From the President
By: LCDR Brian D. Swan

Early on in this endeavor, one cynic said to me “I applaud your efforts, but you will never make it past the second issue of this journal. The physiology community has a long history of not responding to calls for articles”. Well, to that cynic I say – we made it to number 3! However – it was close this time. You will note that the issue IS somewhat slimmer than in the past, and if you took out all of the articles that were written by the Editor, LT Prevost, it would be thinner yet! This is not meant to slight those of you who have contributed – some in every issue. To you, I say thank you for your interest and support. But these folks are a mere handful of the 70 registered members! As I have said from the beginning, this is YOUR Society. The Board of Governors is in place to provide structure and keep the “business end” of the society running, but it is you, the members that will make or break the Society.

That being said as preface, the time has come to prepare a slate of nominees for the elections that will be held in February, at our Annual Meeting (probable date is Monday, 5 February, following the close of that day’s FAILSAFE session). By definition of the By-laws, I am the Chair of the Nominations Committee. I am required to have 4 non-Board of Governors members to serve on that committee with me. CAPT Armstrong has volunteered his services; I need three more individuals. If you are interested, I would ask you to please contact me as soon as possible.

Likewise, if you are interested in holding an office in the Society, please let me know. (DSN 922-4705 or (850) 452-4705; e-mail bdswan@nomi.med.navy.mil).

After the flurry of activity during the first two quarters (by-laws, logos, etc), there is not a great amount of news to report in this issue. We are in the process of contacting various embroidery shops in town to find the best deal on shirts/hats with logos. We will have samples of shirts at FAILSAFE, and will be taking orders at that time. We may also have a small number of items available for “on-the-spot” sales (this is still being discussed by the Board of Governors at the time of this writing). LT Artino and I are working with Hank Caruso on the Society artwork. We hope to have the finished artwork from Mr.
Caruso by FAILSAFE as well, but I do not want to impede the creative process for the sake of that deadline.

And that’s about all the news I have at this time. Although still in the process of recovering from 7 days at Walt Disney World, I find myself at the brink of the “Holiday Season”. The Winter Solstice, and associated “modern” holidays, has been a pivotal time in many of the world’s theological/philosophical frameworks. A time of transition from death to birth, from past to future, from conclusion to resolution. It is also a time of celebration and the coming together of families. However you choose to observe this time of year, I wish you health and happiness at the real start of the New Millennium, and I look forward to seeing all of you in Jacksonville in February.

SUSNAP Members,

AMSO isms

By: LT Matt “Ratboy” Hebert

In the last edition of the SUSNAP Journal I addressed the first facet to what I believe comprises a “successful” AMSO program. Communication. Many of you probably thought to yourself after reading that column “who is this guy and what planet did he have an AMSO job on? These aren’t what I’ve experienced and I certainly am not listening to his advice!” Keep in mind that these are my own personal opinions and not made to be the template by which all AMSOs are pressed. I have found, as you have or will soon, that a successful AMSO program is not measured by that which you have done, but rather, by the safety record that your squadrons, Group, or Wing carries. We measure our success on events that DIDN’T HAPPEN! What? How?

In this edition of SUSNAP, I would like to offer up another element of a successful AMSO program. Remember these “AMSOisms” are purely guidance based on experiences I’ve had. First, one reflection on the last issue I’d like to repeat again (and I’ll probably do it again next issue too): A successful AMSO program comes to those who DON’T STAND STILL. There are two types of AMSOs; the quick and the dead. You must get into the squadron spaces and advertise your billet and what you can do for Naval Aviation and consequently each individual pilot or aircrew. You must be an advocate for the FAILSAFE program and believe in your abilities. If you are the shy-type, get over it. Your reputation is built on your ability to function solo AND produce results. OK, I digress. Sorry.

I have been told by many-a-wise AMSO(s) (who shall remain nameless, although you know who you are!) that probably the MOST important element to doing the job of a Naval Aerospace Physiologist (insert AMSO here) is INTEGRITY. We must get back to the core of who we are and what we are actually called upon to do in the Navy. You are not just an AMSO, or a Department Head at an ASTC or a body filling a job anywhere else. You are, after all, a Naval Officer, first and foremost...not just an Aerospace Physiologist (just as CAPTs Schuyler, Armstrong or Musashe).

According Webster's New World dictionary, integrity is "a quality or state of being complete, in an unbroken condition based on wholeness or a quality or state of being unimpaired, of perfect condition or soundness." Furthermore, it could be "a quality or state of being of sound moral principle, honesty and sincerity." It means the same as "Doing what needs to be done, whenever it needs to be done, when nobody is looking". Definition by RATBOY. We need to take a hard look at what our jobs require of us, what our aircrew expect us to do for them and apply this important principle as an overlay to our day to day operations...reflecting on what it means to be a NAVAL OFFICER.

Our "customers" evaluate our "performance" based on their own standards and experiences. These perceptions of our "performance" are reality to them, correct or not. Our perception of our own accomplishments don't mean SQUAT if the people we serve think we are not servicing them. It is up to each and every one of us to align our performance and their perception as one common element. So, RATBOY, big deal...WHAT DOES IT ALL MEAN? It means ultimately, those who fail to master the INTEGRITY juggling act will probably have short Naval careers. Promises can only be made and broken once, after that your reputation will be in serious jeopardy and more often than not will enter a graveyard spiral from which there is little chance of recovery.

As an example to the aforementioned, how many of us meet the MINIMUMs for flight time each FY? How about MINS per every 6 months? According to OPNAVINST 3710.7R Naval Aerospace Physiologists (applies only to those on DIFOPS orders) are required to meet semi-annual flight MINS of 24 hrs. Who checks on us to ensure we are in compliance? Audits to our log books don't usually occur (some exceptions, but few), but month after month we get our flight pay and it is assumed that we have met those minimums. You are
responsible for maintaining records and getting the requisite flight time. **YOU!** For those who are NITELAB Custodians, do you have the required NVG flight hours? Do you fly only one type of mission to get your flight time, or do you really try to understand the "total package" of missions your aircrew fly and fly as many as you can? These are only a few examples, and the list could continue for probably several pages.

Let's wrap up this banter: "Integrity is what we do, what we say, and what we say we do" - (Don Galer). Anyway, think about what you do day to day, everyday. Think about the services you provide and then think about the promises you make and the perception of your performance by those around you. Just some food for thought to start or end your day. Next edition: LEADERSHIP. All for now...RATBOY out.

**Dual Designator Program**

*By: LT Mike Prevost*

A recent message released by BUMED announced a call for applications for a Naval Aviator/Flight Surgeon, Aerospace Physiologist, Aerospace Experimental Psychologist Dual Designator program. Application packages are to be submitted via your chain of command and should include copies of all certificates from formal courses attended, all flight evaluation reports, transcripts and a statement that includes goals and reasons for applying for dual designator status.

In a recent MILPHYS posting CAPT Matthews indicates that the following 1836 billets are being coded for DD are:

- MAWTS (Yuma)
- NSWC (Fallon)
- TW-2/CNATRA
- NAWCWD (China Lake)
- NAMRL

Selects for the DD program will be PRIMARY candidates for these positions. For more information on the dual designator program check out the BUMED message (BUMED WASHINGTON DC//02// R 231606Z JUN 00).

**AMSOs Pitch in to Revitalize SEMPERFIT**

*By: LT Mike Prevost*

This past year the Naval Health Research Center in San Diego, CA was tasked by Headquarters Marine Corps to revitalize the Semper Fit educational materials. The Semper Fit program consists of 9 subject areas. These areas include tobacco use and cessation, suicide awareness, HIV and STD prevention, stress management, physical fitness, injury prevention, hypertension education control, alcohol/substance abuse prevention and control, and nutrition education. The goal of the program is to develop Power Point briefs, associated lesson topic guide, resource manuals, handouts and perhaps videos to cover each of the 9 areas.

NHRC contacted LT Rich Folga and myself to work two of the subject areas. LT Rich Folga has developed an injury prevention brief and associated LTG. The brief emphasizes the types of activities that are causing injuries among our Marines. LT Rich Folga utilized injury data and information from the MAG and base Ground Safety Managers to develop the brief. The brief has been well received by NHRC. It is currently under review by a panel of experts. Following the review and any necessary revisions, it will be distributed to every Marine Corps unit worldwide.

I am working the physical fitness subject area. I have created an instructor resource manual/textbook (over 260 pages of information) that covers the basics of exercise physiology and nutrition and also contains lots of Marine Corps specific issues like designing and implementing effective combat oriented fitness programs, the goals of the Marine Corps Fitness Program, load bearing marches, fitness in the field and while embarked and more. The package includes a 100 slide Power Point brief in modular format. It include hyperlinks that allow you to navigate through the brief and cover areas that you are interested in like running programs, aerobic conditioning, swimming, combat fitness, strength training, flexibility, and exercise physiology. Also included is a comprehensive lesson topic guide. The physical fitness section is also under review and when completed will be distributed to all Marine Corps units worldwide. I have also submitted the instructor resource manual/textbook to the Marine Corps Institute (MCI) and it is being developed into a correspondence course for the Marine Corps. MCI estimates that over 5,000 Marines will use it annually.
Training Opportunities:
By: LT Mike Prevost

Norwegian Winter Survival Course

The Norwegian Air Force (NOAF) Inspectorate of Flying has organized two winter survival classes for this winter season. NOAF has invited NATO personnel to attend at unit’s expense. Former USAF students have praised course as an outstanding experience that is a must for personnel operating in European theater of operations. It definitely will benefit aircrews and survival instructors immensely.

Some facts about course are as follows:

A. Course fee: course fee is 6000 Norwegian Kroner (approx. US$ 650) per student. This will cover organization and administrative expenses plus transportation. Accommodations in Oslo and Spaatind are not included in course fee.

B. Who may attend: attendees preference is for fighter pilots/aircrew members, personnel involved in fighter operations who have to operate in areas of winter climate, and/or other aircrew life support/survival instructors who require winter survival experience. The NOAF restricts course to NCO and officers only.

C. Equipment requirements: NOAF host will issue each student Norwegian infantry gear. Additionally, the host encourages student to bring own survival equipment for his/her specific aircraft survival kit. This will indicate how effective survival equipment his/her unit will be in extremely cold climate.

D. Class periods: NOAF personnel will cover course in two classes/sessions (maximum 50 students per classes):

(1) class a: 19 - 26 Jan 01
(2) class b: 26 Jan - 02 Feb 01

E. Training location: NOAF will conduct course in the Spaatind area, Approximately 180-km northwest of Oslo.

For questions concerning course operations, (after contacting HQ USAFE Life Support first) contact NOAF Capt Eskil AMDAL, NOAF Directorate of Flying, tele: 0047-69237757, fax 0047-69237586, email: lti@lti.mil.no.

3. Students interested in attending should request a nomination form From USAFE life support NLT 28 Nov 00. HQ USAFE POC is SMSGT Goolsby, DOTL, DSN 480-5150, email: Usafe.life@ramstein.af.mil.

LIFE SCIENCES EQUIPMENT INVESTIGATION COURSE (LSEI)
By: LT Meredith Yeager

The Life Sciences Equipment Course is taught at Randolph Air Force Base, San Antonio, Texas. The course is designed to teach life support equipment investigative techniques for ALSS personnel. The course length is four days, and includes both classroom and laboratory instruction. The days are long, staying until 1800 during the lab, and classes cover the following topics: flying safety program, mishap response planning, personal investigator kit, crash survival, and accident investigation. In the laboratory students participate in mishap scenarios which provide theoretical and practical instruction in life sciences and crash investigation.

The Life Sciences Equipment Laboratory is located at Brooks Air Force Base, San Antonio, Texas. The laboratory was established in 1983 and its function was to investigate problems associated with life support equipment and resolve issues related to Air Force mishaps. More than 15 years later it’s mission support continues to expand, to meet taskings from the Department of Defense, the Armed Services, and those of allied foreign nations. The laboratory conducts investigations, studies, and instructional programs related to a very broad range of military systems, which are defined as life sciences equipment. Currently, the lab occupies more than 20,000 square feet and its function includes: assisting aircraft mishap investigation boards; technical training of U.S. Military Federal and allied foreign national personnel in life sciences equipment investigating techniques; and acts as the DOD focal point for all life sciences equipment artifact studies, as part of this Nation’s endeavor to resolve the status of personnel who still remain unaccounted for from this country’s periods of military conflict. During the lab instruction you are given a tour of the facility and some free time to look around at the hundreds of reference exhibits, as diverse as World War II infantry equipment, U.S. Navy flight ensembles from the Korean conflict, and a complete F-11 aircraft crew escape module.

I thoroughly enjoyed this class and would highly recommend it to other AMSO’s and AMSC’s. It teaches you about what to look for to determine what the pilot or aircrew member was doing prior to impact and identifies the three most important pieces of flight
equipment at the mishap site. With the focus of the course on life support equipment investigation techniques it opens your eyes to exactly how difficult it would be to answer the board president’s questions with only part of a banged up ejection seat and seat pad or a helmet and a glove.

The point of contact for the course is MSgt (select) Alex Moorehouse or MSgt Alan Reams at DSN 487-2003. You can also visit the web page: aetc.randolph.af.mil/trss/ALSOC/alsochrome

The course is funded by FAILSAFE and it is very difficult to obtain a quota with only 5 classes per year. The remaining schedule for fiscal year 2001 is as follows:

2001B 09 Jan-12 Jan
2001C 13 Feb-16 Feb
2001D 26 Jun-29 Jun
2001E 31 Aug-3 Sep

**Aerospace Physiology**

**The Most Common NVG Focusing Error**

By: LT Mike Prevost

The most common NVG focusing error among aviators and aircrew is dialing in too much negative diopter. This can create problems like NVG eyestrain and poor image quality. In order to understand why this is a problem we need to first discuss the concepts of diopter, accommodation, optical infinity and also myopia and hyperopia.

The way your eye works is that it sees virtually parallel light rays that reflect off of objects and enter your eyeball through the pupil. These parallel light rays are bent (focused) by the cornea and then the lens (see figure 1). The bending (or focusing) of the light is measured in diopters. If you imagine a lens bending light rays so that they converge, the distance from the lens that the light rays converge is referred to as the focal distance. Diopter is determined by taking the inverse of the focal distance in meters. The formula is simply: Diopter = 1/focal distance in meters. In a perfect eye the focal distance is ideal so that a clear image is presented on the retina. In a myopic eye (nearsightedness) the image is presented too far in front of the retina so that the image is blurry (see figure 2). The eye has too much focusing power (too much diopter). We correct for myopia by providing a convex lens that imparts a negative diopter correction. The amount of negative diopter correction exactly counterbalances the excess diopter in the myopic eye. This results in a clear picture on the retina. The situation is the opposite in the hyperopic eye. The image is focused behind the retina (see figure 3). We correct for a hyperopic eye with a concave lens that adds focusing power (+ diopter) to bring the focal point back to the appropriate distance in front of the retina.

In a normal (not hyperopic or myopic) relaxed eye, when we look at objects that are 20 feet away or farther, the focal point is in the ideal location to present a clear image to the retina. This is why things that are farther than 20 feet are in focus. 20 feet is the optical infinity point for the eye. However, as we start to move the objects closer to our eye (less than 20 feet), the focal distance becomes greater and the picture becomes blurry. When this happens we automatically contract small muscles in the eye (ciliary muscles) that increase the thickness of the lens (increasing it’s focusing power or diopter) to bring the focal distance back to optimal. This is called accommodation.

Night vision goggles (NVGs) have a diopter focusing ring that can dial in both negative and positive diopter corrections. The proper focusing technique is to turn the diopter ring counterclockwise until the image is blurry and then slowly turn it clockwise until the image is clear. Turning it counterclockwise increases the diopter and turning it clockwise decreases the diopter (continuing to turn it clockwise moves the dial through 0 diopter and then into – diopter settings). Therefore when you turn the diopter ring counterclockwise the image is...
focused too far in front of the retina. As you slowly turn it clockwise the focal distance travels towards the retina (increasing focal distance) until it reaches the optimal focal distance. As soon as that optimal focal distance is reached, the image will clear up. This is the ideal diopter setting. If the aircrewman or aviator continues to turn the diopter ring in the clockwise direction beyond the point where the image just clears up, he is dialing in too much negative diopter (or too little positive diopter). You would think that the image would get blurry again but this is not the case. What happens is that the eye contracts the ciliary muscles to increase the thickness of the lens (and move the focal point back to the optimal distance) and clears up the picture again. The problem with this scenario is that the ciliary muscles are subject to fatigue. After 5-10 minutes, the ciliary muscles will begin to fatigue, the aviator or aircrewman will begin to develop an eyestrain headache and the picture will slowly become blurry as the ciliary muscles relax due to fatigue. This will result in a degraded image. This is a common error when aircrews do not focus NVGs properly or do not use an eye lane for focusing.

I was reminded of this issue recently when I was approached by two female aviators who were students at the Huey FRS. They both complained of NVG related headaches. When I inquired about their use of the eye lane for NVG focusing they replied that they could not use the eye lane because it was set up in the male head! I helped them set up an eye lane in an area that would be accessible and the headache problems went away. It is difficult to dial in a correct diopter setting without an appropriate focusing target.
own fault.

football, soccer and hockey near
will have pro baseball, basketball,
roads. If you are into sports you
world training on Camp Pendleton
cyclists and triathletes in the
Pendleton simply cannot be beat
Headquarters building and Camp
hiking/running/mountain biking
There are miles of
away from some great surf.
are about 3 hours from some
trails than you can imagine. You
more hiking and mountain biking
National Park land. There are
1/3 of San Diego County is
best location you can get. Almost
you like the beach and outdoor
activities then this is probably the
best location you can get. Almost
1/3 of San Diego County is
National Park land. There are
more hiking and mountain biking
trails than you can imagine. You
are about 3 hours from some
decent skiing and just minutes
away from some great surf.

There are miles of
hiking/running/mountain biking
trails directly behind the MAG
Headquarters building and Camp
Pendleton simply cannot be beat
for great road cycling routes. You
will find most of the best pro
cyclists and triathletes in the
world training on Camp Pendleton
roads. If you are into sports you
will have pro baseball, basketball,
football, soccer and hockey near
by. If you are bored here it’s your
own fault.

TAD Opportunities: You will
probably go TAD more than any
other MAG staff member. The
command is very supportive (after
all, the Navy is paying most of the
time!). There are lots of training
$ available for Navy Medical
Department officers serving with
the Marines.

Gouge: Military Good Deals While Visiting “The Mouse”

By: LCDR Brian Swan

As mentioned in my opening
letter, my wife and I just returned
from a 6 1/2 day assault on Walt
Disney World. Anyone who has
been there doesn’t need me to
tell them that a WDW vacation,
per diem, is probably one of the
more expensive vacations that
you can take. For example:
onsite hotels (in my opinion the
only way to go) start at $98 per
night (for a glorified “Motel-6”
type room) and escalate, rapidly,
to over $400; admission to the
parks is $50 per day; a meal for 2 at
virtually any “sit down” restaurant
starts at $40 and goes higher
than you can probably (or at least
would want to) imagine; “fast
food” for 2 averages $20 – and I
don’t even want to talk about
souvenirs...

Well, there are a few good deals
out there that can take at least
some of the sting off of the price
tag. First is the Shades of Green
Resort. Like the Hale Koa in
Hawaii, this is a resort exclusively
for the use of Military and Federal
Employees (including Retirees).
The room rates are on a sliding
scale, depending on rank. For a
LCDR (in the second highest
category) it was $95 per night.
When the resort was still owned
and run by Disney, the same
rooms started at $250 per night.
This got us one of the largest
rooms available in ANY resort in
WDW (save some of the $600
rooms at the Grand Floridian),
and all of the benefits of staying
at a WDW resort (free
transportation system, early
openings, etc). The resort
restaurant features menu service
or an extensive buffet every
evening. Two can eat (a lot)
there for under $40 for dinner and
about $15 for breakfast. Also, the
resort is directly adjacent to two
top-notch PGA 18 Hole golf
courses, and has its own pro
shop. As with any deluxe resort,
concierge service, room service,
maid service, pools, tennis courts,
Jacuzzi, etc. are all included.

Sounds too good to be true? Is
there a down side? Only one: you
have to book WAY in advance. I
called in July for a week in
November (the slowest month of
the year to go to WDW), and all I
could get was the waiting list. In
October they finally called and
said that I got the room. If you
want to be sure of a specific date,
you need to call at least 6 months
in advance, and if it’s during peak
season (although I have no idea
what anyone would want to go
then) – summer, Easter
week/Spring Break and
Christmas week – consider a full
year in advance. If you just can’t
get in, the Shades of Green staff
can frequently negotiate a
substantial discount at one of the
Disney-owned resorts.

The other really good deal is
specifically for Florida residents.
It’s called the “Florida Resident
Seasonal Pass”. This is actually
an annual pass with three
“blackout” periods: three months
in the summer, two weeks at
Christmas, and Easter Week.
This pass gives you unlimited
admission to the four major parks,
as well as some good room
discounts at the Disney Resorts
(if you can’t get into Shades of
Green). The cost (through
MWR): $160. Simple math should
tell you that this is equal to

Physiologist. You will also go
through the Aviation Safety
Officer course at the Naval
Postgraduate School in Monterey,
CA.

Flight Time Availability:
(Location/Type AC) There are 8
active duty and 1 reserve
squadron at Camp Pendleton.
Aircraft include the AH-1W, UH-
1N and CH-46E. Back seat time
is unlimited. You can easily get a
flight just about any day you want
it. Stick time is a bit trickier but if
you play your cards right there is
plenty of that available as well.

There are lots of good deals available locally. Lunch on the
beach in Santa Barbara is my
favorite (Well, actually it is a toss
up between that and a 50 cal gun
shoot.). You also have access to
the UH-1N and AH-1W
simulators.

Locale: (Information for the
area); Camp Pendleton is located
on the coast about 30 minutes
north of San Diego and 60
Minutes south of Los Angeles.
The base occupies about 15
miles of coast front property. If
you like the beach and outdoor
activities then this is probably the
best location you can get. Almost
1/3 of San Diego County is
National Park land. There are
more hiking and mountain biking
trails than you can imagine. You
are about 3 hours from some
decent skiing and just minutes
away from some great surf.

There are miles of
hiking/running/mountain biking
trails directly behind the MAG
Headquarters building and Camp
Pendleton simply cannot be beat
for great road cycling routes. You
will find most of the best pro
cyclists and triathletes in the
world training on Camp Pendleton
roads. If you are into sports you
will have pro baseball, basketball,
football, soccer and hockey near
by. If you are bored here it’s your
own fault.
sue more than 3 days admission. Kind of a buy 3 get 250 free! My original plans were to spend only 4 or 5 days at the parks, but with this pass, we were able to spread things out over 7 days.

All things considered, these two "good deals" saved us in the range of $800; not too bad, in my opinion. If you want more info on any aspect of a WDW vacation, feel free to call me; I think I pretty well up on the current gouge.

SME Corner
By: CDR Donnie "Spike" Plombon Advanced Training Technologies SME

I reported to the Naval Education and Training Professional Development and Technology Center (NETPDTC) (an acronym to rival FAILSAFE) at Saufley Field, Pensacola, FL on December 15, 1999 for a Medical Service Corps Director's Training Opportunity (fellowship). NETPDTC provides Computer Based Training (CBT) products, Automated Electronic Classroom (AEC) hardware and courseware and Web Based Training (WBT) for both classroom and afloat training and is one of the leading training technology solution providers for the NADEDTRACOM and the Navy. Since arrival, I have been assigned to the Instructional Technology Department, Interactive Courseware (ICW) Branch. The goal of the training opportunity was to give me a comprehensive learning experience including training analysis procedures, media analysis, ICW design/development, web-based technology applications and ICW contracting. As CAPT Bob Matthews put it, "We need somebody to learn the language of advanced training technologies, both the design and development of ICW and presentation methodologies."

After I told him how impressed I was at his ability to articulate this need so eloquently (I was serious), he told me that I was the only applicant for the fellowship or I probably wouldn't even be at NETPDTC (I think he was serious too). CAPT Matthews then ensured that I "volunteered for" and was subsequently designated as the Aviation Survival Training Program Subject Matter Expert (SME) for Advanced Training Technologies by Chief, BUMED on January 27, 2000. At the time of SME designation, although surrounded by plenty of "card carrying smart guys" at NETPDTC, I was still a training technologies knucklehead. After 11 months of working with the NETPDTC Instructional Technology staff, attending training technology conferences and making training technology reading a top priority, I feel better prepared to handle the SME role (although still a knucklehead).

Before I tell you a little bit about what I have done and learned, let me tell you what I have not been exposed to and what I am not. NETPDTC does not do simulation and simulators. The simulator/simulation SME is CAPT Ryan Eichner (AFRL). CDR Rick Mason (NAWC TSD) is another POC for simulation issues. This training opportunity exposed me to a broad range of issues/processes in the training technology field, but it did not certify me as an instructional designer, instructional developer, instructional system specialist, computer programmer, authoring system specialist, writer, editor or QA specialist. I did learn HTML through self-study though.

My NETPDTC "education" has been focused in the areas of ICW design, development and contracting. Specifically, I have completed the Navy Interactive Courseware Novice Authoring Course (NICNAC) and the Interactive Multimedia Instruction (IMI) for Managers Course. Remember the PADDIE acronym? Plan, analyze, design, develop, implement and evaluate. I didn't think so. As part of the NICNAC, I have designed and developed a web-based, PC-downloadable knowledge assessment tool known as PHYS QUIZ 2000. It will eventually (hopefully in the year 2000) be placed on the NOMI server for downloading to ASTC (and other) PC's around the world. PHYS QUIZ 2000 was designed for ASTC student (or instructor) use and will test individual knowledge in nine areas of aviation survival training. Remediation will be immediate for each question answered and a score may be printed out for each subject area completed. PHYS QUIZ has been in the hands of a computer programmer since mid June for formatting of the Computer Managed Instruction (CMI) shell. As I stated above, I am not a computer programmer. The knowledge assessment database may come to be known as PHYS QUIZ 2001.

The ICW contracting process has been solidly driven home in my everyday work with NETPDTC Contracting Officer Representatives (COR's) and Technical Assistants (TA's). I have participated in numerous ICW Technical Proposal Reviews (TPR's) and have a good understanding of the ICW design/development and contracting process including who, what, when, where and how issues of the process. My curriculum and media analysis education has been via attendance at VTC curriculum analysis project plan meetings for EM and IC "A" schools in Great Lakes, IL. These meetings,
although incredibly important, can also be incredibly tough to stay awake at when you are not a major stakeholder.

I have been exposed to intermediate and advanced AEC hardware, software and instructor training issues. NETPDTC has an advanced AEC “Beta Lab” used for the testing of new hardware, software and instructor training curriculums. The Beta Lab is right next to my office. The negative side has been quite a few electrical (or maybe brainpower) overloads in the lab leading to unanticipated power outages. The brainpower overloads never seem to occur when I am in the lab.

I have been exposed to numerous Distance Learning (Distance Education, Distributed Learning) initiatives during the last 11 months, including the NETg web-based, PC-downloadable Information Technology (IT) courses that are available to military personnel free of charge. The NETg IT courses should really be taken advantage of by any military personnel with an IT interest. CNET provides this commercially available CBT for software and professional development skills right from your desktop. NETg courses range in scope from beginning application training such as MSWord, PowerPoint, Access and Excel to Local Area Network (LAN)/Wide Area Network (WAN) administration and programming/development courses in C, C++, JAVA and Visual Basic to name a few. These courses map to numerous industry certification requirements such as Microsoft Software Engineer (MCSE), database administrator, A+ certification and a host of others.

My favorite reading material has become Online Learning magazine and two electronic training technology newsletters: Online Learning News and Training Technology Digest. I post the electronic newsletters on the JISTTT (formerly TECWEB) MILPHYS Bulletin Board as I receive them for perusal by any interested parties. The BUMED Advanced Training Technologies SME site provides many excellent links including:

- CNO, Director of Naval Training, Training Technology Information Center
- Military Training Technology Online
- NETPDTC Distributed Learning Technology Demonstration Site
- CNET Training Technologies Site Index
- Advanced Distributed Learning Network (ADL Net)
- Interservice/Industry Training, Simulation and Education Conference (I/ITSEC)
- Online Learning Magazine
- Distance Learning Resource Network
- Designing WBT
- WBT Information Center
- The Future of Online Learning
- Distance Education at a Glance

I try to keep these sites current and relevant. If you have an interest in advanced training technologies, check out these sites. If you come across or get a hot tip on a link that you think should be listed on the Advanced Training Technologies SME site, please forward it to me. I hope I taught you a couple of new acronyms.

---

**New Water Survival Training Facility in Pensacola**

What was becoming too old, increasingly subject to breakdowns, and too costly. If you guessed Deion Sanders you’re on the wrong page. The correct answer is Bldg. 671, Naval Operational Medicine Institute’s (NOMI) aviation water survival training facility, located on Pensacola Bay next to the Mustin Beach O’Club.

The facility provides water survival training techniques for aircrew personnel of the armed forces and contract personnel in the Gulf of Mexico region. According to official NOMI documents, the present facility, a 13,604 square-foot, former outdoor swimming pool which was converted to a training function during World War II, “suffers from significant age-induced deterioration to include plumbing along with frequent breakdowns in the supporting pool mechanical systems. “The facility is inadequate for effective training,” the report continues, “due to severe space constraints which are major safety hazards.” According to the report, the facility also suffers from limited provisions for female staff/aircrew trainees, extremely inadequate training classroom, no support area for the program instructors, no support space or storage areas for maintenance and storage of training devices and materials. The new facility, located next to Bldg. 746 on Turner Street, will boast 23,229 square feet of space to assure completion of the facility’s express mission of “providing specialized high-risk aviation water survival training in support of NOMI’s mission to provide specialized and operational
medical training and consultative services to military forces worldwide. "Official groundbreakers at ceremonies held Sept. 28 were Capt. Randy Bahr, commanding officer of NAS Pensacola; Capt. John Fahey, commanding officer of NOMI; Capt. Robert Buchholz, commanding officer of Navy Public Works Center; Cmdr. William Little, officer in charge of NOMI detachment central; Cmdr. Julian Irby, ROIcc; Coast Guard Cmdr. Dave Simms, assistant officer in charge of NOMI det central; Lt. Cmdr. Alex Gavrish eff, FMD; Lt. Cmdr. Tim Barnes, military construction liaison officer; Kevin Spellman from Greenhut Construction; Sharon Burgoff, from the ROIcc office; Lt. Bill Setley, assistant department head of water survival, Ens. Joe Boyles, NOMI; and HTC Ben McNair, NOMIdet central.

In remarks at the ceremony, Cmdr. William Little, officer-in-charge of NOMI detachment central, said “This is something the fleet as wanted us to do for years.”

NOMI Commanding Officer, Capt. John Fahey, told the small group of assembled spectators “We’re here to re-emphasize our commitment...to safe mission accomplishment.”

The $2.713,000 facility is being built by the Greenhut Construction Company.

New Land Parasail

By: AT1 Goldberger

Here’s some back round on the new land based parasail:

Before sailing, the students get a day of parachute training, learning descent procedures, how to land properly, and what to do if being drug across the ground. The following day, we take them out to the field for parachute familiarization training. Each student gets two rides in the parasail. The first ride is what’s called a “Tow Down”. During this ride, the students stays attached to the truck during descent, causing the descent rate to be slow and controlled. This is done to ensure the student can properly perform a PLF (Parachute Landing Fall) while descending in an actual parachute.

The second ride is called a “Release”. This is when the student is taken up to between 200-450 feet in altitude and released from the truck. The student parachutes down at an unrestricted rate allowing them to experience what it will really be like to land after a bail out or ejection.

The whole evolution requires coordination between 16 different crew positions and two pick-up trucks.

- Rear Tabbers (2)- Keep students in order and unwrap parachutes
- Tow Truck Driver- Drives Tow Truck
- Spotter- Guides Tow Truck Driver away from obstacles
- Release Operator- Releases the student from the truck during “Release” and aborts
- Chase Driver- Picks up student after sail and returns them to Launch Zone
- Recorder- Logs number and type of sails for students and equipment
- Demonstrator- Demos the rides
- Landing Zone Alternate- Relieves LZ Supervisors and Assistants when needed
- Launch Zone Alternate- Launch Crew members when needed
- EMT- Handles injuries
- Tow Truck- Pulls students up and down
- Chase Truck- Picks up student and returns them to Launch Zone.

Class A Update

CRASHED DURING WTI TRAINING FLIGHT YUMA, AZ PILOT EJECTED OK

IMPACTED WATER FOLLOWING NIGHT CATAPULT LAUNCH CV-64 / SOCAL PILOT LOST AT SEA

COLLIDED DURING
NIGHT TRAINING EXERCISE
FALLON, NV
1 EJECTED OK / 1 LANDED

Specialty Leader's Corner
By: CAPT Bob Matthews
BUMED Up-Date (20 NOV 2000)

1836 LIST SERVER/TECWEN
"MILPHYS" Bulletin Board:
We have 95% of the Active Duty 1836s 'subscribed' to the LIST SERVER. I use the LIST SERVER to distribute professional information that I feel must get to the 'masses'. If you change your email address or need to subscribe, go to this site and be sure to make your delivery preference "IMMEDIATE".


If you would like to 'send' a file, msg, note to the LIST, you can do so by addressing it to:

1836@bumed30.med.navy.mil

It will come to me for approval and posting.

I am using the MILPHYS BB primarily for Subject Matter Expert postings. SMEs can post directly to the MILPHYS BB by sending emails to:

MILPHYS@techet1.jcte.jcs.mil

You can get to the MILPHYS BB by going to: http://jcs.mil/ -> "MENU" -> "Sharing". You will need a TECNET ID and password AND authorization to enter MILPHYS, which I can provide.

Water Survival Training Facilities MILCON Status:
Projects at Pensacola, Cherry Point and Norfolk have started and Pensacola seems to be in the lead. A decision recompetition for Pax River has been postponed until February, pending other decisions on other Navy projects. Whidbey Island has been 'slid' to FY02 because the bids were so far over the budget, congressional action would have been required to reprogram funds. Additional funding is requested in the FY02 plan. I am very pleased to have three started, and one in the gate.

Naval Survival Training Institute (NSTI):
The establishment of NSTI is part of NOMI's Strategic Plan. CAPT Ryan Eichner will oversee the organizational transition as CDR Norton’s relief. CDRs Shoenberg, Little, Plombon, and Norton have been working on the preliminaries. The Director of NSTI will be the SINGLE point of contact on survival training for OPNAV, BUMED, HQMC and NOMI. I hope to present a Draft organizational chart at FALLSAFE.

Full Time Out Service Training (FTOST):
Our program has two FTOST billets, one MS and one PhD. Currently we have two officers in MS programs (LCDRs Schutt, Venable). Applications requesting FTOST starting in the fall of 2002 will be solicited this FY. We (NAPPPC) could recommend 2 MS programs, 1 MS and 1 PhD, one of either or none, depending on program needs. I am recommending we utilize ONE MS for an officer who currently does not have an MS. I am recommending using the other billet for EITHER a specific MS or PhD program depending on program 'needs'. Projecting 'expected' availability of a PhD grad as three years from matriculation, the graduate would be available for a FALL 05 assignment. If I project the 'probable' billets, identified as requiring PhDs in FY05, this is what comes up:

USUHS (LCDR/CDR) - Applied Physiology
Lemoore DH (LCDR) - Acceleration Physiology

These projections are truly "fuzzy math" because of the unpredictability of detailing process, BUT we have to have a plan.

Preferred applicants for MS should:
PRD range 0105-0205
Not have MS degree
Be accepted into a 'strong' science program with aviation applications
I will be suggesting the USUHS MPH program as a starter.

Preferred applicants for PhD should:
Be Senior LT or Junior LCDR
PRD range 0105-0205
Have an MS
Be accepted into either an Applied Physiology or Acceleration Physiology PhD program
There IS a PhD program in Physiology USUHS.

Other applications will be considered and ranked according to program requirements.

MAJOR variables!
a. PCS 'chains' disrupted negating billet availability upon graduation from programs. In cases like this, graduates go to the 'most appropriate' billet available.

b. Program manning: If program manning levels drop to a point that operational billets would be gapped, then ALL billets, including FTOST billets, are reviewed for 'fill' priority.

There are NO guarantees in FTOST. They are opportunities that come and go. If you are in the right place, at the right time,
the chances go UP, if you are not, then the opportunity diminishes.

**Issues on the table:**

Training support for "Other Than" USN/USMC aviators (Assault Troops, USAF, USA, Civs)

CFET operations
Preceptorship Update
Subject Matter Expert Program
Officer and Enlisted Manning and recruitment
New billets and manning (NASC, MCCDC & possibly VAQ, ASW & AFRL)

I am looking forward to seeing everyone at the FAILSAFE meeting in Jacksonville. Those officers with FY01 and 02 PRDs should be sure to contact your NAPPPC representatives for advocacy at the NOV NAPPPC

<table>
<thead>
<tr>
<th>Navy Aerospace Physiology Subject Matter Experts</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SUBJECT</strong></td>
</tr>
<tr>
<td>Acceleration</td>
</tr>
<tr>
<td>Advanced Training Technologies</td>
</tr>
<tr>
<td>ALSS</td>
</tr>
<tr>
<td>Anthro</td>
</tr>
<tr>
<td>CBR</td>
</tr>
<tr>
<td>Ejections</td>
</tr>
<tr>
<td>Fatigue</td>
</tr>
<tr>
<td>Human Factors</td>
</tr>
<tr>
<td>Hyperbarics/DCS</td>
</tr>
<tr>
<td>LASERS</td>
</tr>
<tr>
<td>Medical Intelligence</td>
</tr>
<tr>
<td>Nutritional Sup/OTC Meds</td>
</tr>
<tr>
<td>NVDs</td>
</tr>
<tr>
<td>ORM</td>
</tr>
<tr>
<td>Parachutes</td>
</tr>
<tr>
<td>SD/SA</td>
</tr>
<tr>
<td>Simulations</td>
</tr>
<tr>
<td>Survival Avionics</td>
</tr>
<tr>
<td>Survival Training</td>
</tr>
<tr>
<td>Survival: Cold Weather</td>
</tr>
<tr>
<td>Tactical Flight Threats: Rotary</td>
</tr>
<tr>
<td>Tactical Flight Threats: TACAIR</td>
</tr>
<tr>
<td>Training Devices</td>
</tr>
<tr>
<td>Vision</td>
</tr>
</tbody>
</table>
Navy Aerospace Physiology Program History

By: CDR Bill “Maytag” Little

Our last installment in the historical chronicle of our program ended with the first indoctrination low pressure chamber flights, which were conducted in a refrigerated low pressure chamber in Pensacola Florida.

In early 1942, faith in altitude classification, based on low pressure chamber examination, was sufficiently strong that altitude classification was set as a requirement for assignment to fighter training. By the summer of 1942, however, Pensacola personnel began to question the value of the low pressure chamber as a selection device and felt, instead, that it’s real worth lay in teaching. In late 1942, the School of Aviation Medicine recommended that altitude classification be discontinued, and that the emphasis be placed on altitude training.

In 1943, the Intermediate Aviation Selection Board at Pensacola analyzed the effectiveness of altitude classification and found it so ineffective that they were convinced that the real value of the low pressure chamber program was educational. In 1943, the Bureau of Medicine and Surgery issued a directive outlining a coherent program for use in altitude training units. The primary mission became altitude training with classification relegated to a secondary role. The orientation of this directive, establishing indoctrination and training as the primary mission of low pressure chamber facilities, has been followed ever since.

The principal accomplishment of the Altitude Training Units in World War II was that thousands of aviators and aircrewmens received instruction concerning the stresses of altitude and the proper operation of oxygen equipment. There is no record of the total number of individuals receiving this type of instruction during the World War II period, but thousands and thousands of aviators were trained.

Records maintained during the three-month period from December 1944 until February 1945, show that 2,499 aviators and 3,416 aircrewmens were given low pressure chamber flights (Williams & Barr, 1946). This gives some indication of the training load being handled by these units during the latter stages of the war.

Williams and Barr also noted that one of the major accomplishments of the Altitude Training Program during the early years of World War II was to dispel misconceptions concerning the use of oxygen. Up until that time, it was commonly believed that breathing 100% oxygen was harmful, that physically strong men did not need supplemental oxygen until they reach comparatively high altitudes, and that only the physically weak needed to use oxygen at low altitudes. To many, use of oxygen at low altitudes was an admission of physical weakness and lack of stamina. These misconceptions were so prevalent and so firmly ingrained, that a significant part of the time spent in altitude training was spent in "selling" the use of oxygen to aviation personnel. (Even back then we spent time marketing ALSS. Some things really don't ever change!) That those early educators succeeded in this mission is certainly one of their most noteworthy accomplishments.

As we have already said, the principal activity in aviation physiology during World War II was unquestionably altitude indoctrination and training in the use of oxygen equipment. However, medical personnel and physiologists were concerned with certain other problems as well. One of the more important of these was night vision. Early in World War II, the increasing tempo of night flight operations evoked interest in techniques for maximizing the night vision capability of aircrewmens. In March 1942, the Bureau of Medicine and Surgery appointed a Night Vision Board to study the problem and to submit reports as warranted (Barr, 1946). In June 1942, the Board published an article outlining current knowledge regarding vision under night lighting conditions. Reprints of this article were distributed to training units as a basic source of information for the early night vision training programs (first FISHWRAPPER!). These programs were conducted, for the most part, at the squadron level.

AMSO Deploys to Greece

By: LT Mickey Phillips

LT Mickey Phillips (AMSO) and HM1 (FMF) Robert Craig, deployed to Greece in support of Operation DYNAMIC MIX '00. This Operation was the first time
April 2000

since Operation DESERT SHIELD/DESERT/STORM that a Marine Aircraft Group has been forward deployed. From 17 May to 19 June, MAG-26 acted as the Aviation Combat Element (ACE) for the II Marine Expeditionary Brigade (MEB) in Thessaloniki, Greece. The ACE helicopter assets included four CH-53Es, three CH-46Es, four AH-1Ws and two UH-1Ns with HMH-461 (REIN) selected as the composite helicopter squadron. Additionally, MAG-26 (FWD) was reinforced by nine AV-8Bs from VMA-223 and three KC-130s from VMGR-252. The mission of MAG-26 was to support II MEB operations in theatre, conduct limited bilateral training with Greek forces, and provide excess sorties for NATO. From the ACE perspective the exercise was very successful. MAG-26 deployed via Strategic Airlift and Maritime Pre-positioning Ships (MPS) and began flight operations within three days of arriving in theatre. The ACE also stood-up a fully operational Tactical Air Command Center (TACC). The helicopters flew a total of 281 sorties, 417.6 flight hours, transported 1,428 passengers, lifted 20,400 pounds of cargo, and expended 1,800 rounds of 20mm TP and eight 2.75-inch rockets.

Lieutenant Phillips served as the ACE Safety Officer, overseeing all elements of Aviation, Aeromedical and Ground Safety. HM1 Craig served as ACE Safety Manager, directing all aspects of the Safety Program. The safety aspect of the mission was extremely successful, deploying over 6,000 miles with 1,200 Marines and Sailors and 25 fixed and rotary wing aircraft, with no notable aviation or ground safety mishaps.

a. As a result of this exercise we were able to establish a closer rapport with our squadrons and aircrew. We had a chance to live with and interact with the pilots and enlisted aircrew on a daily basis, which we are not afforded on a daily basis. We had Commanding Officers of squadrons and Aviation Safety Officers seeking us out, asking that we fly with them. As a result we were both able to fly on almost every scheduled fly day.

b. Before deployment, HM1 and I wrote an ACE Safety Letter of Instruction, establishing a Safety Chain of Command, and rules of engagement, as well as helping establish a pre-mishap plan for safety concerns while in Greece.

c. Upon arrival in Greece, HM1 and myself, along with one of the squadron ASO’s set up and orchestrated a pre-mishap drill, which included local Greek Officials. The drill was executed very successfully.

d. Thanks to LCDR Jeff Andrews, 2nd MAW

AMSO, we had a digital camera. We were personally asked to fly on multiple missions in order to take photographs of remote landing zones. These photos were then used as part of pre-flight briefing.

e. We had the fortunate experience of getting to fly on missions with Recon Para-ops. One of the missions took us to 10K’ feet in a CH-53E for a free fall jump by Force Recon, were we monitored aircrew and passengers for signs of hypoxia.

f. HM1 and I, established a close working relationship with the Intelligence staff (S-2) which set up a Flight Line Intelligence Center (FLIC). They also requested that we take intel pictures for them while flying. We came through with several pictures that they used in their intel briefs of the enemy. These photographs helped to further all safety aspects of flight and to increase situational awareness due to greater familiarization of the local area.

g. The temperature in Greece was in the mid 90’s during this operation, so we spent a fair amount of time on the flight line trying to ensure flight line personnel were staying adequately hydrated.

Learning points to apply for an AMSO/AMSC:

a. There were only twelve flight days while in country, so flight time
consisted mainly of daytime flights. There were only three nights of flying and night time flight hours were limited to essential personnel. Night Vision Goggle flight time would have given us the opportunity to use the Night Scope on the Camera and take pictures of NVG flight conditions.

b. The days were packed with mission planning and training so there was very little time to give aeromedical briefs, and the squadrons involved were up to date on all required briefs, but we addressed individual questions as needed. We spent a great deal of time in the ready room, so that we were available at all times.
SUSNAP Registration form

Name:
Last          First          MI

Place an X in the box that applies

Active Duty
Former Active Duty
Emeritus
Reserves

Rank

Call Sign

Mailing Address
Street Address

City, State          Zip Code

E-Mail Address          Phone #

Type of Membership

<table>
<thead>
<tr>
<th>Annual</th>
<th>$10.00</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lifetime Membership</td>
<td>$200.00</td>
</tr>
<tr>
<td>Lifetime Emeritus</td>
<td>$100.00</td>
</tr>
</tbody>
</table>

Donation

Complete Form and Mail with payment to: (Make checks payable to The Society of US Naval Aerospace Physiologists)

LTjg Brian Bohrer
ASTC Pensacola
220 Hovey Rd
Pensacola, FL 32508