complete various depot maintenance activities on board your cutter and can explain how to use them to the junior engineers.

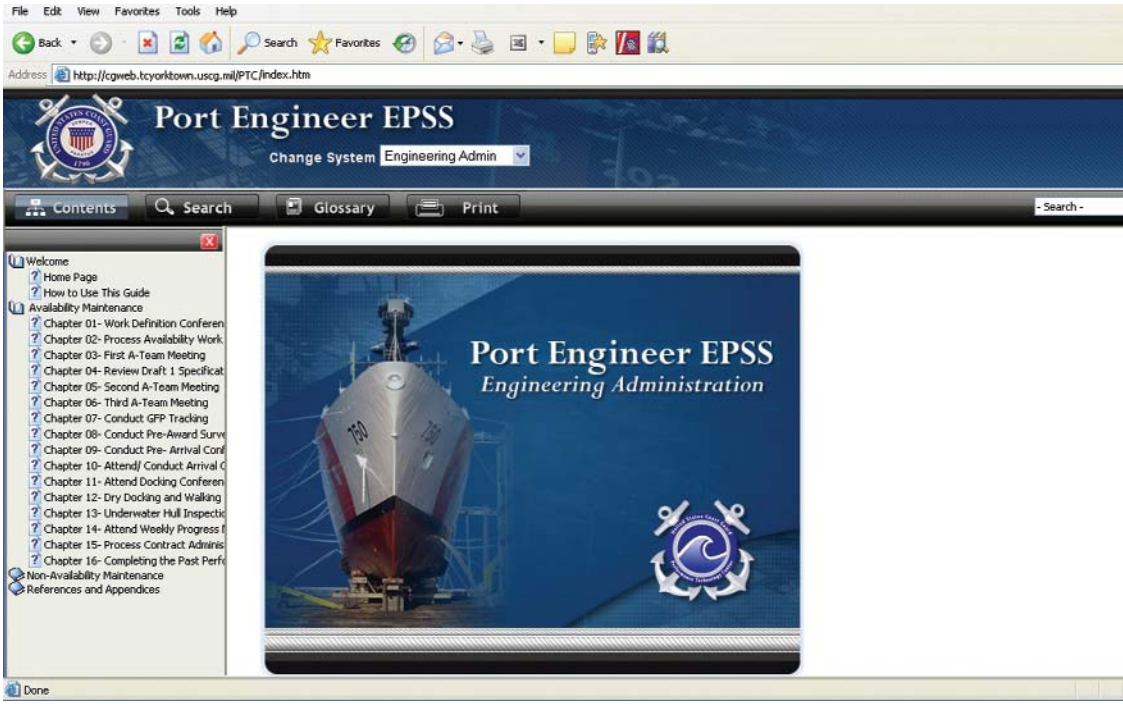
Recently, a majority of 87' CPB engineers reported in a survey that they would like to have an EPSS on their next platform and you can see why. It's only a week before the cutter's availability and since you have no time to attend training or go through a pile of manuals, the EPSS will be a lifesaver.

The effort to acquire the Port Engineer EPSS began in 2008. Naval Engineering leadership expressed concern that over the years, the job of the Port Engineer had changed significantly and, as a result, the legacy support mechanisms for Port Engineers were now outdated. To address this concern, MLCLANT, in cooperation with MLCPAC (Pacific), asked the Office of Naval Engineering (CG-45) to commission a study to validate the contemporary world of work for Port Engineers and compare this to their existing performance support infrastructure.

In February 2008, a group of seasoned Port Engineers and subject matter experts from several NESUs, and type desk managers from both MLCs met with analysts from the Performance Technology Center (PTC) to begin the process of

defining the Port Engineers' world of work. The Team's first challenge was to capture all the tasks that Coast Guard Port Engineers were currently accomplishing in the field, no matter whether the task was being performed on boats or on cutters. This master task list became the foundation for an online survey, which was distributed to every PE in the Coast Guard. Nearly 100% of them provided their input and as a result, this data provided an all encompassing picture containing specific information on tasks performed, task locations, and resources used by the Port Engineers. The data driven results revealed that the development of a Port Engineer EPSS, designed specifically to support validated Port Engineer tasks, would fulfill the performance support requirement.

Much like our PE responsibilities, the scope of the EPSS spans the entire Coast Guard Engineering Body of Knowledge. As such, Coast Guard resources from the Design and Development Team at the Performance Technology Center are dedicated to building the Port Engineer EPSS. Unlike a commercial off-the-shelf- application, the EPSS will address the specific needs of the Coast Guard Naval Engineering community. The EPSS is divided into seven modules tailored to the support categories from current Coast Guard Port Engineers: Contract Administration, Paint Inspection, Non-Destructive Testing process, Training Support, Dry-docking Procedures, Welding Processes, and Shaft Alignment Procedures. Because of the sizeable scope involved, the EPSS will deploy in two phases. The first phase is already under development and will be completed by the end of FY09. The Phase I performance areas are Administration, Paint Inspection, Non-Destructive Testing Processes, and Training Support. Phase II is scheduled for completion by the end of FY10 and will address the performance of Dry-docking Procedures, Welding Processes, and Shaft Alignment Procedures. Based on a separate EO/EPO gap analysis, an additional EPSS dedicated to EO/EPO specific issues is planned for FY10.



Each module of the EPSS will provide the user with access to systematic instructions, important warnings and cautions, a listing of special tools required for the job with information on how to use them, and links to relevant standards and specifications. A search feature included in the EPSS will enable Engineers to locate the information they need based on the task requirements. The EPSS is specifically designed to ensure access from the field. Through an interactive Intranet-based application and a stand-alone aspect, access from SWIII or personal computers will also be available.

Whether you are a new PE tasked with overseeing flight deck preservation or an EPO who desires to enhance your knowledge of Naval Engineering, you will want to watch for the release of this new tool. A Naval Engineering Advisory will notify the Naval Engineering community and a link to the EPSS will be posted on the CG-45 CG Central site once the EPSS is deployed.

The Port Engineer EPSS provides a centralized, accessible location for all information relating to cutters or boats in depot level availabilities. More than just a PE tool, anyone requiring this type of information can gain the vital insight required to get the job done. As witnessed through feedback from the field regarding the award winning 87' Coastal Patrol Boat EPSS featured in the Spring 2009 *EE&L Quarterly*, it is a low cost, high return method of optimizing mission readiness by providing performers in the field with the assistance they need to do their job in a flexible, just-in-time, on-demand format. This new tool will bring value not only to the Port Engineer but also to the Engineer Officer, a vessel availability inspector, or an EPO. As we strive to transform current engineering maintenance activities into a more efficient system through Modernization, key initiatives such as the EPSS play a fundamental role to support our most important assets, the hard-working members of the naval engineering community.