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Our Aerospace

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The CNO's Revolution in Training

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Since assuming CNO, ADM Clark has charted a course for transforming the Navy. At the top of his Priorities List are Manpower and Winning the "War for People." To successfully achieve these goals, the Navy must renew its commitment to education and learning and empower Sailors both personally and professionally. Over the past twelve months, significant events have taken place in Manpower, Personnel, and Training that will forever change the way we support our most valuable resource – the Sailor and Marine. These changes have revolutionized the way we look at education, training, and their impact on readiness.

In 2000, the CNO chartered an Executive Review of Navy Training (ERNT) to examine the entire Navy Training System and recommend changes to improve learning effectiveness, foster innovation, and develop an efficient and effective organization focused on lifelong learning. The diverse team from DOD, industry, and academia looked at all types and levels of training as well as programmatic and resource support in all warfare communities.

As a result of their findings and recommendations, the CNO chartered the Task Force for Excellence through Commitment to Education and Learning, TASK FORCE EXCEL, to lead the "Revolution in Training". The goal of the Revolution is to transform the Navy into a responsive, agile, and efficient learning organization. TASK FORCE EXCEL, headed by RADM Ulrich, consists of a team of military and civilians located at five separate locations – Washington DC, CNET, NAWC TSD, Norfolk VA, and San Diego CA.

These teams are actively working pilot projects to transform Navy Training in execution, acquisition support, and organizational structure. The ultimate training organization will be a human resource organization that will focus on the Sailor and their career path not just hardware training requirements. The TASK FORCE EXCEL efforts are based on three key concepts: the Human Performance Systems Model, the Navy Learning Model, and the Sailor Continuum.

Human Performance Systems Model

For more than a century, the civilian and academic community have sought to optimize organizational systems and individual task performance. The Revolution builds on the previous research in the Psychology of Work and applies a Systems Engineering approach to improving Navy Training. The cornerstone of the Revolution is the Human Performance Systems Model (HPSM) shown in Figure 1.

The Four Quadrant model provides a formal process that translates critical mission support requirements into effective performance solutions. The first step in this process is to "Define the Requirement." In the past, we have defined the requirement in terms of a solution, most frequently in terms of a training solution. In the HPSM, the requirement is defined in terms of human performance. Human performance addresses the aggregated impact of all factors that result in an individual achieving the desired results in a job or task.

The basic principle on which human performance relies is that of Competencies. Competencies are defined as the Knowledge, Skills, and Abilities that an individual brings to the job. The challenge in any learning environment is to develop a solution that matches an individual's Competencies with their job task performance requirements.

The Human Performance Systems Model provides an analytical method to effectively accomplish that goal. Human Performance Requirements are identified and prioritized in Quadrant I. They are then translated into possible solutions in Quadrant II. The solutions are analyzed and an optimum is selected. The solution identified may or may not be a training solution. The Analysis of Alternatives may result in a technology innovation, a weapons systems redesign, or a policy change. Once selected, the solution is tried and evaluated in Quadrants III and IV.

Navy Learning Model

If the solution is a training solution, it will be based on the Navy Learning Model. This model consists of a blended approach to developing Knowledge, Skills, and Abilities through effective use of technology. The type of instructional system selected hinges on the Competencies required. As shown in Figure 2, there are four major learning methods: Reference Based, Instructor Led, Computer Mediated, and Collaborative Learning, as well as two In Service instructional types: On the Job Training (OJT) and Mentoring.

Historically most training has been didactic in nature. This traditional "Chalk and Talk" format is still the most common instructional methodology in Navy schools. It is characterized by two-way communication. Reference Based Learning complements classroom instruction and occurs when the student accesses knowledge based materials. In its simplest form it is reading. It may or may not include a computer media. This type of learning is characterized by its unidirectional flow of information and as such must be carefully managed or monitored to ensure learning objectives are achieved.

Human Performance System Model

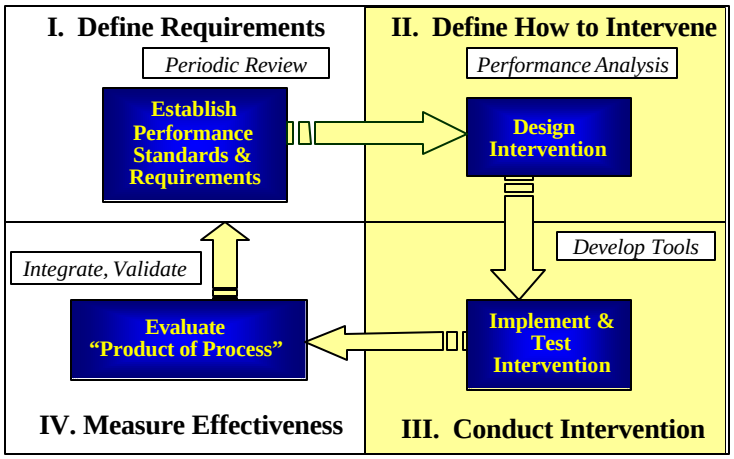

Figure 1: Human Performance System Model

Navy Learning Model

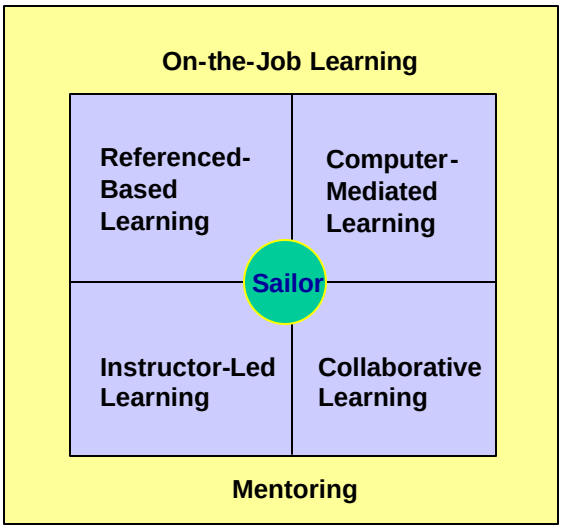

Figure 2: Navy Learning Model

Computer Mediated Learning includes Computer Aided Instruction (CAI) and Interactive Course are (ICW). In this type of learning, the student has two way dialogue with the technology based instructional system. It provides the advantage of instructor led instructor and the flexibility in scheduling. The more innovative types of this method approach learning through a gaming scenario. Collaborative learning is when students assist each other in the learning environment. A combination of these methods will be used to develop Sailors and Marine throughout their career. This blended approach will provide the most efficient and effective solution to meeting readiness.

The Sailor Continuum

The Sailor Continuum is the tool the Navy will use to identify the competencies that a Sailor will need to possess to achieve success throughout their career. As shown in Figure 3, a career path from accession to retirement will be charted along five vectors – Professional Development, Personal

The Sailor Continuum

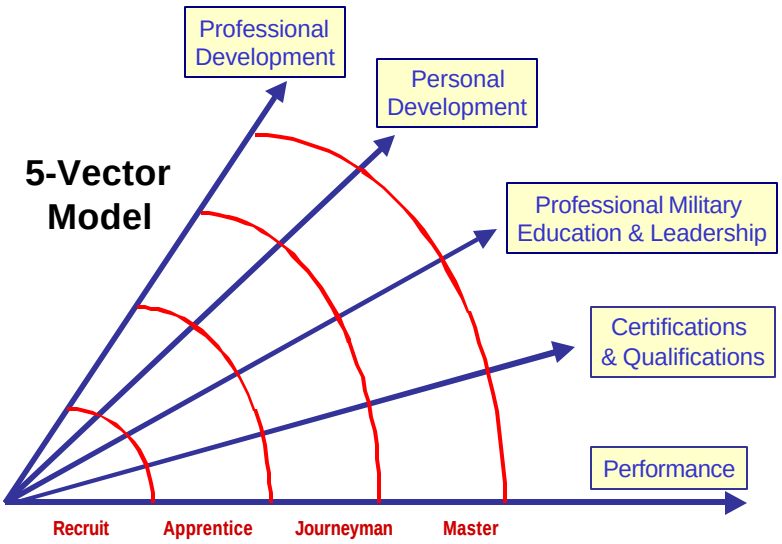

Figure 3: The Sailor Continuum

Development, Leadership and Military Education, Certifications/Qualifications, and Performance.

The Professional Development Vector shows a detailed career path for a Sailor's technical specialty or rating. The second vector, Personal Development, can best be described as "Life Skills." It covers such items as financial management, management skills, and academic achievement. The Leadership and Military Education vector provides the critical thinking tools needed to be an effective leader. The fourth vector, Certifications and Qualifications, will focus on unit level certifications and equivalent civilian qualifications. The last vector, Performance, will assess a Sailor's overall performance. The Sailor Continuum will clearly define how the Navy expects a Sailor to grow and develop in all areas. It will ensure our Sailors are provided every opportunity to succeed in the Navy or in the civilian community. They will not just be employed but employable.

BUT, where are we now?

In Naval Aviation Technical Training, we are well positioned to rapidly meet the CNO goals for revolutionizing training. In the mid 1990's, Naval Aviation took significant actions to improve enlisted training. The Naval Aviation Technical Training Executive Steering Group, a cross functional team representing stakeholder organizations, was established to manage policy and process efficiency. A vision and strategy were shaped for technology infusion and supported with an ACAT IV program (CBTSI). PMA 205 was established at NAVAIRSYSCOM to manage aviation training. C schools were moved to fleet sites and collocated with their respective TMS. And most importantly, the Aviation Maintenance Training Continuum System (AMTCS) was implemented.

AMTCS consists of three parts: the Enlisted 'Street to Street' Continuum, the Knowledge and Skills Tools, and the Management Tools. It provides the mechanism for optimizing the use of technology to provide just in time training throughout an individual's career. The 'Street to Street' Continuum establishes an iterative learning cycle from apprentice to journeyman to master for each sailor and Marine.

Currently after accession, an individual will typically receive generalized skills training at A School where they will be assigned a rating. Most individuals will then receive an Initial C School prior to reporting to their first operational command. The C School courses are categorized by the skills they provide – Initial or Career. The courses are not redundant in content. The Initial C School provides familiarization with a specific TMS and the basic skills required by entry level technicians and awards an 88XX NEC upon completion. The Career Course provides advanced troubleshooting and maintenance skills associated with that TMS and awards an 83XX NEC upon completion. The Initial NEC is a prerequisite to the career course. Since the standup of the enlisted continuum, the course content has been continuously refined and aligned with fleet requirements through the use of Maintenance Training Requirements Reviews (MTRR).

MTRR are fleet forums in which course content is reviewed for accuracy and relevance by Sailors and Marines. As of 1 January 2002 MTRRs were replaced by Human Performance Requirement Reviews (HPRR). The new HPRR format not only looks at existing content, acquisition initiatives, existing fleet degraders, but also the refinement of technology and pending human performance solutions.

While the C School courses are robust, they do not meet every possible requirement. In Service Training (IST) is used at the activity level during all tours. Over the past 20 years, IST has been managed in a number of different ways. Initially PQS were used. They were followed by the Maintenance Training Improvement Program (MTIP). Currently AMTCS Knowledge and Skills Tools are being implemented for In Service Training. These tools, such as Interactive Courseware (ICW), Computer Based Training (CBT), and Video TeleTraining (VTT), provide a blended solution to meeting the learning objectives associated with long-term learning, infrequent tasks, and refresher training. The CBTSI Program is systematically deploying CBT and ICW in support of specific TMS and systems. These can be used in either at the activity level as shop training or individual training or as formal course content. Additionally, we are exploring other human performance solutions such as Electronic Performance

Support System (EPSS) or Maintenance Mentoring Systems to provide training assistance anytime anywhere. These solutions are portable self-contained devices that integrate technical manual content, courseware, and troubleshooting logic to assist the technician in the completion of day to day tasks.

The AMTCS Management Tools provide the link from the individual performance to the operational performance requirement. The AMTCS Software Module (ASM) provides powerful tools for managing the education and training process. This software includes an Electronic Qualification/Certification Record (EQCR), Master Task Lists, and a Test and Evaluation Module (TEV). The EQCR provides the capability to track formal training and electronically create a tailored professional development plan for each Sailor based on work center and job assignments. Linked to NALCOMIS, the EQCR provides an automatic method for tracking OJT through task completion. Also resident in the software are Master Task Lists (MTL). Based on the Work Unit Code taxonomy for each TMS, the Master Task List provides a direct link from training to aircraft mission capability and readiness. The tasks are stratified by rating and can be directly linked to specific systems. In addition to creating a tailored training plan for each Sailor, ASM provides a means to assess an individual's knowledge on any or all sections of systems supported by the MTL. TEV can be used in direct support of formal courseware or by a work center supervisor as a training aid.

Where are we going?

There are still many milestones yet to be reached in the Revolution. During the next twelve months, we will continue our efforts to improve AMTCS in support of the CNO Revolution in Training. Starting in June of this year, we will conduct a Naval Aviation Rating Analysis. Every aviation rating will be reviewed. A full Job Task Analysis (JTA) will be conducted on each to identify human performance requirements. As a result of this effort, a detailed Sailor Continuum will be developed for all Sailors. The results will be integrated into our technology upgrades and curriculum revisions that are taking place through the CBTSI and ASM Programs. A civilian certification program will be developed. By October, we will implement a program under which Sailors and Marines will be able to use formal schools and Navy work completion to be eligible to take the FAA Airframe and Power Plant (A&P) Exams.

And finally as with any transformation, there will be changes to organizational structures. At this point you are probably asking what activities will be changed? What can we expect from the Aviation Rating Analysis? How does a JTA really work? How will we know if the Revolution is successful? We will get to those discussions in the next installment of this series.

CASS Into The Future

By CDR Avgi Ioannidis
NAVAIRSYSCOM HQ (PMA-260D3)
CASS Officer

Consolidated Automated Support System (CASS), the linchpin of I-level avionics support in the fleet, is nearing the end of its production run, but a new smaller version for the US Marine Corps (USMC) and US Southern Command (SOCOM) is nearing production. Plans are well underway to upgrade and modernize older existing CASS stations to ensure that CASS can continue to do its job well into the future.

CASS is the Navy's standard Automatic Test Equipment for electronics and avionics. It is in use throughout the Navy both afloat and ashore, at Navy AIMDs and Depots, at USMC MALSs, aboard CVs and L-Class ships, and at many other sites.

Mainframe CASS is fielded in four versions that are designed for specific testing requirements. The Hybrid version is the basic five-rack station. Other CASS versions add capability to the Hybrid Station to test radio-frequency components (pictured here) high power radar systems, electro-optics, communications, navigation, IFF systems.

The $1.2B CASS program was formally initiated in 1982. Lockheed Martin Information Systems (then GE) became the CASS Prime Contractor in 1986. The actual design of CASS dates from the mid-to-late-1980s. The initial CASS stations were ordered in 1990 and CASS entered the fleet in 1994 supporting JTIDS WRAs aboard USS CARL VINSON.

Growth and performance have been steady since then. 531 CASS stations are currently operational around the world with almost 200 more to be produced. Most aircraft carriers currently have 8 or 9 stations onboard. While production of the mainframe version of CASS will complete in 2002, a smaller transportable version will begin production in 2003. By 2006, each carrier will have 18 mainframe CASS stations.

CASS supports a wide range of aviation and electronics systems in the fleet. 541 CASS Test Program Sets (TPSs) have been fielded, and another 900 are now in various stages of development. When the current TPS development effort is complete in 2006, there will be 1,890 TPSs on CASS. About two thirds of these will have been offloaded from the legacy testers which CASS replaces and the remainder will be new TPSs. As our fleet aircraft have new systems added or existing systems changed, new or upgraded CASS TPSs will be developed and fielded.

Reconfigurable Transportable CASS

The advent of the V-22, and especially US SOCOM's mobility requirements, has led to the development of a smaller version of CASS known as Reconfigurable Transportable CASS. This tester has the same capability as Mainframe CASS, but, due to advances in technology, packages this capability in nine or ten man-portable interlocking cases. RTCASS is Windows NT PC-based and is comprised of commercial-off-the-shelf components.

Although US SOCOM will use RTCASS to support its V-22 fleet, the USMC has decided to replace its mainframe CASS stations with RTCASS in order to improve mobility and reduce the footprint of their I-level van complexes.

Test programs written for mainframe CASS will require only recompiling to play directly on RTCASS. There will be a total of 585 RTCASS TPSs to support V-22, F/A-18, AV-8B and EA-6B.

RTCASS is currently in development testing and production will begin in FY03. The inventory objective is 130 stations.

New Testing Technology

CASS is incorporating several exciting new testing technologies. Until recently, the limitations of the stimulus and measurement instruments in CASS necessitated that tests be performed sequentially. For example, a typical test program would include statements such as "apply stimulis1" followed by "make measurement1". Another test action could not be executed until measurement1 was completed. While this serial test strategy works fine in most testing situations, there are some uses where a parallel test capability is greatly advantageous, such as the F/A-18's IATS (Intermediate Avionics Test Set) which is a functional tester that uses parallel test strategies. The advent of the F/A-18 requires more IATS testers than are available, so the program manager decided to replace IATS with CASS. This has required that CASS be augmented with new test technology to allow parallel testing, the key to making CASS into a functional tester.

The key to the new parallel testing capability is break-through test technology developed by Teradyne, Inc named the Ai-7 Analog Test Instrument. This single circuit card has 32 output pins that can be software controlled to simultaneously provide stimuli and make measurements. Each pin can act as one of six discrete test instruments: function generator, arbitrary waveform generator, digital multimeter, timer/counter, limit detector or digitizer. A single Ai-7 card then can provide the equivalent of 192 separate test instruments (6 functions x 32 output channels). Current planning is to include two Ai-7 ATI cards in the CASS Digital Test Unit, which will provide the capability for 384 simultaneous parallel, realtime tests, and which will permit the offload of IATS to CASS.

The Ai-7 ATI will be introduced into CASS and RTCASS as a kit which is currently being developed by Boeing under a Commercial Operations and Support Savings Initiative (COSSI) program award titled Synthetic Instrumentation for DoD Automatic Test Systems. This title is appropriate for the Ai-7 technology is the first true manifestation of synthetic instruments in any DoD tester. The Synthetic Instrument COSSI Kits are expected to be used in several testers in DoD, not solely CASS.

Improvements to fleet weapon systems continually necessitate technological upgrades to CASS. For example, the new Advanced Technology FLIR (ATFLIR) being introduced into the F/A-18 brings new electro-optics test requirements. CASS is being upgraded to test multi-wavelength LASERs and Charge Coupled Device Focal Plane Arrays. Additionally, traditional responses to testing busses such as the electro-optic 1773 bus, the transformer coupled 1553 bus or the IEEE 488 bus have been to simply add ancillary devices to CASS for testing specific busses. To reduce support costs, the CASS program is developing a Bus Test Instrument which will essentially be one single circuit card that will have the capability to test along all busses, and which can be software upgraded to allow testing of new busses. Both ATFLIR and the new Bus Test capability will be ready for fielding in FY04.

Additionally, to achieve the USMC's goal of replacing their mainframe CASS stations with RTCASS stations, PMA260 plans to investigate downsizing the current High Power and Electro-Optic subsystems to operate with RTCASS.

CASS Modernization

CASS stations, especially the early lots of stations, face problems of obsolescence of station components as well as physical wear and tear. To address the long term health and performance of the CASS stations currently in the fleet, PMA260 is formulating a CASS Modernization Plan that will identify a configuration goal for each CASS station and create a plan to upgrade and modernize each station to reach the goal. Some early stations, for example, may need structural items replaced to account for wear or ageing. Some stations of medium age may need only the addition of later technologies (such as the Synthetic Instrument Kits).

The CASS Modernization Plan is expected to be implemented starting in 2006 and will last several years. Initially about 120 early stations are expected to be brought up to a Block IV configuration which will include both obsolescence and technology improvements.

The Future

The requirements for CASS stations and TPSs in the fleet will continue beyond 2025.

CASS will support F-14, S-3, F/A-18 C/D/E/F, and SH-60 aircraft in the fleet for the next several decades. Discussions have begun with the P-3 program manager's office to investigate shifting P-3 support from the ageing USM449 tester to CASS, and award of the Joint Strike Fighter contract to Lockheed Martin now means that the details of JSF support can be discussed.

PMA260 is committed to keeping CASS technologically current and capable of satisfying all Naval aviation test requirements. To ensure that we make maximum advantage of the leverage available to DoD, PMA260 has joined with the other services to form a working group to identify and develop the testing technologies that will be needed for the DoD's Next Generation tester named NxTest. The technologies made available through the NxTest project will be inserted into CASS as needed, whether through the CASS Modernization Program or via Engineering Changes in response to specific new weapon system testing needs.

As long as there are airplanes in Naval aviation that require off-aircraft avionics support there will be a need for CASS, and PMA260 will ensure that CASS is fully ready to accomplish the mission.

Want more information?

For information on CASS, contact the CASS Officer, CDR Avgi Ioannidis, NAVAIR PMA260D3 at (301) 757-7944 or e-mail ioannidisa@navair.navy.mil

For information on TPSs which are used on CASS, contact Pat Weaver, NAVAIR PMA260D2 at (3001) 757-6831 or e-mail weaverps@navair.navy.mil.

CASS technical information can be obtained from the CASS Fleet Support Team Leader at NADEP North Island. Call (619) 545-3997 or email buhaysg@navair.navy.mil.

Check the PMA260 web site at http://pma260.navy.mil for CASS and CASS TPS information.

Aircraft Material Readiness Entitlement

By CDR Tim Holland
CCG-1 (N4) Material Officer
CNAP (N422R) Aircraft Material Readiness Officer

Readiness is currently at the forefront not only in our forward deployed fleets but also during the inter-deployment training cycle (IDTC). Historically we as maintenance managers and logisticians have always focused our energies toward achieving the best possible readiness, period. In the ever decreasing budgets of the last decade we have also been pushed to determine the readiness levels that are "good enough."

But what is good enough? In the past we always seemed to achieve the desired training readiness levels regardless of our material readiness. We also always seemed to make the required sorties during deployment. Was that the result of material readiness that was on target or did we have too much material readiness? The latter was assumed and the result was a chipping away at the resources the fleets need to sustain material readiness in an effort to find out the right level of resources to achieve the desired training readiness and mission accomplishment. A rather brutish means of determining resource requirements that is not in concert with modern information management principles. Besides, our can-do attitudes would overcome the some of the over-reduction (a.k.a. under-resourcing) and as our own worse enemy, result in desired training levels and mission accomplishment ("doing more with less").

Theoretically we could design a system that uses 100 per cent of the readiness metrics and build it to both measure current and predict future readiness. We have portions of that in NAVICP to predict sparing levels and at OPNAV to predict depot requirements, however that level of detail is not needed when we want to measure our performance in terms of readiness at the fleet levels. Sort of like trying to read a highway mile marker from 40,000 feet; it'll certainly tell you where you are and where you're going, but you've got better means of acquiring that knowledge.

As OOMA is fielded with its top-tiers we may eventually see the differential equation that solves readiness forever, but until then we'll use a simpler method that is accurate enough to meet our needs and doesn't require quantum math. I've digressed a bit from the theme of this paper, but the point is that Naval Aviation is working on a process that better defines the resources required to achieve desired material readiness levels. The problem addressed here is not how much to resource but how to manage the resources available—in other words, CNO bought us resources, where do we put them?

During deployment the AIMD-Supply-Air Wing Triad is continually pushing for the highest possible material readiness, period. In many cases that means attempting to achieve more than the material readiness that the Triad is ***entitled*** to. "But I'm at the tip of the spear; shouldn't I be trying to achieve 100%?!" The answer is both yes and no because you aren't entitled to 100%.

At the extreme end of readiness is 100% full mission capable or FMC. In order to achieve 100% FMC every day (which really means start the day at 100% FMC, not average 100% FMC over the 24 hours) we would have to ensure the sparing levels and scheduled maintenance requirements were both high enough and low enough, respectively to ensure the maintenance effort required to repair the aircraft was never more than a few hours on any given day. Let's also assume we live in the perfect world of no crunches or hard landings. Can Naval Aviation afford the engineering analysis, design and production as well as the spares to achieve this? Never! The cost of ownership is so high we would bankrupt our country with $ 1 billion fly-away costs for each aircraft.

However, to answer that original entitlement question, yes we do want to push for 100% for some systems and at certain times. But not all the time nor with all systems. Through much study and analysis at the Naval War College and by Fleet Commanders we have an established set of readiness goals as published in OPNAVINST 5442.2 series of instructions. The goals tell us the average MC and FMC rates we should be achieving for each aircraft TMS that is either deployed, within 6 months of deployment or is non-deployed either in the early stages of the IDTC or a unit that never deploys.

Those material readiness goals are SCIR goals and are used, along with SCIR and other engineering and logistics data to determine the material resources required to sustain those goals. If we purchased those resources to the perfect levels to achieve material readiness goals, then any unit that exceeds the goals must out of necessity force another unit to have material readiness lower than the goals. Therein lies our IDTC readiness "bathtub" curve. We have historically sustained our deployed forces to higher material readiness levels than the goals we've established and achieved this chest-thumping level at the expense of our non-deployed units. And of course it's not a perfect world so we don't necessarily have resources at perfect levels.

A Sea Change In Material Readiness–Entitlement

A unit is entitled to the resources required to sustain material readiness to MC and FMC goals. How this is interpreted is that in the normal course of aircraft maintenance and logistics parts and other support will be provided per existing policy and guidance. *Nothing new here.* However when one of the logistics elements breaks, a temporary work around must be instituted if we are to sustain readiness. A good example is a NMCS or PMCS requirement that has what we typically term "bad" status. Customer wait time for that item will certainly exceed the standards and in all probability will take months to procure and deliver, well after the requirement is needed.

Where Entitlement is applied to the work around is when executing that work around sustains readiness at a level above goal. As an example, the Type Commander directs the cannibalization of the part with "bad" status from a perfectly good aircraft currently non-deployed in order to sustain deployed readiness above goal. The IDTC bathtub just got deeper.

The Sea Change occurred shortly after the then new COMNAVAIRPAC (VADM Nathman) began asking why his staff was over-resourcing his deployed units and providing "too much readiness." The practical response to that question was to reduce cannibalizations from Type Wings to the deployed Carrier Air Wings overall and use judicial sense to ensure cannibalizations were to sustain goal, not exceed it. At the same time it has forced the staffs to determine real inventory requirements for particular aircraft and mission systems and improved management of scarce resources. The real result has been a moderate improvement in non-deployed readiness during the IDTC while not sacrificing mission accomplishment deployed or during the latter stages of the IDTC. Exceptions certainly still exist and are continually receiving the attention they need, however overall it is better.

Here is a practical demonstration: let us say Brand X is a Hornet squadron with 12 aircraft. The CNO readiness goal says the material status (SCIR) should average about 79% MC during the deployment. That means about 9 plus aircraft MC on average

each day. Now let us say Brand X has a hydraulic drive unit (HDU) failure; none are in supply and AIMD can't fix it plus there are none in the "system." Historically we would put a note in the AMRR and ping on the type commander for a cannibalization from the Strike Fighter Wing for the HDU and it would generally happen. But remember that your entitlement is 9+ MC aircraft each day. You, as the maintainer, would only be entitled to that HDU cannibalization if the cannibalization would sustain your readiness to 9+ MC aircraft. Because you only have the one requirement, you would have to keep the hole; live with one of your 2+ NMC aircraft as NMCS due to the HDU and the Type Commander would then force the "system" to produce the HDU a bit later in the deployment. Obviously if we were talking a near-term fly-off requirement or smaller squadrons then the discussion is different. But taken further, you could possibly see a second NMCS requirement before the cannibalization is authorized.

N41 and N42 at COMNAVAIRPAC and COMNAVAIRLANT monitor potential cannibalizations and work closely with class desks and wings to ensure the cannibalizations are minimized. The key is understanding the desire to sustain both non-deployed and deployed readiness at the appropriate levels to achieve both training and mission accomplishment as a result of the CNO's direction to properly align readiness and logistics.

The Naval Aviation Readiness Integrated Improvement Program (NAVRIIP) is chartered with better defining IDTC requirements and entitlements in the form of type-model-series unique ***standards*** based entirely on achieving sortie based training and readiness goals. NAVRIIP is beyond the scope of this article but expect to see more on it in this forum as well as during both formal and informal meetings of any two or more senior greenshirts.

News from the UAV Class Desk

By CDR Dean Peters
NAVAIRSYSCOM HQ (PMA-263)
UAV Class Desk Officer

On 19 May 2002, Northrop Grumman's Fire Scout prototype successfully completed two flights at NAWCWD China Lake. The flights mark a significant milestone in the development of the Fire Scout system, which began with contract award in March 2000. In this relatively short period of time, the program has accomplished all of the design reviews and component level testing normally seen in manned aircraft programs, significantly raising the standard of engineering rigor for UAV system development. The prototype flights will continue throughout May and June for finalization of flight control software algorithms and envelope expansion. In FY03 the first EMD system is scheduled to fly at China Lake. The EMD system will utilize a dual aircraft mission computer architecture and will employ Tactical Control System (TCS) software in its ground station. Although the Navy's VTUAV Program has been descoped, the Fire Scout system is currently planned to complete EMD followed by an Operational Assessment and basing at NAS Fallon, NV for CONOPS development.

In addition to the VTUAV and TCS CAT II programs, the UAV Class Desk also supports the in-service Pioneer UAV system, small unit developmental systems, and the Broad Area Maritime Surveillance (BAMS) UAV programs.

NADEP North Island F/A-18 Center Barrel Program

By CDR Al Micklewright
NADEP North Island
Production Officer

Naval Air Depot North Island (NADEP NI), located in San Diego, California, is one of three NAVAIR depots. As a major element of the NAVAIR team, NADEP NI conducts depot level maintenance and repair on F/A-18, E-2, C-2, S-3, H-60, and AH-1 aircraft. The aircraft that go through the NAVAIR depots require extensive disassembly and repair and often require development and approval of new repair/maintenance procedures in support of fleet needs.

The F/A-18 Center Barrel Replacement program got its start following a Hornet shipboard mishap in 1987. A Lot 8, A-model, with approximately 160 total flight hours on the aircraft, suffered a "hard landing" which resulted in significant structural damage to the fuselage. At the time, the cost of a new F/A-18 aircraft was approximately $26M. Commercial industry repair options resulted in an estimate of approximately $16M over an expected three-year repair effort period. The engineering and production team at NADEP NI thought that they could do the repair "better, faster, cheaper" and was given the go ahead to design, engineer, and manufacture the tooling and procedures necessary to execute the repair.

Beginning in 1989, the NAVAIR North Island team designed the fixture and procedures to remove and replace the F/A-18 center barrel section, the structural core of the aircraft. Non-recurring design and engineering costs totaled approximately $4M, while the material and labor cost an additional $2M. The entire project was complete in 18 months and the aircraft was subsequently delivered back to the fleet. The Navy had a new and unique repair capability for the F/A-18 Hornet aircraft.

To date nine Hornets have been "brought back to life" in the center barrel fixture including FMS work for the Royal Australian Air Force. Four additional aircraft are currently waiting their turn in the fixture for the repair opportunity that will allow them to fly once again. In addition to returning otherwise strike damaged aircraft to service, the center barrel repair capability has created the opportunity for increased F/A-18 Service Life Management via the Center Barrel Replacement Plus or CBR+ Program.

CBR+ addresses fatigue life issues necessary to keep F/A-18C/D models flying in continued operation until 2020. Current plans call for the CBR+ modification of up to 355 F/A-18C/D aircraft at a cost of approximately $2M each with an eleven month scheduled turn-around-time. The CBR+ modification program is scheduled to run from 2002-2012. Throughput will build up to approximately 45 aircraft per year at multiple fixtures/sites. The total number of aircraft to be reworked under this program is subject to change due to factors such as Service Life Assessment Program (SLAP) results; attrition; actual FLE based on flight hour and cat/trap count accrual rates; and buy rates of the F/A-18E/F and JSF aircraft.

The initial CBR+ modification prototype is complete, the aircraft has completed flight test, and will be returned to fleet service in late

May 2002. The CBR+ modification validation/verification aircraft is currently in process in the fixture with induction of the first production CBR+ modification aircraft scheduled for July 2002.

The CBR+ modification is necessary because up to 80% of fleet F/A-18 aircraft are limited to 78% of their original planned service life due to failures on the certifying fatigue test article. Additionally, increased operational commitments have significantly increased the flight hour and cat/trap count for the Hornet resulting in accelerated fatigue life usage rates. F/A-18C/D models are a required part of the Naval Air inventory until sufficient numbers of F/A-18E/F and JSF aircraft have reached the fleet. The combination of SLAP, Service Life Extension Program (SLEP), and CBR+ modification will provide the opportunity for the Hornet fleet to reach 100% of intended fatigue life and beyond.

The CBR+ modification program is a very complex structural engineering change proposal (ECP) and brings with it a "new and improved" fixture over the original CBR fixture. The program itself has significantly higher work content and replaces many more structural components than the baseline center barrel swap. CBR+ will also incorporate the complete PMI-1 phase maintenance under the Hornet Integrated Maintenance Concept (IMC) meaning that the aircraft will not need to come back to the depot for another eight years.

The NADEP NI CBR+ team has garnered numerous awards for their work including the National Engineers Week (NEW) Engineering Project of the Year and Engineer of the Year award to Mr. Rick Devore, the lead engineer of the team. The Best Manufacturing Practices Center of Excellence (BMPCOE) has also recognized the CBR+ program as an industry "Best Practice".

CBR+ Prototype (RB01) being lowered into the fixture

Aircraft split, new center barrel being installed

CBR+ fixture ready for next aircraft

As part of the NAVAIR Team, the Naval Air Depots are uniquely postured to be able to assess the health of an aging fleet of Naval Aircraft and components. The F/A-18 Center Barrel Replacement Plus program is but one example of Naval Air Depot North Island's commitment to "Service to the Fleet."

NAPRA Det Okinawa, Japan
Fixin' the Forward Deployed Fleet

By LCDR David Maybury
NAPRA Det Okinawa
Officer-In-Charge

Since 11 September 2001 NAPRA Detachment Okinawa (NDO) personnel have repaired 116 Navy and Marine Corps aircraft in direct support of Operations Enduring Freedom and Anaconda. Aircraft inspected and repaired include 37 F/A-18, 21 F-14, 15 E-2C, 13 S-3, 12 EA-6B, 7 H-60, 3 UH-1N, 2 C-2, 2 AV-8B, 1 P-3, 1 CH-53E, 1 CH-46D, and 1 AH-1W. These aircraft have been located at sea aboard 14 different ships and ashore in Afghanistan, Pakistan, and Diego Garcia. The ships supported during Enduring Freedom have been the USS ENTERPRISE, CARL VINSON, THEODORE ROOSEVELT, KITTY HAWK, JOHN C. STENNIS, JOHN F. KENNEDY, PELELIU, BATAAN, ESSEX, BONHOMME RICHARD, GARY, FORD, PORT ROYAL, and VICKSBURG.

Each of these aircraft repairs has their own unique stories but we have our favorites. One is the transportation exercise of getting one of our Planner & Estimators from the USS JOHN C. STENNIS to Kandahar, Afghanistan and back via the USS BATAAN then Pakistan using helos, C-130's, trucks on long dirt roads, and Marine Corps landing craft. Another story was the race to repair the VFA-147 F/A-18 missing the canopy after the pilot landed in Jacobabad, Pakistan following a mid-air refueling incident over Afghanistan. That F/A-18 was ready to fly within four hours of the repair team's arrival. A third story was how the Team arrived in Bahrain to find the carrier's VRC-40 C-2 transportation down for structural repair. The Team found a set of our tools, fixed the aircraft, and then flew it aboard the USS ROOSEVELT just in time to repair numerous VF-102 F-14 Tomcats down for engine mounts. Another story was the gracious Fleet welcome for the Team repairing the war critical VP-9 P-3 in Diego Garcia. The stories go on and on and keep our teams pumped up to keep the birds flying so the war continues unabated.

Many folks talk about Fleet support. NDO lives it.

USS JOHN C. STENNIS VFA-147 aircraft repair team and pilot in Jacobabad, Pakistan after completion of aircraft repairs following in-flight refueling incident. The aircraft had numerous areas of damage including a badly damaged canopy. The aircraft was repaired and ready for flight within fours hours of the arrival of the repair team.

The U.S. Naval Air Pacific Repair Activity (NAPRA) is NAVAIR's forward deployed depot maintenance facility in WESTPAC. NAPRA is tasked with all scheduled and unscheduled depot level repair of aircraft throughout Asia and the Middle East. NAPRA Headquarters is located on the Naval

Air Facility (NAF) Atsugi, Japan near Tokyo. NAF Atsugi is the home-base airfield for Airwing Five off of the USS KITTY HAWK. NAPRA manages In Service Repair (ISR), Integrated Maintenance Concept (IMC), Standard Depot Level Maintenance (SDLM) and Phased Dept Maintenance (PDM) for 27 different type, model, and series of forward deployed aircraft. NAPRA works closely with a prime contractor on NAF Atsugi, Japan Aircraft Manufacturing Company, also known as NIPPI. NAPRA also manages detachments in Okinawa, Singapore, Korea and Australia. As a side note, the U.S. Naval Air Mediterranean Repair Activity (NAMRA) supports aircraft deployed to the European and some Middle Eastern theatres.

NDO is the Fleet's 911 maintenance team of Planner Estimators, Sheet Metal Mechanics, and Machinists. These maintenance teams travel to the customer's locations to perform ISR of damaged aircraft whether at sea or ashore. An outstanding staff located on the balmy southern Japanese island of Okinawa supports these folks that visit and repair the aircraft throughout the world. That support staff includes representatives from Engineering and Technical Publications, Information Management, Supply, Quality Assurance, Safety, Security, Budget Analysis, and the Administration areas. NDO staffs all Arabian Sea and Persian Gulf aircraft carriers with repair teams of three: a Planner Estimator and two Sheet Metal Mechanics. Machinists complement the teams as needed. If this were not enough Fleet support, NDO recently initiated the first overseas H-1 Integrated Maintenance Concept (IMC) scheduled depot level aircraft repair program. Our next upstart Fleet support event starts in August with the Detachment supporting the maiden cruise of the VFA-115 and the F/A-18E aircraft aboard the USS ABRAHAM LINCOLN.

The Detachment's repair of the ship-based aircraft in the Arabian Sea is especially satisfying. These aircraft are vital to the Navy's role in the war on terror. The teams know that without these aircraft, Operations Enduring Freedom and Anaconda would cease to exist. Our teams are performing amazing feats of aircraft repair with a sense of urgency like no other. The Carrier Air Group Maintenance Officer's (CAGMO) from the different ships continue to be impressed with our teams. They have mentioned in numerous Bravo Zulu's that our team's performance has been second to none. A few words from the CAGMO of CVW Nine, LCDR Paul Olson aboard the USS JOHN C. STENNIS:

"NAPRA Det Okinawa should be justifiably proud of the professionalism, teamwork, dedication and sense of purpose demonstrated by your Team. They all went above and beyond the call of duty. Short notice trips to Kandahar, Afghanistan; Jacobabad, Pakistan; USS BATAAN; USS BRIDGE; and USS PORT ROYAL were added in to the mix of repairing my own damaged aircraft. Never was there a moment's hesitation to go to work and return our aircraft to the skies in support of national tasking during Operation ENDURING FREEDOM. The quality of their work was outstanding in all regards. I personally feel three key members of my Air Wing have left the ship."

This is an example of the flavor of BZ's that routinely come to Detachment Okinawa. We have set a standard of excellence for ourselves and we are meeting and exceeding that standard on a daily basis. We have established a proud tradition here at NAPRA Det Okinawa of quality, integrity, and customer satisfaction. We will continue with those principals in mind as we further support the war fighter and their assets.

Artisan Floyd Moody inspects an aircraft onboard USS JOHN F. KENNEDY

Why LEAN at AIMD?

By CDR "CJ" Jaynes
AIMD Lemoore
Officer-In-Charge

Intro

All government organizations, induding the military, can learn from the success of industry. Industries are always looking for ways to improve their operation so they can stay in business and be competitive. My goal was to learn from industry, take its best ideas, and apply them to Aircraft Intermediate Maintenance Detachment (AIMD) Lemoore. We have seen some immediate improvements. The operator cycle time for the afterburner section of the F404 engine was reduced from 1200 minutes to 750 minutes. The Fan module cycle time for tear down was reduced from 82 minutes to 40 minutes and build up from 408 minutes to 305 minutes. Process improvements that are evident in all work centers participating in workshops are a more clearly defined process flow, a safer work environment, improved production efficiency, better control of parts by work center built kits, and an overall improved attitude in the detachment.

As F/A-18 Program Integrator at Northrop Grumman in El Segundo, CA, during 1999-2000, I witnessed the effectiveness of Northrop Grumman's Lean process. I was very impressed by the concept of Lean manufacturing and started to consider a mechanism for converting Lean to a military environment. Although AIMD Lemoore has a nonprofit-making mission, it mirrors industry in its obligation to produce safely at the lowest cost with the most efficient methods. I wanted Lean manufacturing to become a part of AIMD's way of doing business and I wanted to train senior enlisted as facilitators so they could spread Lean throughout the Navy once they left AIMD Lemoore. My first facilitator, AEC(AW) Richard Frohlich, transferred in December 2001 and is enroute to AIMD on board USS ABRAHAM LINCOLN.

What is Lean?

Lean is a process that enables organizations to streamline any method into the most efficient way of doing business. It can be applied to production lines, administrative processes, and supply procedures. Lean allows the workers to be the decision-makers in how their work centers are established and what changes need to take place. It is a constantly-evolving process that allows for immediate changes in established procedures. The only restrictions for changes in procedures are the OPNAVINST 4790.2 series (the Navy maintenance "Bible") and safety regulations. One of its strongest attributes is the time in which it takes to implement change – under Lean, a workshop implements changes on-site within a week, not months or years downrange.

Why Lean at AIMD?

AIMD was a typical intermediate level maintenance facility. The sailors came to "shore" duty, performed work the way they "always did it," and went back to sea duty two to three years later. The urgency to reduce bare firewalls (an engine missing from an aircraft) to zero or cut the overall non-engine backlog in half was not a priority. No matter how many engines they produced, or how many radar parts or hydraulic parts they repaired, there were always more coming in the door. The sailors could never see the

light at the end of the tunnel, and therefore could never imagine reaching zero bare firewalls, so it was never a priority for them. My goal was to change that way of thinking and show them that AIMD needed to make process improvements to meet increasing production requirements. No shore activity is manned to 100%, yet the requirement to maintain aircraft engines and parts at peak efficiency has not diminished. In order to meet the demands of today's operational tempo, AIMD had to find new ways of doing business, without working our sailors around the clock. They could produce more efficiently and reduce the backlog with the Lean tools provided, and fully implement our motto of "Service to the Fleet."

Lean is implemented through utilization of Accelerated Improvement Workshops (AIW's) in a subject area selected by the command. The AIW consists of one team - a leader who functions as facilitator, a co-leader who serves as a facilitator "under instruction," and four to five team members. Team members can come from both inside and outside the subject area. For example, if the subject area of the AIW is RADAR, then RADAR work center personnel would be the subject matter experts since it's their shop and shop procedures undergoing the workshop process. Although having someone from outside the work center on the team is not mandatory, an outsider's participation is crucial nonetheless to ensuring that the workshop maintains an objective perspective. The first stage of the AIW is to analyze how the process currently works. The second stage of the AIW is to focus on minimizing waste in terms of time, manpower, resources, and materials. Other functions of the AIW are specific to the nature of the work center involved.

We've held 20 AIW's since October 2000. We held a separate one-week course for potential facilitators. In order to qualify as a facilitator, the individual must complete the facilitator training course and serve as a team member on at least one AIW, followed by one AIW as co-leader. The final qualifying step is to lead an AIW under the guidance of a Boeing consultant. Of the twenty-one personnel who went through this facilitator training track, ten have earned their certification and the remaining are only one workshop away from qualifying. The second round of training was held in March 2002, with 16 additional personnel from AIMD Lemoore beginning the certification process. We are also opening this class up nationally to personnel from other F/A-18 activities. Facilitators earn not only certification from Boeing, but those from AIMD also earn documentation in their service records, fitness reports, and award citations, as appropriate.

Every Division in AIMD has held at least one AIW, with 400 Division (Power Plants) completing the most workshops. Our most significant accomplishments include reducing turn-around-time within the Detachment; improving the process flow of engines; shortening the time that gear is in the calibration cycle; improving the throughput in the RADAR work center; improving the issue time in remote supply areas; reducing the time to process Naval Aviation Material Discrepancy Reporting Program (NAMDRP) reports; and improving the induction process in the Aviation Material Screening Unit (AMSU).

How to Implement? (funding, personnel, leadership, costs)

I was very familiar with Lean not only from my time at Northrop Grumman, but also through my exposure to Boeing St Louis' program. Executives from both companies and PMA 265 visited AIMD Lemoore shortly after I assumed duties as Officer in Charge in July 2000. I took them on a tour of Power Plants and asked for their assistance in improving our production flow. I knew I needed to implement Lean but did not have the resources or the training to go at it alone.

PMA 265 assisted with the funding for Boeing trainers, facilitators, and advisors to come to AIMD Lemoore. Boeing also provided facilitators for our first several AIW's. As all the AIMD perspective facilitators went through the certification process, the Boeing facilitators became consultants and advisors in the process. We mapped out a workshop schedule twelve months in advance and identified potential facilitators. The plan was flexible enough for us to adjust if one work center or process appeared to need more attention than another. In some cases, we were able to apply Lean concepts and make improvements without conducting a four-day AIW. Now in our second year, we have identified new areas for workshops and are reviewing past workshops to see if we need to re-address some of the processes we originally put in place. Lean is a continuous journey.

The Boeing trainers, facilitators, and advisors are on-site at AIMD once a month. Financial resources needed for the workshops themselves are minimal. We build our own storage shelves and carts, or we go to DRMO for items. The money spent to build parts kits is minimal compared to the savings in man-hours to cut process time in half.

Barriers

Changing the entire mindset and way of doing business is the biggest obstacle. You have to make believers out of people before you have a product to show them. All the preliminary training and workshops help set the tone, but you really don't have their buy-in until they see the results from an actual Accelerated Improvement Workshop (AIW).

My strategy was to go after the low-hanging fruit, with Power Plants as the perfect place to start. We had over 300 modules and 40 engines awaiting maintenance. The production floor was unorganized. The first impression when you walked on to the floor was chaos. The plan was to pick one module work center and grow from there. I needed to take a select group of individuals and make them believers in the process. Once that happened, Lean would be contagious. Other work centers in Power Plants followed suit, and eventually we were able to spread the Lean word throughout the Detachment.

Keeping the members of the organization focused and on the Lean path is a constant process in and of itself. A few weeks after the AIW's are complete, some people tend to fall back to the old way of doing business. The challenge is to keep the organization thinking Lean 365 days a year.

Any organization attempting to implement Lean (or indeed, virtually any new process) has to overcome the mindset of "but we've always done it this way." Making believers out of individuals who have never seen the process in action was the most difficult task. It required a lot of patience and open-mindedness from all hands. They had to have faith that the boss wasn't leading them down the wrong path. From my first month as OIC, I talked about the AIMD "train" – my goals for making AIMD Lemoore work smarter, not harder. I challenged my personnel with the question, "Are you on it or not?" The train was moving down the Lean track and those not on board were eventually going to get run over by it or left by the wayside.

Summary

All AIMD Lemoore Officers and Chiefs are 100% on board the Lean train. The benefits gained from the sailors' enthusiasm and "ownership" of their work centers after an AIW are immeasurable. Process improvement is a way of life now. All hands, down to our most junior airman, know that if they have an idea on how to make a process better, they will be heard. "Service to the Fleet" is our motto and all hands are working

towards improving the overall maintenance health of the F/A-18 aircraft.

NATEC, The Warfighters' Choice for Technical Support

By CDR Andy Villanueva
Naval Air Technical Data and Engineering Services Command (NATEC)
Commanding Officer

Prior to 1998, the Naval Air Engineering Service Unit (NAESU) and the Naval Air Technical Support Facility (NATSF) were two of the Navy's many technical centers. Their mandated closure per BRAC 95 was part of the reduction of "excess capacity that emphasized full spectrum, total life cycle, and total systems responsibilities, while retaining the ability to pursue and sustain essential technological efforts uniquely critical to naval operations." The closure of these facilities resulted in the elimination of surplus capacity while achieving synergy and consolidation of functions. NAESU and NATSF were combined to form the Naval Air Technical Data and Engineering Service Command (NATEC), a technical support activity that became an operational command on October 1, 1998 in a location of major fleet concentration, San Diego, California. I reported aboard NATEC in August 2000 subsequent to a remarkable and rewarding tour aboard the USS CONSTELLATION as the AIMD Officer. After serving as the Executive Officer for 18 months, I relieved CDR Jim Tung as the Commanding Officer on the 25th of April 2002.

So what is NATEC all about? NATEC is a technical command with a ubiquitous significance. It is the world leader in technical data; providing services in the development, preparation, and distribution of aeronautical technical and maintenance management information; and exercising technical guidance of systems of reproduction and distribution for specified engineering design data. NATEC also leads the way in providing field engineering technical advice, assistance and instruction to Naval Aviation activities in the installation, maintenance, repair, and operation of all types of aviation systems and equipment, enabling them to accomplish safe and affordable aircraft readiness. An integral part of the NAVAIR Team, NATEC is a field command reporting directly to RADM Walter B. Massenburg, AIR 3.0, Assistant Commander for Logistics.

To achieve its mission, NATEC employs thirty-one detachments worldwide. The Pacific detachments cover the West Coast, Hawaii, and Japan, while the Atlantic detachments cover the East Coast including Rota, Spain and Sigonella, Italy. Moreover, the command has six detachments that provide engineering technical support to the Navy's reserve components. NATEC satisfies over 6,000 requests for technical assistance from fleet units and other customers every year. Of these, nearly 500 are actual on-site technical assistance to aircraft carrier AIMDs and air wings or other locations, and about 5,500 are accomplished through electronic means.

Manned by close to 700 military and civilian personnel at the NAS North Island headquarters and its globally dispersed detachments, NATEC continues to be the warfighters' number one choice for its engineering technical service (ETS) and technical data requirements. The men and women of NATEC--equipment specialists, engineering technical experts, logistics elements managers, data management specialists, technical publications specialists, programmers, contract experts, information systems specialists, financial analysts and administration personnel--on a daily basis guarantee that customers worldwide are provided the critical technical support they need to accomplish their respective missions.

Besides the Navy and Marine Corps aviation activities, NATEC also provides products and services to the U.S. Army, U.S. Air Force, Foreign Military Sales (FMS) program, Space and Naval Warfare Systems Command (SPAWAR), commercial vendors, and the Federal Aviation Administration (FAA), among others. The command provides services in the printing, distribution, and digitization of over 20,000 technical manuals. NATEC recently completed digitization and posting of 7,000 publications to the web and, with over 42,697 customer accounts, the NATEC web-site is accessed almost 60,000 times per month. It is the official repository for 60 million technical images including 28 million engineering drawings. The ETS services include providing on-site training tailored to the needs of the customer; review and verification of technical publications and data; providing information, assistance, and solutions concerning difficult maintenance and repair problems; and accomplishing mission critical direct support in case of emergent repair requirements. In the face of manning shortfalls or turnover; design, supply, or technical data problems; aging aircraft issues; loss of original-equipment-manufacturer (OEM) support; and inadequate Navy personnel maintenance/repair training or experience, NATEC ETS provides the glue that keeps our aviation weapons platforms and support systems together and operating.

I submit that realizing success in the face of challenges, future and current, is an intrinsic part of any command. NATEC, as an operating budget holder, is faced with declining resources in the future years as every one else. The challenge is defining the strategy that will enable NATEC to remain as the Warfighter's number one choice for technical support in the 21st century in spite of shrinking budgets. Currently, the command is engaged in the transition/update of the remaining paper technical manuals and 60 million aperture cards--under the Joint Engineering Data Management Information and Control System (JEDMICS)--to digitized format. The command is also prototyping a proactive approach to providing technical assistance--Carrier Readiness Team (CRT)--to CV AIMDs; and developing a strategy to create customer awareness of NATEC processes and its value as a technical support source. Furthermore, the team is developing a central customer service unit and integrated response team to expedite problem resolution and enhance the feedback loop.

Finally, I learned quickly that the keys to success include not only accomplishing the mission of NATEC despite its global employment, and meeting the challenges of today and tomorrow, but creating a culture of excellence as well--one that will endure way beyond my tour as Commanding Officer.

DAWIA courses documented in your record?

Have you taken the initiative to get your DAWIA courses documented in the SERVICE SCHOOLS ATTENDED section of your Officer Summary Record (OSR) ?

Do the following:
- Click on http://dacm.secnav.navy.mil
- Go to Register-NOW! For DAU training
- Review your ACQ Training History
- Save ACQ Training History as an attachment for e-mail or print for Fax

Options to submit Completed Courses:
- E-mail to p312odc@persnet.navy.mil
- Fax to (901) 874-2660 DSN 882

Follow-up in two weeks via "BUPERS On-Line" link to confirm OSR documentation.

AEDO Community Manager LCDR Craig Oechsel Departing

By CAPT Tom VandenBerg
NAVAIRSYSCOM HQ (AIR-7.9)
Head AED/AMD Detailer

LCDR Craig Oechsel recently transferred to the PMT-302 Advanced Program Management Course and will report to Space and Naval Warfare Systems Command in San Diego, CA in September 2002. For the past 21 months, Craig superbly led the AEDO Community and positioned us for continued success in the 21st century.

Without question, LCDR Oechsel's extraordinary contributions will ensure long term stability for the AEDO Community. LCDR Oechsel will be sorely missed. We appreciate the incredible support that he ALWAYS provided.

Welcome aboard LCDR Tom Popp who is Craig's replacement. LCDR Popp recently completed his E-2/C-2 Class Desk tour at COMNAVAIRPAC. I encourage you to give him a call.

Tom … it's great to have you on the AED/AMD Detailer and Community Management Team !

Community Manager's Corner

CAPT Tom Vandenberg
LCDR Fred Hepler
LCDR Tom Popp

CONGRATs to our NAVAIR 2001 Military Logistician of the Year:

CAPT Mark H. Stone, 1520

CONGRATs to our new APC members:

LCDR Scott Adley, 1510
LCDR John Bailey, 1510
LCDR Jeffrey Belanger, 1510
LCDR Charles Chan, 1520
LCDR William Dillon, 1510
LCDR Mark Dover, 1520
LCDR David Eccles, 1510
CDR Katherine Erb, 1520
LCDR Miles Ervin, 1510
CDR William Fulton, 1510
LCDR Terrence Hammond, 1520
CDR Andrew Hartigan, 1510
LCDR Eric Holmberg, 1510
LCDR Mark Hunt, 1510
CDR Avgi Ioannidis, 1520
LCDR Brian Jacobs, 1520
CDR Douglas Killey, 1520
LCDR Jeffrey Kuhlman, 1510
LCDR Ralph Lee, 1510
CDR Darryl Long, 1510
CDR David Markert, 1510
CDR Daniel Mathis, 1520
LCDR Joseph Mckee, 1510
LCDR Albert Mousseau, 1510
LCDR Donald Parker, 1510
LCDR Robert Porter, 1510
CDR Vivan Ragusa, 1510
CDR William Reuter, 1510
LCDR Carlos Rippe, 1510
LCDR George Robinson, 1520
LCDR Michael Schachterle, 1510
LCDR Marlon Smith, 1510
LCDR Angelo Smitha, 1510
LCDR Carolynn Snyder, 1520
LCDR Donald Varner, 1510

CONGRATS to the following selected for transfer to 1510:

LCDR Patrick Ferinden, 1325

CONGRATS to the following selected for transfer to 1520:

LT Stephen Brenneman, 1525
LTJG Richard Cordle, 1525
LT Martin Cummins, 1525
LT William Doody, 1525
LT Marc Farnsworth, 1525
LT Tyrone Gorrick, 1525
LT Carl Hink, 6382
LT Darren Jones, 1525
LT Ricardo Mercado, 1525
LT Demichael Morgan, 1525
LT Bruce Osborne, 1525
LT Jeffrey Pizanti, 1525
LTJG John Turner, 1525
LT Jon Voigtlander, 1525
LT Michael Wagner, 1525
LT Matthew Wilcox, 1525

CONGRATS to the following selected for redesignation to 1510:

LCDR David Adams, 1320
LCDR Terry Barrett, 1310
LT Kenneth Bates, 1320
LT Douglas Belvin, 1310
CDR Michael Berens, 1320
LCDR Richard Burr, 1310
LCDR David Davison, 1310
LCDR Michael Durst, 1320
LT Wesley Sanders, 1320
LCDR Daniel Stark, 1320
LCDR Jung Suh, 1320
LCDR Denis Tri, 1320

CONGRATS to the following selected for redesignation to 1520:

LT Humphery Lee, 6330
LT Robert Palmore, 1300

CONGRATS to the following selected for redesignation to 1525:

ENS Anthony Bruno, 1305
LTJG John Harris, 1305
LT Joseph Hidalgo, 1305
ENS Holly Kenney, 1305

NAVAIR SLATE (04Oct01) AWOC Approval:

CO, PMA-259 Air-to-Air Missile Systems
CAPT Scott D. Stewart, 1320

CO, PMA-260 Aviation Support Equip
CAPT Thomas M. VandenBerg, 1500

CO, PMA-280 Tomahawk All-Up-Rnd
CAPT Robert E. Novak, 1500

NAVAIR SLATE (20Dec01) Results:

Commander, DCMA Japan
CDR Brian A. Fazzone, 1510

NAVAIR SLATE (24Apr02) Results:

CO, PMA-233 Naval Mission Planning Sys
CAPT (S) Kenneth V. Smolana, 1320

CO, NADEP Cherry Point
Col John M. Reed, USMC

CO, NADEP North Island
CAPT William T. Trainer, 1510

CO, Naval Weapons Test Squadron Point Mugu
CDR Thomas F. Bourbeau, 1320

CO, Naval Strike Aircraft Test Squadron
LtCol Martin G. Rollinger, USMC

CO, NAPRA Atsugi
CDR Louis M. Borno III, 1510

CO, NAMRA Naples
CDR Timothy J Dunigan, 1510

CO, Test Pilot School
LtCol Steven W. Kihara, USA

PMA-231, PMA-257 and PMA-272 will be announced upon AWOC approval.

NAVAIR SLATE (7Jun02)

Programs/Commands that will be slated:

PMA-290 Maritime Surveillance Aircraft
BUPERS Sea Duty Component
Commander, DCMA Van Nuys

NAVAIR SLATE (Oct02)

Programs/Commands that will be slated:

PMA-201 Conventional Strike Weapons
PMA-265 F/A-18 Program
PMA-234 EA-6 Program
PMA-202 Aircrew Systems
PMA-203 DoD Manufacturing Resource Plan
PMA-251 Aircraft Launch & Recovery Sys
PMA-242 Defense Suppression Systems
PMR-51 Low/Counter Low Observables
CO, NAES Lakehurst
CO, NAMTRAGRU
CO, NADEP Jacksonville
Commander, DCMA Lynn
CO, NAMRA Naples
CO, NATEC
CO, VX-20

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Reference Corner

**Fitness reports. If missing a fitness report from your microfiche send a copy to:

(via regular mail)
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PERS-311
5720 Integrity Drive
Millington, TN 38055-3110
DSN 882-3316/COMM(901)874-3316

(via Certified Mail/FEDEX)
NAVY PERSONNEL COMMAND
PERS-311
Bldg 769 – Wood Hall
5751 Honor Drive
Millington, TN 38055-3110

**Photograph. The official requirement to submit a photograph is within three months after acceptance of each promotion. At minimum you should be in your current paygrade. Photographs can be submitted on NAVPERS 1070/10 to:
NAVY PERSONNEL COMMAND
PERS-313C
5720 Integrity Dr.
Millington, TN 38055-3130

**Microfiche. Order your microfiche online at BUPERS Access It will be mailed to your command - (to your command's official address) No fax or signature required! Log on to BUPERS Access, click Programs and then Microfiche Req.

BUPERS Access should be your primary source for obtaining your Microfiche. Only if you cannot access BUPERS Access should you fax or mail in the Microfiche Order form and mail or fax it to: (Don't forget to sign the form!)

NAVY PERSONNEL COMMAND
PERS-313C
5720 Integrity Dr.
Millington, TN 38055-3130
DSN 882-3415/3596
COMM(901)874-3415/3596
FAX 882-2664 COMM (901) 874-2664

**Performance Summary Record (PSR)
Officer Summary Record (OSR)
Officer Data Card (ODC)

Go to the BUPERS Home Page
www.persnet.navy.mil/index.html
and click on "BUPERS On-Line" link;
log in using your SSN and password,
click Performance Summary Record,
click View Now!

**Have you updated your contact information on the AMDO web site lately? If not, please click below, complete and submit the form. It will only take a couple of minutes and will greatly assist your Detailer! Thank you for your support!

http://www.persnet.navy.mil/pers446/Contact_info.htm

** Download the latest AMDO E-Directory (updated monthly!) at:
http://www.persnet.navy.mil/pers446/amdo_webpage.htm

User Name "aed-p446"
Password "engineering"

**Medals. If missing an award send a copy of signed citation to Navy Department Board of Decorations and Medals (print or type your SSN in upper right corner).

(SECNAV Awards Board & Unit Awards)
Navy Department
Board of Decorations and Medals
Attn: N09B13
2000 Navy Pentagon
Washington, DC 20350-2000
COMM (202) 685-1770 DSN 325

(CNO Awards Board & Personal Awards)
Chief of Naval Operations
Board of Decorations and Medals
Attn: N09B13
2000 Navy Pentagon
Washington, DC 20350-2000
COMM (202) 433-4992 DSN 288

**Letters to the Selection Board:

President, FY0X (Grade) (Competitive Category) Promotion Selection Board
Department of the Navy
NAVY PERSONNEL COMMAND
PERS 801A
5720 Integrity Drive
Millington, TN 38055-8010
FAX 882-2746 COMM(901) 874-2746

**Educational Achievements:

NAVY PERSONNEL COMMAND
PERS 312G
5720 Integrity Drive
Millington, TN 38055-3120
FAX 882-2660 COMM(901) 874-2660

Web Sites:

AEDO/AMDO info:
http://www.persnet.navy.mil/pers446/p446_webpage.htm

AMDO info:
http://www.amdo.org

DAWIA and APC info:
http://dacm.secnav.navy.mil

Community Manager's Quotes:

Over the years, Defense Secretary Donald Rumsfeld has collected more than 150 observations about what matters in government, business and life. Here are just a few:

"Visit with your predecessors from previous administrations. They know the ropes and can help you see around some corners. Try to make original mistakes than needlessly repeating theirs."

"Learn to say, I don't know. If used when appropriate, it will be often."

"If you try to please everybody, somebody's not going to like it."

"It is easier to get into something than to get out of it."

"Don't think of yourself as indispensable or infallible. As Charles de Gaulle said, the cemeteries of the world are full of indispensable men."

- SECDEF Donald Rumsfeld

The AED/AMD Newsletter, Our Aerospace, is published by the Career Management Office of the Aerospace Engineering Duty (Aerospace Engineering and Aerospace Maintenance) communities. The purpose of this newsletter is to provide information of general interest to officers of both the AED and AMD communities and to serve as a forum for the publication of technical papers and articles. Contributions and comments are solicited and should be sent to:

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