U.S. Coast Guard

Engineering, Electronics & Logistics Quarterly

Summer 2006

Logistics Transformation

You can visit us on the web at www.uscg.mil/systems/EEL_QUARTERLY.htm

All issues are available to Coast Guard personnel on *CG Central* under "Magazine and Newsletter"

Summer 2006, Vol. 10, No.38

U. S. Coast Guard Engineering, Electronics and Logistics Quarterly

COMDTPUB P5700.2

RADM Dale.G. Gabel
Assistant Commandant for Engineering and Logistics

Mr. Kerry L. Freese
Managing Editor and Publication Staff

The *U.S. Coast Guard Engineering, Electronics and Logistics Quarterly* is published quarterly by the Assistant Commandant for Engineering and Logistics. This publication is unofficial and not authority for action. Views and opinions expressed are not necessarily those of the U.S. Department of Homeland Security or the U.S. Coast Guard. We encourage readers to submit articles and letters to the editor. Authors are encouraged to submit articles through the Program Representative. The *U.S. Coast Guard Engineering, Electronics and Logistics Quarterly* Editor and the Engineering and Logistics Directorate Management Board retain final approval authority for the publication or non-publication of all article submissions. We will make every effort to publish all submissions. We also reserve the right to edit submissions for length, accuracy and grammar. All letters to the editor must be signed along with current address and telephone number.

Article and Photo Submissions:

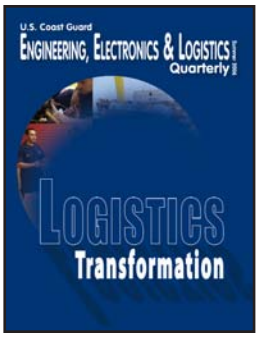
Articles should be about 500 words long; however, C4IT, engineering and logistics specific articles can be up to 2,000 words -- all acronyms must be spelled out when first used. To have your article considered for publication, photo(s) must accompany each article. Articles can be submitted by FedEx in hard copy and/or in Microsoft Word on a 3.5 disk, 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:

Editor, U.S. Coast Guard Engineering, Electronics and Logistics Quarterly
Commandant (CG-4)
Room 6120
2100 Second St., SW
Washington, DC 20593-0001

Phone: 202-267-2593
FAX: 202-267-4245
E-mail: kfreese@comdt.uscg.mil

Submission deadlines are as follows:

Fall 2006 - 03 July 2006
Winter 2007 - 03 October 2006
Spring 2007 - 03 January 2007
Summer 2007 - 03 April 2007



On the Cover: ***This issue focuses on the Coast Guard's "logistics Transformation" through the efforts of the Logistics Transformation Program Integration Office. Read on, and find out what is in store for you and the Coast Guard's logistics future.***

Contents

2 Systems of Interest

6 From the Commandant

8 Thoughts from the Top!

11 What is Logistics?

12 Logistics Transformation Program Integration Office (LTPIO)

14 Logistics Transformation -- The Need for Change

18 Change Management

20 Aviation Logistics Transformation 10 Questions for the Chief of Aviation Engineering

26 Reflections on Transformation

30 Centralized Logistics and the Field Support Workforce

32 A Day in the Life of a Logistics Department Head, 2011

36 A Primer on Aviation Mechanic Speak

40 A Day in the Life of a Sector Naval Engineer in the New Centralized Logistics World

42 Logistics Transformation -- Putting It into Practice

44 Configuration Management -- The Foundation of Logistics

46 Logistics Business Transformation Update - CFO Remediation Actions for Field Held Inventories

47 Parts Availability Research Tool

48 "Configuration Item Smith Reporting for Duty"

52 Do You Need Help With CMplus?

53 RB-S Pilot Overview

54 Response Boat-Small (RB-S) Product Line Project

56 Supply / Inventory Transformation

58 IT Consolidation for Logistics

60 Logistics Transformation and the Coast Guard Training System

63 Centralized Logistics Metrics - What to Expect

64 Convergence of the Civil Engineering HPO With the LTPIO

66 CG-4, Logistics Transformation -- The Course Ahead

68 ALCOASTs 1, 2 and 3

72 Electronics Recycling and Reuse Challenge Award

72 2006 Winners of Coast Guard Environmental Award

73 LCDR Carroll, 2006 Coast Guard Engineer of the Year

Editor's Note: *The EE&L Quarterly would like to acknowledge the contribution of Brooks Minnick and Tiffany Turner to this issue. Without their hard work assembling and preparing articles this issue would not have come to fruition.*

Nationwide/Maritime Differential Global Positioning System (N/DGPS) (C2CEN)

The Nationwide Differential GPS (NDGPS) expansion project continues to increase signal coverage throughout the U.S. Thirty-four NDGPS sites are now on air supplementing the existing Maritime DGPS sites for a total of 84 transmitting broadcast sites. Eighty seven percent of the country is receiving at least one DGPS signal and fifty five percent of the country is receiving at least two DGPS signals. The upcoming months will show the same steady progress as additional sites are brought on-air. These sites include new construction sites in St. Marys, WV; Dandridge, TN; and Idaho Falls, ID, as well as GWEN conversions in Essex, CA and Mequon, WI. After these efforts are complete, nearly 95% of the continental U.S. will be covered by at least one NDGPS signal. The present NDGPS predicted coverage map is shown in Figure 1 with single coverage areas in gray and double coverage areas in yellow. Figure 2 shows the complete map of proposed NDGPS sites.

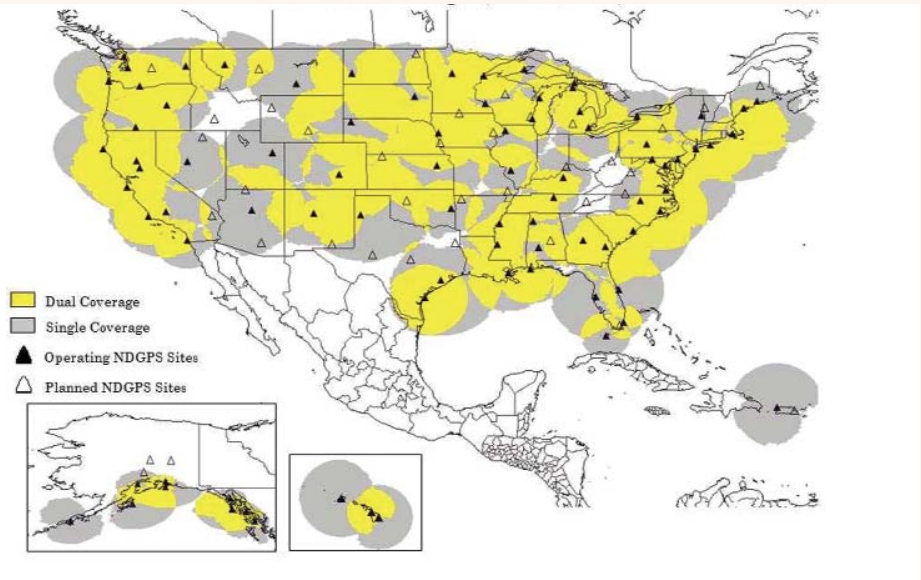


Figure 1. FEBRUARY 2006 PREDICTED NDGPS COVERAGE (Courtesy USCG NAVCEN).

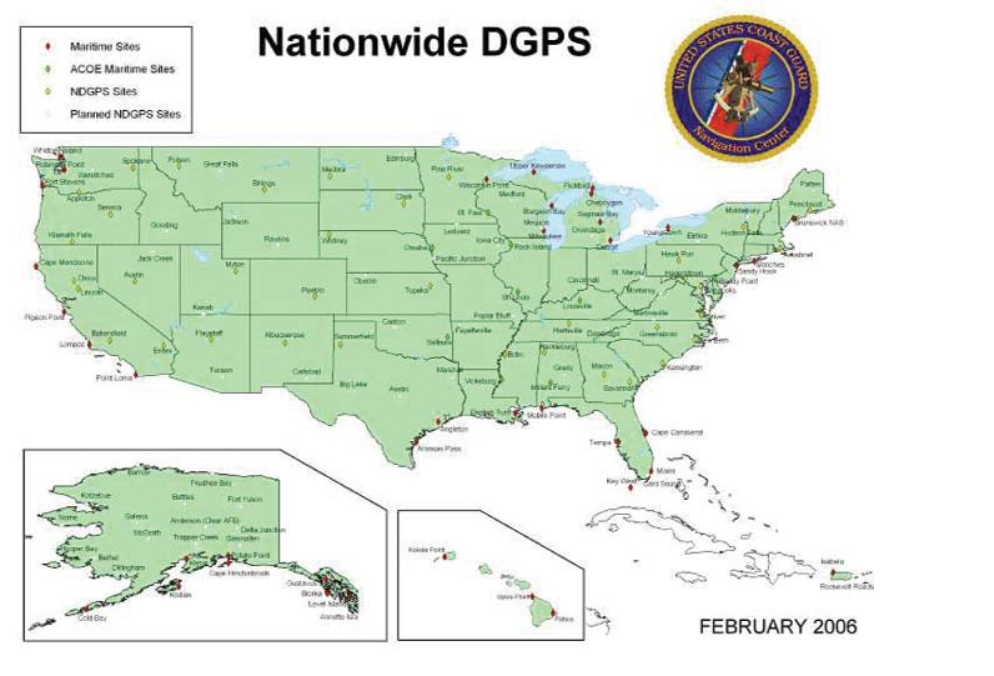


Figure 2. PLANNED NDGPS SITES (Courtesy USCG NAVCEN).

USCG C2CEN (Command and Control Engineering Center) continues to work with equipment manufacturers and field units to implement several recently issued Field/Engineering Changes (EC) designed to improve overall availability and reliability of N/DGPS service. These changes include EC2, which replaces the Southern Avionics PC1KILO Medium Frequency (MF) automatic tuning units at all maritime DGPS sites and medium power NDGPS sites. Recommendations have been forwarded to the Maintenance and Logistic Commands (MLC) on both coasts to upgrade maritime DGPS MF antennae to enhance configurations that will improve operability in foul weather.

Several major N/DGPS system engineering changes are approved at low rate production levels, including: the replacement of Z-12 DGPS Reference Stations and 4000IM DGPS Integrity monitors with PC based platforms; upgrade of the Southern Avionics SC-1000 RF Driver PWB; install of the SC-1000 remote reset card; and the replacement of GPS receiver antennae. Ongoing efforts include grounding improvements to decrease susceptibility to lightning and icing outages and upgrades to the Nationwide Control Station (NCS).

N/DGPS Point Of Contact is Mr. David Wolfe at (757) 686-4015.

Looking into the Future of Hawkeye (C2CEN)

Hawkeye is the Department of Homeland Security's prototype Maritime Domain Awareness system. Designed by C2CEN (Command and Control Engineering Center), it integrates radar, optical and Automatic Identification System sensors into a Geographical Imaging Software- (GIS) based display, giving the operator the tools to monitor and evaluate marine traffic. Since its establishment in Miami/Ft. Lauderdale in 2004, Hawkeye has been installed in Boston, New York, Charleston and Hampton Roads. Key West and San Diego should come on-line in 2006. Hawkeye also functions as a test bed for the development of C2 requirements for the Command 2010 project.

Coast Guard Sector Command Center Hawkeye System Version 1.3.

System stability will be significantly improved with the upgrade to the latest version of the DISA COE (Common Operating Environment) and several other software improvements. By using the DISA COE interoperability, reusability and portability with Department of Defense (DoD) systems can be achieved while at the same time reducing development time and life-cycle costs. Additionally, an upgraded database server and operator workstations will increase system efficiency and performance. The electronic charting display as well as several Graphical User Interfaces (GUIs) have been enhanced to simplify transit administration, alarm zone administration and database interactions.

Transit management has been simplified by specifying only one type of transit, versus the older separation between arrivals, departures and moves. Alarm zone management has been streamlined and simplifies the actions required to build and acti-

vate these zones. A combined effort with the CG-VTS (Coast Guard Vessel Traffic Service) project has created a new database schema which will significantly increase system efficiency and will enable the querying of a broad range of vessel attribute information.

SCHEDULE

The U.S. Coast Guard Research and Development Center will evaluate the operational effectiveness of the upgraded software, focusing on several key performance parameters this summer. Upon completion of the Operational Assessment, the current Sector Command Centers that have the Hawkeye system (Hampton Roads, Miami, Charleston, Boston, San Diego and New York) will receive this latest upgrade. Sector Key West is also slated for an installation of the Hawkeye system this year.

Blue Force Tracking, the system that provides the capability to track friendly assets through encrypted Automated Identification System (AIS) mobile units, continues to be evaluated and is currently undergoing an upgrade to its hardware and software architecture.

Ensign Jeffrey Morris is the Assistant Software Lead for the Engineering Applications Branch, C2CEN, Portsmouth, Virginia.

Vessel Traffic Service (VTS) Project (C2CEN)

The Coast Guard VTS (CG-VTS) software development team at the Command and Control Engineering Center (C2CEN) is continuing its overhaul of the CG-VTS application, significantly upgrading the speed, supportability, interoperability and functionality of this critical maritime domain awareness tool. System speed is being increased as a result of newer processing hardware that takes advantage of the numerous technological advances over the last five years. Additionally, the application is being developed using object oriented programming languages (C++ and Java) that allow for much more flexibility in both the processing and presentation of data to the operators. CG-VTS version 4.6 is more supportable because it is built upon the latest versions of the Department of Defense's (DoD) Common Operating Environment (COE). The COE is software architecture used by numerous DoD systems, including Army UAVs, Navy Aircraft Carriers, and Marine Corps and Coast Guard Command and Control PCs. The wide ranging use of the COE across numerous DoD projects allows COE systems to benefit from centralized support and distributed enhancements. The CG-VTS software application is closely aligned with another C2CEN initiative, the Hawkeye system which serves as a prototype C2 system for our Sector Command Centers (SCC). Over the past year, several steps have been taken to merge the code base of these two systems. We are now at the point where both applications are loaded from the same CD, with just a handful of registry

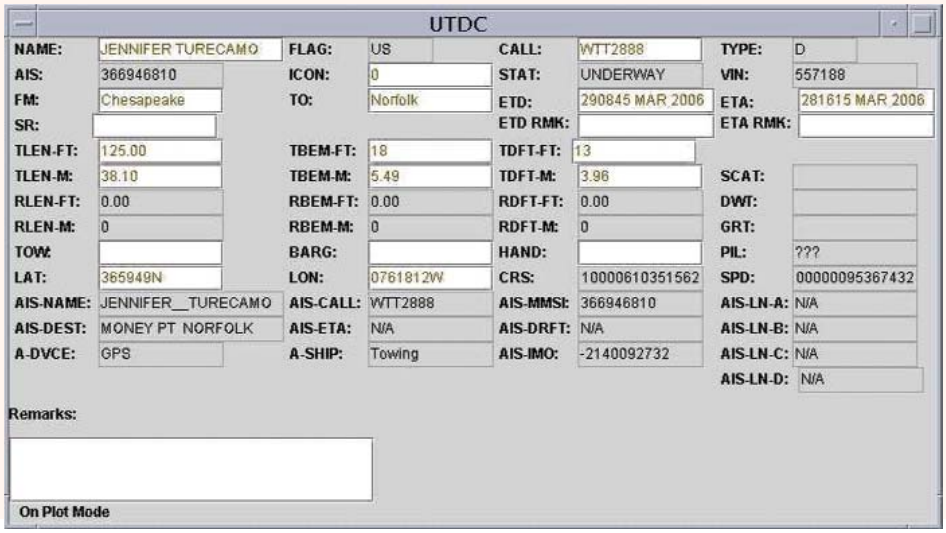


Figure 1. UTDC displaying voyage related AIS data.

variables and configuration files used to customize the program for use in a SCC or a Vessel Traffic Center (VTC).

Several functionality enhancements are also planned for the version 4.6 release. One of the latest features added was the full parsing and display of static voyage related data transmitted using the Automated Identification System (AIS). AIS equipped vessels routinely broadcast both their position data and voyage related data across the AIS network. Voyage related data includes a vessel's name, call sign, IMO number, destination, ETA, cargo type, length, beam and transit draft. This data is parsed into separate data fields that can now be displayed in the Universal Track Data Card (UTDC) used by the VTS operators to both input and display critical information about the vessels they are actively tracking. Having all of this AIS data displayed and available for the operators will greatly enhance their awareness of the maritime environment, allow them to ensure the integrity of the data being broadcast, and also provide a tool to detect anomalous behavior by a vessel (e.g., broadcasting a name that does not match with the vessel's Maritime Mobile Service Identity number.) The figure on page 4 shows the new UTDC with all of the AIS data displayed. POC: LT Dean Milne (757) 686-4237.

An Environmentally Friendly Coast Guard

Solar car and wash rack, Air Station Borinquen.

Low-emissions solvent cleaning aircraft parts, Air Station Borinquen.

Fuel recycling use, Air Station Borinquen.

From the Commandant

I'm grateful to Rear Adm. Gabel for inviting me to address the Coast Guard Engineering and Logistics community through this important *EELQ* forum, on a subject of which I am very familiar and personally committed to; Logistics Transformation.

As anyone who knows me can attest to, I am not an advocate of frequent change for the sake of making change. However, *institutions must go hand in hand with the progress of the human mind. As that becomes more developed, more enlightened, as new discoveries are made, new truths discovered and manners and opinions change, with the change of circumstances, institutions must advance also to keep pace with the times.*

I didn't write that. Thomas Jefferson did. It's excerpted from an 1816 letter that Jefferson wrote to Samual Kercheval, and is also inscribed on the walls of the Jefferson Memorial here in Washington, DC. Jefferson understood then, and it is our challenge to embrace today, that doing business the way we've always done it is an acceptance of the status quo at a time when the demands of our mission, our department, and our country, require us to do more, do it better, and often times do it with less.

We operate in a strategic environment that has changed dramatically in the past five years and will continue to change. We live and work in a world of dynamic threats and hazards and must adapt accordingly. We will not change for change's sake but purposefully, with strategic intent and always focused on our first priority and duty to the Nation: Mission Execution.

The Coast Guard has taken bold steps to consolidate our shore-based forces at the port level into unified, multi-mission Sector commands. This consolidation provides a single point of accountability for operations. It will also unify our resource management systems and provide risk based decision-making tools necessary to focus the Coast Guard's shore based efforts on reducing risk and mitigating threats. We've taken equally bold steps by advancing the Deepwater acquisition for maritime presence, patrol, and response. And we are about to integrate our various deployable forces. Based on the new Sector mission delivery system and the new requirements for deployable forces, I am now directing our senior leadership to conduct a comprehensive review of existing command and control structures along with our logistics and maintenance systems to ensure that the Coast Guard is optimally organized to support our trident of operational forces, including our shore-based, maritime patrol and deployable forces. In too many cases, the Coast Guard's existing finance, maintenance, and logistics systems are based upon platforms (e.g., aviation, surface) rather than being aligned with common functions or processes. A unified financial accounting system is a requirement for effective support to the field, necessary for the deployment of internal control systems, and fundamental in addressing material weaknesses identified in recent audits. At the same time, the Integrated Deepwater System acquisition is transforming our maintenance and logistics systems.

The inadequacy of the status quo as well as future requirements require that the Coast Guard develop and deploy an integrated, transformational business architecture that aligns with DHS and, above all, facilitates more effective mission execution. I **did** say **that**. It's an excerpt from my testimony to Congress given during my confirmation hearing for Commandant.

My interest in supporting our operational commanders with the most effective and efficient logistics and support systems is longstanding. I was a member of the Gilbert study teams which resulted in our existing organizational structure for supporting our maintenance and logistics requirements, including the formation of our two MLCs. It was the right construct for the time, and it improved our logistics delivery system from the highly decentralized form that existed prior to that. However, having served within the post-Gilbert construct as both the Seventh District Commander and the Atlantic Area Commander, it quickly became apparent to me that we didn't go far enough. There were great inconsistencies in the way we managed certain types of assets, which made it more difficult for an operational commander to carry out the mission and more difficult to sustain those assets. Consequently, I formed the Theater Integrated Logistics Architecture (TILA) initiative when I was Area Commander in an attempt to harmonize these disparate support delivery models. TILA stimulated analysis and discussion which, several years later, resurfaced in more refined studies and briefings delivered to me as Chief of Staff. These discussions led me to my decision to charter the Logistics Management Transformation Office (LMTO), which delivered the business case justification for moving all of our disparate logistics stovepipes into a centralized organization, modeled after the best practices observed in industry as well as our own best-of-breed program, aviation logistics.

Of course, the vision of a single, integrated Coast Guard logistics program has existed in writing for a long time. Since 1993, the Coast Guard's Engineering Logistics CONOP has stated that "*The logistics system will have a uniform look and feel that does not vary by platform, equipment, unit type, or geographic location. This will be accomplished through standard integrated policies, business practices, and information systems.*" Regrettably, the Coast Guard took little concrete action to achieve this vision in the 10 years since it was signed leading up to the award of the Integrated Deepwater System (IDS) contract. Instead, we allowed our various support stovepipes to continue unencumbered by our stated organizational goals. We had declared a destination, but we never charted a course to get there. In doing so, we rendered ourselves powerless to inform or constrain the duplicative efforts of the Deepwater project to build yet another, parallel logistics stovepipe. The development of LIMS within the IDS project provided an important wakeup call. Not only were we not consolidating our existing logistics information management systems, we were acquiring a new one, at substantial cost to the enterprise. This experience has provided a valuable lesson to be learned. Acquisition projects, of any size, must not exist in a vacuum. The solutions they bring must be extensible to the entire organization, and not just selected parts of it. Acquisition logistics must roll seamlessly into sustainment logistics, and provide solutions that benefit the entire enterprise.

This is not a departure from the Deepwater contract, or an abandonment of the Deepwater construct. As I stated in my Congressional testimony, "I am personally committed to executing this program in the most effective manner possible." Rather, it is an adjustment to the way in which we implement this construct to ensure that it aligns with our longstanding definition of what our Logistics CONOP should be, and how we choose to implement that concept of operations for the benefit of our operational commanders and the people who operate our ships, boats and aircraft, and command and control systems.

As I clearly stated in my first Sitrep to the men and women of the Coast Guard the day I assumed my duties as Commandant, our people must have the tools and support they need to do their job. We will ensure Coast Guard men and women are the best trained and most versatile workforce in government, equipped with the most capable fleet of multi-mission ships, aircraft, boats and command and control systems available.

I am personally committed to implementing our new logistics architecture during my tenure as Commandant. Under Rear Adm. Gabel's leadership, the Logistics Transformation Program Integration Office (LTPIO) will chart our course to our final destination. I recognize that the cultural challenges are huge and not easily overcome by an organization steeped in tradition like our Coast Guard. But, as someone who has spent his entire life living and learning these traditions, first as the dependent of an enlisted man, and now as your Commandant, I charge each of you with rising to meet the challenge of integrated logistics transformation. Difficult undertakings have never deterred Coast Guard men and women from pursuing change when they've recognized that it is in the best interest of their service and our Nation.

Admiral Thad W. Allen
Commandant
U.S. Coast Guard

Thoughts from

As the PEO, I have a new appreciation for the critical role that integrated logistics will play in Deepwater being successful in our mission. I believe in our mission -- to acquire and deliver interoperable assets and systems that support Coast Guard operational forces in executing missions effectively and efficiently. It is not sufficient to ensure all Deepwater platforms are ready to perform all missions when they arrive on station; the imperative is to ensure they remain that way for the duration of their operational assignments. If we execute our master logistics plan properly, our operators will spend more time performing their missions and less time on repairs and maintenance. That is our goal.

Rear Admiral Gary T. Blore
Program Executive Officer (G-D)
Integrated Deepwater System Acquisition
U.S. Coast Guard

I am impressed daily by the passion and technical excellence that I see in our people across the Coast Guard, both those in uniform and the civilians. With the team we have, I am certain that we will show the persistence, creativity and constancy of purpose needed to deliver our transformation vision of affordable readiness.

Mr. Jeffery Orner
Deputy Assistant Commandant for
Engineering and Logistics
U.S. Coast Guard

As the 8th District approached our plans for the 2006 hurricane season, we were committed to radically improving our survivability and restoration capability at our most exposed and vulnerable stations. Station Venice had been substantially rebuilt 3 of the last 5 years due to heavy weather losses. We were committed to evacuating parts and tools, along with our people, as hurricanes approach. Applying logistics transformation, we were able to reduce the amount of materials needed on hand, and the amount of materials that needed to be evacuated, to the point where all parts and tools could be maintained in "saddle bag" mountings on standard pickup trucks - and can now leave, and return with our operating forces; or surge to a Forward Operating Base, as needed. Logistics Transformation enabled the achievement of an operational imperative.

Rear Admiral Robert F. Duncan
Commander Eighth Coast Guard District
U.S. Coast Guard

USCG photo by PA3 Mike Hvozda.

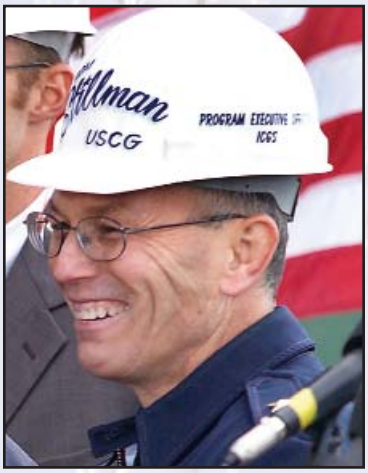
the Top!

The Logistics Program has shown outstanding leadership in improving our logistics processes to enable CFO Act compliance, and pursuing the close integration of our logistics and financial management programs, processes and data. I fully support Logistics Transformation, and dedicate my organization to working on our common shared objectives.

Mr. Robert Horowitz
Chief Financial Officer
U.S. Coast Guard

Through our partnership with the Logistics Transformation effort, the Coast Guard Acquisitions Directorate is committed to ensure that new systems are brought onboard in a cost-effective, schedule-sensitive manner, fully supported to provide the maximum possible capability for our field operators. This will be accomplished through interdiscipline product teams charged with cradle-to-grave lifecycle support.

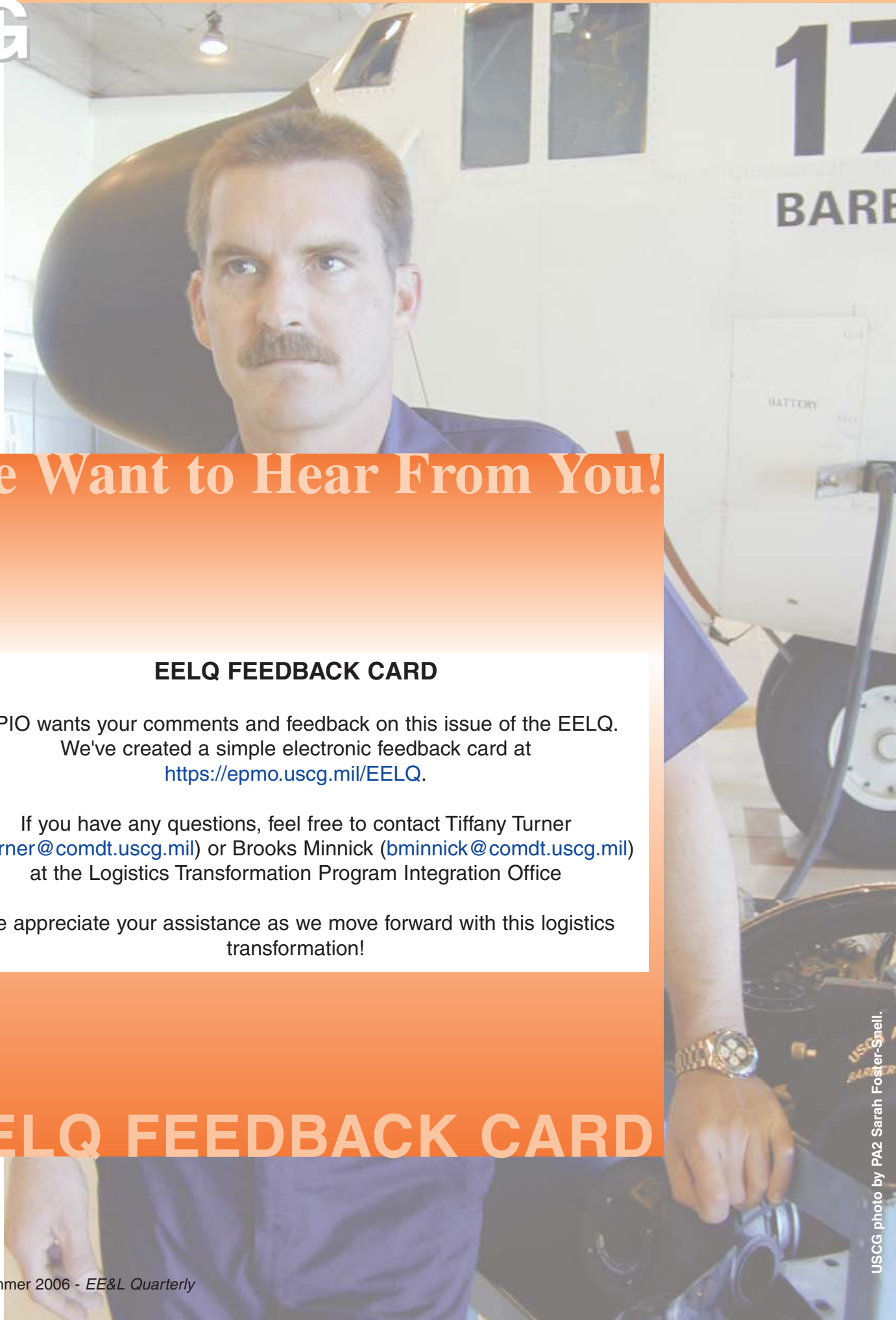
Rear Admiral John P. Currier
Assistant Commandant for Acquisition
U.S. Coast Guard



Change is not easy. We may profess a desire to embrace it, but in practice organizations are reticent to do so. I believe you can change this cultural predisposition through measuring performance and informed risk management. The necessary logistics solution will be achieved in Deepwater only through a convergence with the implementation of logistics transformation servicewide. The need is real and the time is now--more so, than ever before. Our organizational excellence thrives on the necessity of the successful implementation of logistics transformation! We must 'sail on' in that direction.

Rear Admiral Patrick M. Stillman (Retired)
Former Program Executive Officer
Integrated Deepwater System Acquisition
U.S. Coast Guard

USCG photo by PA1 Harry C. Craft III.



USCG photo by PA2 Sarah Foster-Snell.

We Want to Hear From You!

EELQ FEEDBACK CARD

LTPIO wants your comments and feedback on this issue of the EELQ. We've created a simple electronic feedback card at https://epmo.uscg.mil/EELQ.

If you have any questions, feel free to contact Tiffany Turner (txturner@comdt.uscg.mil) or Brooks Minnick (bminnick@comdt.uscg.mil) at the Logistics Transformation Program Integration Office

We appreciate your assistance as we move forward with this logistics transformation!

EELQ FEEDBACK CARD

What is Logistics?

by Peter LaRoche, CG-44LT

When people talk about logistics, they often focus on the physical assets that the Coast Guard uses to perform its missions, such as ships, aircraft and facilities. This usually leads to a narrow focus on the "supply" and "movement" side of logistics. While this is important, logistics has a much broader scope. In fact, the Coast Guard's definition states that:

"Logistics encompasses all the activities associated with developing, acquiring, sustaining, and eventually retiring the components of capability: People, Information, and Systems." (COMDTINST 4000.5A)

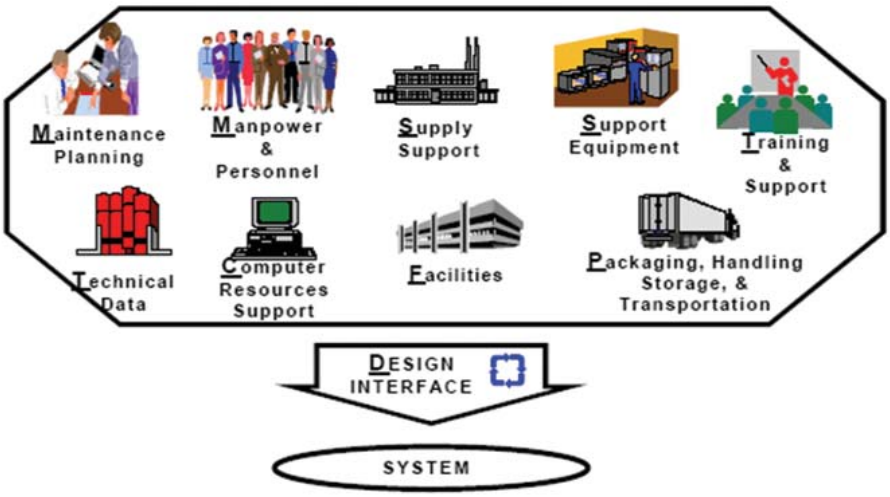
USCG photo by PA2 Matthew Belson.

To understand how all the components of logistics have to come together to support the Coast Guard's missions, let's look at a specific example: a Search and Rescue (SAR) mission close to shore using a small boat.

To perform this rescue, we will most likely need a rescue swimmer, along with the rest of the crew to operate the boat. Before any mission, these crew members must be recruited and trained to ensure they have the right skills. For the boat, we need an acquisition process to identify the requirements to purchase the right kind of boat. This means a boat that can be safely operated in all the environments required to support its missions. We need a tightly integrated set of sustainment processes to ensure that the boat is ready when needed -- this includes effective maintenance and supply capabilities to support the boat. We need shore facilities to house the boat and its crew which will need their own logistics infrastructure to support them. Finally, each of the processes that we have discussed (e.g., recruitment, maintenance, etc.) requires information and communications systems to operate effectively and efficiently.

Search and Rescue is one of the Coast Guard's unique missions. But the Coast Guard is a federal agency and, as such, there are a variety of other requirements that we must meet that require logistics support. For example, how we manage and support our workforce, how we operate as a mixed uniformed and civilian organization, how we meet our financial and other stewardship requirements (e.g., CFO Act compliance), etc.

As we follow this interconnected "web" of logistics processes, we see that each link in the chain itself requires people, information and systems to support it. The CG Logistics Program is responsible for aligning and coordinating these component processes to support the Coast Guard's missions. This can only be achieved in a systematically "engineered" way that is driven by our missions and other federally mandated requirements. The key principles for efficient and effective logistics management are clear and concise:



- Understand logistics needs based explicitly on mission and federal mandates;
- Align and/or develop our capabilities to address these needs;
- Execute based on rigorously-specified, standard processes;
- Measure and control performance against well-defined standards; and
- Continuously improve our processes to address performance gaps.

In the following articles, we will describe logistics as it is affected by the Coast Guard's Logistics Transformation Program.

Logistics Transformation Program Integration Office (LTPIO)

Shaping tomorrow's Coast Guard capabilities ... Today!

by Jim Sylvester, CG-44LT

What is logistics?
"Logistics encompasses all the activities associated with developing, acquiring, sustaining, and eventually retiring the components of capability including people, information, and systems." (COMDTINST 4000.5A)

What is Logistics Transformation?
LTPIO represents the Coast Guard's (CG) new level of commitment to boldly transform current logistics processes to better support the operator. This transformation effort offers vast improvements to the effectiveness (and costs) associated with logistics support to field level operations. LTPIO also represents an approach to transformation that cuts across stovepipes, thus eliminating burdensome processes and legacy systems used Coast Guard-wide. LTPIO is the Coast Guard's roadmap to transformation.

LTPIO Mission
Develop and implement transformational concepts, processes, systems and policies to deliver dependable, effective and efficient logistics support to operations.

LTPIO Vision
Provide an integrated enterprise-wide logistics system that delivers consistent capabilities in support of operations in a flexible, scalable and modular manner.

Purpose
The LTPIO has been charged with the following transformational objectives:

- ✘ Improve asset availability
- ✘ Lower total ownership costs
- ✘ Become a data driven logistics organization, which drives continual improvements
- ✘ Establish a culture of preventive vice casualty (corrective) maintenance response
- ✘ Link logistics efforts to operational performance and financial savings
- ✘ Meet all statutory compliance requirements (GPRA, CFO Act, etc.)

To meet these objectives, Coast Guard logistics processes need to change, and they need to be common across the enterprise.

LTPIO Approach
Leverage best practice. The Coast Guard's Aviation Logistics business model represents industry best practice, and is the result of a similar transformation. Aviation logistics processes are clearly understood and very well documented. LTPIO will leverage the lessons learned from their transformation to lower project risk and accelerate the transformation of logistics throughout the Coast Guard.

Establish an enterprise view of logistics. Eliminate current logistics asset-based perspectives so that all logistics capabilities can be managed to optimize supply chains, increase asset availability, and predict and respond to operational demand.

Drive to known goals. LTPIO will drive change such that there is a 20% increase in asset availability and 10% reduction in logistics costs, redirected back to operations, by Fiscal Year 2011 (FY11).

Governance. RADM Gabel, Assistant Commandant for Engineering and Logistics, will lead the effort. LTPIO is chartered under RADM Gabel and charged with carrying out the task. The Commandant directed, via an ALCOAST, that all Coast Guard commands support RADM Gabel in this effort.

How will LTPIO drive transformation?
LTPIO will push this effort through metrics associated with platform availability and total ownership costs. Data supporting these metrics is only minimally available today, and is inconsistent at best. So the measures and the processes collecting the data must themselves be transformed.

How will transformation be implemented?
The LTPIO will be using a prototype approach in a spiral of increasing learning and progressive implementation. Beginning with the Response Boat-Small (RB-S) as the first implementation of new logistics processes based on the CG Aviation Engineering and Logistics model, the LTPIO will build a reusable transformation tool which will enable replication of the transformation process throughout the logistics enterprise. The program office will charter capability-based working groups to develop specialized implementation plans for their respective areas. The working groups include: Depot/Industrial Capability, Acquisition, Product Line, Policy, Training, Finance, Sector Organization, USCG Organization and Information Technology (IT).

What are the near term efforts?
CFO OM&S Remediation Initiative - The focus of this effort is to eliminate excess/obsolete materials at field units to significantly reduce the Coast Guard's inventory burden, improving the opportunity for a successful FY2007 Chief Financial Officer (CFO) OM&S audit. This is a symptomatic fix which requires a long term transformation to acquisition, maintenance and supply chain processes. Demand monitoring will continue throughout the transformation project. This effort is resulting in tons of no or low demand parts being removed from our units, while facilitating greater visibility of parts across the enterprise. CASREPs (Casualty Reports) are being resolved thanks to this part visibility, and the unit receives repositioned parts as free issue.

Technical Information Management System (TIMS) - The focus of this effort is to leverage an existing Commercial-Off-The-Shelf (COTS) solution within the CG to consolidate Aviation (A)-TIMS, Navel Engineering (NE)-TIMS, Civil Engineering (CE)-TIMS and Coast Guard Preventive Maintenance System (CGPMS) into a single application known as CG-TIMS. This will require the consolidation of business processes across all communities. This effort represents the first real consolidation of processes resulting in the elimination of redundant IT systems. The final COTS product is in use by the Civil Engineering community, and will be updated with workflow and functionality from the Aviation community.

What does senior leadership say?
"The inadequacy of the status quo as well as future requirements require that the Coast Guard develop and deploy an integrated, transformational business architecture that aligns with DHS and, above all, facilitates more effective mission execution."

ADM Thad Allen
Confirmation Testimony

Logistics Transformation -- The Need for Change

by CAPT Scott Reynolds, CG-44

"Every significant breakthrough is a break with current thought processes and practices."

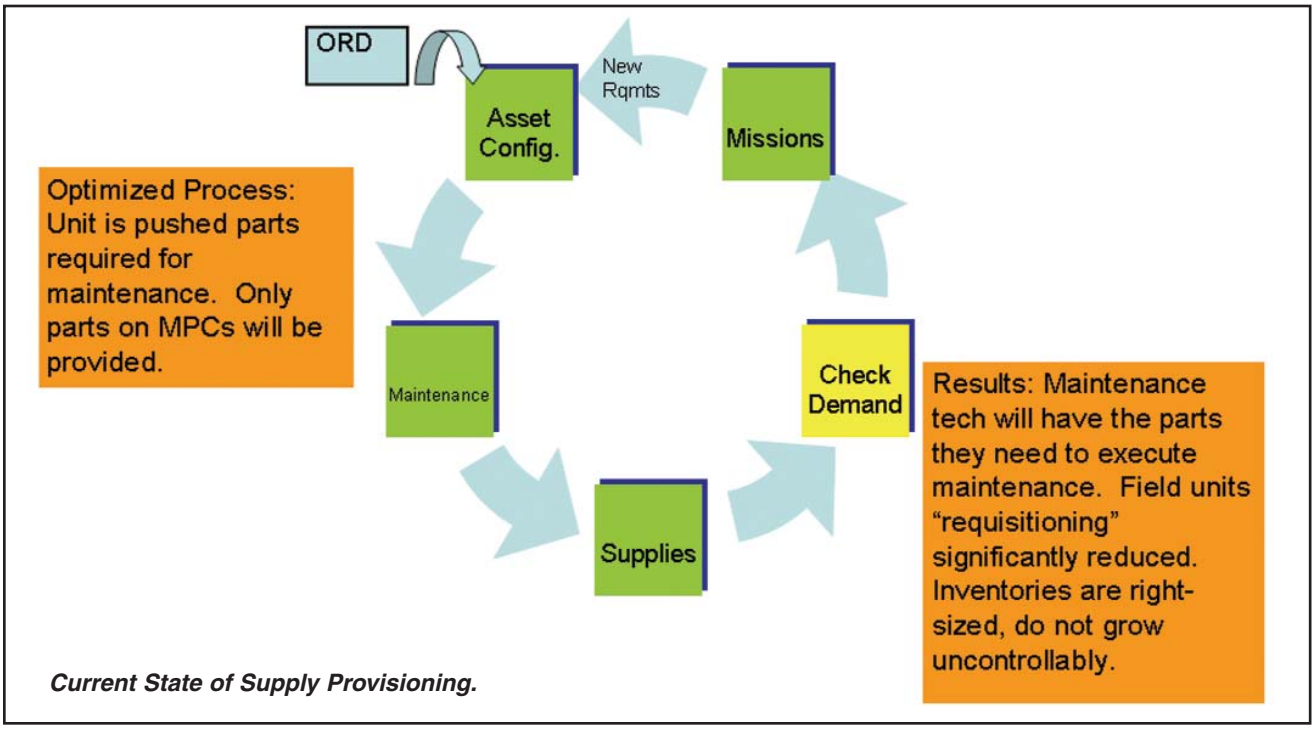
Many people throughout the Coast Guard (CG), both operators and support providers, believe our present logistics practices work just fine -- our old cutters get underway on schedule, we get paid on time and our resulting mission performance is recognized as a government standard. In addition, our logistics practices are tried and true. With constant incremental improvements, but not major change, our logistics practices have been basically the same for the past 15 to 20 years. So why should we change? Change is hard, takes up resources and often doesn't improve upon today.

The truth is our logistics successes are built upon the brilliance and work ethic of our technicians. Without their ingenuity and willingness to work extraordinary hours, our system would fail. I believe some simple facts show this to be true. Let's start with supply. Of the parts needed for preventive and corrective maintenance on a typical Coast

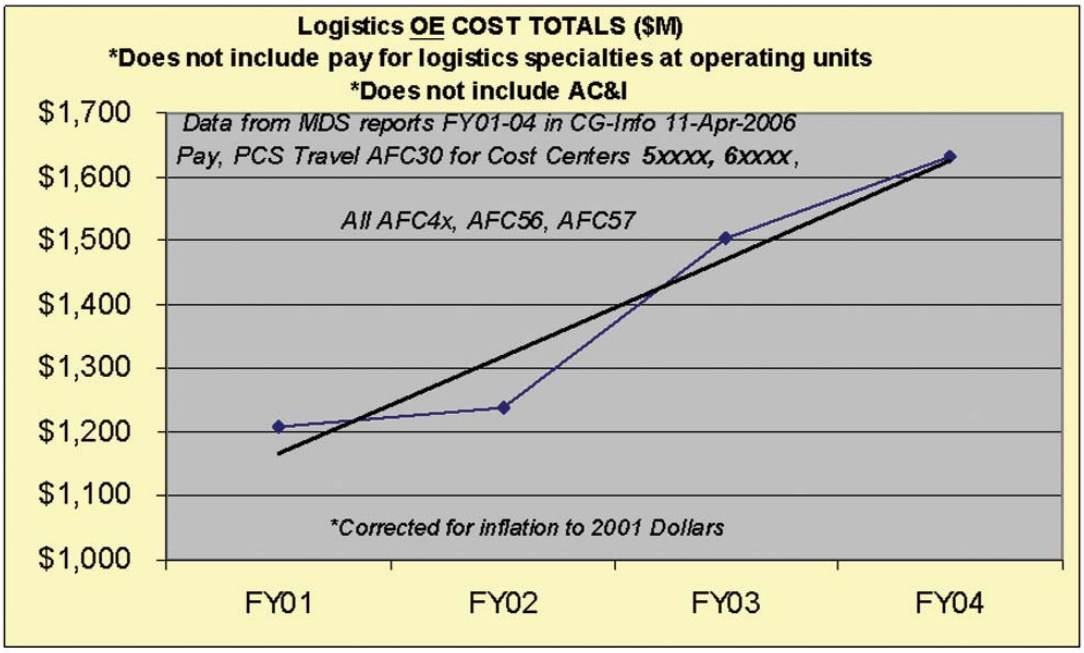
USCG photo by PA1 Paul Roszkowski.

Guard cutter, our logistics program provides only 15% of what is actually used. More than half of the parts our logistics and acquisitions programs provide are never used in the life of the cutter. The cutter itself purchases 60% of their on-board spares but never uses 80% of those purchases. These practices represent cost expenditures in the hundreds of millions. Unfortunately, we can't recoup that money. But we can prevent the waste of these dollars in the future -- an area of logistics that needs significant change.

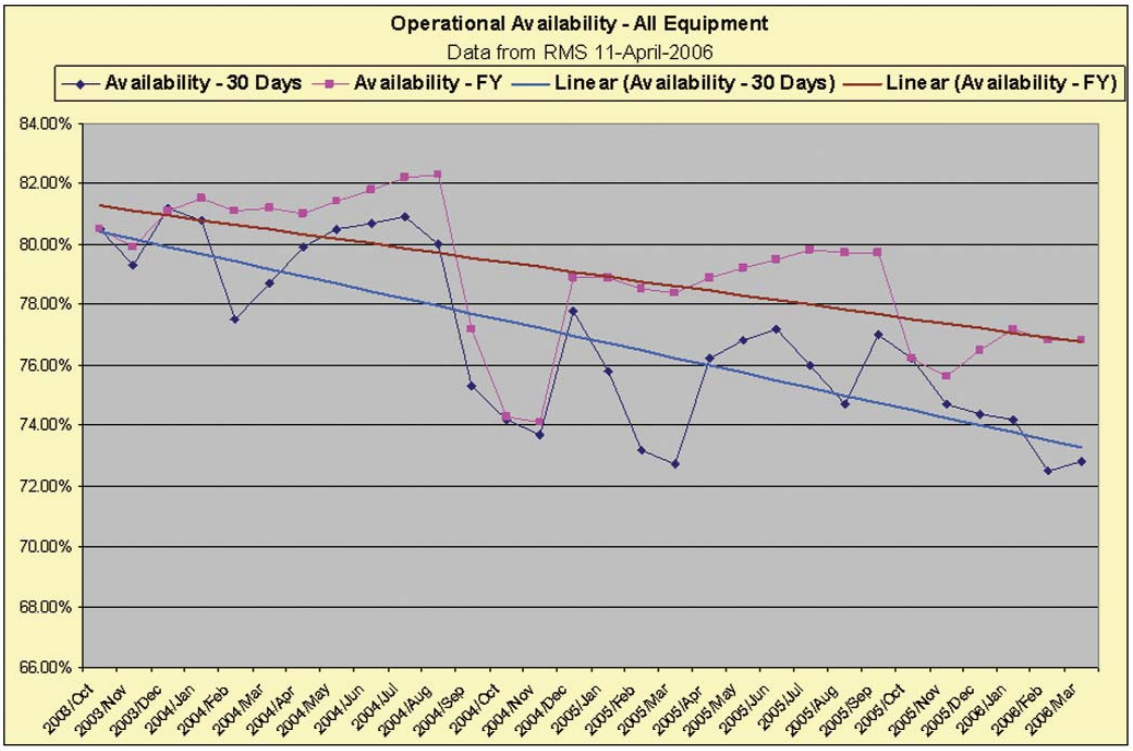
Now let's look at maintenance. Today, a typical Machinery Technician (MK) is trained on less than 30% of the required maintenance items of their assigned cutter. This ratio is similar across all rates. In addition, the Maintenance



Current State of Supply Provisioning.

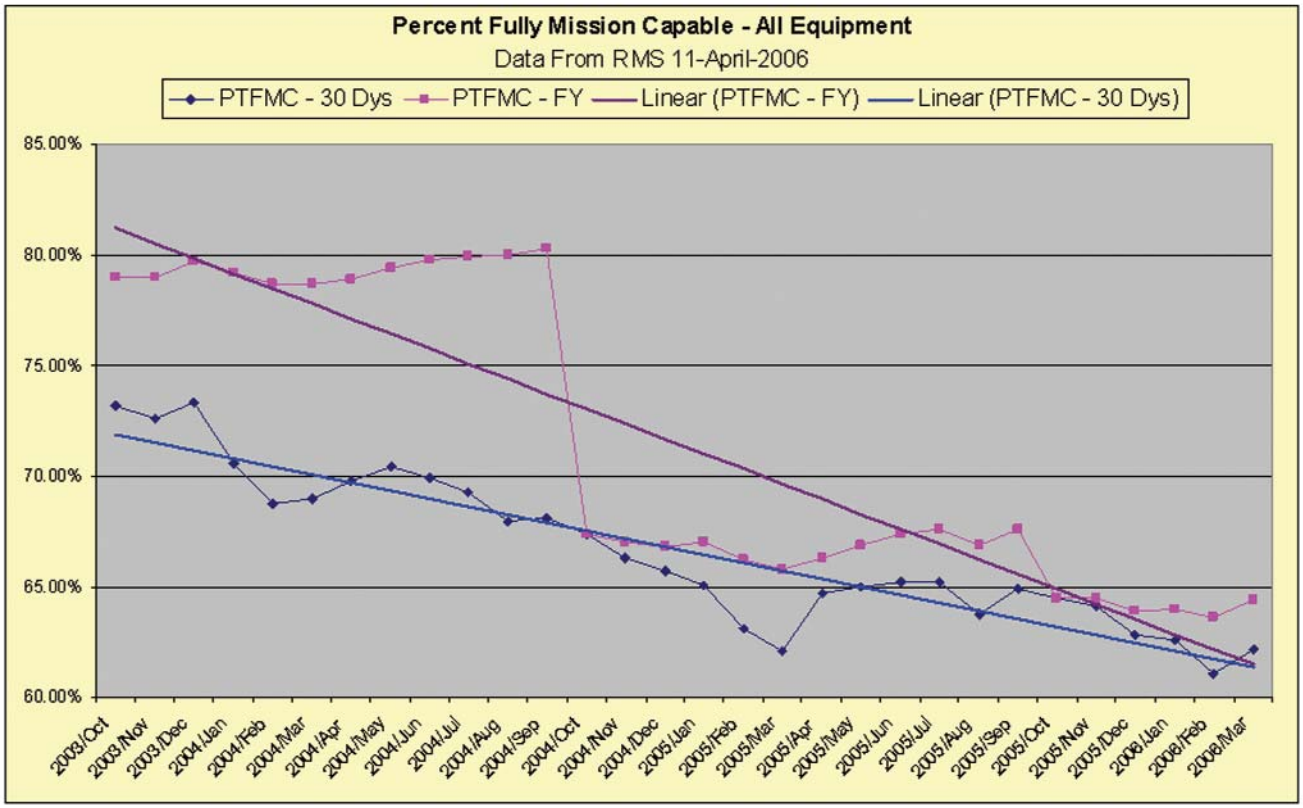


Rising Logistics Costs.

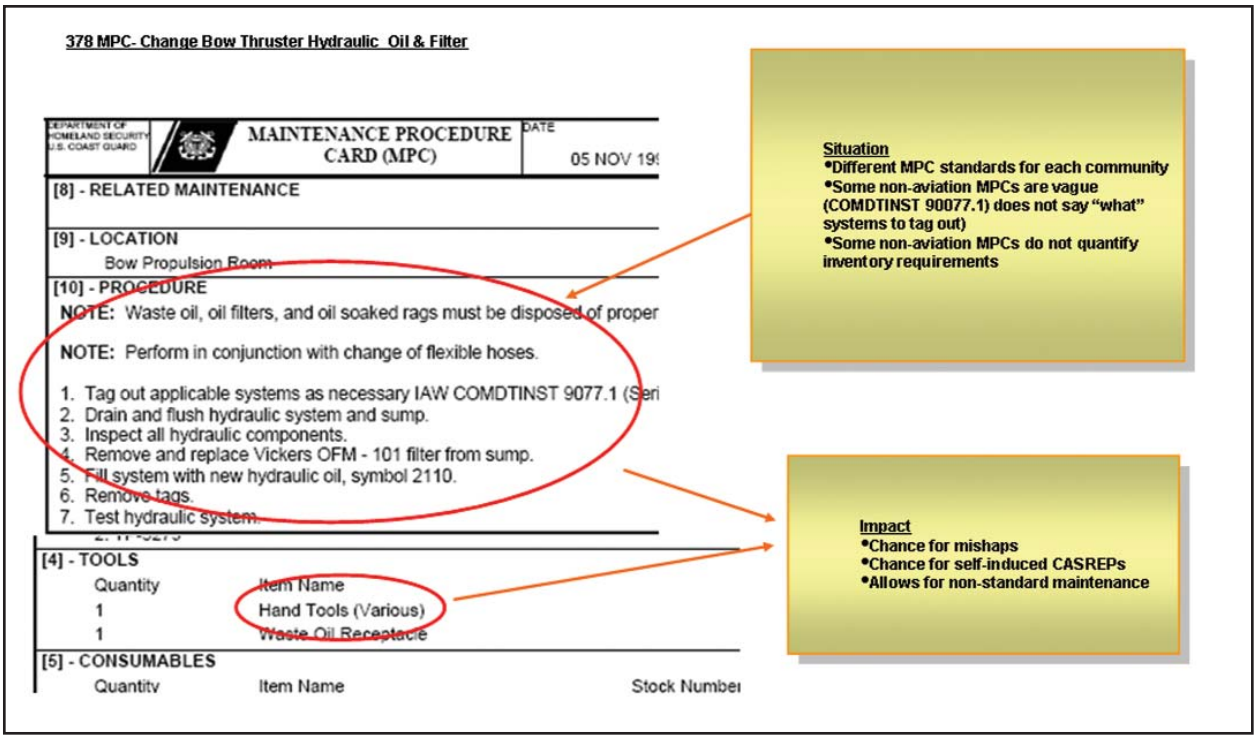


Decreasing Operational Availability.

Procedure Cards are either non-existent and produced locally or are of such poor quality that the technician must draw upon several technical pubs and make large mental gyrations to complete the task. A study of SORTS reports in the Pacific Area suggests that 38% of casualties are the result of our own poor maintenance. Industry studies suggest that using our current maintenance practices actually causes



Decreasing Full Mission Capability.



Inconsistent Maintenance Procedure Cards.

more than 70% of all equipment failures. The high number of equipment failures the Coast Guard must deal with is quite costly as unplanned work takes three times longer than planned work and costs twice as much. Maintenance is an area of logistics that needs significant change.

USCG photo by PA2 Andrew Shinn.

As the Director of Logistics for the Coast Guard, I can't tell you what it costs to support a 378. There are three primary reasons for this. First, we are haphazard and inconsistent in our data collection. Some units do it, others do not. Second, the data we collect is very suspect. Since we don't have standard procedures, the information we collect is of poor quality. Third, our logistics IT systems are not integrated with our financial IT systems. Unfortunately, the lack of good data has allowed the Coast Guard to postpone making the difficult decision to change our logistics program. Data management is an area of logistics that needs significant change.

Maybe the question that should be asked is why didn't we change sooner? Part of the answer to that question is that knowing you have a problem and knowing how to solve the problem are two different things. We now know what needs to be done. Several studies have captured industry best practices for improving our logistics program to improve asset availability at reduced costs. Luckily for the CG, our aviation program is closely aligned with industry best practices. We're moving to that model! By picking a known model that is already adapted to the Coast Guard, we significantly reduce the risk of not reaching our performance goals and can accelerate the transition. The rest of this publication discusses how that model resolves the problems I've identified above.

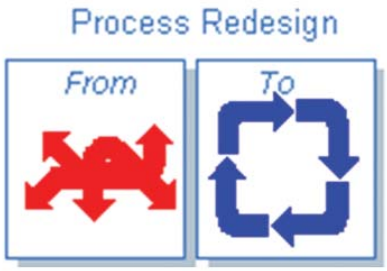
The world has changed around us; we must break with past logistics practices and adopt breakthrough logistics practices that improve asset availabilities at reduced costs.

Change Management

by Alan Mihaley and
Peter LaRoche
CG-44LT

trans·for·ma·tion *1. change in form, appearance, or structure; 2. the state of change in condition, nature, or character; 3. the act of change into another form of energy; 4. to undergo a change in form, appearance or character.*

The dictionary defines transformation as the act of change. The Logistics Transformation Program aims to change the way the Coast Guard conducts logistics in support of its missions and will bring about a significant change in structures, processes, procedures and supporting information systems. This in itself will represent significant change, and some concern, for many of us in the Coast Guard.



Change is about people

At a deeper level, however, the program will raise the potential for significant human change at the heart of the transformation. It is this human change which offers both the greatest potential and risk for the Coast Guard. While the introduction of new processes and systems can be managed, it is only through a focus on people that the Coast Guard can ensure that the transformation is effective and lasting. After all, structures don't implement themselves, and processes don't learn -- people do!

Turning chickens into pigs

"Always remember, the distinction between compliance and commitment is like bacon and eggs for breakfast. While the chicken complies by supplying eggs, it's the pig that makes a genuine commitment." **John Mack Carter**

A core objective of the change management program for the Logistics Transformation Program Integration Office is to effect a lasting change in perceptions of commonly held beliefs and assumptions in the way work is conducted in the Coast Guard. As with other military services, the Coast Guard is a compliance-based organization where *threat* is often the approach used to motivate change. However, change is more successful when based on a shared vision and involvement of all effected parties. Using this *aspiration* and *participatory* approach will shift people from the threat of compliance to a genuine commitment. In other words, successful change is about the process of turning complying chickens into committed pigs.

Elements of Change

Change management in any project must be carefully planned and involves all affected parties. Experiences from a broad range of organizations undergoing change teaches several crucial lessons for achieving and sustaining change.

Leaders understand that people respond best to change when pulled by initiatives that have value, clear focus and visible targets to achieve. The starting point for all change initiatives is to develop a shared vision of the future based on a collective and honest view of the current reality. The shared vision must have a set of worthy goals, create a sense of urgency and suggest how the goals can be realized.

Assessing the level of aspiration for change helps identify potential risks and barriers that need to be addressed during the change initiative. Understanding why people resist change and working with the forces of resistance (rather than fighting) is essential to develop desired beliefs and behaviors.

Celebrating what will work and what worked in the past, helping people honor, but let go of, out-of-date practices generates excitement about the future, and momentum for commitment. Change leaders understand that twenty percent of the population in an organization must become committed to the change for it to become significant and lasting. Change leaders create the twenty percent from all organizational levels, not just those that are directly affected by the change.

Effective communications accelerates transformation by building awareness and acceptance of the change initiative. It demonstrates that management cares to learn and understand employee issues and concerns that could undermine a successful change effort. Constant communication of the shared vision, benefits and plan for change will motivate and inspire people and reduce potential conflicts.

Leaders recognize that early involvement of people in the change initiative, through targeted efforts ranging from providing communications to involving people directly in change activities, drives commitment and builds consensus and ownership of the change transformation. Involvement in the change initiative must be recognized and a reward system developed to reinforce desired behaviors.

Successful change leaders take a leveraged approach toward change. Leaders look for opportunities where a small change can produce a large effect and to leverage team structures to accomplish work activities. For example, many change leaders use pilots to demonstrate that the change will produce results, reinforcing the change initiative.

US Navy Photo by PH1 Michael Moriatis.

Finally, successful change initiatives use a balanced scorecard to measure the change process. A common set of change goals are developed along with corresponding metrics that can be easily measured and tracked. Performance measures provide evidence of success, building momentum for the change initiative.

Moving Forward

Our Logistics Transformation Program incorporates these elements into a change management approach that focuses on changing the cultural beliefs and assumptions prevalent in Coast Guard communities. Moving forward, our program team will be developing change initiatives that seek to inspire and involve the workforce to build commitment for a sustainable change in the way Coast Guard logistics will be conducted in the future.

Aviation Logistics Transformation 10 Questions for the Chief of Aviation Engineering

In 1986 CAPT Mark Butt was a LTJG serving as Aviation Materiel Officer at Air Station Borinquen when he first felt the winds of change within Aviation Logistics. As this issue goes to print, he's completing his tour as Chief of Aviation Engineering, and preparing to assume command of Group/Air Station Humboldt Bay.

Photo by PA2 John Edwards.

Introduction: With the Coast Guard's decision to implement the Aviation Logistics Business Model for its other logistics programs, there is a perception forming that Aviation Logistics has always been a "best practice." Of course, this is not the case. In fact, Coast Guard Aviation Logistics went through a painful transformation of its own that began in the late 1980s, and continued in earnest in 2001. Even today, the Aviation Logistics Program is not sitting still, and is constantly working to improve its practices. To better understand the Aviation Logistics transformation, and how the lessons learned from it might benefit our other support programs, the LTPIO staff interviewed Captain Mark Butt, Chief of Aviation Engineering (CG-41) at CG Headquarters.

Question

LTPIO: *With the Commandant's decision to adopt the centralized, Aviation Logistics model for the entire Coast Guard, there's a perception that CG Aviation Logistics has always been a well-run organization, but that's not entirely true, is it?*

Answer

Captain Butt: For some of the older members, the easiest way to answer this question is to remind folks of Admiral Kime's ire for Coast Guard (CG) Aviation. At that time, it wasn't uncommon for an aviator to consider covering his wings when walking the halls of headquarters. From the business aspect, we were terribly inefficient coupled with Aircraft Repair and Supply Center (ARSC) failing a couple of very high profile audits. Additionally, there were disconnects between the field (i.e., end-use customer) and ARSC. The folks at ARSC were working very hard, trying to do a good job, yet the field "felt" unsupported. I can remember early Engineering Officer (EO) conferences I attended where field EOs and program members literally came to "fisticuffs" over support issues. Our configuration and maintenance management practices were always pretty good, but our supply management program was terrible. We couldn't track parts and equipment that weren't installed on an aircraft, and parts hoarding was rampant and in reality the norm for doing business.

LTPIO: *What were some of the problems the program experienced prior to its Transformation, and what was the impetus for the change?*

Captain Butt: I'll sight from personal experience: circa 1986, the Coast Guard replaced the bleed air Environmental Control System (ECS) in the H65 with a freon system which required less engine power to cool the aircraft's avionics. I was a LTJG assigned as the Aviation Material Officer (AMO) in Borinquen at the time and we were one of the first air stations to receive H65s with this modification. Right away, we started having problems with compressors failing after only 15-20 hours of operation. We had four H65s at the time, and very quickly didn't have an operational ECS system, all the compressors on backorder status at ARSC with no estimated delivery date. An H65 without an ECS can't use all its avionics in the tropical environment and is really ineffective at night. Needless to say, the CO wasn't too pleased with my "can't get the parts to fix the helos" answer. So, using all that "trained initiative" that had been instilled into me at the factory (USCGA), I took a good look at one of the compressors. Guess what? Except for that pesky little airworthiness sticker and the face plate, it looked and felt just like Mitsubishi's automotive air conditioning compressor. Down at the local auto parts store, there were 4 in stock at $129 a piece (ARSC's list price was $450 +). So, guess where those four compressors got installed by the end of the day? Within a couple of weeks, I was the favorite customer of the local auto parts store and quickly started getting calls from Air Station Miami's AMO who was in the same position. Very soon the Chief's jungle drum network went to work and every unit getting the mod had their "stash" of compressors from the local auto parts store. We had solved our problem locally, air station by air station, but now the engineers at ARSC didn't even know there was a problem.

Unfortunately for the program, the aircraft rated compressor internal components were made of different material then the automobile ones which lead

Question

Answer

LTPIO: Was there high level leadership support, or alternatively pressure, for Aviation Logistics to transform the way it did business?

to internal corrosion of the condensers. So, at the next aircraft overhaul, the condenser (at $42K a piece) had almost a 100% swap out rate. So, instead of lasting a couple of overhaul cycles as designed we had this huge additional depot cost. This huge increase in depot cost is what belatedly triggered ARSC engineers to look at the problem.

It took ARSC engineering only a couple of weeks to realize the pulley size was wrong on the original compressor, and changing to the right size put the compressor at a speed within its rated range and mean time between failure went to over 600 hours. But that was still a couple of years and many dollars away. So in the mean time the unit gave me an award for my initiative, the CG promoted me to LT, and I was sent to a job of increased responsibility.

Circa 1989, I was a rotary wing engineer at Air Station Astoria when there was a civilian Dauphin mishap which resulted in the life limit of the main rotor beams (the arms that hold the main rotor blade to the aircraft) being reduced from 3000 hours to 1700 hours. This created a crisis throughout the fleet because most the aircraft had beams over 1500 hours and ARSC didn't have the sparing to support this swap out. ARSC collected all the used rotor blades with less than 1700 hours, and would ship them out to units that needed them under the new life limit change out guidelines. However, there was a loophole in the ordering procedure for these rotor beams that an engineer with "trained initiative," like myself, could exploit. Within months I had collected every H65 spare rotor beam in the Coast Guard and was using them to horse trade for other parts. In addition, I had the highest H65 availability rate in the Coast Guard. Of course, I received an award from my unit for my actions, made LCDR, and was given a position of increased responsibility.

This reflected a culture of personal ownership prevalent within the aviation community at the time. It's my unit, and my job to "keep 'em flying" at all costs, even if it meant others within my community went without due to my actions. If you talk to any O-6 aviation engineer today, you'll find that they began their careers as a first class parts scrounger. Of course, there were some within the community who saw the error of our ways. I can remember my personal mentor, CDR Stan Walz, "chewing my butt" for this H65 rotor beam hoarding episode. That made a big impression on me, and began to change my perspective.

Of course, aviation engineers of that time were only reflecting the attitudes of Air Station COs, who competed with one another on "program flight hours," and routinely exceeded them. Keep "my aircraft" flying at all costs. The net result is that costs rose steadily, and the aviation program became very expensive, yet it couldn't justify its costs.

Captain Butt: The program responded to the pressure from Admiral Kime. The Captains at ARSC, G-SEA and G-OSR had regular "personal meetings" with the Commandant, and not particularly interested in continuing to have them, mobilized their staffs to develop solutions. There was a group of senior Commanders within the community who

Question	Answer
	came to be known as "The Twelve Angry Men," and they developed an action plan. There was also an "Aviation Mindset Study" conducted at the time, which provided great insight into the cultural aspects of change within our community. Ultimately, it took strong leaders to drive the change. I can still remember Captain Joe Walker, the CO of ARSC, addressing an EOs conference and saying "If I catch you hiding or hoarding parts, this big dog's coming down off the porch to personally deal with you." Actually, his language was a good bit more off color, not suitable for printing in the *EELQ*. Suffice it to say, he made his point. Of course, by this time G-SEA and G-OSR had given ARSC the authority and responsibility to be the supply manager for the entire aviation fleet, and stood behind them in their compliance efforts.
LTPIO: *Was there resistance within your program to pursuing the change at the time, even though it was mandated? How did you convince people that this change was ultimately good for them, and for the Coast Guard?*	**Captain Butt:** I was an EO in the field at the time, and I rewarded my Chiefs who were expert hoarders. The change in message was communicated, by folks like Joe Walker, at CO and EO conferences. Some of the "old Guard" folks who couldn't adapt simply retired. Additionally, COs were held accountable for flying only to 100% of program hours and no more. Finally, G-OSR and G-SEA supported the firing of EOs who wouldn't get with the program. That got people's attention. At the same time, we implemented Aviation Maintenance Management Information System (AMMIS), which is the supply management component of our current Aviation Logistics Management Information System (ALMIS) system. AMMIS gave us total asset visibility (TAV) of our spares, both “A” and “F” condition, across the fleet. Prior to that time, Aviation Computerized Maintenance System (ACMS), our configuration and maintenance system, only gave us visibility of installed equipment. Also, as AMMIS came on line, ACMS was modified so that you couldn't install an unofficial part. The days of installing Mitsubishi compressors in our H65s was over. Also, the Air Ops program in G-OSR became vested in this outcome, because we didn't have enough money to operate the Falcon fleet and had to cut the fleet in half. In the end, the Operations/Engineering relationship went from an adversarial face-to-face relationship to a symbiotic side-by-side one.
LTPIO: *In what ways did the way you conducted your business change … at ARSC … at an Air Station?*	**Captain Butt:** Air Stations changed because of the new policies and the visibility and enforcement capability that AMMIS enabled. ARSC really didn't begin to change until the early 1990s, and between 1997 and 2001 shifted from a functionally aligned organization to one organized along product lines. They also documented their core processes, removed unneeded steps and became more customer focused.
LTPIO: *In Aviation Logistics you have something called the Tri-P. Can you explain what that is, and how it serves your community?*	**Captain Butt:** Tri-P stands for tripartite (def: related to or executed by three parties), which in our case is Operations (G-RCA), Engineering (CG-41) and Safety (CG-1131), and we meet at least weekly. It's important to understand that "Aviation" is not really a program, in the traditional sense, but it acts like one through the Tri-P. Consensus is required on any engineering change decisions, and any one entity has veto power. Within this Tri-P, CG-41 is specifically responsible for ensuring that all of the 10 elements of logistics are addressed for any proposed change.

Question

LTPIO: *Presumably this change was led by key officers at the program level. Is that true? Also, how important was it for you to involve the senior enlisted workforce in your transformation?*

LTPIO: *A lot of people focus on the role of information technology. There's a perception that ALMIS is a key underpinning of your program, and that your community has always embraced it. Can you expound on the role that ALMIS plays in transforming your program, both today and in the past?*

LTPIO: *Because the Coast Guard has been directed to move to the Aviation Logistics model, there's a perception that Aviation Logistics is "perfect" and does not need to evolve. Surely there are things within your program which you'd like to improve. Can you expound upon a few?*

Answer

Captain Butt: The involvement of our senior enlisted workforce was CRITICAL. Without them, you don't have real change. This was done through the CO and EO, where the message was simply "get your people on board." Of course, we tried to build people's confidence in the new approach by assuring them that, if everyone plays fair, when you need a part, you'll get it … and it will be in "A" condition! It didn't always go smoothly, and it really took 4-5 years for the changes to really take hold. Also, we used Logistics Compliance Inspections to ferret out the non-compliance. Using ALMIS at ARSC we were often able to detect these folks before the inspectors ever arrived at the unit. Finally, the Chief Financial Officer (CFO) compliance came into play during this time, and if ARSC failed the audit, the Coast Guard was going to fail. It gave us a sense of urgency.

Captain Butt: "In the beginning there was ACMS"… it was built in the mid-80s and gave us configuration on the wing visibility, as well as maintenance, but no visibility of de-installed parts. In the early 90s, AMMIS came on line and gave us total asset visibility. Both of these systems were developed by mechanics, aviation engineers and supply types, which basically automated our manual processes. Of course, initially AMMIS was very slow, and the users were very upset. It took us several years to get the performance right and for users to begin to accept it. We even had issues with some of our contracted "Power by the Hour" vendors. Rockwell Collins was reluctant to use AMMIS, but ended up liking the functionality. We require all of our PBH vendors to use AMMIS, and they typically like it because it gives them visibility of the entire pipeline for their systems.

Eventually, the ALMIS umbrella was erected over ACMS and AMMIS applications, we then added Electronic Aircraft Logbook (EAL) for flight hours, and a Decision Support System to give us an integrated suite. It's this suite of tools which comprise ALMIS.

ALMIS gives aviation business processes the "open kimono."

Captain Butt: I'd like to improve the way we record flight hours on an aircraft. Now the pilot enters aircraft hours in EAL, but aging of parts only happens by the mechanic transcribing this flight data from EAL into ACMS. We need more integration here. Also, ALMIS is not well integrated because of how it was built … separate applications developed at different times. Of course, in choosing Ingres as our database technology, we chose Beta at a time when the rest of the world chose VHS (i.e., Oracle). We also need to automate our feed to Coast Guard Oracle Financials to meet the ever changing CFO act audit requirements. Finally, we need to normalize the data bases and remove some hard coding in the system to make it more flexible.

Hurricane Katrina also taught us some things. For instance, when we lost comms and had to go to manual processes, we shifted pretty easily because we mimicked manual processes when we built the system. Still, there are some folks within our community who have never used

Question

Answer

the manual procedures, so we learned that we have to teach people how to do this. One benefit of having to shut down our system for quarterly financial reporting is that it forces us to exercise our manual cutover procedures. From this, we learned the importance of keeping paper forms up-to-date with the electronic versions. We learned one other thing during Katrina, and that is that we built some constraints into the application that become problematic during surge operations. For instance, ALMIS is built for an airframe assigned to a unit with an attached crew of flyers and maintainers. In Katrina, we had helos from Houston being flown out of NOLA by aircrews from Miami and maintenance personnel from Traverse City. Katrina definitely made us expand the world of what's possible with respect to our support model.

LTPIO: *What final advice would you offer to other programs as they strive to implement a centralized model based on CG Aviation?*

Captain Butt: Centralized funding is critical. You can't solve program-level problems when all the money is divided out to many fiefdoms. We're very fortunate to have the centralized account with our AFC-41. Visibility of parts and funding is another key component which ensures trust across the program. Finally, it's important to go from a culture of "ownership" to one of "stewardship." In the end, the benefits are worth the effort; we're much more efficient and effective then we were 15 years ago and the rest of the CG can learn from these efforts without experiencing all the pain.

USCG photo by Telfair Brown.

Reflections on Transformation

LTPIO interviews Captain Steve Carlson, Chief of Naval Engineering

Captain Carlson, Chief of Naval Engineering (CG-45), graduated from the U.S. Coast Guard Academy in 1982 with a Bachelor's Degree in Civil Engineering and a commission as an Ensign. He has served aboard USCGC JARVIS (WHEC 725) and as the Engineer Officer of USCGC DECISIVE (WMEC 629). His shore assignments include Facilities Engineering at Training Center Cape May, NJ; Assistant Professor of Marine Engineering and PCO/PXO Afloat course instructor at the U.S. Coast Guard Academy; Executive Officer of Naval Engineering Support Unit Miami; Executive Officer of the Buoy Tender Replacement Project Resident Office in Marinette, WI; and Commanding Officer of Naval Engineering Support Unit Seattle. Captain Carlson will retire from the Coast Guard in the summer of 2006, after 24 years of service. Before his departure, he shared his views on Logistics Transformation and what it means to his program.

USCG photo by PA1 Kimberly Smith.

Question

LTPIO: *The Naval Engineering Program has been charged with transforming the way it does business, bringing it into alignment with our highly centralized Aviation Logistics Program. In your opinion, what are particular challenges that your program will face in making this transition?*

Answer

Captain Carlson: This is supposed to be a one page article, correct? The biggest challenge facing our program is the natural resistance to change (especially when it involves moving people and transferring control of money); the feeling of operational commanders that they will be losing "flexibility" and control; the cultural change in the surface fleet in getting the ship underway on time, in any way that we can (oars, duct tape, band aids, box patches); and the cultural change in the Machinery Technician (MK), Electrician's Mate (EM) and Damage Controlman (DC) world that we can fix anything regardless of whether we have the right training, the right tools, or the right tech pubs to do it "by the book." The last challenge may sound like a harsh criticism of the surface engineers, but it is absolutely not intended to be that. Instead, it is more of a criticism of the organization that puts the surface engineers in that environment without the right training, tools or tech pubs and expects them to perform CPR on 40 year old ships. We have a lot of great people doing amazing things, but for the most part, as a Naval Engineering Program, we have been a reactionary based, localized (Maintenance and Logistics Command Atlantic and Pacific (MLCA and MLCP), Sector, Engineering Logistics Center (ELC), Yard, Naval Engineering Support Unit (NESU)) program rather than a well coordinated, process/procedure/standards based, managed program.

LTPIO: *For many years the Naval Engineering Program has contended that "ships don't fall out of the sky", and therefore should not be supported in the same fashion as aircraft. Do you think there is validity in that statement, or are perceptions changing about what it means to "adopt the Aviation Model"?*

Captain Carlson: The point of this transformation is not because suddenly "ships are falling out of the sky." It is not about safety, although that will improve by going to the Aviation model. As much as any surface engineer hates to admit the aviators do anything right, it is clear to me that they have a better managed program that is able to clearly defend their budget needs. They are data driven in their decision making. They were not always that way. As I understand it, they were essentially forced to transform because they were getting killed in the budget battles. They had no data to back up their case, they had indefensible numbers of spare parts squirrelled away at Air Stations, and their maintenance procedures were all over the place. Sound familiar? To say that ships should not be supported in the same fashion as aircraft is saying we don't need any standards. We can do whatever we want with our ships, run them as hard as we want, maintain them (or not) however any individual wants. Clearly that's not a good plan as our 378s, 270s, 210s and 110s are showing us today.

The Naval Engineering Program has to transform because we are in the same place the aviators were several years ago. The budget will not be growing in the foreseeable future, it will be shrinking. At present, we are unable to tell what it costs to maintain a ship. We are barely able to tell what we spend on our ships and when asked if what we spend is enough, we scramble around unsuccessfully trying to defend that we need more money. We do not have consistent metrics to track the state of our fleet; we do not have required standard maintenance procedures (preventive and corrective) to base our training needs on; we do not enforce standards of maintenance on our cutters; and we do not enforce a sustainment level of operation for our ships because we don't know that level. Some people have said the surface fleet can't afford the aviation model. I would argue that we can't afford not to. If we cannot afford to support our ships to the standard that they require, then we either need to get more money or we need to operate our ships less. Nothing is free. What is it costing (in money and op hours) to fix Casualty Reports (CASREPs) caused by untrained people, incorrect or out of date tech pubs, lack of standard procedures, lack of visibility of a problem? What is it costing (in money and op hours) to Mission Effectiveness Project (MEP)

Question

LTPIO: *From your perspective, what are the key components of the Aviation Logistics Program, and are there benefits to their adoption within the Naval Engineering Program?*

LTPIO: *Are there any recent events that come to mind that caused you to think "that wouldn't have happened if we followed Aviation support practices"? Can you tell us about one or two?*

Answer

270s/210s/110s because we did not maintain them properly over the last several years? Look at the volume of spare parts that have never had demand that we are currently removing from our cutters. Couldn't those millions of dollars have been better spent?

I'm not saying that everything we do is wrong. I'm saying we can do better and learn something from the aviation model. We shouldn't dismiss it because it has the word "aviation" in it.

Captain Carlson: The key components that I see are: 1) Centralized control of money and spare parts so both are managed program-wide and not localized, 2) Standard maintenance procedures, 3) Training that is tied to maintenance procedures (i.e., you do not work on the equipment if do not have the quals), 4) Outside audits of units to ensure standards are being followed, and 5) Consistent data and consistent metrics.

All five of the above items would benefit the Naval Engineering Program.

Captain Carlson: Two events come to mind. The first is a 110' WPB [Patrol Boat] that had a catastrophic main engine casualty. The NESU conducted a root cause failure analysis investigation to look at possible causes for the casualty. They found an engine vibration problem which pointed to rocker arm defects discovered during a vibration inspection. The corrective parts were ordered by the MLC and shipped to the NESU. The NESU and ship's force worked on the engine, restored it to operation and the cutter got underway. Several weeks later the cutter attempted a full power trial and one hour into the trial the engine suffered a catastrophic failure. The failure was due to nuts coming loose on the engine where work had been performed by the crew and NESU. The contributing factors to the failure were work performed by the NESU and ship's force was work not normally performed by field units; only one of the crew that performed the work had Paxman training; the NESU did not have the most recent Paxman bulletins for job changes; there was controversy between the ELC, vibration analysis crew and the NESU crew on the best way to perform the work; Preventive Maintenance (PM) cards weren't clear as to which engine the card was written for; lube oil analysis records were inadequate; no current engine vibration data was available; NESU used an older procedure for performing the work; the NESU did not normally perform this work; and training is "on the job" education based on the "trainer's" knowledge base.

The bottom line is that, while the crew and NESU were trying to get the job done, they really had no business doing that work; they weren't trained and they didn't have the proper procedures to do the work. We put them in the position of trying to figure it out. As a result, we blew up a very expensive engine. If we had followed the aviation model, they would have had standard procedures for the work, and if needed, formal training would be established.

The second example occurred on the West Coast. The Pac Area's 378s had been suffering a rash of Emergency Gas Turbine (EGT) CASREPs. This is a vital piece of equipment that provides emergency power in the event of a casualty/fire in the engine room. The Pac Area Commander rightly ordered

Question	Answer
	the affected ships to remain in port until the casualties were corrected. MLCP(v) requested all 378s to report on the percentage of PMS that the ships had performed on their EGTs over the past year. Some of the ships reported zero percent. There is a quarterly PMS requirement to test run the EGT. By reporting zero percent, the ships had either not run the EGT in the past year, or they had not been properly recording their Preventive Maintenance System (PMS) in CMPlus. Until this was reported by message, the support and operational commanders had no visibility of the state of their fleet. In the aviation model, PMS is a requirement that is not deferred or ignored. The completion of PMS items has visibility all the way up the chain of command. If the item is not done, the aircraft is grounded. PACAREA and MLCPAC have instituted some standards and reporting requirements on the 378s which require them to report completion of certain critical PMS items prior to getting underway or claiming fully mission capable. We need to institutionalize those types of standards across the entire cutter fleet.
LTPIO: *Culture is a big part of any change initiative. In your view, what are the unique cultural hurdles for surface operators and support personnel in adopting aviation logistics principles?*	**Captain Carlson**: We have to overcome the cultural hurdle that the ship gets underway on time, regardless of its condition. We have to overcome the mentality that we attempt to fix anything regardless of available training, tools or tech pubs. Sometimes we just have to admit that we don't know what we're doing. We have to overcome the idea that we can operate our ships at whatever operational level "required," regardless of the maintenance necessary, money available, or the long term consequences of the short term need. We can do that for short periods of time (i.e., Haiti/Cuba/Katrina type things) but not without making up that maintenance. And lastly, we have to overcome the hurdle that any maintenance item is deferrable, and that maintenance is a subtracter from the readiness equation, because the ship isn't available, rather than a vital part of long term sustainable readiness. Sometimes I think the senior officer Officer Evaluation Report (OERs) need to have a block in them for "Long Term Impact" -- "What have you done to make the Coast Guard/ your unit/ your command better five years from now?"
LTPIO: *You're getting set to retire. Any final words for your colleagues and your program about this transformation initiative before you leave?*	**Captain Carlson:** Part of me (a small part) wants to stay and see this thing through because I absolutely believe it will result in a much better managed Naval Engineering Program that can defend every penny of its budget, and have a workforce and ships that are sustainable for the long term. A much larger (and more important) part of me feels the tug of family pulling me back to Seattle, saying that it's time to move on to something else. My relief, CAPT Brian Merrill, is more than capable of seeing this transformation through to the end. I only ask that all of the Naval Engineers out there get on board (the "plane" in this case) and help him make this transformation to the "Coast Guard" logistics model. Its been a quick 24 years; I've enjoyed and been blessed with the opportunity to work with some of the finest people and best engineers that anyone could hope for. Best of Luck to all of you ....

Centralized Logistics and the Field Support Workforce

by AMTCM Tom Justice and
LT Ed Semler
Engineering and Logistics Workforce Management (CG-481)

USCG photo by PA2 Sarah Foster-Snell

What does logistics transformation mean to the field workforce, particularly logistics personnel? It means that logistics standardization and a centrally managed supply system will now be the norm.

Through disciplined configuration management, we will strive for the highest degree of equipment standardization possible, with particular emphasis on mission and safety critical items. With reasonable accommodations for our legacy assets, every boat, cutter and aircraft will be more alike than different from all of the other assets within their class. The flashlights will be mounted in the exact same spot in every helicopter, every UTB (Utility Boat) will have the same make and model FM radio, every WHEC (High Endurance Cutter) will have its fire extinguishers mounted in the same place.

Maintenance standardization is also included as part of the Coast Guard logistics transformation effort. More specifically, every Machinery Technician (MK) will perform the same engine maintenance on similar vessels. Additionally, maintenance will be through the use of Maintenance Procedure Cards (MPC) written in user friendly text that is easy for MKs and Electrician's Mates (EMs) to read and understand. These MPCs will be written by MKs and EMs, so terminology and rating knowledge will flow throughout the workforce in one consistent manner. There will be no need to fumble through a six inch thick maintenance manual that refers you to five other references. The MPCs will list the

tools the mechanics will need, what consumables are required, and how to do the actual work. Inspection criteria, torque values and safety precautions with all the necessary illustrations needed to help the mechanic through the entire process will be on the card. Upon completion of the task, the crew member will sign off the MPC with the date, operating hours and any pertinent remarks regarding that particular task. At the end of the day, the information will be entered into a database that tracks the completion of every maintenance task to ensure compliance and accountability of individual responsibilities and actions. By using a Maintenance Due List (MDL), managers will have an up to the minute report on any scheduled maintenance coming due in the near future, when it was last completed and the average time it takes to complete the work. Using this information, maintenance supervisors can better forecast and schedule upcoming maintenance events and prevent duplication in the performance of the same tasks.

Parts supply will be handled by our designated Inventory Control Points (ICP), who will work in cooperation with a professional supply officer at specified command with inventory management responsibility. Gone are the days of hoarding parts in your locker or in a desk drawer. Parts will be on hand prior to the scheduled maintenance date with no need for hoarding. All parts will be tracked for their usage rate, and those items that are rarely used will be turned in to the ICP who will manage them at one location. Each unit will have an Allowance List of high usage items with a low limit monitored at the ICP. As units deplete their on-hand supply, the ICP will replenish their stock, free of charge. There won't be a need to carry $2M worth of inventory all over the ocean just in case you need it. Item Managers (IM) at the ICP will fill your parts requests by the fastest means possible. If you need a part and the cutter tied up alongside you has one, the IM will use "parts pooling" to direct that ship to transfer the item to you, and then automatically backfill that cutter with the replacement part. By having the ICP own and manage all of the parts, it will take the burden of fiscal, inventory and property management off the backs of unit personnel.

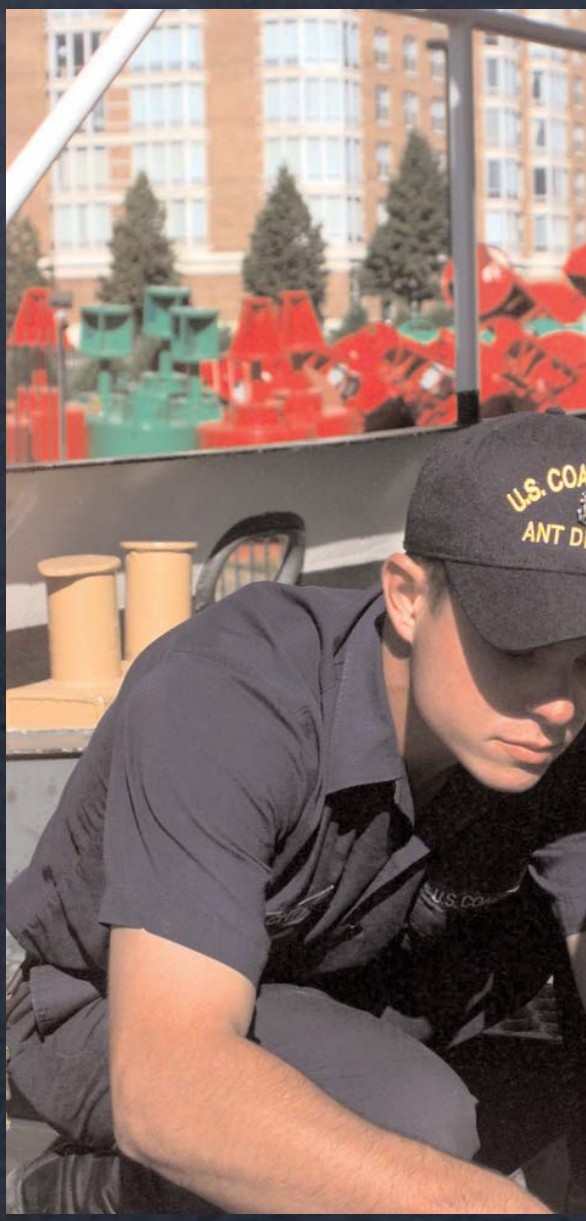
USCG photo by PA3 Bridget Hieronymus.

The ICP will be able to monitor upcoming maintenance events by looking at the same computer data base that the units will be using. When a component is coming due for replacement, the ICP will already be aware of it and will route the replacement part before you need it.

It will take time for confidence in the system to grab hold and the cultural change may be hard; we understand that completely. But easing the maintenance burden and taking the tracking, stocking, purchasing and disposal of parts off the backs of unit personnel is a key to logistical and mission success.

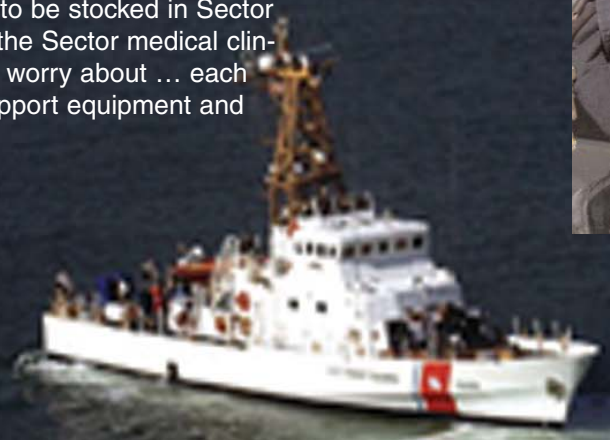
A Day in the Life of a Logistics Department Head, 2011

by Brooks Minnick, CG-44LT



USCG photo by PA1 Tom Sperduto.

It's a Monday morning in 2011, and CDR Sam Paratus, Sector Logistics Department Head, takes another hit of coffee, leans back in his chair and rubs his eyes. It's the start of a busy work week following on the heels of a busy summer weekend. Op tempo has been high, as usual for this time of year, and the Sector's assets are getting worked hard. So are Sam's people … the Logistics Duty Section responded to a number of critical casualties over the weekend. Of course, the scope of a Sector Logistics Department Head's responsibilities seem a bit daunting, even to Sam who has been doing this job for two years now. With responsibility for the organizational level maintenance of all the Sector's assets, keeping track of preventive, corrective and alterative maintenance schedules can be a real challenge. There are the various Sector/Station/ANT facilities and housing units; station/ANT boats (both standard and non-standard); aircraft; communications and nav gear located in aircraft, vessels, vehicles and facilities; vehicles with trailers for both boats and pollution response gear; small cutters, including a legacy 110' and several Deepwater 123' conversions; and various Aids to Navigation (ATON) gear, including the requisite buoys, chain and sinkers out on the back lot. For each of these assets, various and sundry supplies (i.e., Operating Materials and Supplies (OM&S)) are required to be stocked in Sector supply. Of course, there's also the Sector medical clinic, the galley, and the armory to worry about … each has its own requirements for support equipment and



USCG photo by PA1 Harry C. Craft III.

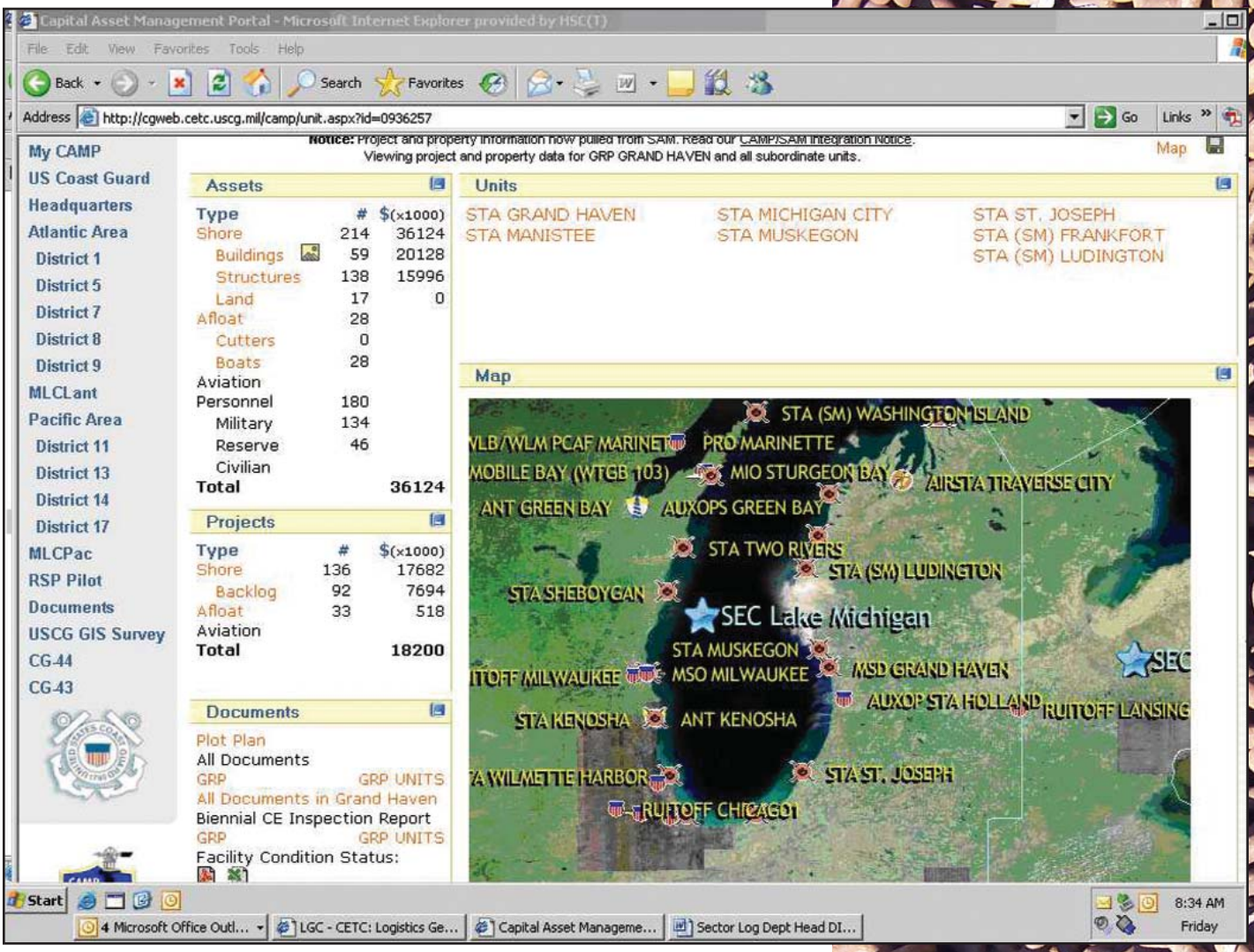
supplies, much of it hazardous, tightly controlled or highly perishable. And he asked for this assignment?

Of course, when Sam reflects back on his first Sector Logistics tour in 2006, right after the Sectors stood up, his duties today don't seem quite so daunting. Sam had good people then, just as he does now, who always ensured that the work got done. But it's the way the work gets done now that is much more manageable and controlled, and requires far less effort on his and his dedicated staff's part to manage and complete.

During Sam's first tour, every asset was managed differently and typically in a different information system. His facilities information was in the Shore Asset Management (SAM) system, and he received no required maintenance procedures for which he had to complete. His staff had to devise a maintenance plan for every shore-based structure themselves. For his cutters, boats and stations, he had to deal with a mixed bag of maintenance requirements and data systems. Some of the maintenance was clear and precise, and done without incident. But there was also the time the Sector lost an Response Boat-Small (RB-S), and almost lost a crew, to fire because a wiring harness was installed incorrectly during an engine change out. Chafing gear needed to be installed but the Maintenance Procedure Card (MPC) did not reflect that, and since his Machinery Technicians (MKs) weren't Honda certified they just did the best they could to get the boat back up. The images of the burnt out hull and the scared look on the boat crew's eyes still gives Sam pause. Then there were the cutters. Some of his cutters were running CMplus, while others had LIMS … requiring his staff to understand and work in both systems. Sam can remember trying to figure out how to submit engineering change proposals and shipyard work packages for the two different classes … actually, he never really did figure THAT all out.

Of course there were also the stations and the ANT. They only had TAIT to manage their inventories, and had no system with which to manage and record their boat maintenance, keeping Sam totally in the dark and making it difficult to assure the Commanding Officer (CO) that everything was "in order." Sam also remembers the Chief Financial Officer (CFO) "drill" in 2006, something called FUIRP (Field Unit Inventory Removal Project). What a headache!

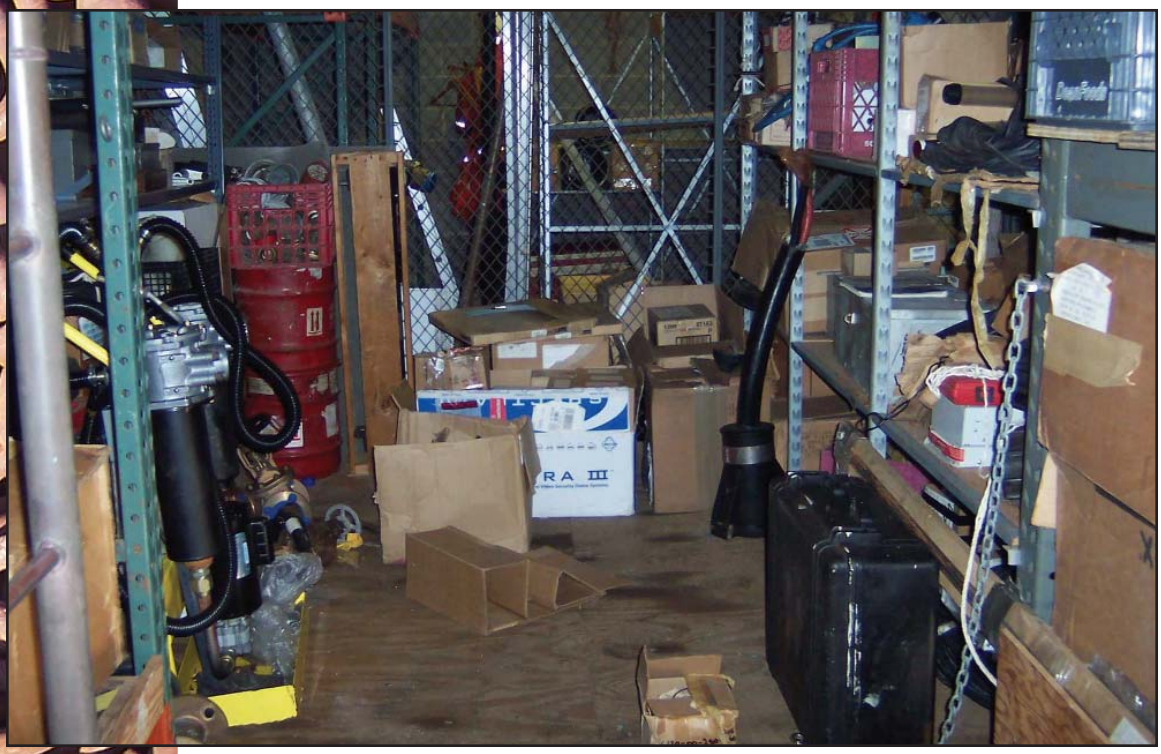
The inventory removal part wasn't all that bad, and it really reduced the amount of stuff his people had to manage and report, but it was the stuff that wasn't on the books that almost killed him! Sam can still remember the blank stare he got from the Supply



Officer at the time when he asked him where the inventory records were for all the buoy chain and shackles, pollution response gear, armory and medical stores.

Of course what gave Sam the most distress back then was reporting to the CO on the status of the Sector's assets. Because all the information was managed differently and in different data systems (if any!!), Sam had no easy way of determining what his operating status was, what critical maintenance was on the horizon, and what his funding needs were to support his infrastructure. This was bad enough during normal ops, but was only made worse when a major incident happened, like that major vessel fire and fuel spill incident the Sector responded to in 2007. The only practical way to manage the Sector's assets during that incident was by using phones, radios and a white board … and people, lots of people. What a nightmare. So why did Sam come back and take this Sector Logistics Department Head position?

Sam takes some more coffee, then leans forward and taps the keys of his standard workstation. In a few seconds he sees the operating con-



dition of every unit within his purview, presented on a Geographical Imaging Software (GIS) map overlay of the Area of Responsibility (AOR).

Units with assets that are down for repairs are depicted with a flashing red icon, and Sam clicks on one to see what's the matter. There's a "gripe" about a nasty port shaft vibration on a station RBM, as recorded by the boat crew when it returned to base. That will have to be checked out by Sector engineers. There's also a roof leak that showed up in the galley after last night's thunderstorm, right over the grill area and will have to be looked into right away. All in all, not too bad for a busy summer weekend.

With another click, the maintenance due lists for each asset in the AOR are viewable, regardless of whether or not Sam's techs or the local unit techs are conducting the maintenance. He can also see what maintenance is overdue ... it looks like the southernmost Station could use a hand since their EPO got hurt the other week. Sam knows that his maintenance section chiefs are already assigning crews to some of these tasks. Soon the maintenance teams begin to assemble the tools they need while the Storekeepers (SKs) pull the needed parts and supplies. This effort used to take hours upon hours, or even days if the parts weren't on board, but because all of this information is detailed on the standard MPC and the storeroom stocked by the Inventory Control Point (ICP) for him with the necessary parts to execute the required maintenance, its become downright routine. Comfortable that everything is under control, Sam prints out his status report and heads off to the CO's Monday morning briefing, confident that he can provide a comprehensive report to her of the state of the Sector's assets.

A PRIMER ON AVIATION MECHANIC SPEAK

Tools and Terms for the Hangar Deck Newbie

USCG photo by PAC Jeff Hall.

by AMTCM Thomas Justice
Aviation Maintenance Technician Rating Force Master Chief, CG-481

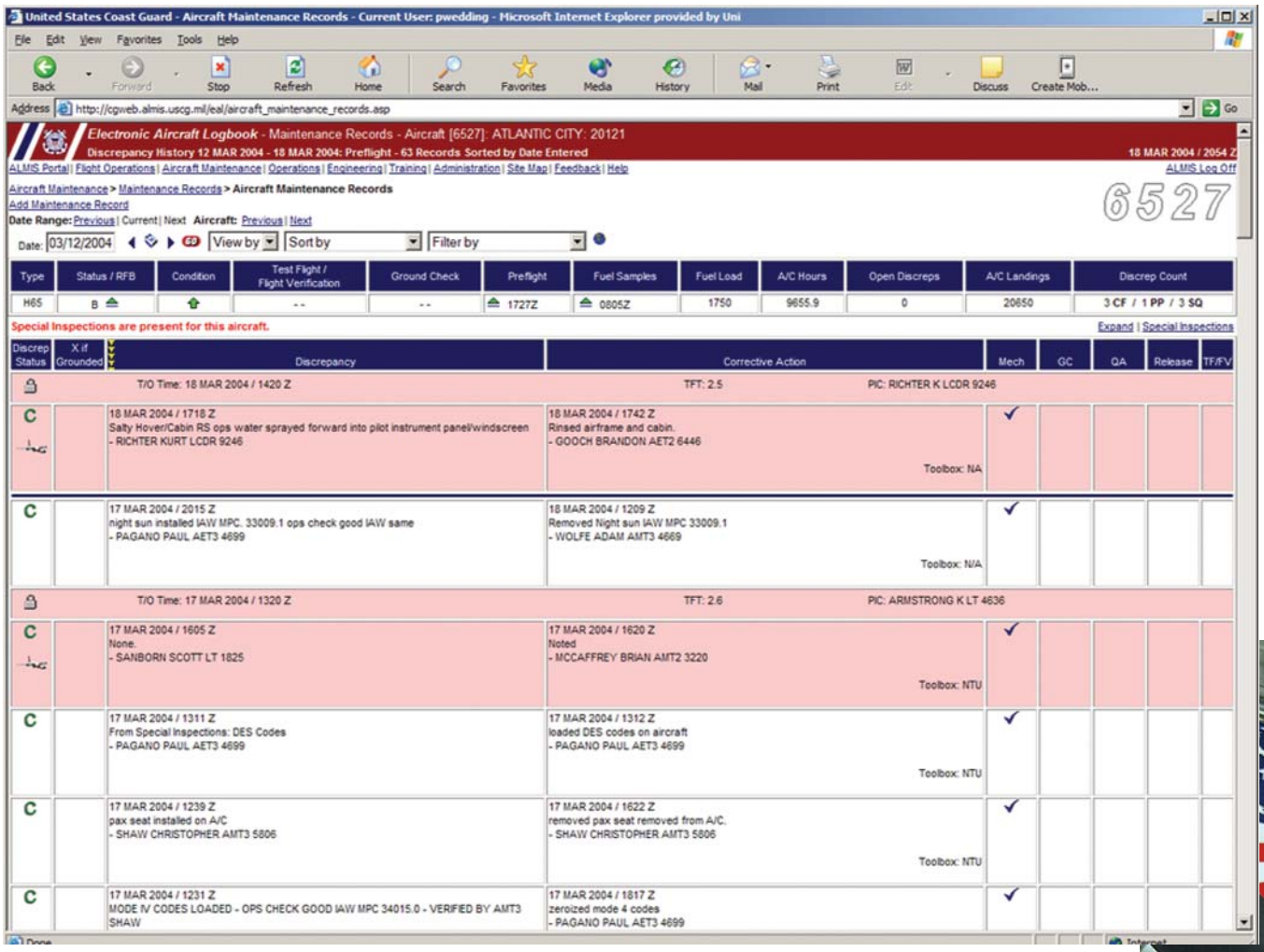
You show up to work, and after hearing the latest stunts attempted by a couple of non-rates last night, you start the day with a review of the log book. Noting any open "gripes" entered through EAL, and checking the Squawk Sheets, you then look at the MDL and start scheduling work, matching skill sets and work that needs to get done today. When issuing the MPCs to your people, you know the average time for each job, so you can bunch several tasks with one mechanic. After everyone gets busy with their assigned work, you can review the MDL and devise a long range maintenance plan that fits your operational schedule. At the end of the day, you review all of the sign-offs in the log book and on the MPCs to make sure all the pertinent data is captured. A "Log Yeoman" enters the work into the computer so that it's captured in the ALMIS data base. Once this is done, your MDL is updated for the next day's work.

Didn't completely understand what I just said? Well, that's the purpose of this article … read on and you will.

Soon we'll all know why those Airedales pack lawn chairs when they deploy. After we transform to the Aviation Logistics Model, we'll have more time to spend dealing with the joys of leadership while maintenance will almost run itself. Managing people is hard enough. Managing asset maintenance doesn't need to be. This transformation is all about easing the burden of unit level maintenance.

To understand how you'll operate in a future based on the aviation or centralized model, it's important to know some of the key tools that we use, and how we use them. The following sections outline how these tools work in this new environment. Some aspects may change as we adapt the aviation processes to boats, cutters and shore facilities, but it'll be forward change. Of course, no one is going to force surface, C4I and shore folks to adopt all of these aviation terms, but we first need to be able to understand each other's language so that we can interpret it, then apply it.

Log Book: Whether it's an aircraft, a small boat or the engineering spaces within one of the new National Security Cutters, everyone will be using a log book to record any discrepancies (aviators call them "gripes") that occur during any operational usage. Aviation folks have been using paper copies in the past but have recently switched over to the



Electronic Aircraft Logbook (EAL) page.

USCG photo by NyxoLyno Cangemi.

Electronic Aircraft Logbook (EAL). It has yet to be determined if this will be the case in the cutter world, so stay tuned for later developments.

As gripes happen on a cutter or at the completion of a mission on a Utility Boat (UTB), the operator/watch stander will write up the discrepancies in the log book. This report will immediately start the clock on some mandatory maintenance requirements. The Unit will have 24 hours to either complete the repair and sign it off or transfer it to a form called a "5181."

If the gripe is transferred to the 5181, the Engineering Officer will have to enter either a "PP" (Parts Pending) or a "CF" (Carried Forward) next to the discrepancy (or "discrep") and initial the entry. If the gripe is awaiting parts, the document number generated by Supply is entered next to the "PP" to inform maintainers that the parts are on order. Carried Forward discrepancies are work that won't keep the unit from completing its mission, but need to be scheduled at the earliest possible maintenance session.

This log book documents the maintenance history of all the unscheduled work completed and is kept for a year to monitor trends. The log book also shows a continuous record of operating time which is a key ingredient in scheduling maintenance.

Maintenance Due List (MDL): The MDL is produced from, and managed in, the Aviation Logistics Management Information System (ALMIS) application. Operating hours and calendar items are the two main methods of tracking and scheduling maintenance. Wear and

COAST GUARD AIRCRAFT
ACMS MAINTENANCE DUE LIST CALENDAR

CEI Number: 65-0000-001
Assembly Serial Number: 6562
MDL Projection Range: 6
MDL Sort Prompt : N

Date/Time of Report: 11/08/2005 04:15 PM

Operating Activity	Part Type	Curr Hours
AR & SC	HH65 AIRCRAFT	8,095

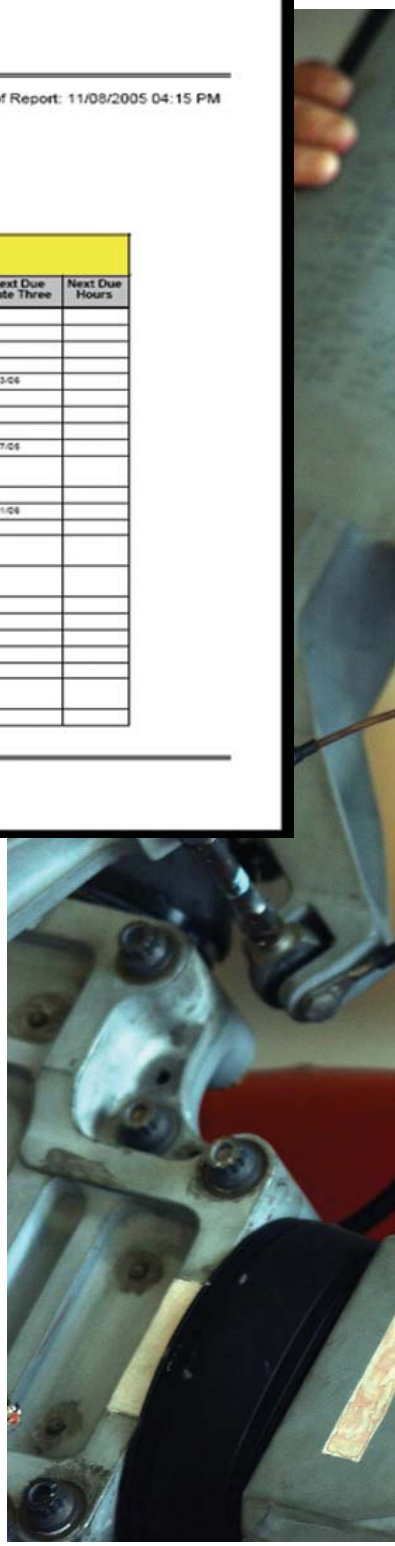
Last Unsuspended Date
10/18/05

MDL Date Range: 2005-11-08 to 05/08/06
Number of CMSCODEs: 37

CMS CODE	MPCNO	Action Code	Description	Ser Nbr	POS	Mech Type	EST MHR	Req'd Mos	Int Ext	Every Hours	Last Mnt Date	Next Due Date One	Do Not Exceed	Next Due Date Two	Next Due Date Three	Next Due Hours
638027	053022.7	BULLETIN	AIRCRAFT JACK PAD KIT IND	6562		AMT	20.0	1.00	0.00		03/03/04	04/02/04	04/02/04			
324026	33028.0	NDI	LH NLG WHL HALF RIMS	6562		AMT	2.5	12.00	6.00		06/12/03	06/06/05	02/04/06			
324027	33028.1	NDI	LH NLG WHL HALF RIMS	6562		AMT	2.5	12.00	6.00		02/12/04	08/29/05	02/27/06			
324028	33028.1	NDI	RH NLG WHL HALF RIMS	6562		AMT	2.5	12.00	6.00		02/12/04	08/29/05	02/27/06			
062031	06021.2	INSPECT	CORROSION INSP (90 DAYS)	6562		AMT	30.0	3.00	1.00		12/29/04	10/03/05	11/02/06	01/02/06	04/03/06	
T62160	T6216.0	INSPECT	ROTATING SWASHPLATE	6562		AMT	0.5	0.10	0.00		10/02/05	10/06/05	10/06/06			
262026	26019.0	WEIGH	FIRE BOTTLE	UR64068	02	AMT	4.0	6.00	1.00		02/24/05	10/06/05	11/06/06	04/06/06		
262026	26019.0	WEIGH	FIRE BOTTLE	UR64069	01	AMT	4.0	6.00	1.00		02/24/05	10/13/05	11/13/06	04/14/06		
062030	06021.2	INSPECT	CORROSION INSP (30 DAYS)	6562		AMT	30.0	1.00	0.10		03/14/05	10/17/05	10/20/06	11/16/06	12/17/06	
332001	33006.0	SERVICE	EMERGENCY LIGHTS BATTERIE	6562		AET	4.0	3.00	1.00		08/13/05	11/12/05	12/12/06	02/11/06		
231013	23001.0	INSP/CHK	HF COMM SYSTEM	6562		AET	2.5	3.00	1.00		08/29/05	11/28/05	12/28/06	02/27/06		
062000	06087	REPORT	MONTHLY OPERATING STATUS	6562		AMT	0.0	1.00	0.25		10/31/05	12/01/05	12/08/06	01/01/06	02/01/06	
231006	23001.0	INSP/CHK	HF MONOPOLE ANTENNA	6562		AET	3.0	12.00	1.00		12/13/04	12/13/05	01/12/06			
346156	34519.2	INSPECT	GPS ANTENNA	6562		AET	1.0	12.00	1.00		12/13/04	12/13/05	01/12/06			
346022	346000.2	INSP/CHK	DIGITAL DATA COMPUTER MDL	6562		AET	1.0	12.00	1.00		12/13/04	12/13/05	01/12/06			
266079	26012.0	INSP/CHK	TRANSMITTER EMER LOCATOR	6562		AET	3.0	6.00	1.00		12/13/04	12/17/05	01/17/06			
266094	26009.0	INSP/CHK	DK100 UNDERWATER BEACON	6562		AET	1.0	6.00	1.00		12/13/04	12/17/05	01/17/06			
346065	34062.0	INSP/CHK	ANTENNA GLIDESLOPE	6562		AET	3.0	6.00	1.00		12/13/04	12/17/05	01/17/06			
346043	34058.1	INSP/CHK	1553 DATA BUS	6562		AET	3.0	6.00	1.00		12/13/04	12/17/05	01/17/06			
631043	63000.0	INSPECT	FUSELAGE STRUCT/SKIN	6562		AMT	6.0	6.00	1.00		12/13/04	12/17/05	01/17/06			
232995	23300.1	REPLACE	KY-58 MEMORY BATTERY	6562		AET	1.0	6.00	1.00		12/21/04	12/26/05	01/26/06			
264019	26019.0	TEST	FUEL QUANTITY CALIBRATION	6562		AMT	6.0	6.00	1.00		12/22/04	12/26/05	01/26/06			

Page 1 of 2

Maintenance Due List.



tear on moving parts normally only happens in motion, so parts of an engine or a generator will be tracked by operating hours. Days in service will be used to record maintenance on components that degrade over time instead of by operating time. Corrosion, hull cracks, weather exposure on deck mounted equipment, etc., are examples of what would be considered calendar Items.

The MDL tracks the various maintenance tasks and gives supervisors an updated report on the last time the job was done, how often it is required, when maintenance is next due, which rating normally accomplishes the work, how long it should take and the serial number of the component to be fixed.

To allow for flexibility in scheduling upcoming maintenance, supervisors are authorized to deviate 10% on hourly maintenance or up to 30 days on calendar items. By allowing this, supervisors can complete work due around the same time, instead of taking the component out of service twice in short succession. Think of when you work on your car in the driveway. Most people do a tune-up and change their oil all at once instead of doing the tune-up on Saturday and oil change on Sunday. Flexibility allows the work to get done all at once.

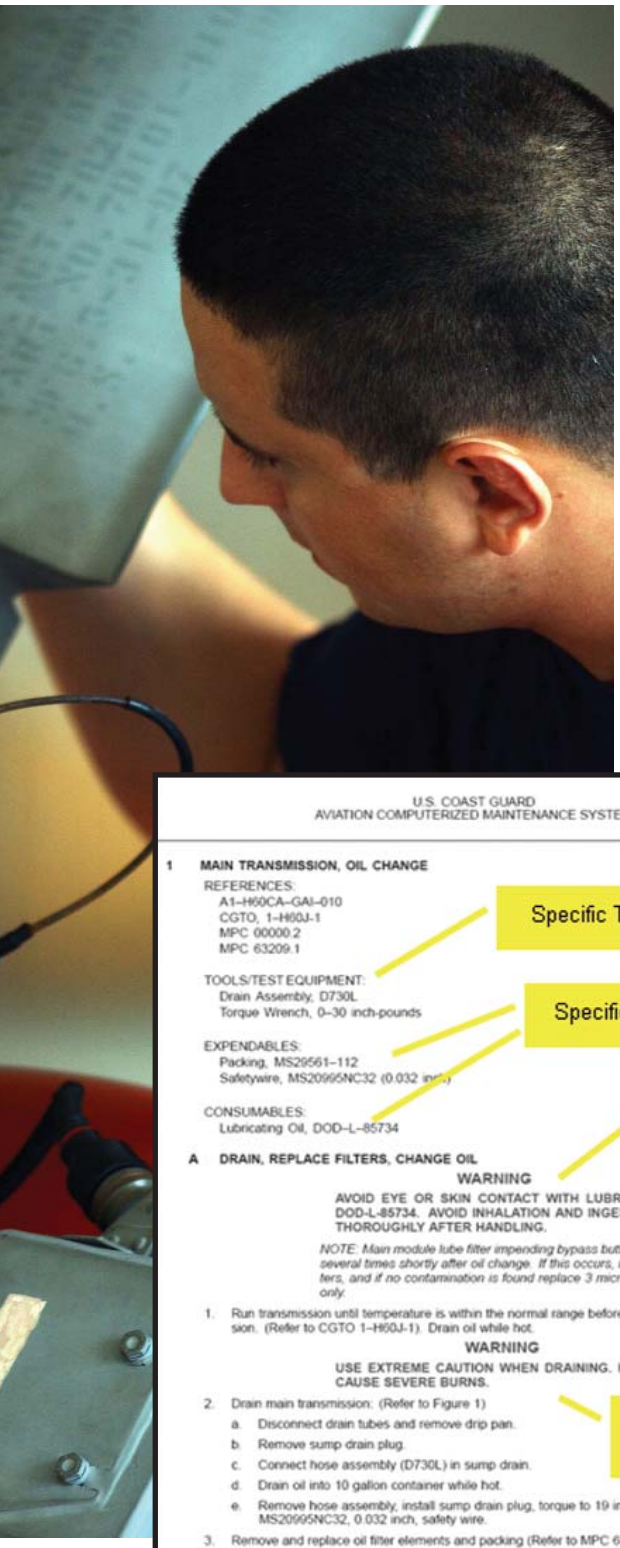
Maintenance Procedure Card (MPC): MPCs are produced in our maintenance authoring software, then stored within our technical information management system, Aviation-Technical Information Management System (A-TIMS). Most maintenance tasks have a standardized method of accomplish-

ment, and this method is included on an MPC along with the consumables, tools, text and illustrations needed by the technician in order to complete the task safely and properly. Upon completion of the work, the mechanic signs it, adds the date and operating hours and any special remarks appropriate for the components' historical record. That is then recorded in ALMIS.

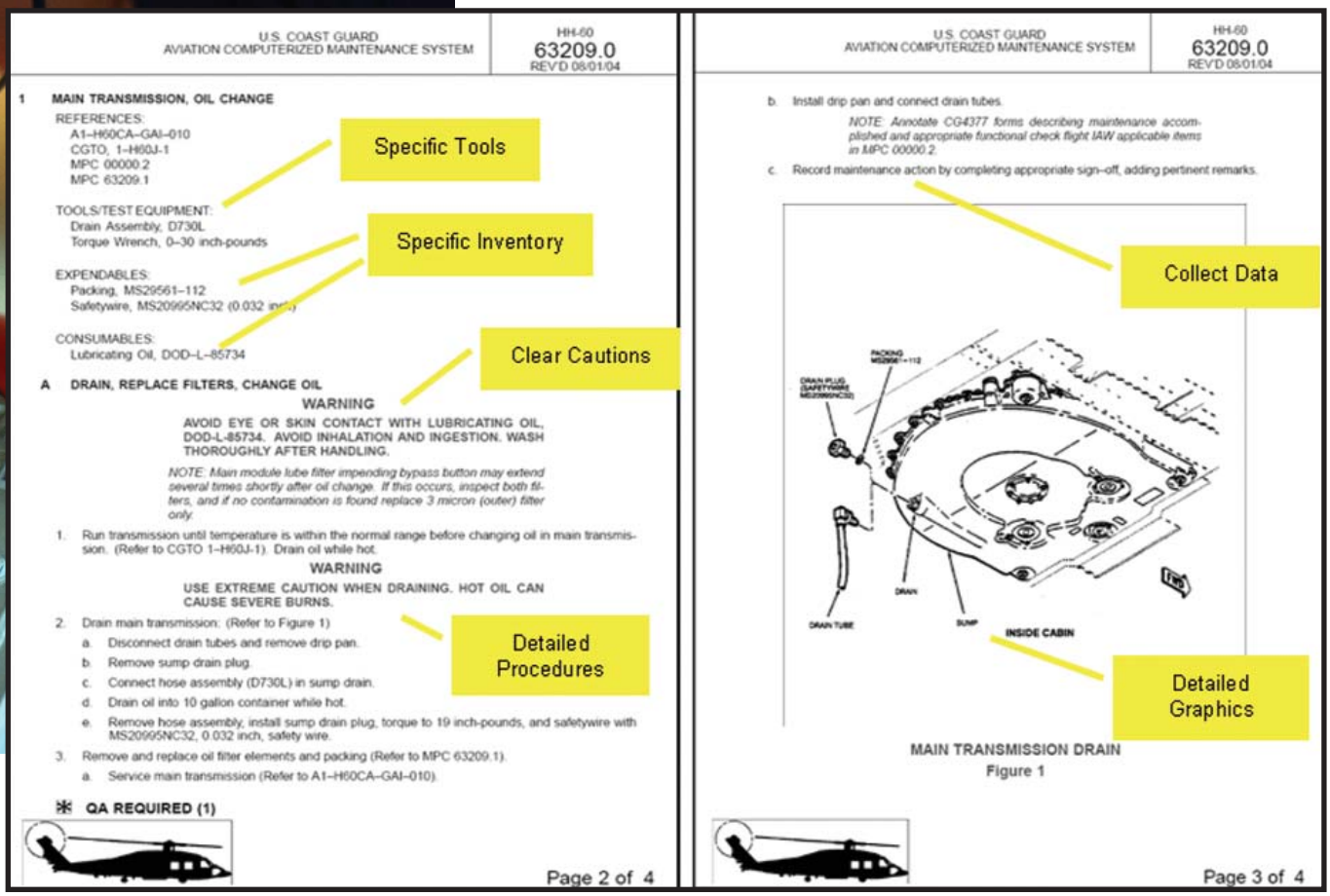
Squawk Sheet: In order to account for man-hours on minor repairs, maintenance personnel document their work on a form commonly referred to as a "Squawk Sheet." These are reports of minor discreps and jobs not covered by more complex maintenance functions. Gripes for touching up paint chips, cleaning, minor corrosion work, etc., are documented here and accurately track man-hours for all work that needs to be done, justifying manpower. This information is again recorded into ALMIS.

Well, you have just completed your first "introduction to Airedale lingo 101," but this doesn't mean that you can run out and buy a leather flight jacket. Over the next few years we'll continue to relate old school terms with those that will come with the aviation logistics model. Over time they'll become second nature and we'll have you talking like an Airedale in no time.

USCG photo by Telfair Brown.



Aviation MPC



U.S. COAST GUARD
AVIATION COMPUTERIZED MAINTENANCE SYSTEM

HH-60
63209.0
REV'D 08/01/04

1 MAIN TRANSMISSION, OIL CHANGE

REFERENCES:
A1–H60CA–GAI–010
CGTO, 1–H60J-1
MPC 00000.2
MPC 63209.1

TOOLS/TEST EQUIPMENT:
Drain Assembly, D730L
Torque Wrench, 0–30 inch-pounds

EXPENDABLES:
Packing, MS29561–112
Safetywire, MS20995NC32 (0.032 inch)

CONSUMABLES:
Lubricating Oil, DOD–L–85734

A DRAIN, REPLACE FILTERS, CHANGE OIL

WARNING

AVOID EYE OR SKIN CONTACT WITH LUBRICATING OIL, DOD-L-85734. AVOID INHALATION AND INGESTION. WASH THOROUGHLY AFTER HANDLING.

NOTE: Main module lube filter impending bypass button may extend several times shortly after oil change. If this occurs, inspect both filters, and if no contamination is found replace 3 micron (outer) filter only.

1. Run transmission until temperature is within the normal range before changing oil in main transmission. (Refer to CGTO 1–H60J-1). Drain oil while hot.

WARNING

USE EXTREME CAUTION WHEN DRAINING. HOT OIL CAN CAUSE SEVERE BURNS.

2. Drain main transmission: (Refer to Figure 1)
   a. Disconnect drain tubes and remove drip pan.
   b. Remove sump drain plug.
   c. Connect hose assembly (D730L) in sump drain.
   d. Drain oil into 10 gallon container while hot.
   e. Remove hose assembly, install sump drain plug, torque to 19 inch-pounds, and safetywire with MS20995NC32, 0.032 inch, safety wire.
3. Remove and replace oil filter elements and packing (Refer to MPC 63209.1).
   a. Service main transmission (Refer to A1–H60CA–GAI–010).

✱ QA REQUIRED (1)

Page 2 of 4

U.S. COAST GUARD
AVIATION COMPUTERIZED MAINTENANCE SYSTEM

HH-60
63209.0
REV'D 08/01/04

b. Install drip pan and connect drain tubes.

NOTE: Annotate CG4377 forms describing maintenance accomplished and appropriate functional check flight IAW applicable items in MPC 00000.2.

c. Record maintenance action by completing appropriate sign–off, adding pertinent remarks.

MAIN TRANSMISSION DRAIN
Figure 1

Page 3 of 4

Maintenance Procedure Card (MPC).

A Day in the Life of a Sector Naval Engineer in the New Centralized Logistics World

by LCDR Chris Bartz, G-RCC-1
LTPIO Sector Work Group Lead

USCG photo.

The NBA schedule has come out and this year the home team will be hosting the NBA All-Star game. Since the game has been designated a national security event, the Captain of the Port has placed a maritime security zone around Riverside Arena, where the game will be played. The Sector Commander, working closely with local, state and federal officials, has determined that four boats and one back-up boat would be the appropriate number of assets to enforce the security zone. While the Sector Response and Prevention Departments work together to develop an operation order, the Logistics Department is tasked with ensuring maritime assets are ready and able to meet mission requirements.

The Sector Naval Engineer has reviewed the operation order and tasked his maintenance supervisor, Chief Wesson, to ensure boats are available to accomplish the mission. Three weeks before the game, Chief Wesson reviews the Maintenance Due Lists for all the boats in the Sector. He identifies five likely candidates and coordinates with the stations to ensure the boats are available and in ready condition. Four out of the five boats will require no maintenance before the operation, but the fifth will need an engine overhaul. Chief Wesson arranges for the fifth boat to arrive at the Sector three days before it will be needed.

When the fifth boat arrives at the Sector, Chief Wesson is ready. Because it is desig-

USCG photo by PA1 Barry Lane.

nated as depot level maintenance, the Sector is not authorized to perform the engine overhaul, but they do have the capability and authorization to perform an engine change out. He has pulled all of the Maintenance Procedure Cards (MPCs) for the engine removal and installation, and assigned a maintenance team consisting of MK1 Smith and MK3 Colt to complete the task. Before work is started, Chief Wesson briefs the team and hands them the MPCs. The MK1 reviews the MPCs and determines which parts and tools will be required for the job. MK3 Colt is tasked with drawing the required spare parts from the Supply Division, while MK1 Smith ensures the required tools are available and calibrated in accordance with the MPCs. When Petty Officer Colt arrives at the Supply Division, he gives a list of the required parts and their part numbers to the duty storekeeper. The storekeeper checks the computerized logistics system for part location, draws the parts and issues them to Colt. By checking the parts out of the computerized logistics system, the system has automatically generated an order for replenishment from the central inventory control point. When Colt returns with the parts, Smith is ready to start work. Throughout the day, Chief Wesson periodically checks on the status of the work. He notices that Smith is consistently providing on-the-job training to Colt as they proceed through the MPCs. At the end of the work shift, the job is complete. After cleaning up the work area, the MK1 and MK3 move to their shop and complete maintenance sign-offs. They input each MPC completion into the computerized maintenance system, which automatically updates the Maintenance Due List, and the system generates the necessary shipping documents for the storekeeper to arrange for the return of the removed engine to the designated overhaul facility. The fifth boat is operational and ready for its mission.

In the end, the mission was a complete success. The Logistics Department was able to anticipate and plan for the mission due to a comprehensive integrated logistics system, and boat five was successfully pressed into service when one of the other boats experienced a lower unit failure. There were no incursions into the security zone due to the overwhelming Coast Guard presence. The East beat the West in a tight game, 198-197.

Logistics Transformation -- Putting It into Practice

by Trixy Gillespie and
Tiffany Turner
CG-44LT

Stood-up in the summer of 2005, the Logistics Transformation Program Integration Office (LTPIO) was tasked by the Chief of Staff with transforming the Coast Guard to a centralized business process. As a first step to tackling the transformation for all Coast Guard communities, the LTPIO will migrate each community to the current Aviation community logistics processes, beginning with the Response Boat-Small (RB-S) asset. By taking pointers from their lessons learned, LTPIO will accelerate the logistics transformation throughout the Coast Guard. We have three distinct efforts underway to start this transformation; the Chief Financial Officer (CFO) Remediation, RB-S Pilot and Coast Guard-Technical Information Management System (CG-TIMS). These projects will be discussed in greater detail later in this issue.

CFO OM&S Remediation

Most of the field should be familiar with the CFO OM&S Remediation Initiative mandated by the CFO Act and driven by LTPIO. Otherwise known as the Field Unit Inventory Repositioning Project or FUIRP, this effort is designed to ease inventory burden and location of needed parts, increase storeroom space, and gain compliance with CFO requirements, making units less likely to be subject to CFO auditor visits. FUIRP covers the repositioning of field-held inventory with little to no demand for a significant amount of time (consumables with no-demand for three years and all repairables with no-demand for seven years). To date, the LTPIO has facilitated the completion of 429 units, removing no-demand items from their inventories. A total value of over $149 million and over 2.8 million parts have been removed from field units. Of the over 2.8 million parts only 18 parts had to be returned due to causality. Since then nearly 800 parts have been shipped to units from FUIRP parts. LTPIO's initial efforts have already led to the creation of better internal material management, tighter internal controls, and reduced inventories to track at the unit level. Full implementation of the CFO Operating Materials and Supplies (OM&S) Remediation Initiative is scheduled to be completed in the fall of 2006. During the course of this effort, the removal of 1.6 million unneeded parts valued at $254M will occur, freeing space on ships, boats and air stations for better operations.

RB-S Pilot

To test the aviation community's business processes and procedures for the surface fleet, LTPIO is conducting a pilot effort with the Response Boat-Small (RB-S) community. As an asset class with some boats still in acquisition, RB-S was a logical starting case. The LTPIO has already briefed key boat community leadership such as the Office of Boat Forces (G-RCB), Office of Naval Engineering (CG-45), G-A, Program Offices for the Response Boat-Medium Boats (RB-M) and RB-S to gain support. This effort will begin to transform how the boat community currently handles acquisitions, the Product Line, asset configuration, maintenance management, and training centers. Figure 1 displays the notional concept of operations for the boat community. The effort is still in the beginning stages, but will entail establishing Working Groups to analyze organizational changes and standardizing processes and procedures. The RB-S Pilot has begun the tangible steps with the crucial stand-up of the Product Line at the Engineering Logistics Center (ELC). With the guidance of the Aircraft Repair and Supply Center (ARSC), the RB-S Product Line and subsequent components of the pilot will roll out to two Sectors and ultimately all Sectors by October 2009.

IT Consolidation and CG-TIMS

The LTPIO is also supporting an effort to consolidate the Information Technology (IT) infrastructure beginning with the system for managing technical documentation. Currently, the Coast Guard uses

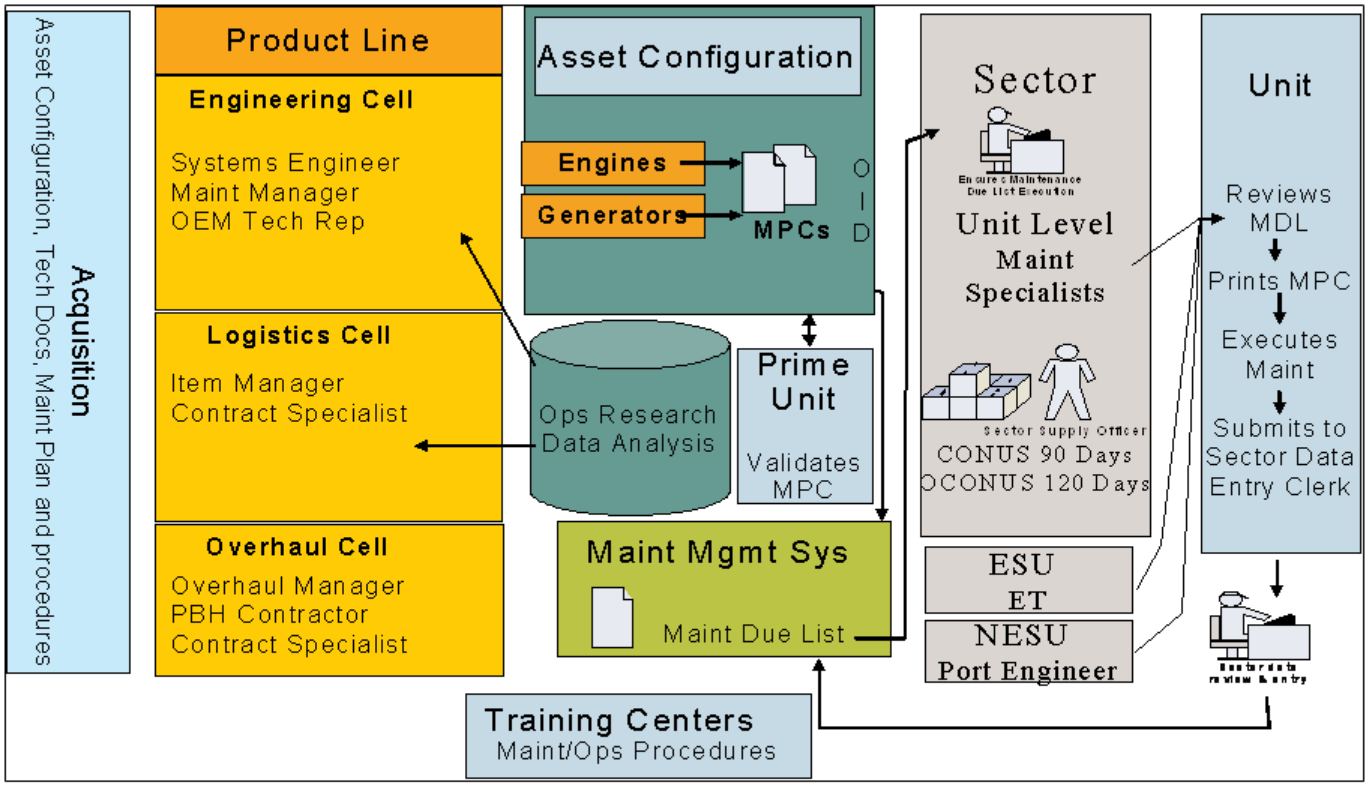
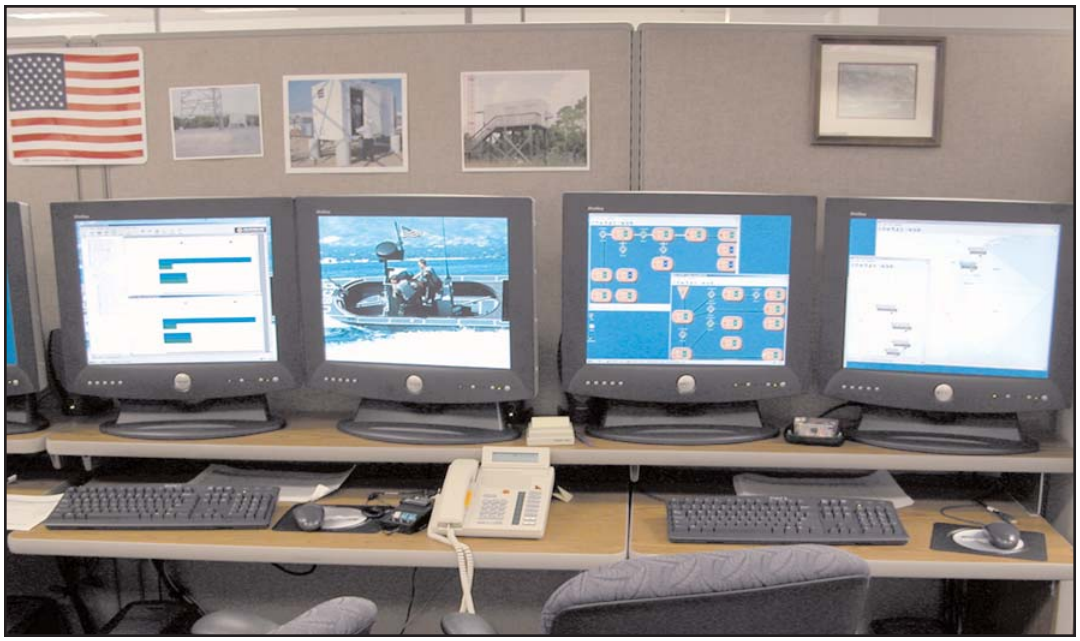


Figure 1. Notional Boat Community CONOPS.



multiple technical information management systems (A-TIMS, NE-TIMS, CE-TIMS and CGPMS) to support the Aviation, Naval, Civil and Electronics communities, respectively. These systems track, manage, organize and control access to design, engineering and business documents. The Coast Guard is in the process of moving towards the use of a single Commercial-Off-The-Shelf (COTS) product called Adept or CG-TIMS. This system has already been used within the Civil community for over seven years and serves as a good model for the other communities to follow. To date, the LTPIO has conducted an analysis for Naval and Aviation, mapped NE-TIMS and A-TIMS data to the COTS product, educated the TIMS team on standard aviation business process for technical information, and identified full migration to CG-TIMS by the end of Fiscal Year 2006.

Configuration Management -- The Foundation of Logistics

by Shelley Diedrich, CG-44LT
with CAPT Scott Reynolds, CG-44

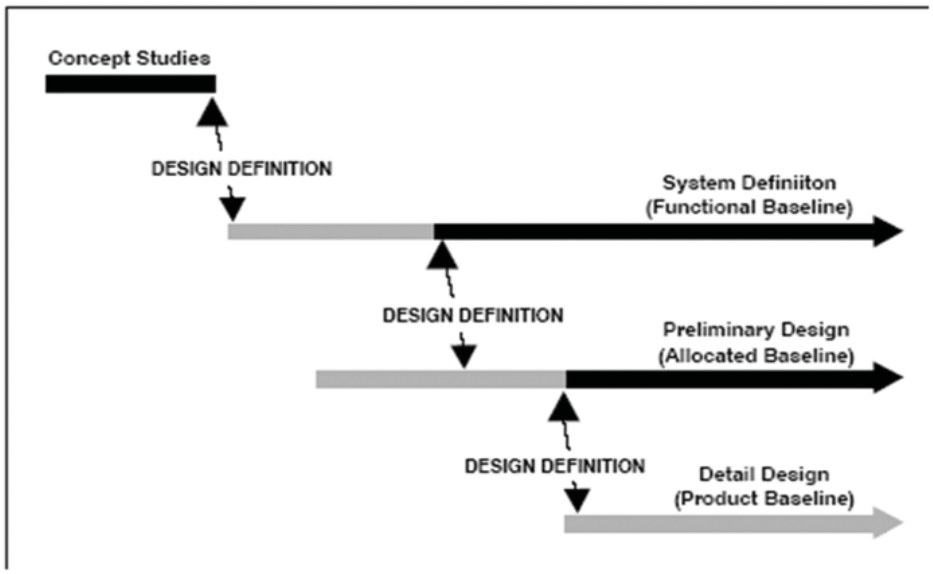
Configuration Management (CM) is a key technical discipline needed to support transformation of the Coast Guard's entire logistics support system to a common model across all communities including vessels, aviation, shore facilities, Command, Control, Communications, and Computers and Information Technology (C4IT) and even personnel. To effectively manage our logistics system through a single set of standard processes (for acquisition, maintenance, supply, training, etc.), we must be able to rigorously document, communicate and control the way our assets (e.g., vessels, aircraft) and systems (e.g., information technology, communications) are configured.

Sound CM is one of the foundations that our logistics support system must be built on. It is an essential component that allows us to effectively and efficiently deliver and maintain the operational capabilities needed to meet our missions. The most difficult and complex parts of CM are handled by professional practitioners at Coast Guard Headquarters (HQ) and logistics Centers of Excellence, and should not be a burden to the field or operational commands.

Requirements Allocation Sheet	Functional Flow Diagram Title and No. 2.58.4 Provide Guidance Compartment Cooling	Equipment Identification		
Function Name and No.	Functional Performance and Design Requirements	Facility Rqmnts	Nomen-clature	CI or Detail Spec No.
2.58.4 Provide Guidance Compartment Cooling	The temperature in the guidance compartment must be maintained at the initial calibration temperature of +0.2 Deg F. The initial calibration temperature of the compartment will be between 66.5 and 68.5 Deg F.			
2.58.4.1 Provide Chilled Coolant (Primary)	A storage capacity for 65 gal of chilled liquid coolant (deionized water) is required. The temperature of the stored coolant must be monitored continuously. The stored coolant must be maintained within a temperature range of 40–50 Deg F. for an indefinite period of time. The coolant supplied must be free of obstructive particles 0.5 micron at all times.			

The primary purpose of the CM process is to ensure that the documentation used to describe our products precisely matches the physical products themselves. It ensures that we know the capabilities of the products we have fielded, along with the full range of logistics support required to maintain them. The CM process is the same for hardware or software, aircraft or vessel, weapon system or information system. While each has unique requirements, the process used to document and maintain those requirements is the same.

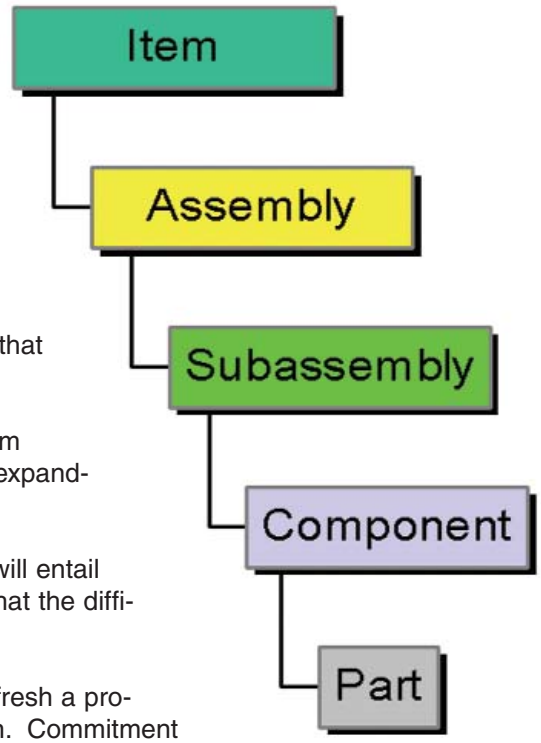
CM starts on day one with the identification of new asset or system requirements and proceeds with the systems engineering process from design through construction to deployment. During acquisition, the Coast Guard and the manufacturer or supplier provide all the initial configuration information. Once the asset or system is put into operation, the CM process controls any changes to its configuration to ensure that it still has the capabilities needed to support its mission and that it can be adequately supported by the logistics infrastructure.



Information tracked by CM covers a broad spectrum, including functional and performance requirements, drawings and parts listings, specifications, physical and functional characteristics, nameplate data, technical and operators manuals, failure data, test procedures and reports, and documentation of all proposed and implemented changes. This information drives all logistics support decisions, such as corrective and preventive maintenance tasks, and schedules unit spare and repair parts, supply system stock, and training needed for unit and support personnel to both operate and execute the required maintenance for the system.

CM is not an optional process. Complete and accurate information is needed to deliver cost-effective logistics support, while simultaneously ensuring that the Coast Guard is always prepared to meet its missions. Furthermore, configuration changes must be rigorously managed through the CM process to ensure that mission capability is not degraded or support costs increased.

The benefits to an organization with an orderly CM program are significant. Major maintenance jobs can be accomplished promptly and correctly the first time because planning is based on good information, lessons learned from previous work of similar nature have been incorporated, an accurate procedure is available, and the proper parts and drawings are ready. Changes and modifications accomplish what they are intended to accomplish because technical reviews establish a design that is based on valid, as-is conditions. The process continues after the change because procedures, drawings, parts and training are updated to reflect the change. As a result, routine maintenance becomes seemingly self-executing, asset availability increases and costs are cut.



The successful implementation of CM throughout the CG will not be easy. What are we doing to ensure it will succeed?

First, we will institutionalize the CM process by requiring CG-6, CG-4, CG-A, and CG-1 to use the same process, and then doggedly enforce that the process is being used.

Second, we'll need to devote the resources necessary to do the program right. We'll get the program running well in several small areas before expanding.

Finally, we'll need to learn from experience and follow up. Part of that will entail compliance audits to determine how the program is progressing and what the difficulties are.

Starting any program is difficult. However, it is even more difficult to refresh a program that's been neglected and which strong cultural norms have set in. Commitment and good intentions are not enough, and aggressive education and enforcement will also be needed to first break, and then recast, the mold.

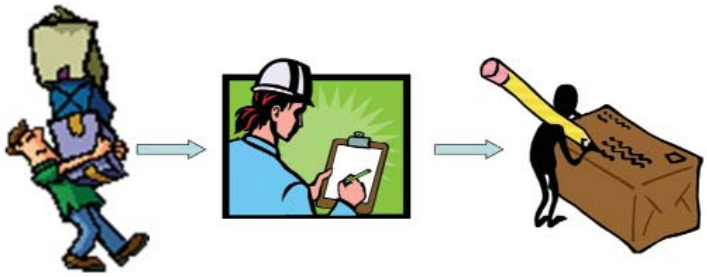
Logistics Business Transformation Update - CFO Remediation Actions for Field Held Inventories

by LT Jeff Clark, CG-44LT

The Commandant of the Coast Guard directed immediate action to improve our inventory management practices in order to comply with Federal Chief Financial Officer (CFO) Audit requirements, and prove our good stewardship of taxpayer dollars. A key step in this effort is to remove field unit inventory that has no recorded demand.

As of 24 May 2006, 429 units have completed the removal of no-demand items from their inventories. We have removed, on average, 80% of all inventory items from most units. Some units have surpassed 95%. Here is a summary of the Field Unit Inventory Repositioning Project (FUIRP) results to date:

- Units completed (removal, wall-to-wall, and final TAV): 364
- Units completed through parts removal phase: 429
- Volume of inventory repositioned (count of all parts): 2,820,534
- Value of inventory repositioned: $149,668,764
- CASREPs that required return of repositioned parts: 18
- CASREPs resolved/averted by FUIRP parts availability: 31



There have been some unexpected successes born of this effort. First, we have removed, on average, six tons of material from each cutter. While a detailed impact analysis of this reduction is still being calculated, it has relieved weight restrictions, freed up storage areas, reduced fuel consumption and lessened environmental impacts while minimizing the inventory management burden on the crew. Casualty Report (CASREP) data shows only a nominal disruption to operational capability. In fact, the total asset visibility and availability of the repositioned material has allowed some units to correct casualties faster than by using the federal stock system or commercial sources. Over 1800 parts have been redistributed to units from FUIRP holdings, free of charge, representing a cost avoidance of over $920K. While there has been great concern about the potential for severe negative impacts, experience is proving otherwise. Overall, the FUIRP has exceeded expectation.

All units are required to participate in this effort before the end of Fiscal Year 2006 (FY06). Units will be contacted by a Maintenance and Logistics Command (MLC) or Engineering Logistics Center (ELC) representative with detailed scheduling information. A letter and detailed process guide, which includes detailed information on how the repositioning activities will be funded, will be provided. A complete plan of actions and milestones (POAM) can be viewed through the Logistics Transformation site in CG Central. This site also contains Frequently Asked Questions (FAQ) about the project and access to a new application called CG-PART which can be used to locate repositioned items. The Logistics Transformation Program Integration Office (LTPIO) is the plan owner and all proposed changes to the plan should be forwarded to CG-44 for consideration and approval.

By its completion in five months, this effort will result in the total removal of more than 1.6 million parts valued at $254 million from 651 units as well as the establishment of new inventory baselines. Special steps are being taken to assist units which pose substantial risk to CFO compliance. For instance, contract support will be utilized to re-configure the CMplus databases for Maritime Safety and Security Teams (MSST) and Port Security Units (PSU). Contractor teams will perform the wall-to-wall physical inventory for each MSST/PSU unit to ensure completeness and to close out FUIRP activities. Another example is Aids to Navigation (ATON) material. A plan will be developed in the coming weeks to ensure this material is also properly recorded and managed. Continuous management of these baselines is critical to CFO compliance, as units must have an accurate record and location for each item in inventory. To accomplish this historic task will require the continued teamwork of field units, support commands and operational commanders.

BRAVO ZULU TO ALL THOSE WHO ARE MAKING THIS EFFORT HAPPEN!

Parts Availability Research Tool

Department of Homeland Security

United States Coast Guard

New Capability - Total Parts Visibility!!

The Operations Systems Center (OSC) has created a new capability that makes searching for parts much easier. CG PART, Parts Availability Research Tool, allows authorized personnel to easily determine if a part is available within the Coast Guard Inventory and where it is located. This total visibility is especially instrumental for items that have been repositioned as a result of the Field Unit Inventory Repositioning Project (FUIRP) process as these parts are FREE ISSUE and can be easily requisitioned via email or MILSTRIP (per FUIRP reclamation processes) as required for maintenance. Strengths of this system include:

1. Queries can be done by National Item Identification Number (NIIN) (no hyphens), Federal Supply Classification (FSC), Item Name, Cage, Part No. or COG.
   - ❏ For FUIRP items only make sure "View FUIRP Items Only" is checked under Inventory View.
2. Search results show the location of the item to allow for parts pooling.
3. Designed with underway units in mind. A key element of CG-PART is its accessibility and functionality with the cutter fleet via International Maritime Satellite (INMARSAT).

Please continue to follow the Aircraft Repair and Supply Center (ARSC) and Engineering Logistics Center (ELC) reclamation processes outlined in the FUIRP Field Users Guide for the return of FUIRP items required for maintenance. This tool should be used to find required parts before requisitioning from outside sources. ***Remember: for FUIRP items, use the "View FUIRP Items Only" inventory view. Items found using "View All Inventory" may not be available at ELC or ARSC***.

"Configuration Item Smith, Reporting for Duty"

by Brooks Minnick, CG-44LT

USCG photo by PA1 Tom Gillespie.

Introduction: Despite the Coast Guard's official definition of Logistics, as reflected in COMDTINST 4000.5A, *"logistics encompasses all the activities associated with developing, acquiring, sustaining, and eventually retiring the components of capability: People, Information, and Systems," there has been a longstanding debate about whether or not personnel management is "part of logistics."* This article should be considered a "thought piece" which explores some areas where logistics principles and personnel management intersect.

We're used to hearing our leaders say that *"people are our most important asset,"* but our most important *"Configuration Item?"* Probably not. A cutter is an asset after all, so is a radar … and we certainly don't put our people in the same category as our machines and equipment, do we? Calling people Configuration Items sounds a little "de-humanizing." But more de-humanizing than "asset"? Admittedly, the term "asset" is nuanced by the context with which is it used. For example, "that officer is *an asset* to our program" means something slightly different than "that response boat is one of our most critical *assets.*" But when a leader says "people are our most important assets," they clearly are applying the latter context (i.e., comparing them to boats), and not the former.

Of course, those boats are also systems, which are comprised of Configuration Items. In fact, they themselves are high level Configuration Items, comprised of other lower level Configuration Items, that complete them as systems and allow them to deliver the capability that we need to get the mission done. Most importantly, they rarely drive themselves …

part of the capability a boat delivers is the ability to get from point A to point B without running aground, and it's typically the coxswain that we rely upon within that "boat system" to steer clear of hard spots in the water.

Per the Coast Guard's own definition of logistics, as reflected in COMDTINST 4000.5A, *logistics encompasses all the activities associated with developing, acquiring, sustaining, and eventually retiring the components of capability:*

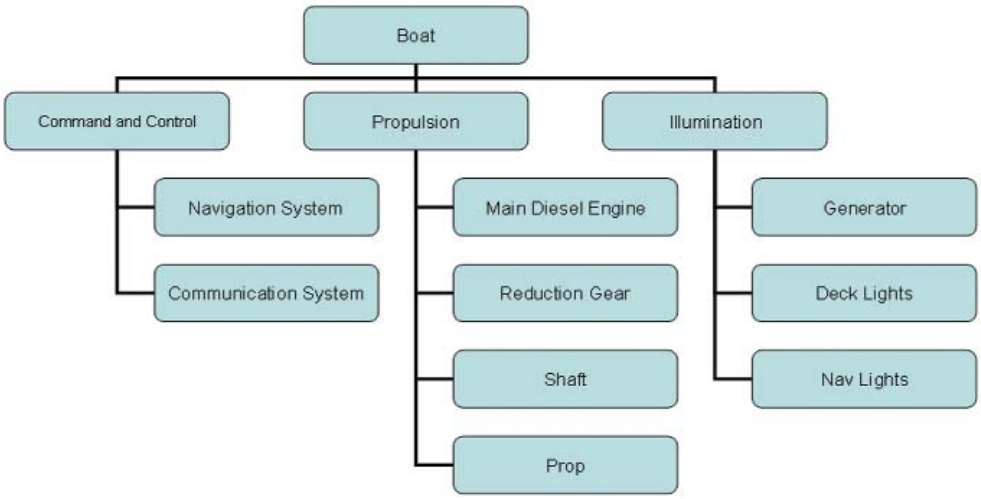
- ***People,***
- *Information, and*
- ***Systems.***

Now, it could be said that even this definition has some redundancy in it, because the commonly accepted definition of a system is: *a construct or collection of different elements that together produce results not obtainable by the elements alone. The elements, or parts, can include* ***people****, hardware, software, facilities, policies, and documents; that is, all things required to produce system level results*. The value added by the system as a whole, beyond that contributed independently by the parts, is primarily created by the relationship among the parts. So clearly, people are a critical component of systems which contribute to the capability of "*the whole.*"

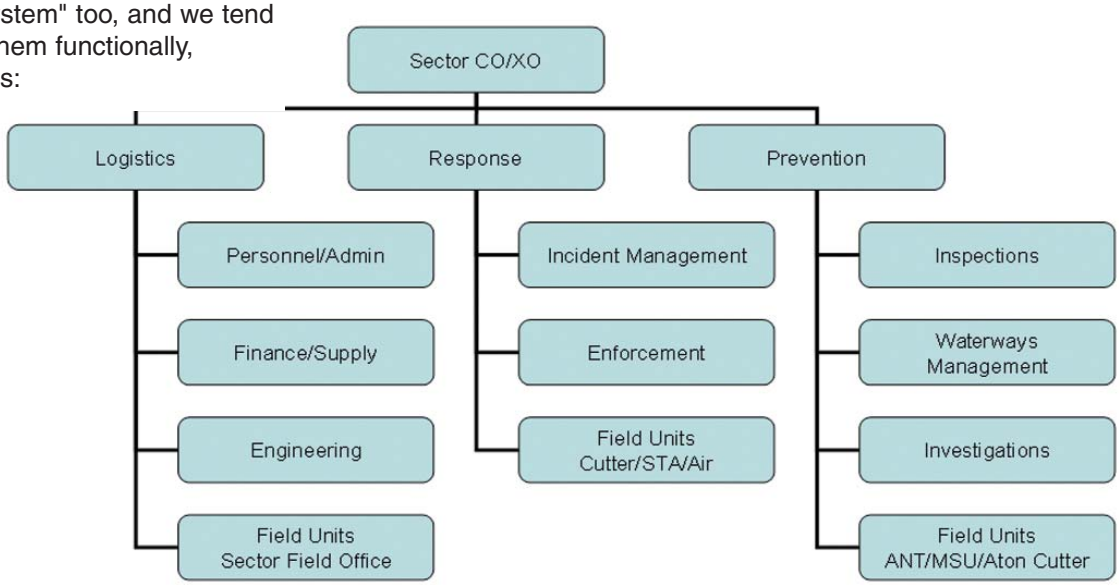
Now, let's take this thinking a bit further, and introduce the concept of Configuration Item to our systems thinking. Per our own Configuration Management (CM) policy, a Configuration Item (CI) is defined as *an aggregation of hardware, software or both; or any of its discrete portions, which satisfies an end-use function, and is either maintenance worthy, or engineering/logistics critical, and is designated for CM*. Stated another way, a CI is a system or components of a system for which we choose to exercise the discipline of Configuration Management for the reasons stated above. Applying this view to people, I can easily argue that a person is an *aggregation of hardware* (i.e., arms, legs and organs) *and software* (i.e, the thoughts, impulses and signals coursing through a brains and nervous system). *Satisfies an end use function?* The end use function which BM2 Smith satisfies is safely navigating the 41' Utility Boat (UTB), while MK3 Jones conducts boardings and keeps the plant running. *Maintenance worthy?* Well, we make sure Smith and Jones get regular dental and medical care (preventive maintenance) and we fix them when they break (casualty/corrective maintenance). We even "upgrade their software" (alterative maintenance) when we send them to "C" school to obtain additional skills. *Critical?* As previously stated, the boat doesn't get from point A to point B and the boarding doesn't get done unless Smith and Jones are in A1 condition, fully trained and qualified to do their jobs.

But do we **designate** our personnel for Configuration Management, which is the last part of the CI definition? First, every unit has a Personnel Allowance List (PAL), which is the authorized personnel configuration of the unit, and is built with the necessary mix of skills and experience to meet its mission requirements, just as a physical platform has an allowance of systems (engine, navigation gear, survival systems) which is its authorized configuration. When a unit wants to change its personnel mix, there is a configuration change procedure, known as a "reprogramming request" (i.e., Engineering Change Proposal (ECP)), which must be followed. A Configuration Control Board (CCB), which resides in the Coast Guard Office of Personnel Management, must approve the change and amend the PAL. Finally, we regularly change out personnel for others with the same *form, fit and function*, such as when boat coxswain BM2 Smith is ordered out, and boat coxswain BM2 Thomas is ordered in to fill his place, which is conceptually the same as replacing engine A with engine B at overhaul time. We even measure our configuration mismatches through the Readiness Management System (RMS), by identifying form (BM vs MK), fit (1st class vs. 2nd class) and function (coxswain qualified vs unqualified) discrepancies which impact the performance of the system (i.e., unit).

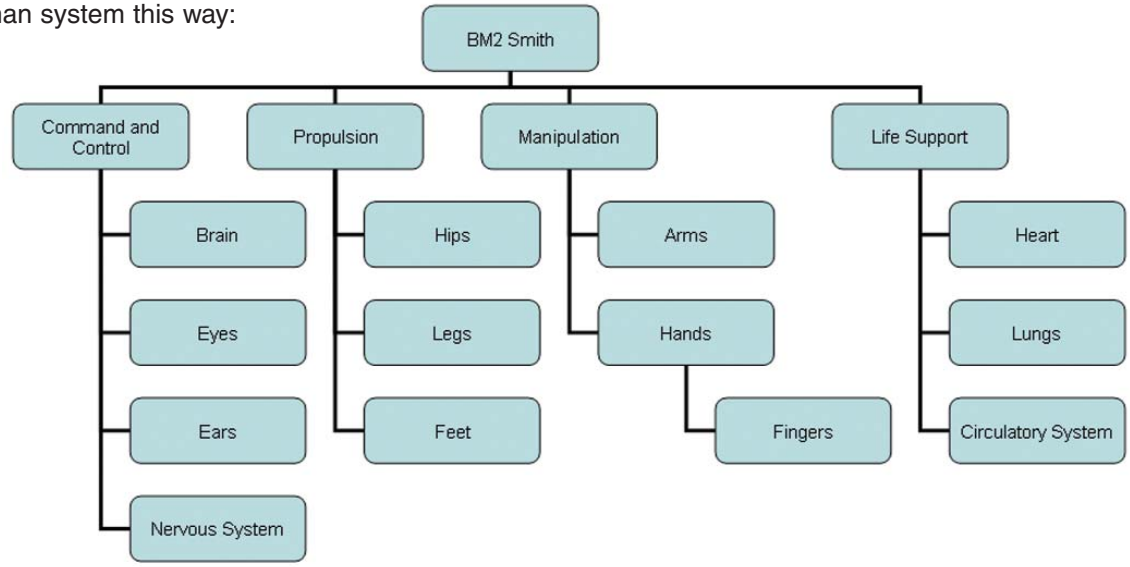
Of course, system configurations are typically represented in a hierarchical "tree," broken down functionally and showing the parent child relationship between the various system components. Here's one way of representing a common system, a boat:



A unit is a "system" too, and we tend to represent them functionally, maybe like this:



Finally, extending our functional systems to view Configuration Item Smith, we could represent this human system this way:



As a final testament to the inter-relationship between personnel and the "less human" elements of systems that we've used in this examination, practitioners of the discipline of Integrated Logistics Support (ILS) have understood and explicitly applied this thinking for a long time. Our own Systems Integrated Logistics Support (SILS) manual (COMDTINST M4105.8) lists the following 10 elements of logistics, which should be managed and applied throughout the life cycle of our systems:

- Design interface,
- Maintenance planning,
- **Manpower and personnel**,
- Supply support,
- Support equipment,
- Technical data,
- **Training and training support**,

USCG photo by PA1 Tom Sperduto.

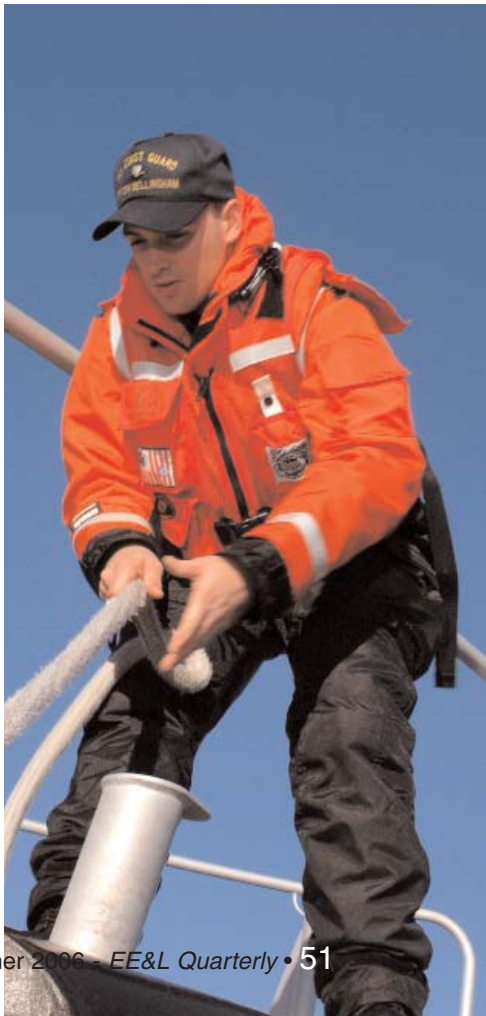
- Computer resources support,
- Packaging, handling, storage and transportation (PHS&T), and
- Facilities.

Two of the ten elements are directly managed within our HR, or personnel, program, and apply to the human elements of owning, operating and maintaining systems. *Manpower and Personnel* is the process that develops and establishes the number of military and civilian personnel required to operate, maintain, sustain and provide performance interventions over the life cycle of the system, and defines the cognitive and physical capabilities required to be able to train for, operate, maintain and sustain that system. *Performance and Training Support* includes the processes, procedures, curricula, techniques, training devices, simulators, and other equipment and methods necessary to train civilian, active duty and reserve personnel to operate, support and maintain a system or equipment. In short, the people of component of operating and maintaining systems must be considered, indeed explicitly planned for, if we are to deliver the mission capability required.

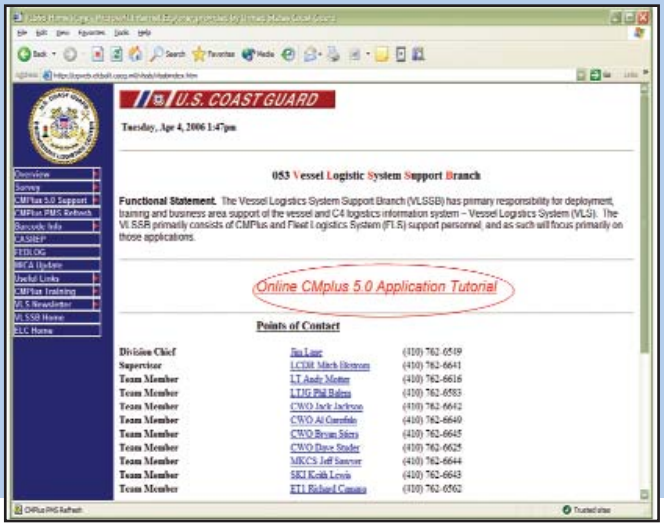
These ideas and concepts are not new, but they did come into even clearer focus recently at the Sector Commanding Officer's (CO) conference in Yorktown while listening to a dialogue between the COs and the representatives from the Coast Guard Personnel Command (CGPC). The COs complained that they need to move their personnel around within their commands, assigning them to different duties and filling critical vacancies internally. For instance, people transferred in as marine inspectors were actually now managing environment response, or even public affairs. While many of us would recognize this as a fairly regular occurrence in many communities, the unit had actually executed an "unauthorized" configuration change (command prerogative was cited). As a result, when transfer season came around, the vacancies a unit needed filled were not accurately represented by the vacancies depicted in Direct Access and on the unit PAL. The approved personnel configuration used by CGPC no longer matched the actual, physical configuration in place at a unit. As a consequence the central authority had lost visibility of the unit's operating configuration, and was unable to provide the right form, fit and function replacement at transfer season *(I know I **show** a pollution response vacancy, but I really **need** a marine inspector*). Underlying this discord was a feeling on the part of the Sector COs that the personnel system was not responsive enough when they requested personnel changes, while the personnel management reps felt that their central authority to manage our personnel had been violated, hindering their ability to manage careers and provide suitable replacements. This scenario bears a striking resemblance to the Configuration Management problems we see in our field physical assets when unauthorized changes are made, and the struggle that ensues between the field commander and the support organization trying to service them.

All this said, there are clearly elements of managing people that do not parallel management of our physical assets. No one would deny that there is an emotional component to the management of our people that should, and does, preclude us from strictly applying "Configuration Item" concepts. After all, we don't worry whether or not the UTB main diesel engine is happy with its work and home life, nor do we worry that it won't be promotable to Patrol Boat (WPB) main diesel engine some day. But we should acknowledge that we have common problems and challenges, and that there should be common approaches to the management of our human and non-human assets to ensure that we deliver our mission capability within the systems we field. The acknowledgment that personnel are a key component (Configuration Item) of the systems that we employ to deliver operational and support capability can simplify and improve the way we conduct Logistics within the Coast Guard.

USCG photo by PA1 Sarah Foster-Snell.



Do You Need Help With CMplus?

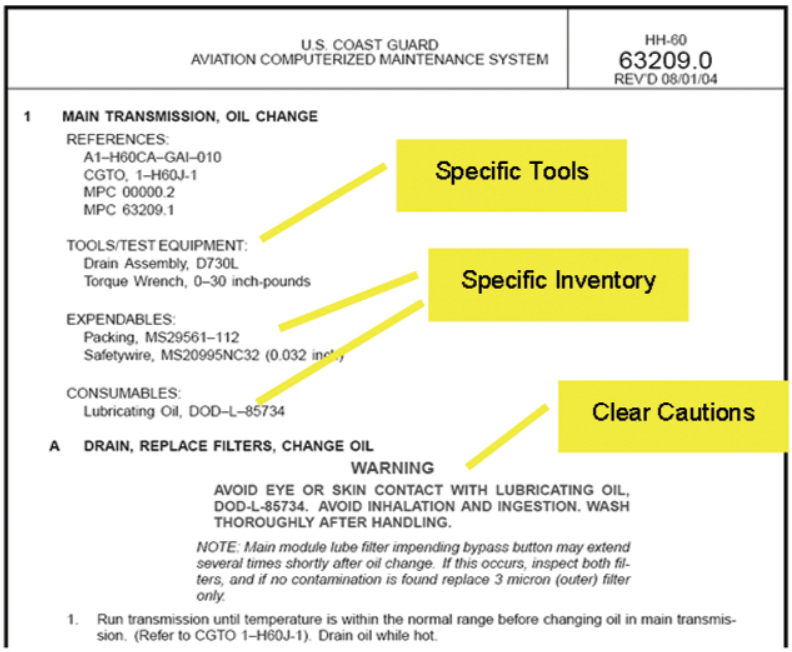


To smooth the transition from CMplus v4.1 to v5.0, the Engineering Logistics Center's Vessel Logistics System Support Branch (VLSSB) created an interactive Video Trainer. This trainer follows the CMplus 5.0 Job Aid and topics are similar to those covered by the CMPLUS MAINTENANCE COURSE and CENTRALIZED SUPPLY COURSE, taught at TRACEN Yorktown. The on-line trainer will walk you step-by-step through CMplus System Administration, Supply, Maintenance and Configuration modules. Users that successfully finish each section can print out a certificate of completion to demonstrate competency. The Video Trainer can be launched from the VLSSB homepage at: (http://cgweb.elcbalt.uscg.mil/vlssb/vlss-bindex.htm) by clicking on: *Online CMplus 5.0 Application Tutorial* or linked to directly at: (http://cgweb.elcbalt.uscg.mil/vlssb/CMplus_tutorial/cmplus50_v1.html). So turn up your speakers and let the voice of CMplus walk you through the on-line video trainer.

RB-S Pilot Overview

by CDR Jim Cash, CG-44LT

Configuration based maintenance requirements drive the need for tools, special test equipment, parts, personnel and training to keep Coast Guard assets in operating condition.



U.S. COAST GUARD
AVIATION COMPUTERIZED MAINTENANCE SYSTEM

HH-60
63209.0
REV'D 08/01/04

1 MAIN TRANSMISSION, OIL CHANGE

REFERENCES:
A1–H60CA–GAI–010
CGTO, 1–H60J-1
MPC 00000.2
MPC 63209.1

TOOLS/TEST EQUIPMENT:
Drain Assembly, D730L
Torque Wrench, 0–30 inch-pounds

EXPENDABLES:
Packing, MS29561–112
Safetywire, MS20995NC32 (0.032 inch)

CONSUMABLES:
Lubricating Oil, DOD–L–85734

A DRAIN, REPLACE FILTERS, CHANGE OIL

WARNING

AVOID EYE OR SKIN CONTACT WITH LUBRICATING OIL, DOD-L-85734. AVOID INHALATION AND INGESTION. WASH THOROUGHLY AFTER HANDLING.

NOTE: Main module lube filter impending bypass button may extend several times shortly after oil change. If this occurs, inspect both filters, and if no contamination is found replace 3 micron (outer) filter only.

1. Run transmission until temperature is within the normal range before changing oil in main transmission. (Refer to CGTO 1–H60J-1). Drain oil while hot.

The following two articles describe how the Engineering Logistics Center (ELC), Baltimore, is stepping out to emulate the configuration and maintenance centric logistics business model used by the Coast Guard's aviation community, the U.S. Navy and industry.

During this effort, the ELC team will be challenged to implement new processes that focus on developing detailed Maintenance Procedure Cards (MPCs) that support the actual equipment configurations in our platforms. These will be used by our training centers as job aids to train technicians and supply personnel to outfit units with tools, special equipment, and parts the MPC authorizes and ensures they are trained to execute. By establishing step-by-step detailed procedures for maintenance technicians to execute, systems engineers can nearly eliminate the probability of human error-induced failures (which industry estimates causes nearly 70% of all system failures) and better pinpoint the actual cause of failure, allowing more rapid analysis and decisions on parts upgrade, systems upgrade or replacement. The Response Boat-Small (RB-S) Product Line and the maintenance based supply support capability at the ELC will be the first step in transforming the naval program.

The aviation logistics model is not perfect. While the Logistics Transformation Program Integration Office (LTPIO) has identified areas where either process or technology can improve the speed and efficiency of delivering logistics services, we will first focus on its strengths, of which there are many, and move all business communities, civil, electronics, naval and others to the aviation proven policy and processes.

The RB-S Pilot will provide a "playbook" used to move all assets to a single, centrally managed, logistics business model based on the aviation logistics model. Once all of our assets are managed in this interim model, we will focus on moving to the final logistics model by improving efficiency and effectiveness for providing logistics to our operational fleet!

All of these improvements require strict compliance with the authorized configuration. Units will benefit by having one point of contact, the Product Line manager and expecting preventive, corrective and alterative MPCs that can be completed quickly with tools, special equipment, and parts pushed to them by the logistics program, improving the overall operational availability of their assets.

USCG photo by Lcdr. Rich Condit.

Response Boat-Small (RB-S) Product Line Project

by LCDR Len Hersl
Engineering Logistics Center

USCG photo by PA3 Andrew Shinn.

The aviation logistics model establishes a single, centrally managed Product Line process for each type of aircraft. Individuals assigned to the Product Line become specialized and establish a one stop shop for any logistics issue pertaining to the asset. The Product Line is able to quickly resolve issues because of the expertise available. Elements of this Product Line include engineering, supply and logistics cells.

The RB-S was chosen as the small boat prototype platform for the Product Line. The Engineering Logistics Center (ELC) identified 44 key functions of Aircraft Repair and Supply Center (ARSC) C-130H aircraft Product Line, and is developing the organizational structure, processes and functions to emulate those functions for the RB-S Product Line at the ELC. Fifty ELC personnel spent 3300 hours at ARSC in training and development of SOPs and desk guides.

USCG photo.

The Engineering Cell for RB-S, which provides maintenance and technical engineering support, consists of a cell leader and assistant leader, system subject matter experts, and a systems analyst. The Supply Cell will carry out parts and material support for the boat. The ELC/ARSC team created a 300 page document that describes the processes necessary to perform their work. The Depot Maintenance Cell manages major maintenance contracts and their contents. This group will determine the requirements for depot level repairs. The final Product Line component, the Logistics Support Cell is responsible for Information Technology, contracting and purchasing, and supply management.

The aviation model bases integrity of all logistic decisions on detailed Maintenance Procedure Cards (MPCs). To emulate the model, the existing RB-S MPCs had to be verified, rewritten to the quality standards used in aviation, and validated by a selected operational unit called a "Prime Unit." The level of detail captured in the maintenance procedure card will ensure units have the proper tools and only the required parts, eliminating the inventory management of unnecessary parts and technical research, and reduce local training hours. In addition, all maintenance performers will complete the same maintenance in the same manner. Process documentation will preserve International Standards Organization (ISO) certification at ARSC and ELC during this transformation. The parts/material information captured on the Maintenance Procedure Card will be used to create a maintenance kit that can automatically be shipped to the unit. This plan will add efficiency to the supply chain.

As this project proceeds, processes, lessons learned and timelines are being documented to establish the scope of moving all CG assets into aviation's MPC centric business model.

Supply / Inventory Transformation

by Louise Griffin
Engineering Logistics Center

The process changes associated with doing business the "aviation way" will make the Engineering Logistics Center (ELC) the one-stop shop for parts.

Currently, ELC manages only the world of Coast Guard unique items, i.e., some 30,000 line items having a total value of around $225 million. These items make up approximately 15% of a unit's needs, with the majority of the other 85% being supplied via the Federal Supply System or local Unit commercial procurements. Currently, units requisition parts and material (using a variety of software tools e.g.,Fleet Logistics System (FLS), CMplus) which are paid for by the unit's AFC-30 funds. Invisible to the user, the requisition routes through the Defense Automated Acquisition System (DAAS) to the material manager (or Inventory Control Point) in the Federal Supply System. If the ELC manages the item, DAAS automatically forwards the requisition to the ELC. A majority of the Coast Guard's requisitions are forwarded to Other Government Agencies (OGAs) who are the Inventory Control Points for the parts.

Under the new maintenance based sparing methodology used in the aviation model, field units will receive almost 100% of their material support from the ELC. In the future, requisitions for Response Boat-Small (RB-S) material will be entered at the Sector level using the Aviation Logistics Management Information System (ALMIS) software tool. Nearly all requisitions will be filled at no cost to the unit. In addition to normal management of Coast Guard unique items for RB-S, the ELC will begin to dual manage OGA parts and equipment in order to deliver kits supporting upcoming required maintenance execution.

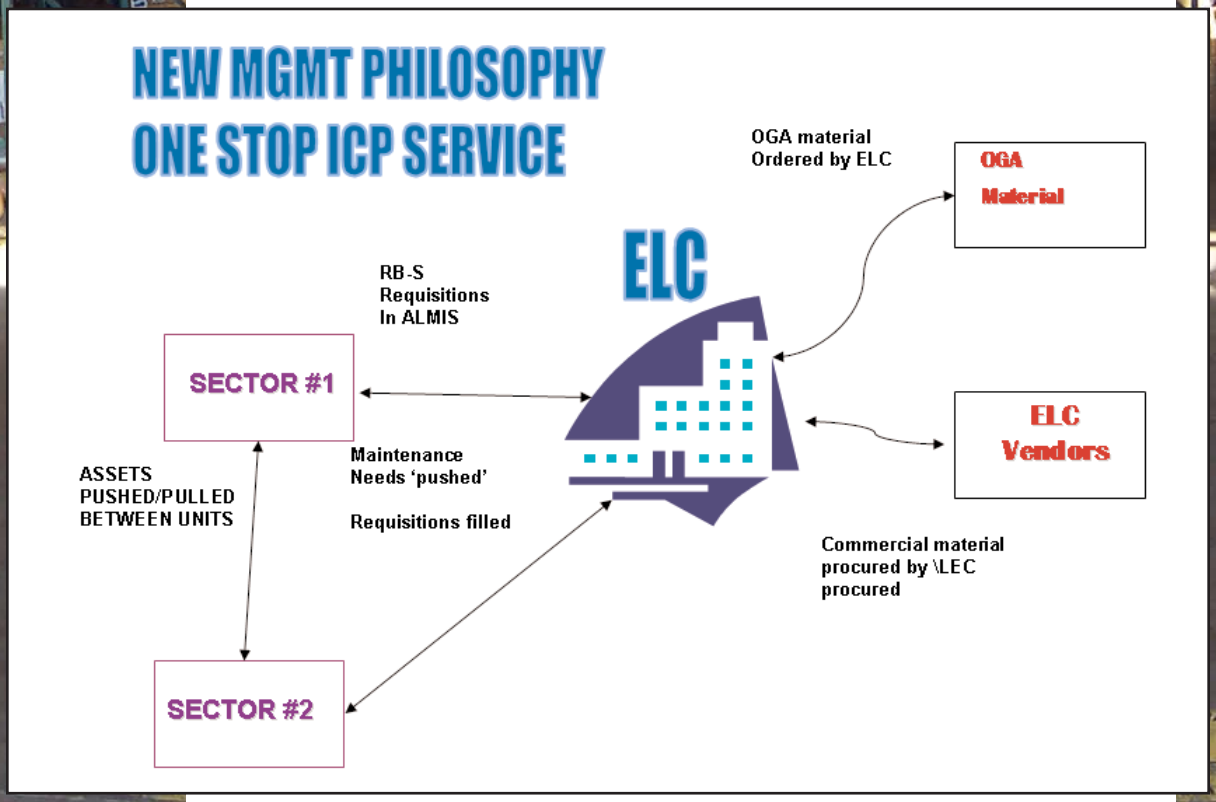
For the time being, the majority of ELC customers will continue to be serviced under the pre-existing system. Units will submit their requisitions for other parts and materials through normal means and receive support for ELC inventory items. As a result, Sectors using ALMIS for RB-S parts ordering and management will also be using CMplus or FLS to order and manage parts for their other assets. Parts and material other than RB-S requisitions for assets will continue to be filled by OGAs.

The change involves more than just a new software tool. In the past, the ELC's stocking level was based upon historical demand, the lead-time, and the projected future demand, as well as other elements that feed into an automated Economic Order/Economic Repair (EOQ/ERQ) model. Those elements will still be a consideration, but the new philosophy places a greater emphasis on projected maintenance needs. The ELC's RB-S Product Line members recently commenced development of a set of required organizational, intermediate and depot level Maintenance

Procedure Cards (MPCs) that will serve as the basis to identify required maintenance parts. In the MPC development process, determination of maintenance periodicities will result in the ability to project when parts will be needed by each unit to conduct scheduled maintenance. As a result, the ELC will be able to 'push' parts out to a unit to accomplish maintenance actions just prior to the scheduled time. The Sectors will expense parts to Stations for unit level maintenance. This will result in Stations managing only Operating Space Items consisting of only consumable parts to be used for organizational maintenance in the near term. This will eliminate large quantities of Unit held inventory and improve Chief Financial Officer (CFO) controls.

This new centralized logistics system will have total asset visibility of all RB-S parts and equipment spares within the Coast Guard. If the ELC receives an unplanned requisition for a part located at a different stock point, such as a Sector or boat, the ELC can direct that the part be transferred. This philosophy will aid in reducing overall inventory levels and improving operational asset availability by establishing central inventory oversight and control at the ELC.

As the ELC progresses with this effort, we will keep our customers informed of any changes that may impact their interactions with the ELC. At this point in time, the prototype is limited to only units with Response Boat-Small platforms. This new model will be piloted at two Sectors in early Fiscal Year 2007, then phased in at all Sectors over the next few years. Until your sector is transitioned, units will continue to use the ELC and OGA inventory systems as they do today. Further information on the RB-S project can be found at the CG Central Logistics Transformation website found under the Strategic Initiatives Section.



IT Consolidation for Logistics

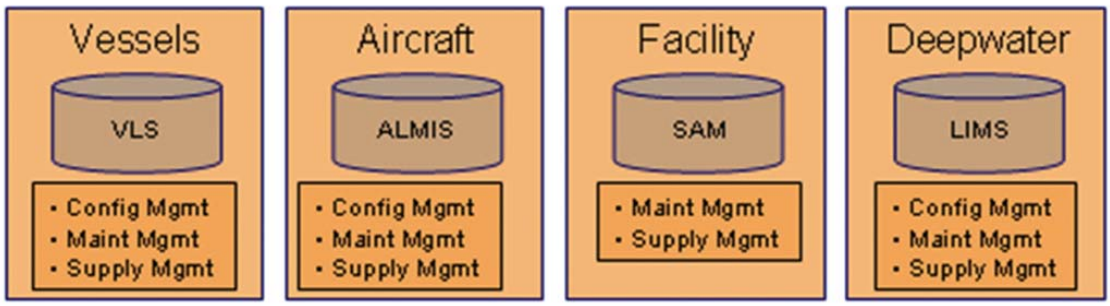
The Single Logistics Information Management System

USCG photo by Telfair Brown.

by LCDR Keith Jernigan, CG-442

In today's Coast Guard, we have many logistics information management systems that provide the same capabilities for different platforms. For example, our platforms are managed as follows:

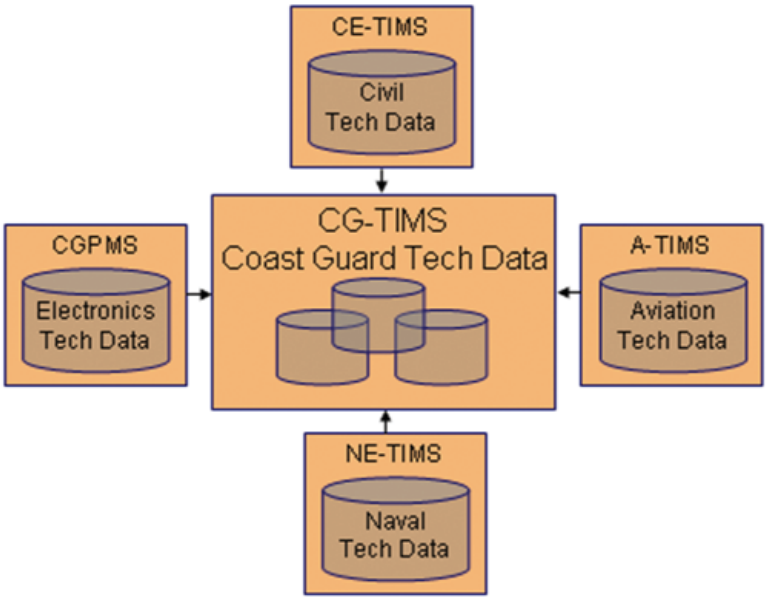
- Vessels use the Vessel Logistics System (VLS).
- Aircraft use the Aviation Logistics Management Information System (ALMIS).
- Shore facilities use the Shore Asset Management (SAM) system.
- Deepwater platforms will use the Logistics Information Management System (LIMS).



These systems create layers of redundant capabilities for logistics information management. As part of the logistics transformation effort, the new Single Logistics Information Management System (CG-SLIMS) will consolidate these capabilities into a single set of software tools using the aviation community's business processes and tool suite as a benchmark. CG-SLIMS will manage logistics for all of our different platform types (i.e., boat, cutter, aircraft and shore facility).

The foundation of CG-SLIMS is accurate data, which begins with a platform's configuration. Technical information (e.g., technical and service manuals), based on established configuration for each platform, will drive detailed and comprehensive Maintenance Procedure Cards (MPCs). These new MPCs will include the parts and tools required to execute the maintenance. The maintenance requirements and associated data in CG-SLIMS will ensure the field user can perform the required maintenance to keep their platform operational.

An important first step for CG-SLIMS is the development of CG-TIMS (Technical Information Management System), an effort to merge the existing technical publication systems. The CG-TIMS project is working to consolidate Coast Guard



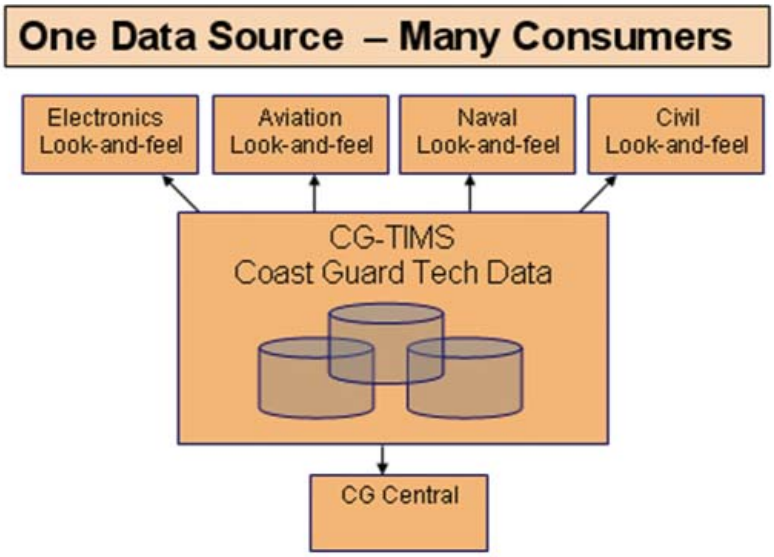
IT infrastructure for managing technical information. In order to be successful, the project is aligning the business processes for the duplicative technical information management systems across all communities [Coast Guard Planned Maintenance System (CGPMS), Aviation (A-TIMS), Naval Engineering (NE-TIMS), and Civil Engineering (CE-TIMS)], consolidating them into a single Commercial-Off-The-Shelf (COTS) solution.

Driving out redundancies in TIMS in the CG not only makes good business sense, but is also at the direction of the Commandant and the Chief of Staff. Additionally, the use of COTS products is mandated by the Office of Management and Budget (OMB) to leverage existing technology and further reduce costs. The Civil Engineering community's Adept application has been selected as the COTS product behind CG-TIMS. The application is currently available on the Engineering Workstation Image.

Using a COTS product for CG-TIMS has several advantages. First, the core functionality of the product can be implemented relatively quickly using "out-of-the-box" features and capabilities. Second, the large customer base of a COTS product will ensure strong product quality and dedicated application support. Third, the Total-Ownership-Cost (TOC) is significantly less than building a customized solution.

A key element of CG-TIMS is the functionality of the interfaces. The Logistics Geospatial Integration Center (LoGIC - formerly the CETC) will create a Graphical User Interface (GUI) with a look and feel similar to the CGPMS, NE-TIMS and A-TIMS applications currently being used to retrieve technical documents. For example, the naval engineering community will see an interface similar in appearance to NE-TIMS, while electronics technicians will see a view like CGPMS. This tailoring of interfaces will make training and transitioning to a new system much smoother. Over time, we will consolidate the look and feel of CG-TIMS to a more standard interface for all communities. Eliminating redundant efforts and systems for managing technical information will free both people and funding to support the logistics transformation efforts.

To effectively execute this IT consolidation in the context of the overall logistics transformation effort, RADM Gabel has facilitated the stand-up of several working groups to provide the foundation and solutions to the coming challenges. These teams include members from all impacted communities, and collectively they will support the USCG in moving toward one centralized logistics model. The IT Transformation Working Group will establish a consolidated set of standard logistics business client applications, which will be included in the CGSWIII Engineering Image. The group will commence market reviews of COTS and existing Government applications that will serve to modernize the existing logistics IT capabilities. Just as critical as selecting a new technology will be building the bridging strategy from today until tomorrow.



USCG photo by PA1 Barry Lane.

Logistics Transformation and the Coast Guard Training System

In Support of Field Unit Performance

by CDR Dave Lunt
TRACEN Yorktown

Every unit commander, workgroup supervisor and crewmember across the Coast Guard will agree that a properly trained crew is critical to completing the unit's mission. Proper crewmember performance support is a continuum that begins at accession training, and reaches across a career as it is reinforced through daily work performance. This article will highlight some of the existing conditions within Hull, Mechanical and Electrical (HM&E) resident training; the impact logistics transformation may have on resident training; and how the anticipated results may support the Coast Guard crewmember executing the daily mission.

Training in the Coast Guard is not developed as a result of someone at a training center making an independent decision to produce a new training course. Within the broadly-defined human resources system, resident training is one possible performance support solution to resolve an identified gap between expected and delivered performance. The Coast Guard training system uses the Human Performance Technology (HPT) model to break human performance improvement into six identifiable actions. These actions are illustrated in Box 1.

- Identify performance **requirements** (what must be done?)
- Determine existing **performance** (what is being done?)
- Define and quantify the performance **gap** (what is the difference or shortfall?)
- Analyze the **causes** of the performance gap (why is there a difference or shortfall?)
- Develop and implement **solutions** to close the gap (how to eliminate the shortfall?)
- **Evaluate** the result (did the solution have an effect?)

Box 1

Performance Example

While driving you observe a road sign indicating a speed limit of 55 miles per hour (**requirement**), you look at your speedometer and observe it reading 75 miles per hour (**performance**), you determine you are going 20 miles per hour faster than the speed limit (**gap**), you see that you have floored the accelerator (**cause**), you relax the pressure on the accelerator and your car slows from 75 to 55 miles per hour (**solution**), you check the speedometer to determine you speed (**evaluation**). Repeat as necessary.

Current rating Class 'A' school requirements are established by the rating's Enlisted Performance Qualifications (EPQs). The existing performance of each member entering the Class 'A' school is assumed to be zero and the gap is assumed to be at the maximum as the schools are designed as accession-level training to perform as a Third Class Petty Officer in the rating. With this maximum gap, the effective solution is to provide all the foundational knowledge and skills acquisition at the resident course and reinforce the practice of those skills in the field. The continuing evaluation is monitored by the unit commander through routine enlisted performance evaluations, monitoring of overall rating health indicators by the CG-481 Rating Force Master Chief, and the timely revision of the EPQs through occupational analysis and program feedback conducted by CG-132 and CG-481.

USCG photo.

Effective resident training development requires clear requirements that will lead to the right field performance to execute the unit's mission. Clearly stated maintenance expecta-

Greater detail on the Coast Guard human performance support development process can be found in the Training System Standard Operating Procedures at http://cgweb.tcyorktown.uscg.mil/PTC/sop.asp

USCG photo.

tions and requirements should result in crewmember performance that meets the mission. If the requirements exceed the maintenance skills possessed by the rated member, a Class 'C' school is one place for that crew member to gain the necessary skills.

This is where the power of logistics transformation and the Logistics Transformation Program Integration Office"s (LTPIO) preventive and corrective maintenance efforts comes into play. With the clear definition and communication of requirements through centralized logistics processes, each rating will have logistic business process EPQs at the E4 through E7 rate. Within the Class 'A' schools, we will teach the foundational E4 logistics business processes which may include executing rating related responsibilities within the logistics system, selecting maintenance due lists, selecting appropriate maintenance procedures, selecting tools to complete maintenance on an MPC, the use of the MPC feedback system and reporting maintenance completion. These new business processes will build on and eventually replace the current engineering administration, preventive maintenance system and CMPlus instruction given to Class 'A' students. At Training Center Yorktown, we will convert every performance lab sheet for every lab exercise in the Damage Controlman (DC), Electrician's Mate (EM) and Machinery Technician (MK) 'A' schools to the same format as the new MPCs. That will expose the typical HM&E 'A' school student to nearly one hundred MPCs by the time they finish school.

Within the centralized logistics model, the training centers will be linked into the asset product line. This linkage will ensure performance support for each asset in a product line is up to date and timely. For assets and equipment with Class 'C' schools, we will teach the required skills and tools used to maintain equipment and systems through the approved MPCs. Class 'C' schools will provide valuable feedback to the product line through their role as subject matter experts. Through the instructor's frequent field contact with students performing operation and maintenance, the training centers will be a regular source of maintenance procedure validation.

This organizational effort represents a significant cultural change for this particular part of the Coast Guard. There are a number of voices that predict the new preventive and corrective maintenance information on MPCs will "dumb down" the HM&E ratings, destroy the base of technical expertise that exists, and make the rated members nothing more than robotic parts changes. I don't believe this argument. Clear and documented maintenance requirements will give our crewmembers the opportunity to do the right work with the right tools and parts, the first time, every time.

USCG photo by Telfair H. Brown.

The training centers will be valuable partners in the transformation of our logistics business practices. Over the past four years nearly 3600 students have graduated from the HM&E Class 'A' schools and thousands more have completed Class 'C' schools. The training system, working hand in hand with the transformation of our logistics processes, will continue to fully support mission execution.

Centralized Logistics Metrics - What to Expect

by CAPT Scott Reynolds, CG-44

"In the long run, men hit only what they aim at." -- **Henry David Thoreau**

One of the goals of our logistics transformation is to become a data driven organization. This article is not a plan for transitioning Coast Guard Logistics Measurement. It simply establishes the direction we're heading. As Mr. Thoreau states above, true achievement rarely happens by chance, it is usually a target that requires several pints of sweat to achieve. Picking the measures that are important to our logistics organization is REALLY EASY -- Asset Availability, Customer Wait Time for a part and the ratio of Preventive versus Corrective Maintenance are examples of the measures that are used by the leading logistics organizations in our country.

Unfortunately, knowing what to measure and being able to measure it are two different things. The data supporting the metrics listed above is only minimally available today, and is inconsistent at best. As part of our transformation, we must instill the processes and tools for collecting the data. The Coast Guard has struggled with this challenge for the past twenty years. To be successful we must recognize that: (1) great organizations run on accurate information, (2) 99% of that information is collected at the unit level, (3) senior leadership's role is to make the collection as easy as possible and useful to those collecting it, and (4) responsibility for accurate data lies with every Coast Guard member.

Fortunately for the Coast Guard, our own aviation community has built a data driven culture. Based on enabling processes and technology, they not only have measures that capture current status of their aircraft, but measures that are predictive indicators of future readiness. We just need to copy their measures.

As the Centralized Logistics Model is implemented, we will identify metrics for use across all Coast Guard communities. I believe strongly that good metrics, captured properly and visible to all trigger self-correcting behaviors that lead to greater asset availability, better work environments for our field technicians, and less logistics costs. Of course, I won't have to rely on my beliefs -- our measurement system will confirm or deny them.

Convergence of the Civil Engineering HPO With the LTPIO

by CDR Bob Bevins, CG-434

The Civil Engineering (CE) Program is developing a proposal called the High Performing Organization (HPO) to re-engineer the CE Program. We are currently developing this HPO to 1) systematically embed capital asset management practices, 2) meet Competitive Sourcing Plan goals, 3) support reinvestment demands, and 4) ensure alignment with the Logistics Transformation Program Integration Office (LTPIO) initiative. Through this effort, we will transform the organization and culture from one with a localized project focus to an agency-wide focus on mission-based performance asset management. We will make it happen by re-engineering our processes, identifying enabling Information Technology (IT), and matching with appropriate reorganization alternatives to form a new Shore Infrastructure Management (SIM) organization.

During the fall of 2005, we developed a Business Case Analysis (BCA) that showed the improvements possible by re-engineering our processes. To achieve the efficiency and effectiveness improvements, the HPO must include the following:

- centralized management,
- consistent CG-wide processes, and
- delivery standards with on-site customer interface. (See note 1).

The SIM organization model will employ consistent engineering processes and standards CG-wide, as currently recommended by LTPIO. This transformation will require significant investment in IT, training and re-skilling of new core competencies. Most, but not all, CE billets and functions will be re-engineered during the HPO. The staffs of CG-43, Maintenance and Logistics Command(s) (MLC(s)), Facilities Design and Construction Centers (FDCC) and Civil Engineering Units (CEU) are the units most likely to be affected. Unit-level maintenance, like that performed by a facilities engineering division, will not be studied at this time, but will wait until the LTPIO initiative is farther along on its roll-out plan (see Figure 1). Though leaving out the unit-level maintenance departs from LTPIO's current emphasis on total maintenance and inventory management, the delay is only temporary to make the CE transition a more manageable size. The LTPIO initiative is also focusing on naval logistics right now, so the CE community can learn from that evolution as it occurs.

Shore Facility Capital Asset Management (SFCAM) brings asset management and integrated decision-mak-

ing techniques to the HPO table (See note 2). SFCAM is a top-down strategic initiative that integrates planning, investing, using and divesting decisions to better align shore facilities with Coast Guard missions. This vision supports the life-cycle management principles required by the LTPIO. Over the last several years, SFCAM has developed a number of performance measurements for shore facilities that will provide objective data for facility decisions, such as development of alternatives and project prioritization.

Competitive Sourcing is a federal mandate that requires open competition for commercially available positions (see note 3). Through the pressure of competition, agencies are expected to be able to achieve improvements in efficiency and effectiveness. Since many CE technical and administrative positions are considered subject to competitive study, the HPO will satisfy the study deadline of 2008. Though designation as an HPO does not require open competition, the process still mandates savings. The Coast Guard, in need of internal sources of funds, expects to harvest some of those potential savings.

Though LTPIO activities are still evolving, the objectives for the HPO are consistent with the goals of the LTPIO. The target model for both is centralized policy and process planning with distributed execution. The co-evolution of each of these initiatives provides a context for strategic planning, identifies facilities as an enabling resources makes costs visible, links funding execution to mission, and manages our maintenance, repair and improvement activities. This will ensure we create a robust, stable and scalable Shore Infrastructure Management Program to support the U. S. Coast Guard.

Notes:

1) For more information on the CE HPO go to http://cgweb.cetc.uscg.mil/cg%2D43/.

2) For more information on SFCAM go to http://cgweb.cetc.uscg.mil/cg%2D43//cg-434/products.asp.

3) For more information on competitive sourcing including HPOs go to http://www.whitehouse.gov/omb/circulars/a076/a76_incl_tech_correction.pdf.

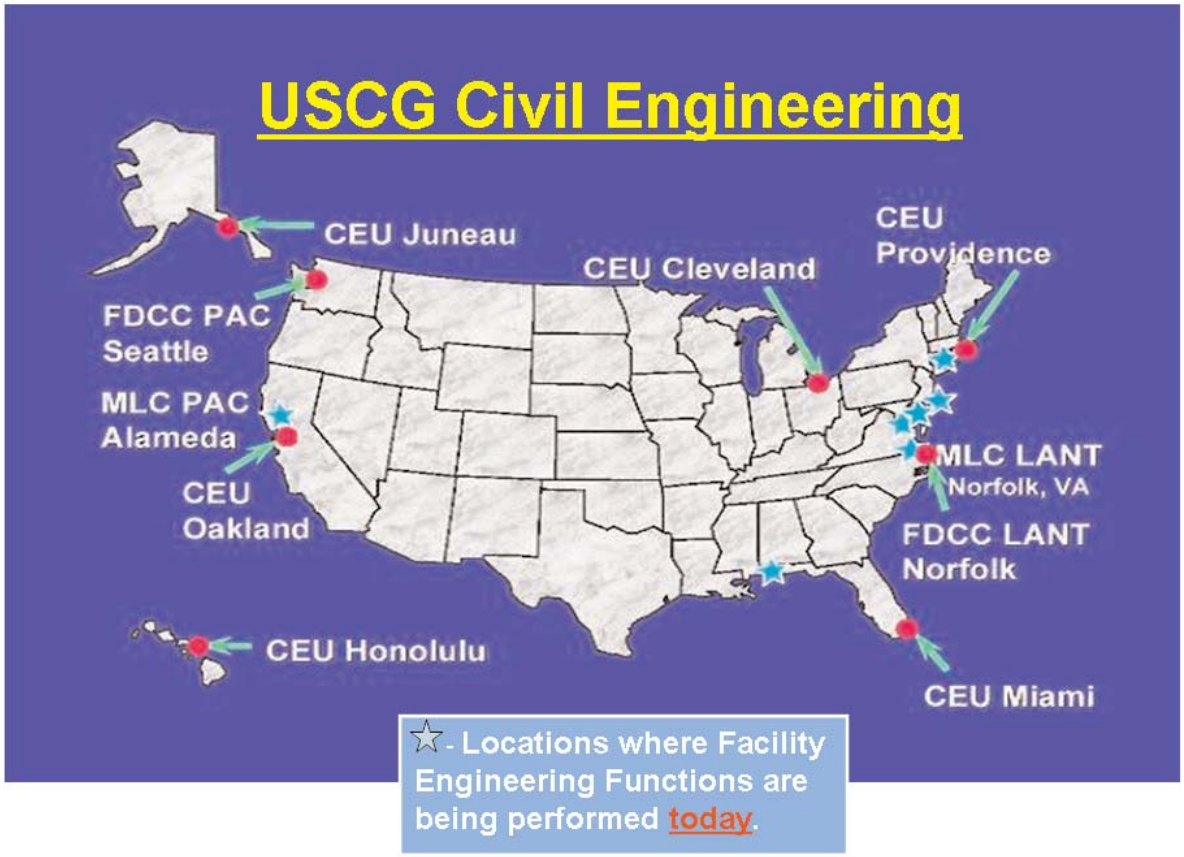


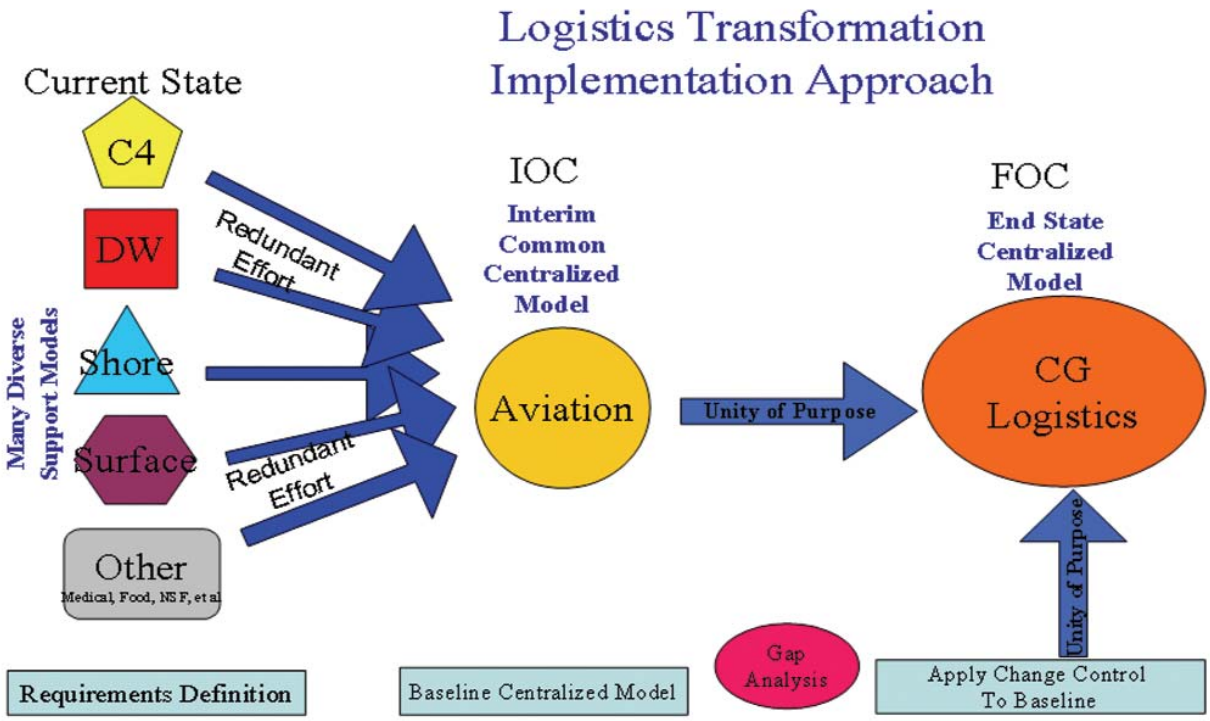
Figure 1. Locations where CE functions are under HPO study.

From the Assistant Commandant

Logistics Transformation -- The Course Ahead

As you can see from the information presented in this issue, Logistics Transformation is well underway. Since late last year the Response Boat-Small (RB-S) Acquisition Project and the Engineering Logistics Center (ELC) have been learning the central asset management processes used by the Aviation Project Office (APO) and the Aviation Repair and Supply Center (ARSC). These processes are the hard core around which Aviation's centralized logistics management model is built. Work has begun to transform the way our non-aviation field organizations manage and execute maintenance by applying the aviation process model to a Sector Logistics Department under the RB-S Pilot Program. We have also shown that our various support programs can agree on common information management requirements and work processes, implementing a common Technical Information Management System. Finally, we made a strong break with our past by removing tons of unused inventory from our field unit storerooms and then showing restraint in not repeating the errors of the past. My sincere compliments and thanks to those of you who have contributed to these groundbreaking initiatives -- you are setting the bar high for the difficult work yet to come.

Of course, adoption of the centralized aviation model infers many changes for our organization, both structurally and culturally. For instance, the aviation logistics model does not include an intermediate support capability and all of the funding for aircraft support is controlled by the central technical authority. You can anticipate that some degree of reorganization and funds redistribution is a likely, and natural, outcome of our Transformation efforts. As stewards and leaders, it is our responsibility to make the difficult business decisions and overcome cultural challenges when doing so will support the desired outcomes. We must put the good of the Coast Guard, Department of Homeland Security (DHS) and the nation and its taxpayers ahead



of any lingering parochial concerns. As a career Naval Engineer with many years as cutter student engineer, EO, XO and CO, I am very familiar with these challenges and the concerns some of you may have. But no one is more personally committed to doing Logistics Transformation the right way than I am, and I will take every opportunity to set a personal example of the commitment necessary to achieve our objectives. The single goal of this entire effort is to shape the Coast Guard's logistics system to better serve operational mission execution while improving the management of our "business."

Looking ahead, it may be difficult to envision how we will achieve our desired end state. The accompanying diagram captures the essence of our Transformation approach. During the first phase, we will implement aviation processes, but resist making improvements to them. Once the aviation logistics model is successfully implemented at several Sectors in support of the RB-S platform, we'll improve the model as needed and use implementation "playbooks" to move these processes to our other assets and support communities.

This is a monumental effort. Success will only be realized through focused leadership and the commitment of all hands. I am confident that the end result will be well worth the effort, and I ask that you join me and our new Commandant in transforming and improving the Coast Guard's logistics system.

Dale G. Gabel RADM, USCG
Assistant Commandant for
Engineering and Logistics

ALCOAST 1

Sep 05
ALCOAST 477/05
Subj: Commandants Direction: Stewardship - Logistics Business Transformation - CFO Act Audit OM and S Inventory Compliance
1. It has become clear to me that we must fundamentally restructure some of our logistics business processes. While the system we currently use is effective - allowing us to maintain unprecedented operational readiness despite aging assets - it is neither as efficient nor as automated as it should be. Business processes across asset classes (Naval, Aviation, Civil, C4IT) are not well integrated or very consistent and, for example, the effort required to count every part we own every year is, in my mind, an effort that could be better applied to mission outcomes. Other imperatives, such as the requirement to pass a Chief Financial Officers (CFO) Act Audit of our business processes, necessitate better processes and internal controls as well as stricter compliance to established policies and procedures.
2. I have directed that the Chief of Staff execute a series of initiatives, some that will have significant short-term impacts and some that provide systemic improvements. These initiatives, which will be explained further in separate messages, include reducing CFO Act vulnerabilities by removing excess and obsolete spare parts from operating unit inventories, re-emphasizing our commitment to following existing procedures in the areas of configuration management and inventory control, and transitioning logistics processes into a consistent, centrally managed system modeled on our aviation logistics program.
3. My stewardship commitment demands that we act boldly. We can and we must operate and sustain our assets in the most efficient manner possible, and we must become capable of passing an audit of our business practices. These initiatives will enable the Coast Guard to achieve both of these goals.
4. Internet support authorized.
5. Admiral Thomas H. Collins, Commandant, sends.

ALCOAST 2

Dec 05
ALCOAST 620/05
Subj: Logistics Transformation - LTPIO
A. LMTO Charter dated 12 OCT 2004 notal
B. COMDT COGARD Washington DC 022009z DEC04/ALCOAST 532/04
C. COMDT COGARD Washington DC 261916z SEP 05/ALCOAST 477/05
1. This ALCOAST reports the findings of the Logistics Management Transformation Office (LMTO), provides amplifying details about the objective of attaining a common logistics business model for the Coast Guard, and announces the formation of the Logistics Transformation Program Integration Office (LTPIO).
2. Refs a and b chartered and announced the establishment of the Coast Guard LMTO. Its primary purpose was to identify the CG Logistics system of the future. Ref c announced the Commandants Initiative to transform our logistics enterprise and adopt our aviation logistics business model across all asset lines.
3. On 23 JUN 05 I received the LMTO findings and endorsed the recommendation of transitioning the CG to a common logistics business model that establishes common business processes across our traditional stovepipes of aviation, naval, C4IT, and facilities. The model is based on centralized process planning with distributed execution through closely monitored management controls. This centralized model is increasingly prevalent in industry and can be seen in logistics operations of world class organizations such as Walmart, Fedex and Southwest Airlines. Within our own service, the aviation logistics program most closely follows the centralized model. The LMTO finding made my decision easy. Sound metrics and business case analysis showed asset availability will improve, we will be better stewards of taxpayer money, and field technicians will have improved work conditions, spending less time on supply issues and more on maintenance. This effort postures the CG logistics organization to be aligned with the centrally managed deepwater logistics organization.

ALCOAST 2 cont'd

4. Now the hard work of transforming our various programs to implement and adhere to that centralized model must begin. Implementation will present management and cultural challenges spanning our entire organization. No matter how difficult the journey, the end result is worthy of our efforts. I have charged RADM Gabel, Assistant Commandant for Engineering and Logistics, with leading the effort. The Office of Logistics, CG-44, will be vested with logistics transformation execution authority, and will create the Logistics Transformation Program Integration Office (LTPIO) to carry out the task.
5. This effort will be funded from our base. Details of how this implementation will be carried out will be the subject of future correspondence. Efforts will include eliminating excess and obsolete parts from unit inventories, establishing a common maintenance procedure format across all asset classes, identifying a logistics center for naval, civil and electronics logistics processes, establishing consistent and transparent logistics processes across asset classes, modifying funding models and training programs to reflect the new processes, and adopting a single financial system integrated with a single inventory management system. Certain actions, however, are required immediately to begin the change process. They are:
a. CG-4: review all ongoing logistics policy, process and information system changes, and refocus or suspend those which are not in alignment with central logistics objectives. Baseline field satisfaction with current logistics processes, services and information technology products through a customer satisfaction survey as a key mechanism to measure the improvements to be section achieved through transformation and centralization. Apply lessons learned from the aviation logistics transition to a centralized business model.
b. CG-6: C4IT, and Electronics shall support the transformation efforts of the LTPIO. Coordinate with CG-4 to review program efforts, modify where necessary to ensure alignment with centralized logistics objectives.
c. CG-8: Review all current OE funding initiatives, AC and I projects, and Outyear RPS for alignment with this new business model. Refocus or suspend those which are not in alignment with central logistics objectives. Partner with CG-4 in identifying financial transactions within logistics business processes with a Goal of having all transactions feed a single general ledger within The Coast Guard's core accounting system.
d. Areas/MLCs/ARSC/ELC: In furtherance of CFO Act Audit Remediation efforts, facilitate the rapid identification and removal of excess and obsolete material from unit stores.
6. The following examples highlight how this logistics transformation will eventually affect all coast guard units:
a. Field units: Detailed Maintenance Procedure Cards (MPCs), with the actual parts, tools and exploded diagrams of the components being serviced, will allow maintainers to carry all of the information needed to perform the maintenance and record its completion. Completion of maintenance will automatically trigger inventory replenishment by the central supply system. Only parts/tools that are specifically tied to maintenance will be held and tracked by the unit.
b. MLCs: A consistent, CG-wide maintenance plan will allow the MLCs to focus on maintenance execution oversight. This oversight will allow maintenance analysts to more quickly and accurately identify system trends and systemic maintenance issues. MLC staffs will work with logistics centers to centrally create/correct maintenance procedures, and reuse the procedures whenever the condition/maintenance requirements recur.
c. Logistics centers: A maintenance procedure standard will lead to clear specifications for future acquisitions to provide the information needed to sustain new assets. Maintenance Procedure Cards (MPCs), identifying actual parts needed and the frequency of the maintenance procedure, will create the on-hand maintenance parts list required for each asset. The goal is to direct-ship the parts needed from the vendor or CG warehouse to the unit based on demand forecasting. Engineering Change Procedures (ECPs) will be managed centrally. Failure analysis will be a contributing driver for creating ECPs.
7. Area and District Commanders, Commanders of Maintenance and Logistics Commands, Sector Commanders, Commanding Officers of Headquarters units, Assistant Commandants for Directorates and Chiefs of special staff offices at Headquarters shall continue to provide support to CG-4 for the logistics transformation efforts in the form of participation in project teams and other related efforts.
8. I commend the efforts of the LMTO -- CAPT Mike Mangan, CDR Dean Bruckner, CDR Dave Hartley, Mr. Jim Sylvester and Ms. Michelle Fields. Their dedication and hard work have helped map out a course for the Coast Guard's future common logistics business model.
9. Comments or questions can be directed to the LTPIO director, Capt Scott Reynolds, (202)267-0652, areynolds@comdt.uscg.mil, or the deputy director, CDR Brooks Minnick, (202)267-0660, bminnick@)comdt.uscg.mil.
10. Internet release authorized.
11. VADM Terry M. Cross, Vice Commandant, sends.

ALCOAST 3

Apr 06
ALCOAST 227/06
Subj: Logistics Transformation - Configuration Management (CM)
A. COMDT COGARD Washington DC 261916z Sep 05/ ALCOAST 477/05
1. Ref. a provides the Commandants direction regarding the transformation of our entire logistics support system to a common logistics model. This message emphasizes the vital importance of an effective configuration management program in meeting our logistics transformation objectives, and institutes immediate actions necessary to regain configuration control and move boldly towards our transformation end state.
2. Configuration Management is the discipline through which we document, communicate and control the who, what, when, where, why and how of our critical assets. While some communities within the Coast Guard have strong CM practices, many others do not. In particular, configuration (change) control, which is the process used to manage proposed engineering changes, is rarely followed with rigor within our cutter, boat, C4I and facilities management communities. We must do better. Effective immediately no system, equipment, or structural changes shall be implemented without proper coast guard authorization.
3. Unauthorized changes are undocumented, unsupportable, and may severely impact crew safety and mission performance while draining Coast Guard resources. A key objective of our logistics transformation effort is to centrally support our assets by delivering the maintenance procedures, tools and parts that units need to maintain asset availability and capability. We will be unable to meet this objective if units continue to make unauthorized alterations. Further, we will use CM practices to pursue standardization of our assets wherever practicable. Asset standardization lowers support costs, improves operational effectiveness, and eases the training burden across the service. In the end, the operational community and field commanders are the primary recipients of the benefits of strong CM and standardization program: documented and reliable asset performance to achieve desired mission outcomes, with a minimal effort required of field personnel.
4. I have directed CG-4 to work with CG-6, G-A and G-RC to promulgate clarifying guidance on the engineering change process and the operation of configuration control boards. These stakeholders will also work with our centers of excellence to create a configuration compliance program. Modeled after aviation logistics and boat forces standardization teams. As a key component of this compliance program, unit Commanding Officers will be held accountable for maintaining the authorized configuration of the assets placed under their stewardship.
5. Effective Configuration Management is a foundational element of our logistics transformation initiative, and is key to meeting our operational mission requirements. We must commit to working together to improve the responsiveness, visibility and effectiveness of our configuration management and control processes.
6. Internet release authorized.
7. ADM T.H. Collins, Commandant, sends.

USCG photo.

We Want to Hear From You!

EELQ FEEDBACK CARD

LTPIO wants your comments and feedback on this issue of the EELQ. We've created a simple electronic feedback card at https://epmo.uscg.mil/EELQ.

If you have any questions, feel free to contact Tiffany Turner (txturner@comdt.uscg.mil) or Brooks Minnick (bminnick@comdt.uscg.mil) at the Logistics Transformation Program Integration Office

We appreciate your assistance as we move forward with this logistics transformation!

EELQ FEEDBACK CARD

Electronics Recycling and Reuse Challenge Award

Left to right: Mr. Juan Reyes, DHS, Director of the Office of Safety and Environmental Programs; RADM Dale Gabel (CG-4); Mr. Mike Healy, ELC; Mr. William Ireland, ELC; Mr. David Parker, ELC; Ms. Gloria Townes, ELC; and Mr. Ed Pinero, Federal Environmental Executive.

On 21 April 2006, RADM Gabel (CG-4) attended a White House ceremony where the Coast Guard Engineering Logistics Center (ELC) was presented with the "White House Federal Electronics Recycling and Reuse Challenge Award." The unit was one of only 15 winners selected from 11 agencies and 70 facilities who participated. This is the first year this Award has been presented. During the five month period between America Recycles Day (15 November 2005) and Earth Day (22 April 2006), the unit recycled and reused the largest amount of electronics equipment in the eastern United States during that period for a medium-sized military facility. A total of 19,500 pounds of CPUs, laptops, printers, monitors, copiers and other electronics were reused, transferred to another agency or sent to Computers for Learning, a GSA/DRMS program, for reuse. The ELC also donated usable electronic equipment to the Baltimore Public School system.

2006 Winners of Coast Guard Environmental Award

A total of eleven Environmental Awards were won by a U.S. Coast Guard team, three individuals and seven units this year. Superior environmental performance was cited in categories ranging from natural resource management, recycling and source reduction to minimizing petroleum use in transportation, and prevention and remedy of environmental damage. The awardees have brought great credit to the Coast Guard while demonstrating the breadth and depth of environmental capabilities the Coast Guard possesses. Seven of these units were recently cited as Best Practices in a memorandum from CG-4 to Pacific Area and Atlantic Area, as being beneficial to any Coast Guard unit, with no appreciable add-on cost.

INDIVIDUALS
Ms. Katie Moore (Atlantic Area)
LT Bradford J. Crowley (Sector Portland)
Mr. Daniel H. Guenthner (ISC Kodiak)

TEAM
HazMat Process Improvement Team (ISC Honolulu)

UNIT (large)
ISC Seattle
Air Station Borinquen
ISC Portsmouth
Coast Guard Yard
ISC Miami

UNIT (small)
WLR Support Detachment Hickman
MSD Port Canaveral

LCDR Peter Carroll, 2006 Coast Guard Engineer of the Year

EOY

LCDR Peter Carroll , 2006 Coast Guard Engineer of the Year, stands between RADM Dale G. Gabel (left) and VADM Terry M. Cross (retired June 2006) (right).

LCDR Peter Carroll, USCG Facilities Design and Construction Center Pacific, Seattle, Washington, is the Coast Guard Engineer of the Year for 2006. He was selected from a group of outstanding nominees throughout the Coast Guard. Selection as the Coast Guard Engineer of the Year made LCDR Carroll eligible for the Federal Engineer of the Year Award (FEYA).

LCDR Carroll was nominated and selected for his leadership and project management "on diverse challenging and high-visibility Deep Water and Home Land Security assignments; ... responsible for constructing projects worth $33M." Other projects in-which LCDR Carroll participated are Navy Homeland Security HVU Mission Study; Parametric Planning Tools w/3-D Object Modeling; Facility Assessments - Sector Command Center; ISC Seattle Berth a Recap; and ISC Alameda Bridge replacement.

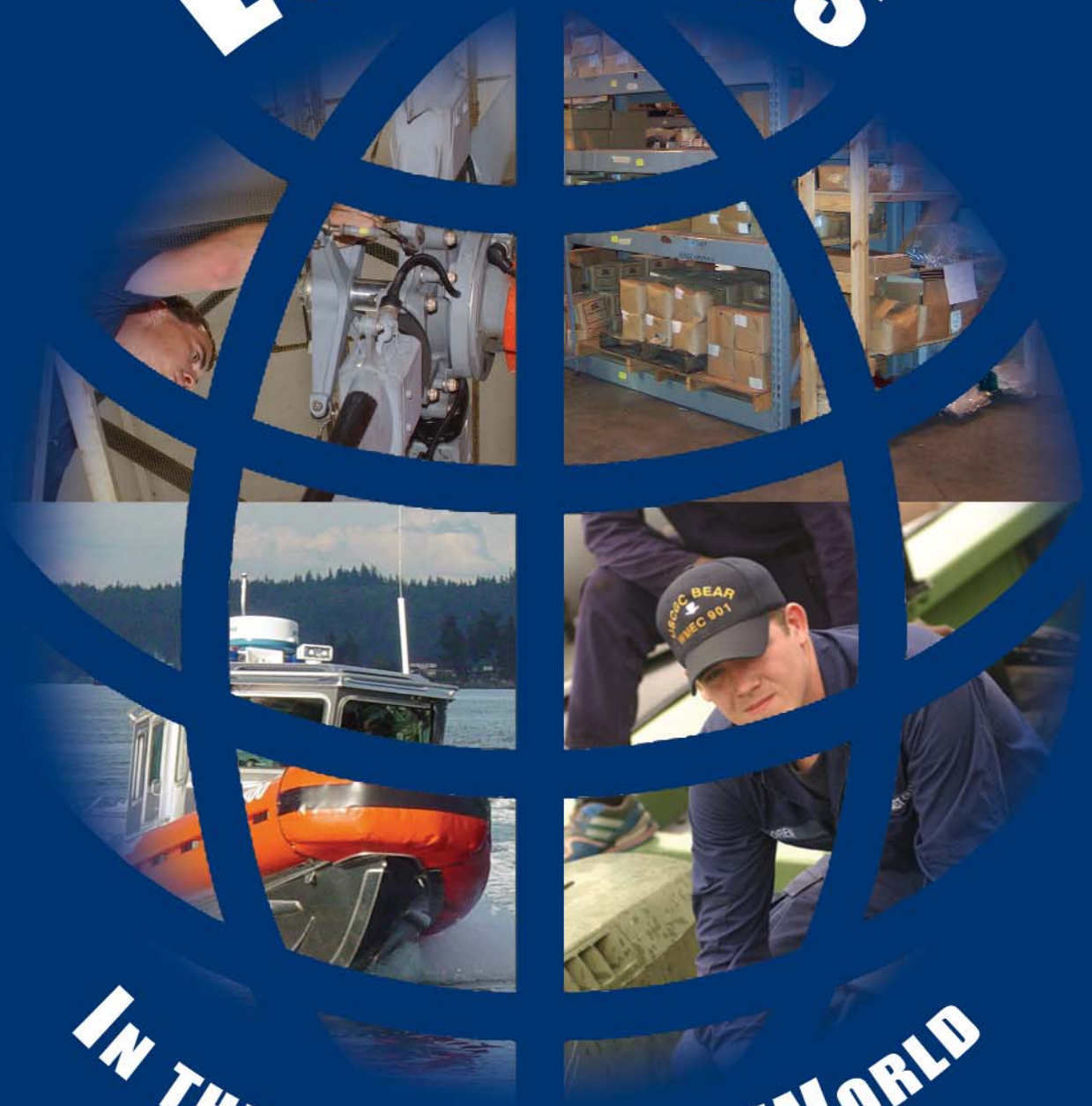
LCDR Carroll was recognized for his contribution to the Coast Guard during an award ceremony hosted by the National Society of Professional Engineers (NSPE) on 23rd of February 2006 at the National Press Club, Washington, DC. Coast Guard Vice Commandant, Vice Admiral (VADM) Terry M. Cross (retired on , and Rear Admiral (RADM) Dale G. Gabel, Assistant Commandant for Systems, congratulated LCDR Carroll for a job well done during an early morning visit to Headquarters on the 23rd. RADM Gabel and Captain (CAPT) Jay Manik, Chief of Civil Engineering, later accompanied LCDR Carroll and his wife, Becky, to the FEYA luncheon where RADM Gabel presented Carroll with the Coast Guard Engineer of the Year award.

At the National Press Club, from left to right, CAPT Jay Manik, LCDR Peter Carroll, Becky Carroll and RADM Dale G. Gabel.

Other nominees for this year's award were LT Zach Malinoski, Wade Williams, CAPT Doug Russell, CDR Frederick Sommer, LCDR Thomas Remmers, LCDR Brenda Kerr, Chris Milkie, CDR Johathan Milkey, LCDR Michael Campbell, Ed Sheppard, LCDR Larry Ramierez, LT Jeff Payne, LT Tommy Vancleave, LCDR George Lesher and CWO Sean Foley.

This annual luncheon honors and recognizes Federal Government engineers and agency winners for their achievements in engineering and their contributions to the American public. We congratulate LCDR Carroll and all who were nominated for the "2006 Coast Guard Engineer of the Year."

LOGISTICS



IN THE COAST GUARD WORLD

Commandant (CG-4)
United States Coast Guard
2100 Second Street, S.W.
Washington, DC 20593-0001