



Logistics Directions



Newsletter of
The Council of Logistics Engineering Professionals
September - October 2014

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From the President – CLEP Membership

Happy Holidays! It is a very exciting time to be a logistician and a CLEP member as you’ll see with this newsletter highlighting technological advances, innovative use of communication tools, and of course the many leading edge approaches to improving logistics recently recognized by peers as ‘best-in-class’. Within CLEP, we are pursuing efforts in several areas to enhance value across our professional community. Our current efforts span major areas including membership, increasing professional dialogue, and education/certification.

First, we are reducing fees for a limited time while at the same time offering additional benefits and opportunities for recognition. More on this can be found within the newsletter (*see Membership – Page 2*).

To increase professional dialogue we are actively engaging with numerous public sector, commercial business, and academic organizations to potentially offer reciprocal benefits to members as well as foster communication among the community which tends to generate innovative ideas for improvement. Many

of these organizations are also featured in this newsletter. We also sponsor an active blog on LinkedIn that facilitates professional dialogue of members and logistics professionals.

One of the most passionate discussions within CLEP remains education and professional certification. We are in the midst of planning a rigorous and incremental framework for meeting our objective of developing professional logisticians. The options range from specialized symposia for logistics engineering critical tasks to multiple certification ‘paths’ similar to other professional organizations. To this end you’ll see a call for information later in the newsletter.

My last item of note before the holidays is to put out the call for helping CLEP achieve further success through serving in one of the following positions: Vice President – Administration, Vice President – Communications or as our Webmaster. Please contact me directly at president@logisticsengineers.org or joe.davis@saddlebuttesys.com if you would like to discuss contributing to any of these positions.

The Perfect Storm of Supply Chain Talent Shortages

By: Irvin Varkonyi

NDTA rebranded itself a few years back as the Association for Global Logistics and Transportation. Through its efforts to support those active in the movement of defense goods and personnel, it supports the continued education and professional development of today’s and tomorrow’s logisticians. NDTA awards significant funds in its national scholarship program for undergraduate students in the field of supply chain management (SCM), which includes logistics and transportation. Additionally,

scholarships for local students, including my own Washington, DC Chapter, which makes the largest scholarship donations of any local chapter.

Is there a need to encourage students to study supply chain management? Is there a need to offer career advice about supply chain management to those newly entering the job market or who seek to change careers? Indeed there is a need!

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Calendar of Events

National Defense Industrial Association (NDIA): 31st Annual National Logistics Forum

March 16-18, 2015, Ronald Reagan Building and International Trade Center, Washington, DC,
<http://www.ndia.org/meetings/5730/Pages/default.aspx>

ASNE Day 2015: Engineering America's Maritime Dominance

March 4-5, 2015, Hyatt Regency Crystal City, Arlington, VA,
<https://www.navalengineers.org/events/individualeventwebsites/Pages/ASNEDay2015.aspx>

2014 UID Forum

The dates/location of the 2014 UID Forum will be announced once there is a clear direction on conference budgeting and travel approval within DoD. Visit <http://www.uidforum.com/> for information updates

Annual Reliability and Maintainability Symposium (RAMS) 2015

January 26-29, 2015, Innisbrook Golf & Spa Resort Palm Harbor, FL, <http://rams.org/>

The Logistics & Supply Chain Forum

May 31 - June 2, 2015, Sawgrass Marriott, Ponte Vedra Beach, FL, <http://www.logisticsforum.com/spring-conference.aspx>

2015 Material Handling & Logistics Conference

September 13-16, 2015, The Canyons Resort, Park City Utah, <http://mhl.com/>

LogiMed USA

April 14 - 16, 2015, Rancho Bernardo Inn, San Diego, California, <http://logimedusa.wbresearch.com/>

INCOSE 25th Annual Symposium

July 13 - 16, 2015, Hyatt Regency Bellevue, Seattle, WA, <http://www.incose.org/symp2015/>

4th Annual World Conference Of The Society For Industrial And Systems Engineering (SISE)

October 19-21, 2015, Embassy Suites Fort Lauderdale, Fort Lauderdale, FL, <http://www.ieworldconference.org/>

CLEP Membership

In an effort to reenergize our membership and broaden our mix of member logisticians, the CLEP Board of Officers has elected to present several initiatives relative to membership. Some of these are for a limited time and some will run on a continuing basis:

CLEP annual membership will now run for 12 months from the time of signing up initially or renewing. Prior to this the membership year ran from June to June of the following year not to exceed 12 months regardless of when the member signed up.

Beginning now and running through February 28th 2015 CLEP is offering significantly discounted membership rates for both initial membership and/or renewal. The normal membership rate for individuals is \$50.00 per year but during this limited period individual membership will be \$10.00. The normal corporate membership rate is \$400.00 per year but during this limited period corporate membership will be \$100.00. The Board will consider either extending the period of availability for these rates or establishing new permanent rates during 2015 that will still represent a reduction to the historical rates.

A new category accounting for Student membership has been established at an annual rate of \$10.00 to continue

indefinitely. Simply provide your Student ID number when signing up.

Corporate and College/University members may submit a one page article highlighting their logistics capabilities and/or offerings for publishing in the CLEP Newsletter one time during the year. Of course, any member may continue to submit an article for publication as frequently as desired but the 'Capability Highlights' will bring attention specifically to that institution's work overall.

Corporate and College/University members may submit a one page article recognizing up to two individual logisticians within their organizations during the membership year. The new 'Logistician Spotlight' section within the CLEP newsletter will provide an additional means of recognition for those individual logisticians who have made noteworthy contributions or innovations within their organizations or to the field of logistics in general. For College/University members, submissions highlighting an individual's area of research would also be appropriate.

Lastly, the Board is currently reviewing reciprocal membership benefits with several other logistics oriented organizations. More information will follow in coming newsletters.

'Batman' fix to sustain C-5s for decades, saving millions

by Jenny Gordon; ROBINS AIR FORCE BASE Public Affairs

Robins has hit another milestone by being the first to complete a new major structural repair on a C-5M which will bring in millions of dollars in revenue and sustain the Air Force's fleet for decades to come.

With completion of the first prototype in September, an additional 51 C-5s will need the new fitting by 2020. The retrofit is also of importance because it keeps the colossal weapon system flying safely.

In the beginning

Following a structural fatigue analysis of the C-5 involving stress, cracks and corrosion, engineers from Robins and Lockheed Martin found that the life expectancy of the 'Batman' fitting was drawing to a close.

The Batman fitting is aptly nicknamed due to its resemblance to the costume headpiece worn by the fictional comic book character.

Weighing about 80 pounds and measuring 10-feet wide and 4-feet high, it's the primary structural component that holds the front part of the tail

structure, the vertical stabilizer, to the aircraft's fuselage.

You can't fly the plane without it

"As part of the process to keep the aircraft flying for the next 40 years, this was one of the steps taken to make that happen," said Andy Ivey, 559th Aircraft Maintenance Squadron planning chief. "After analysis it was discovered when having problems with this area, we needed to do a fleet-wide change to this particular fitting because it's a high-risk area for aircraft structural failure."

Field-level inspections in 2009 identified cracks that were occurring in several aircraft, normally indicative of a fatigue problem. Temporary repairs were made to ensure safe operations.

While recurring field-level inspections were made, Robins and Lockheed engineers were conducting analysis to see what was causing the cracks.

"The fitting was designed from a static-strength perspective. From a fatigue perspective and original design, one of the big considerations was weight," said Russ Alford, C-5 chief engineer. "As part of

identifying and fixing the problem, we redesigned the fitting and thickened it up in places where cracks were occurring."

One of the challenges for the replacement was that the original installation drawings did not account for the aircraft's skin and vertical stabilizer being in place.

"To do it now, we had to develop a process on how to remove the Batman fitting without damaging the surrounding structure, and then put in the new fitting. That was a new challenge," he said.

Off to work we go

The first aircraft identified to receive the Batman replacement fitting, once it completed its regularly scheduled programmed depot maintenance, entered a hangar on June 18.

It would take exactly 108 days with 5,000 hours of work invested from start to finish before returning home in late September to its customer at Dover Air Force Base, Del.

The aircraft was placed on jacks, its horizontal stabilizer removed, dorsal panel taken off, flight cables rolled back, stands constructed for mechanics to work inside, existing fasteners tied to the old Batman fitting removed, and non-destructive inspections conducted on the Batman fitting's substructure prior to its installation.

And that was just the beginning

But first things first. When putting in a major new structure, you must take out the old, in this case the old Batman fitting.

Since there was no process to begin with, teams from maintenance and engineering had to get together and form one. Constraints were identified and issues were brought up during a rapid improvement event, attended by engineers, planners, schedulers and mechanics.

Michael McUmber, a 559th AMXS sheet metal mechanic, was one of four day-shift



Flight control mechanics install the tail on a C-5M. The Warner Robins Air Logistics Complex will be completing a new retrofit on 51 C-5s between now and 2020. U.S. Air Force photo by Isaac Cruz

'Batman' fix to sustain C-5s

mechanics dedicated to removing the old material, bolts and the like, and passing them through a small opening called an anti-hijack screen door, located just under the tail section of the aircraft.

"After we removed the old fitting, we basically fit-installed it to see if it would fit," recalled McUmbler. "Amazingly, it fit perfectly."

That's not to say everything in those 108 days was smooth sailing. Engineers had to create new blueprints for mechanics to follow. Procedures had to be tested to see what would work best.

"We resolved a lot of issues, especially with the blueprints," said Isaac Cruz, 559th AMXS tactical planner. "Keep in mind these prints were established a long time ago, and they showed outdated parts in there. We had to make a lot of changes to these prints."

"One of the main issues involved the parts listing for things like hardware, nuts, bolts, washers, etc.," he said. "Some of these items were so outdated that they were not stocklisted, so engineering had to research what was currently available and determine a suitable substitute."

Fasteners used on the fitting had to be updated. New holes had to be drilled on the fitting, made of a new aluminum alloy that is much more resistant to corrosion and fatigue.

"Secondary structures like fasteners, webs, none of that fit," said McUmbler. "Those parts had to be remade by hand. Once that happened, then it was just a course of back-drilling everything in and locating holes on the Batman."

To drill up the actual Batman fitting took about two weeks.

Looking ahead

Space is a precious commodity when working inside a military aircraft, even on an aircraft as big as the C-5. It can get cramped. It's dark, and there can be tight awkward turns which can make things uncomfortable at times.

When installing the Batman on this C-5M, there was a distance of about 12 feet from the floor to the top of the aircraft. With access stands in place, there's even less room for maneuvering.

Made of stainless steel, mechanics had to drill in a dorsal longeron or shelf, which would tie everything together from the inside as well as outside. That consisted of four parts all fitting perfectly and safely together - the vertical stab, tail on the outside, Batman fitting, forward spar and dorsal shelf.

After carefully documenting each step of the process with the initial aircraft, it's expected the days to accomplish the second one will be significantly less. The goal is to install the second Batman fitting from start to finish in less than 75 days. The team is optimistic.

"We learned that this can be done in a timely and cost-effective manner," said McUmbler. "Going in, we just didn't



David McLemore, sheet metal mechanic, installs web plates on the Batman fitting. The fitting gets its nickname due to its resemblance to the cowl worn by the fictional character. U.S. Air Force photo by Isaac Cruz

know what to expect."

Cruz, who was in on the project from the beginning, credits mechanics like McUmbler who dug right in. He also gave a nod to hydraulics technicians, the weight and balance shop and flight control mechanics.

"It took an entire team to do this," he said.

Dave Nakayama, 559th Aircraft Maintenance Squadron director, told crews working on the fitting to be extra vigilant in tracking the project, taking things slowly and asking questions along the way.

"We have to nail down this new process based on this prototype so we can become much more efficient, much faster when we go into full-scale production," he said.

"The airplane has never been older than it is today, yet we have some of the highest mission-capable rates, some of the highest aircraft availability rates than we've had in 15 to 20 years. That's pretty fantastic," he said. "From what we're being told, this Batman fitting and dorsal longeron modification will keep these planes safely flying for at least another 30 years."

Starting in early 2015, they will do the process all over again - 51 more times to be exact - which should keep things pretty busy here over the next five years.

"This Batman fitting is a good example of what we do here. No one else in the world can do this. The fact that we're able to sustain equipment like the C-5 fleet is hugely beneficial to us as a country, to the Air Force and the Department of Defense," he said.

Product Support Manager's (PSM) Workshop

January 13-15, 2015

Defense Acquisition University
Scott Hall
Building 226
Fort Belvoir, Virginia

This is an AT&L Approved Workshop

This Workshop's intended audience is government, industry and academia.

The 2015 PSM Workshop theme is:

Tangible Tools for the Workforce.

The 3-day program will take place on Tuesday, January 13, 2015 through Thursday, January 15, 2015 in Howell Auditorium, Scott Hall, Building 226 at Fort Belvoir, Virginia. It will feature government and industry presentations on Cost and Affordability (Day 1), Support and Sustainment (Day 2), and Industry Perspectives and Incentives (Day 3).

Any questions regarding the PSM Workshop may be addressed to the Office of the Deputy Assistant Secretary of Defense (Materiel Readiness) Workshop coordinators:

ODASD(MR) 703-614-6082

Attendees can register by completing the registration form, no later than Friday, December 12, 2014.

L&MR PSM Workshop
Announcement
Memorandum

January 13-15, 2015
PSM Workshop
Information & Registration

DAU Fort Belvoir
Information

Joint Helicopter Program
[JHP] Use Case

PSM Workshop
AGENDA
January 13-15, 2015

Visit http://www.acq.osd.mil/log/mr/PSM_workshop.html for more details

Army Sustainment Command Assists In Combating Ebola In West Africa

The U.S. Army Sustainment Command is providing direct support to Operation United Assistance to combat Ebola in West Africa.

The Army Sustainment Command's, or ASC's, Army Prepositioned Stocks program was tasked to assist in Operation United Assistance to provide 25 Force Provider Modules from assets stored in Livorno, Italy.

"Our thoughts and prayers are with all those who are suffering from the Ebola outbreak in West Africa," said Timothy Fore, director of APS for ASC. "The deployment of Army Prepositioned Stocks in support of Operation United Assistance is an example of our ability to rapidly support our nation's humanitarian relief missions and strategic defense objectives around the world."

Force Provider Modules enable rapid deployment and mobility of forces. The modules -- available in 600-, 150- and 50-man configurations -- are capable of providing climate-controlled billeting, shower, latrine, kitchen, power distribution and even morale, welfare and recreation facilities.

ASC issued and coordinated the transportation for 25 Force Provider Modules in 150- and 50-man configurations, approximately 500 tri-con containers, enough life support capability to support 3,450 Soldiers, to Liberia and Senegal, from assets stored in Livorno in less than a month.

The modules will be set up and maintained under the ASC Logistics Civil Augmentation Program by a contractor.

"Each unit had a critical part which made this mission a success and ASC's [Army Field Support Battalion-Italy], had the privilege of being at the center of it integrating this great local Livorno 'Team of Teams' to support the Soldier supporting this crisis," said Lt. Col. Joseph Greenlee, commander, Army Field Support Battalion-Italy.

"It has been a lot of work over the last month but, any time we can directly provide equipment to Soldiers in need by utilizing the full strategic capability of the [Army Prepositioned Stocks] site here in Livorno, Italy, makes it all worthwhile," Greenlee said.

The APS is executed by military and civilian employees stationed here, at ASC headquarters. The program allows the Army to preposition strategic assets in the continental

United States and abroad. These assets include equipment required to respond to emergency contingencies and humanitarian crises.

The APS Directorate develops and manages the accountability, funding, storage, maintenance, repairs and is ultimately responsible for the readiness of the equipment. Teams of employees coordinate efforts to ensure equipment is in serviceable condition and up to date with the latest hardware upgrades.

They also manage the transportation requirements for shipping equipment to and from various APS storage locations to ensure the right equipment is in the right place at the right time.

Also in support of Operation United Assistance, ASC issued four Large Area Maintenance Shelters from APS stocks stored in Livorno. LAMS are semi-mobile platforms that provide shelter for maintenance of aviation and ground vehicles. Each shelter comes with equipment for lighting, ventilation and electrical distribution.

Welcome New Members

CLEP welcomes one of our newest members, **Shumani Nethengwe**. Shumani is a Senior Logistics Engineer at the National Research Foundation (NRF) of South Africa where he is involved with the Square Kilometer Array (SKA) South Africa Program and is

responsible for the SKA1_Mid Infrastructure and Power consortium in South Africa from design phase to the establishment of the Operational Support Baseline (OSBL). Shumani is a graduate of the University of Johannesburg with

a degree in Electrical Engineering (Light Current) and a degree in Project Management from Cranefield College of Project and Programme Management and Logistics Engineering from University of Pretoria.

NAVAIR charts a new course in virtual worlds

Imagine engineers, program managers, shipyards, Sailors and Marines designing aircraft, analyzing parts, creating new tactics, training and models — all together in real time, without ever leaving their office.

All this is possible in a virtual world, a computer-based 3-D simulated environment. Virtual worlds, such as OpenSim, MOSES or AvayaLive Engage, enable real-time, synchronous, remote human interaction via avatars. Members of NAVAIR's Leadership Development Program (NLDP) are using virtual worlds to increase their collaboration by networking, connecting and creating through voice and text chat. "We are exposing our future leaders to the potential of virtual world technologies through virtual conversations and interactions, so they can learn how to infuse this technology into their programs and work," said Pamela Jamieson, deputy director of NAVAIR's Total Force Strategy & Management Department. "One way we offer in-world conversations is through NLDP's monthly 'fireside chats.'" To date, NLDP has held five virtual fireside chats in Second Life with NAVAIR technical and leadership personnel from all over the U.S. Employees log into the

virtual Patuxent River base in Second Life as their personally created avatars, meet with other NLDP participants and guest speakers at a virtual fire pit and spend an hour chatting about the new NAVAIR University, the "Federalist Papers," job rotations or the current NAVAIR environment. Using their avatars, they can also explore training simulators and other NAVAIR facilities.

"We are finding alternative venues to connect up and down the organization to get input from everyone in the organization," said Gary Kessler, executive director for the Naval Air Warfare Center Aircraft Division, who participated in the Jan. 22 fireside chat. "By going to these open architectures, we can stay ahead of threats and do it at a lower cost, leveraging the best and brightest ideas inside the government and across academia and small businesses so we can continue to deliver world-class products and services to our Sailors and Marines." Mechanical Engineer Don Balcom said he enjoys the relaxed social networking environment of the virtual world the best, while P-3 Assistant Program Manager, Systems Engineering Kerry Westervelt said being exposed to cutting-edge technology and skill development will help keep employees on the front end.

"Because technology is forever changing

the way we operate and do business, it is critical that NAVAIR's developing leaders be technology visionaries and be well informed of where technology can lead us in the next few years," Westervelt said.

In addition to NLDP, NAVAIR is researching and partnering with other pioneers across academia and the Department of Defense (DoD) on virtual environments to:

- Develop and conduct virtual world training with the Naval Undersea Warfare Center Division Newport and Submarine Learning Center, leveraging NAVAIR's SAIL facility and SQQ-89 trainer. Targeted for summer 2014, this instructional event will connect real-life tactical remote systems. Effectively, team members from all over the country, co-present in a virtual world, will remote control tactical equipment in other remote locations, using standard interfaces.
- Maintain and develop NAVAIR's public virtual space to educate and showcase the command's capabilities
- Interface with students to bring science, technology, engineering and math concepts to life inside a virtual world
- Develop a browser-based virtual



NAVAIR Leadership Development Program participants meet in a 3-D virtual world to chat about current leadership topics. NAVAIR uses virtual world technology in a variety of ways to increase collaboration and learning.

NAVAIR charts a new course in virtual worlds -- Continued from Page 7

world, offering the capability for employees and customers to share desktops and presentations and incorporate video

- Build a secure NAVAIR virtual space for use across NAVAIR programs, competencies and sites
- Help accredit virtual worlds for secure use across the DoD

Virtual office

Virtual spaces aren't the only new technology NLDP participants are using. The program also has a virtual office, the brainchild of NLDP alumna Marie Marrero, where employees can access program materials, links and other resources via a visual interpretation of a standard

workspace.

"The virtual office and NLDP SharePoint lounge foster a 'green' information technology (IT) approach to leadership," Marrero, an IT software engineer, said. "They help us maximize use of the wonderful resources made accessible to us throughout the program."

Barely two years young, massive open online courses (MOOCs) have already begun to radically change the way universities teach. The top universities worldwide have begun creating free, Web-enabled courses. NLDP participants are encouraged to participate in these classes using Coursera and covering topics such as organizational analysis, nutrition sciences and terrorism.

"As a national program, NLDP has explored possible methods of effective collaboration across the command and identified virtual worlds and MOOCs to be highly effective," said NLDP Manager Stephanie Gleason. "Over the past year, program participants have been able to not only develop a deeper comfort level with emergent technologies — an important leadership skill — but also increase their dialogue and engagement with one another."

Explore the virtual "NAVAIR Island." (<http://maps.secondlife.com/secondlife/NAWC3D/151/128/22>) (Note: You must have a Second Life account to access this site.)

CLEP Education and Certification Initiative

In fulfilling the mission of CLEP there is a consistently recognized need to fill voids relative to education, training and certification in the logistics engineering community. We have committed to reenergizing our effort to fill this void, engage our membership and provide our logistic partners worldwide an enhanced life cycle logistics capability. Additionally, this entails trying to align with other organizations such as the Aerospace Industries Association (AIA) and the Aerospace and Defence Industries Association of Europe (ASI/ASD) among others. As part of this effort we are reevaluating the most effective methods of education, training and certification processes and standards while at the same time beginning to develop a cadre of highly qualified logisticians that may serve as potential educators, trainers or instructors.

CLEP is currently evaluating potential individuals/candidates that could aid

in development, review or delivery of training in many logistics areas that include:

- Material Management: parts management, supply support, provisioning, supply chain, spares, counterfeit parts, diminishing sources, disposal, obsolescence, additive manufacturing (3D direct digital manufacturing), demilitarization, configuration management
- Maintenance Management: reliability analysis, maintainability, task analysis, design and performance impact, life cycle costing, durability, sustainability, design changes, level of repair, computer support and software
- Personnel and Training: skill specialties, training plans and equipment, course material, manpower, job analysis
- Support Equipment: requirements, test, diagnostic, calibration, SE software, tools, ground-handling, metrology, SE for SE

- Facilities: types, new construction, utilities, refurbishment, drawings, improvements, locations, environmental requirements, site preparation, security, safety
- Transportation: transportability, warehousing, packaging and handling, crating, preservation, environmental conditions, shock and vibration
- Data Management: technical manuals, specifications, drawings, maintenance data feedback, data mining, model-based enterprise (3D drawings), voice recognition, computer software, electronic manuals

If you or someone you know may be interested in assisting as a developer, reviewer or provider of training and has significant experience in any of the above logistics areas, please contact Lincoln Hallen at

l.hallen.technolink@gmail.com.

Defense Logistics 2014 Awards

Defense Logistics 2014, hosted by Worldwide Business Research, recently concluded. As part of the annual event the Defense Logistics Awards were established to honor, recognize and promote the logisticians in the US Department of Defense and the Defense Industry that have made a significant contribution to military logistics. CLEP representatives were fortunate to have participated, along with judges from other organizations, in the selection of this year's award winners that were announced during the Defense Logistics Awards Cocktail Reception on December 2nd.

There were two categories of awards this year: The Best Logistics Strategy Award and The Cost Savings And Performance Improvement Award. The first recognizes "a specific project or military-contractor

partnership achieving logistics excellence" and the second award recognizes "the agency that not only realizes cost savings, but also improves their mission effectiveness in their supply chain and logistics processes". There were a total of 8 nominees submitted for Best Logistics Strategy and a total of 10 nominees submitted for Cost Savings & Performance. The four finalists in each category were:

For Best Logistics Strategy Award:

- Headquarters Air Force Directorate of Logistics (HAF/A4L) and Deloitte Consulting LLP
- LMI
- 416 SCMS/GUMBC A-10 Avionics Supply Chain Management Team
- Aero Precision Industries, LLC, A

Greenwich AeroGroup Company

For Cost Savings and Performance Improvement Award:

- Northrop Grumman Technical Services: KC-10 Engine Contractor Logistics Support
- Navy F414 Engine Performance Based Logistics
- Air Force Sustainment Center's 448 Supply Chain Management Wing's Strategic Alternate Sourcing Program Office (SASPO)
- U. S. Army AMCOM Logistics Center (ALC) Sustainment & Supportability Directorate (SSD) Sustainment Optimization & Analysis (SOA) Office.

And The Winners -- Defense Logistics 2014 Awards

For Best Logistics Strategy Award:

This award was presented to LMI. The Defense Logistics Agency (DLA) must meet customer needs and have mission-critical items available in stock, but without having inventory sitting idle on shelves. Many DLA hardware items with sporadic or erratic demand in the past had suffered from extreme forecast error, resulting in inadequate customer service, excess inventory, and overwhelming buyer workload. DLA tasked LMI to find better way to manage these items. LMI's solution was PNG (Peak and NextGen), software suite of inventory models that bypass demand planning and forecasting, and brings together two groundbreaking inventory control algorithms: Peak Policy (for items with sporadic demand) and Next Gen (for items with erratic demand). After 20 months of operation, the PNG item population had seen outstanding unfilled orders reduced to 35%, fill rates up from 72% to 82% on Peak items, 87% to 91% on Next Gen items, and annual buys generated down 45%, without increasing the dollar value of inventory.

For Cost Savings and Performance Improvement Award:

The F414 PBL strategy supports over 1,200 F/A 18 Super Hornet engines in the Navy inventory. Material availability is over 87% for all requirement categories. The PBLs fill over 103,000 annual Fleet demands. The firm-fixed price PBL contracts incentivize General Electric (manufacturer of the F414 engine) to make investments and support decisions that pay off over the long-term through improved parts support, improved time-on-wing, optimized depot processes, and decreased depot returns. Documented business case "hard" savings associated with the program total over \$90M with additional cost avoidances of over \$400M. The General Electric/Fleet Readiness Center Southeast partnership brings government/industry best practices to the supply chain and proactively manages readiness goals. The F414 strategy is clearly focused on the desired outcomes of DoD Acquisition Reform and Better Buying Power guidance.



The LMI Team accepting their award at the 2014 Defense Logistics Conference in Alexandria, VA



Sustaining mission effectiveness as Coast Guard surface fleet transitions

by Loretta Haring

The U.S. Coast Guard Western Hemisphere Strategy is built around three priorities, combating networks, securing borders and safeguarding commerce. To meet these priorities, the strategy emphasizes the critical importance of offshore vessel and aircraft presence to support effective governance and sovereignty, as well as other concepts to ensure long-term success. That long-term vision relies heavily upon the ongoing acquisition of national security cutters and fast response cutters and future acquisition of offshore patrol cutters by the service but also requires us to lean heavily on an aging medium endurance cutter fleet made up of 210-foot and 270-foot cutters, some of which have been operational for as many as 45 years.

Recently, the Coast Guard entered a new phase in its long-term strategy to sustain these cutters with the completion of the Mission Effectiveness Project and commencement of the In-Service Vessel Sustainment project. MEP's modernization work began in 2005 as a bridging strategy to keep the service's medium endurance cutters safe and operationally effective until they can be replaced with newer vessels, such as the fast response cutter and proposed offshore patrol cutter. ISVS is an outgrowth of the success of MEP and will enhance other vessels, many nearing or beyond their designated service lives, by renewing the hull, mechanical, electrical and electronic systems most susceptible to failure. "It doesn't solve our need for new cutters," said Rear Adm. Bruce Baffer, assistant commandant for acquisition. "But it helps us maintain maximum capabilities with the assets that we have."

Through the replacement of obsolete and increasingly insupportable systems through MEP, the Coast Guard plans to operate its 210-foot and 270-foot cutter fleets for a decade or more. The service's fleet of 110-foot patrol boats previously received similar system refreshments at the Coast Guard Yard in Baltimore, Maryland.

"Collectively, the work included replacement of more than a hundred acres of steel hull plating, tens of thousands of feet of piping and structural steel, enough wiring to stretch from here to Pennsylvania, replacement of hundreds of pieces of auxiliary equipment, electronics systems and other critical upgrades designed to improve reliability," said Capt. George Leshner, commanding officer of the Coast Guard Yard. Leshner likened replacement of the machinery plant control and monitoring system on the 270-foot cutters with "going from late-1970s Atari technology to current-day technology."

MEP has had a measurable impact on operation of the medium endurance cutter fleet, according to an analysis by



Coast Guard Cutter Tampa, a medium endurance cutter, sits high and dry at the Coast Guard Yard in 2005 as part of the Mission Effectiveness Project for 210-ft. and 270-ft medium endurance cutters. U.S Coast Guard photo by Gordon I Peterson

Volpe National Transportation Systems Center, U.S. Department of Transportation. The percent of time free of major casualty reports for the 270s has increased 91 percent since MEP. The increase for the 210s is 77 percent. In addition to cutters being available on a more regular basis, MEP has caused a reduction in maintenance costs on the vessels that have gone through the program. The increased level of readiness came at the modest investment of \$6 million to \$13 million per hull, depending on type of cutter. "These are quite impressive accomplishments considering the tremendous technical risk inherent in performing extensive renovations on ships that range from 20 to 45 years old," Leshner said.



Crewmembers aboard the Coast Guard Cutter Tampa's deployable response boat tow an intercepted 'go-fast' vessel from the Cutter Confidence to the Tampa. U.S. Coast Guard photo by Petty Officer 3rd Class David Weydert

402nd AFSB watercraft unit completes intensive inspection

By Chief Warrant Officer 3 Jonathan Keyes, 402nd AFSBn-Kuwait

KUWAIT NAVAL BASE, Kuwait -- The Watercraft Equipment Site Kuwait experienced its first Brigade Inspection Reconnaissance Exercise Program Sept. 1 -- Oct. 5.

The purpose of the BIREP was to validate the timeline to activate Army Prepositioned Stock-5 vessels within the mandated 10 days.

With orders from the Army, the WES-K sent in motion a series of events that would lead to the successful activation, operation and return to preservation of two Landing Craft Utility 2000 Series vessels.

The WES-K team knew the mission was going to be fast paced and extensive work. In the past, WES-K has activated and issued several vessels, but this was the first time in 10 years it was going to be an "official" inspection. Cramer Claxton, the contracting officer representative, 402nd Army Field Support Battalion-Kuwait, and the contractors he oversees from Heavy Engineering Industries & Shipbuilding Company, were ready for the challenge.

The plan was to split each LCU issue into three phases (activation, operation, and turn-in). During phase 1, inventories, dock trials and sea trials were conducted. Once the vessel master signed for the vessel, phase 2 began.

During this phase, the crew continued to sail, validate crew licensing and performed a myriad of exercises consisting of man overboard, abandon ship and fire drills. The turn-in phase was the reverse order of phase 1.

After several in progress reviews, hot washes, after action



Lt. Col. Earl B. Schonberg Jr., 402nd Army Field Support Battalion-Kuwait commander, and Sgt. Maj. Tyrone P. Legier, AFSBn-KU senior enlisted adviser, take the helm of LCU-2029 during the BIREP sea trial at Kuwait Naval Base, Kuwait, Sept. 20. (Photo by Chief Warrant Officer 3 Jonathan Keyes, 402nd AFSBn-Kuwait)

reviews and process map working groups, the BIREP ended.

According to battalion officials, the BIREP was a success. It demonstrated that all stakeholders should continue to seek innovative techniques and processes to make their organization more efficient by weaving AARs and lessons learned into their internal processes.

Logistics Support Analysis (LSA) becomes Product Support Analysis (PSA) Logistics Support Analysis Record (LSAR) becomes Logistics Product Data (LPD)

By James V. Jones

MIL-STD-1388-1A Logistics Support Analysis has been the internationally accepted process for ILS implementation since 1984. It focused on two specific areas, supportability engineering to design a supportable product and then maintenance task analysis to develop a reasonable physical support solution for the product.

MIL-STD-1388-2B Logistics Support

Analysis Records has been the internationally accepted neutral data exchange format for LSAR data since 1984 also. It provided a common method for recording the results of Maintenance Task Analysis (MTA) and the physical support solution.

The US Department of Defense (DoD) cancelled both standards in 1996

MIL-HDBK-502 Acquisition Logistics, released in 1997, was an attempt to

provide US Government programs with a guide on performing LSA, but only for the Government. It contained no MTA or other contractor requirements.

MIL-PRF-49506, Logistics Management Information, was a DoD attempt to contract for the output of MTA without requiring contractors to

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The Perfect Storm *Continued from page 1*

THE PERFECT STORM

In the January 2014 issue of Supply Chain 24/7, an article pointed out the perfect storm of supply chain talent shortages. "Based on our review, we have observed a number of key emerging trends that individually create tension and potential disruptions in the supply chain talent pool. Either of those on their own can create challenges for a supply chain organization similar to a hurricane or a severe winter gale. At the same time, like The Perfect Storm (movie), there is the prospect of these trends colliding to create a supply chain talent perfect storm'. "1

Four key areas are noted by the authors that may cause this "perfect storm."

1. Industry Demand for New Supply Chain Talent
2. Supply Chain Talent Gaps
3. Supply Chain Profession Dynamics
4. Potential Business Faculty Shortages

Globalization has created demand for organizations to be able to produce, distribute, and recycle goods, regardless of borders. Equally important is the need to move information. These skill sets were not required of the same individual until the last 15 years or so. Thus, we have increased demand in all fields. Where do you learn supply chain? We have three options:

On the job training (OTJ) - a tried and true method of learning from those with more experience. However, this becomes a challenge when technology changes the landscape.

Professional development - learn from training supplied by an organization or a professional association after you've been hired.

Academic degrees - enrolling in undergraduate or graduate programs in supply chain management to gain knowledge in SCM.

TOP UNIVERSITIES WITH SUPPLY CHAIN DEGREES

Academic degrees and professional development are actually complementary as the former instills education about the field, while the latter trains you to apply this knowledge.

The profession's dynamics are changing. As the authors state, "On the contrary, a set of skills, leadership, and cross-functional competencies essential for supply chain professional and organizational success in the 21st century will continue to broaden and constantly evolve. Already, there is a shortage of highly skilled workers who possess those broader business skills."2

And finally, if the SCM world is evolving so rapidly, how well stocked are universities to keep up on these changes and prepare students accordingly? Some are doing better than others. In its most recent survey of supply chain degree programs, US News and World Report selected the following as the ten best programs in the nation:1

1. Michigan State University
2. Massachusetts Institute of Technology
3. Arizona State University
4. Ohio State University
5. Penn State University
6. University of Tennessee
7. Carnegie Mellon University
8. University of Maryland
9. Purdue University
10. University of Michigan

PREPARE FOR THE PERFECT STORM

What can organizations do to prepare for this storm? Supply Chain 24/7 suggests the following:

1. As sailors prepared for heavy weather by ensuring that the vessel is structurally sound, Supply Chain 24/7 suggests that organizations prepare for the storm by providing career roadmaps to employees and opportunities to acquire the skills of supply chain leadership.

2. Map talent needs by identifying "must have" competencies required by the organization in order to remain competitive.
3. Focus on retention in an economy where voluntary turnover is increasing, despite our earlier recession with so much forced turnover and/or job loss. This is especially occurring in Generations X and Y.
4. Utilize professional development programs to convert a critical mass of "labor" into "talent and leadership." Not to underrate experience, but to add to the experience offered by long-tenured employees.
5. Collaborate with colleges, universities, and even high schools to create a talent pipeline. Companies should participate in developing industry-driven curriculum, offer internships, and such. Make the world of supply chain exciting, and profitable, for young people.

Good luck weathering this storm. Whether you are active duty military, public sector civilian, or commercial sector, each of us are responsible to grow supply chain talent. This article has sought to demonstrate that talent shortages can be overcome. Supply chain talent is a competitive differentiator.

1. Kusumal Ruamsook & Christopher Craighead, *Supply Chain 24/7*.
2. Kusumal Ruamsook & Christopher Craighead, *Supply Chain 24/7*.
3. *US News and World Report*, www.colleges.usnews.rankingsandreview.com

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DoD Announces Winners of 2014 Secretary of Defense Performance Based Logistics (PBL) Awards

In an October 17, 2014 memo "[2014 Secretary of Defense Performance Based Logistics \(PBL\) Awards Selection](#)", the Principal Deputy Undersecretary of Defense for Acquisition, Technology and Logistics (AT&L) announced the winners of the tenth annual Secretary of Defense PBL Awards:

- System Level Award: F-22 – USAF F-22 System Program Office.
 - Summary of Accomplishment: Implemented a PBL solution between USAF Air Combat Command, USAF Air Logistics Complexes, Lockheed Martin, Pratt and Whitney, and Boeing for the F-22 fleet which resulted in an F-22 record-high 71% mission capable rate. Additionally, there were significant improvements in the Aircraft Abort Rate, which averaged 5.1% for the year against a fleet exceptional goal of 6.5%. Their efforts reduced the cost per flight hour, saving \$20 Million in operating and support (O&S) costs in 2013.
- Sub-system Level Award: Sniper Advanced Targeting Pod PBL – USAF Precision Attack System Program Office.
 - Summary of Accomplishment: Implemented a PBL solution between USAF Precision Attack System Program Office and Lockheed Martin Missiles and Fire Control personnel which delivered exceptional support of 358 Sniper Pods used by USAF and Air National Guard on multiple platforms at operational and training locations around the world. The PBL arrangement improved readiness by 14% while simultaneously reducing O&S costs by \$77.3 Million.
- Component Level Award: H-53E PBL – USN, Naval Supply Weapon Systems Support.

- Summary of Accomplishment: Implemented a PBL solution between NAVSUP WSS, NAVAIR, and Sikorsky for ten high-value, flight-critical components resulting in improved processes and products that increased supply availability by 49% while reducing O&S costs by \$20.2 Million.

The memo goes on to state that "Performance Based Logistics is a key Department of Defense strategy used to deliver an integrated, affordable, support solution designed to optimize system readiness and reduce O&S costs. The Secretary of Defense PBL Awards recognize government/industry teams that have demonstrated outstanding achievements in providing our Warfighters with exceptional operational capability through PBL agreements and are examples of "Better Buying Power" in action. The 2014 PBL Award winners will be recognized at the Product Support Manager (PSM) Workshop in January 2015. The Principal Deputy Assistant Secretary of Defense for Logistics and Materiel Readiness (ASD(L&MR)) will present the award at their command."

For a list of previous award winners since 2005, visit the [Performance Based Logistics Community of Practice \(PBL CoP\) Award Winning Programs](#) page.

Congratulations to the Air Force's F-22 and Precision Attack System Program Offices, the Navy's Naval Supply Systems Command Weapon System Support (NAVSUP WSS) and Naval Air Systems Command (NAVAIR), and their industry partners for this significant achievement and well-deserved recognition.

LSA to PSA, LSAR to LPD - *Continued from page 11*

perform the MTA process. This specification was later cancelled.

GEIA-STD-0007, Logistics Product Data, released 2006, is the current replacement for MIL-STD-1388-2B and contains all the LSAR data elements plus other standards such as Aerospace and Defence Industries Association of Europe (ASD) S1000D. The S1000D specification should be used on all programs for generation, storage and transfer of logistics data.

GEIA-HB-0007 is the tailoring guide for GEIA-STD-0007. They are used together.

ASD's S3000L specification, the International Specification for Logistics Support Analysis, released 2010, is a European specification developed by ASD as an attempt to

fill the void since MIL-STD-1388-1A was cancelled. It only addresses MTA and contains no supportability engineering requirements. It assumes all logistics activities start after the design is completed. It is not a replacement for MIL-STD-1388-1A.

TechAmerica Standard 0017 (TA-STD-0017), released in 2012, is a complete replacement for MIL-STD-1388-1A. The now cancelled MIL-STD-1388-1A contained 15 tasks that must be performed in the LSA process; all 15 tasks outlined in the former standard are now contained in TA-STD-0017, however, these tasks are now referred to as activities. For example, Task 101 is now Activity 1, Task 102 is Activity 2, Task 103 is Activity 3, Task 201 is Activity 4, etc. There are two additional and new Activities in TA-

STD-0017, one for the use of Field Feedback data in the operational phase and one for developing a Disposal Analysis.

MIL-STD-1388-2B had a series of 48 standard LSA Report formats, i.e. LSA 001, LSA-036, etc. GEIA-STD/HB-0007 has no report formats.

TA-HDBK-0007-1, Logistics Product Data Reports Handbook, released 2013, contains 24 of the report formats previously contained in MIL-STD-1388-2B. 23 of the reports are the same and one new report that compares task code with Source, Maintenance and Recoverability (SM&R) code has been added.

LSA to PSA, LSAR to LPD - *Continued from page 13*

MIL-HDBK-502A, Product Support Analysis, released 2013, is the new DoD guide to tailoring TA-STD-0017 to DoD programs.

MIL-STD-1390D, Level of Repair Analysis (LORA) provided an analysis process, based on cost and technical considerations, to deterring the maintenance policy for every item within a system. This standard was cancelled at the same time as the LSA and LSAR standards. SAE has recently released AS1390 which is an updated replacement for MIL-STD-1390D. AS1390 has been adopted for use by the US DoD on all current and future programs. An application handbook is in process and expected to be released shortly.

New SAE EIA-649-1 "Configuration Management Requirements For Defense Contracts" Published

The Defense Standardization Council Configuration Management Standards Working Group (DSC CMSWG) committee announced late last week that the long-anticipated SAE EIA-649-1 Configuration Management Requirements For Defense Contracts has officially been issued. Note that there is a fee required to obtain a copy of this SAE standard.

According to the SAE website, "this document applies to hardware and software and provides CM requirements to be placed on contracts after being tailored by the Acquirer. The requirements have been organized by the following five CM functions: a) Configuration Planning and Management b) Configuration Identification c) Configuration Change Management d) Configuration Status Accounting e) Configuration Verification and Audit.

The rationale is "this is a defense unique standard to the non-government standard, "ANSI/EIA-649B Configuration Management Standard," that generates, manages and is controlled by the non-government standard body with Defense membership to provide requirements specific for Defense contracts. This standard is for placing tailored Configuration Management requirements on Defense contracts."

Additional insights area available in a Configuration Management Standards presentation at last year's 2013 NDIA Systems Engineering Conference.

Information from this new SAE standard will be included in the planned revision to the planned 2015 revision of DAU's LOG 204 Configuration Management course.

The Council of Logistics Engineering Professionals



<http://logisticsengineers.org>

HOW CAN WE BETTER SERVE YOU?

As we continually strive to meet the requirements and of our Logistics Community, we need to hear from you concerning what you would like to see CLEP accomplish in the future to better serve you.

Do you have a need for workshops on particular subjects, job assistance, or filling job requirements on a program within your organization? We can help. Contact us by email, phone, or stop by our web site at

www.logisticsengineers.org and let us know how we can assist or serve you better.

We also need your help. As we have begun our new program year, we need volunteers to serve on our committees. If you have a talent in a particular area and would like to participate on a committee, please contact us.

If you would like to submit an article for our newsletter, please contact Bill Horne (bhorne1@cox.net).

LinkedIn Join the Conversation, Discussion and Networking at:
http://www.linkedin.com/groups?gid=1358457&trk=hb_side_g

CLEP Information

The Council of Logistics Engineering Professionals is a professional organization composed of individuals devoted to enhancing logistics technology, education, and management. For membership information or if you are interested in starting a Chapter in your area, contact Scott Juneac (membership@logisticsengineers.org) or Bill Horne (bhorne1@cox.net).