



# The CSA Courier

## President's Message: Why Do We Do What We Do? — Dick Leland



This President's message may depart from previous ones, but I believe that it is value added for all of us in the aerospace professions to occasionally stop and consider why we do what we do and why it is so important.

First, a brief look back...all the way back. Flight most likely first became known to man by his watching winged creatures, which dates back to prehistoric times. The Chinese experimented with flight using kites some 2,000 years ago. However, man did not achieve flight until the 18<sup>th</sup> century. Interestingly, the time from man's first flight in a balloon to the first manned space flight was only about 180 years and the time from man's first aircraft flight to man's first space flight was only about 60 years. This chronology gives us some appreciation for the pace of aviation and space

technology and the pace at which aerospace science, human support equipment and human factors training has evolved.

Aviation and space have progressed from the Wright Brothers' historic twelve second duration, one-G flight to virtually unlimited duration flights at speeds several times the speed of sound and at G levels that exceed unprotected human capacity. Space exploration has become almost common place and space travel for civilians has become a reality. Today's aviators and astronauts operate in aircraft and spacecraft that their pioneer predecessors never dreamed were possible.

Over the past 50 years, aircraft and spacecraft have become more reliable as well as more sophisticated. Maintenance procedures have become more standardized and flying training programs have become more effective.

Mishap rates have fallen to only a fraction of what they were even as recently as the 1950's.

Today, aviation and space enjoy unprecedented safety records, but as aerospace medical professionals, we still face significant challenges. (Continued on page 2)

### Inside this issue:

Why Do We Do What We Do?	1
Noel Wien — Alaska's First Bush Pilot	3
Anchorage Accolades	5
Smart Phone Application for 2012 ASMA Meeting	10
Advanced Pilot Training at NASTAR	11
Reporting for Duty	14
New CSA Logo	15
Nuts & Bolts	17

### Special points of interest:

- CSA General Business Meeting and Luncheon: May 14
- Luncheon Feature Event — Radiation Exposures in Long Duration Spaceflight
- 2011 Corporate Forum Breakfast: May 15
- CSA Speakers Bureau: May 15

President's Message: Why Do We Do What We Do? (cont. from page 1)

Our challenges involve the shift in the causes of today's mishaps. Logistics and maintenance mishaps have become rare and the vast majority of mishaps are now due to human factors...the man controlling or maintaining the machine.

This is where our products and services come in. We must continue to evolve to meet the challenges as they arise in aerospace operation. Today these challenges include:

- Commercial Jet Loss of Control Inflight (LOC-I)
- Selection and training of civilian space travelers
- Support of pilots crewmembers and passengers in increasingly dynamic and complex environments

The message here is clear. We have a real opportunity to reduce aircraft mishap rates and improve safety. Our efforts must be dedicated to providing needed support systems and services to help pilots, crewmembers, and passengers function safely and effectively. That is what makes our job as aerospace professionals so very important. We, through our products, services, training and research directly and positively influence aerospace safety. However, aeromedical training and equipment are unique. There is no other training like it that pilots and aircrews will ever receive and no other equipment like it that pilots and aircrews may use. Pilots and aircrews will seldom have to call upon the knowledge we impart or use the protective equipment that we provide so long as everything works correctly. That is, provided the aircraft and spacecraft systems don't malfunction and pilots, crewmembers, and passengers can always fly in an optimum physiological condition and in an environment that doesn't exceed their capabilities.

However, this is not always the case and when the aviation and space pilots, crewmembers and

passengers do call upon the body of knowledge that we impart and / or employ the equipment we provide, they must respond with perfect execution each and every time. This is because when they get down to the things we provide, it may be the last opportunity for them to save their lives.

Aerospace has a remarkable history. Truly, we stand on the shoulders of giants. Everything we know today and are privileged to teach and provide to pilots, crewmembers and passengers is the result of the dedication and sacrifice of those professionals who have gone before us.

Although this quote has been around for a long time, I think it is fitting to sum up my thoughts :

"WE ALL SHOULD BEAR ONE THING IN MIND WHEN WE TALK ABOUT A TROOP WHO RODE ONE IN. HE CALLED UPON THE SUM OF ALL HIS KNOWLEDGE AND MADE A JUDGMENT. HE BELIEVED IN IT SO STRONGLY THAT HE KNOWINGLY BET HIS LIFE ON IT. THAT HE WAS MISTAKEN IN HIS JUDGMENT IS A TRAGEDY, NOT STUPIDITY. EVERY SUPERVISOR AND CONTEMPORARY WHO EVER SPOKE TO HIM HAD AN OPPORTUNITY TO INFLUENCE HIS JUDGMENT, SO A LITTLE OF ALL OF US GOES IN WITH EVERY TROOP WE LOSE."

Author Unknown

Note: The quote is presented as it was originally written. Accordingly, the following explanations may be useful. The author refers to the pilot as a "troop". The phrase "rode one in" means he fatally crashed his aircraft.

**We have a real opportunity to reduce aircraft mishap rates and improve safety.**

## Noel Wien - Alaska's Pioneer Bush Pilot

— Mary O'Connor

### Noel Wien - Alaska's Pioneer Bush Pilot

Alaska is known as the "flyingest" state in the country, with approximately six times as many pilots per capita and sixteen times as many aircraft per capita when compared to the rest of the United States. One man was responsible for making the idea of travel by air in Alaska as similar to travel by car in the rest of the United States, his name was Noel Wien.

Noel was born in Wisconsin in 1899 and was fascinated with automobiles and airplanes from an early age. He learned to fly in 1921 and afterwards took a job



as a barnstormer in Minnesota. Flying jobs were few and far between and in 1924, Noel jumped at the chance to fly for Alaska Aerial Transportation Company in Fairbanks, Alaska. Airplanes and pilots were scarce in these early days of Alaskan aviation, so many of the flights that Noel made were firsts, including the first flight over the Alaska Range, the first flight north of the Arctic Circle, the first flight from North America to Siberia via the Bering Strait and the first commercial flight between Fairbanks and Nome.

**Do you want your organization to get more involved in AsMA and CSA Activities?  
See "Reporting for Duty" on Page 14**

Noel made efforts to bring his brothers to Alaska to join him in the aviation business, first Ralph and then Fritz and Sig. In 1927, Ralph and Noel bought a Hiss Standard from his former employer and they started their own airline. In the first two months, they made \$4,000 and put the money back into the company, buying a Stinson Detrouiter. They continued to add planes to the company and steadily grew to more than 800 employees serving 190 airfields. Wien Air Alaska used Boeing 737s to pioneer jet service to gravel runways and maximize freight and passenger loads using the Combi configuration.

Noel died in 1977, and after nearly 60 years of flying passengers and freight, Wien Air Alaska folded in 1985. Along with his mild-mannered nature and quiet personality, Noel's kindness, fairness and generosity, even towards competitors, were legendary. Noel Wien was known as one of the most conservative - and safest - pilots in the Alaska bush and lived by his words of advice "Remember, always bring the airplane back".



*Mary O'Connor serves as the Historian for the Corporate & Sustaining Affiliate of the Aerospace Medical Association. She is the Coordinator for the Aviation Safety in Alaska Program at the Alaska Pacific Regional Office of the National Institute for Occupational Safety and Health.*

*Photographs provided by Mary O'Connor*

## Business Bullet — International Federation of Airline Pilots' Associations

Montreal, Quebec - The International Federation of Airline Pilots' Associations, The International Air Transport Association and The International Civil Aviation Organization have released a Fatigue Risk Management Systems (FRMS) Implementation Guide for commercial aircraft operators.

FRMS is based on scientific principles that allow operators to manage the fatigue-related risks that are particular to their types of operations. Workshops are being held around the world to outline the context of the FRMS requirements from the perspective of regulators, operators and pilots. Visit <http://www.ifalpa.org/> for more information.

## In-Flight Care Reaches New Heights with MedAire

Advances in in-flight medical care reached new heights this year, and MedAire was at the forefront of some of its leading initiatives. In September, MedAire's MedLink telemedicine capability was featured by Panasonic Avionics Corporation (Panasonic) during the 2011 APEX Expo, an annual event committed to elevating the level of the airline passenger experience.

The demonstration showed the improvements to in-flight telemedicine services available when RDT's Tempus IC medical monitor and MedAire's MedLink remote medical assistance services are used over Panasonic's eXConnect global broadband Ku service.

"By leveraging Panasonic's eXConnect service and MedAire, airline passengers and crew can quickly and easily access the best possible medical assistance throughout the aircraft, whether at the gate or at 35,000 feet," said Grant Jeffery, MedAire CEO. A few of the benefits to passengers include better care and observation from land-based doctors because of the enhanced video and voice definition and superior link reliability.

"It's an exciting time in telemedicine," continued Jeffery. "The goal of all medical providers is to provide timely, quality assistance to those in need. Advances in communications provide a platform to offer that assistance in ways never before possible."

MedAire also revamped its signature course—the *Management of In-flight Illness and Injury (MIII)*—including Initial, Recurrent and eLearning formats, and personally re-trained all global instructors on program execution.

MIII is the industry benchmark preferred by leading aircraft manufacturers. Boeing Business Jets, Bombardier, Embraer, Gulfstream, and Hawker Beechcraft offer MedAire as standard medical training to every aircraft owner and crew. In conjunction with the course update, MedAire released the

3rd edition of their *Manual of In-flight Medical Care*, which addresses recent changes and highlights advances in medical care and treatment. In addition to a hard copy



format, the manual is now available as an eBook. Crewmembers can easily search and access medical terms and symptoms from their iPad, smart phone, or other electronic device.

Written by medical professionals, the step-by-step instruction in the manual is based on tried-and-true teaching methods and actual in-flight medical situations. The manual is provided to pilots and flight attendants in business and commercial aviation who attend MedAire's initial and recurrent Management of In-flight Illness & Injury (MIII) courses.

MedAire created the MIII course framework by pulling data from its database of actual in-flight cases they've logged over the past 26 years. In addition to expanding capabilities in the air, MedAire's reach is also expanding on the ground.

International SOS (MedAire's parent company) acquired SMI (Service Médical International), the France-based manufacturer and distributor of medical supplies to the aviation and maritime industries earlier this year.

SMI's healthcare solutions and European-based medical kit manufacturing capabilities will be integrated into MedAire.

"With distribution centers in both Europe and North America, we are now uniquely positioned to deliver the highest quality products to crewmembers attending to medical events on board thousands of aircraft around the globe," says Jeffery. MedAire's worldwide presence—with a combined staff of 9,500 located across the globe—means that, whenever illness, injury or threatening situations occur, clients have prompt access to the very best medical and security help *when* and *where* they need it.

MedAire managed more than 1.3 million assistance cases this year, with more than 19,000 medical cases occurring in flight.

A tribute to the expertise MedAire provides the aviation industry, MedAire Founder and Chairperson, Joan Sullivan Garrett, was appointed to the Board of Directors of the National Business Aviation Association (NBAA). As Vice Chair of the Associate Member Advisory Council, Ms. Garrett is one of two Associate Members to sit on the NBAA Board.

For more information about MedAire, please visit [www.medaire.com](http://www.medaire.com) or email [erin.mitchell@medaire.com](mailto:erin.mitchell@medaire.com)





## Anchorage Accolades

- Dave Hale



When CSA members caught the last glimpse of the Anchorage mountains from their airplane windows, they could release a sigh of achievement. CSA efforts last May and throughout the 2010-11 cycle, supported all seven Benefits of Affiliation: Networking, Marketing, Recruitment, Research, Education, Advocacy & Leadership. Former CSA President Guy Banta, PhD MPH (Eagle Applied Sciences) provided leadership that generated essential networking tools, sponsored innovative research investigations, hosted memorable annual meeting events and speakers, and most uniquely secured a tangible, sustaining funding source for CSA operations. With the closure of the year under his leadership, CSA had taken important developmental steps for the organization's sustained growth and dynamic contribution to the Aerospace Medical Association (AsMA) and to the aerospace industry.

The Second Annual CSA Business Luncheon was well attended with CSA Representatives from member organizations, including Wyle, American Airlines, and United Airlines. The luncheon has secured its place in the annual meeting schedule, offering a place for corporate members to gather and focus on matters affecting the viability of commerce in the aerospace industry. Updates on the History Initiative progress, insights from the 2011 scientific meeting panels sponsored by CSA, and plans for Bellagio 2 began the luncheon agenda. The leadership team for the 2010-11 cycle was small, but extremely effective in maintaining standards of excellence in CSA governance and programming, and in continuing CSA traditions started by Marian Sides PhD (Education Enterprises, Inc.) since its inception over a decade ago. For distinguished contributions to a variety of CSA programming and functions over the year, Dr. Banta presented Deborah Lickteig (Eagle Applied Sciences) and Yvette DeBois, MD MPH (CSMC Chairman) each with an Award of Excellence.

(continued on page 6)



CSA President Dr. Guy Banta presents an Award of Excellence to Deborah Lickteig.



CSA President Dr. Guy Banta presents an Award of Excellence to Yvette DeBois, MD MPH, CSMC Chairman.

*Photos courtesy Dave Hale for Pilot Medical Solutions*

Anchorage Accolades (cont. from page 5)

The feature event of the luncheon, speaker Jason Metrokin, President of the Bristol Bay Native Corporation, offered an interesting perspective on the Alaskan way of life.



*CSA President Dr. Guy Banta presents the 2011 CSA Speakers Bureau commemorative plaque to Jason Metrokin, President of the Bristol Bay Native Corporation.*

The 2011-12 officers were inducted into their new CSA offices, before the luncheon concluded with the passing of the CSA President's gavel from Dr. Banta to Dick Leland from ETC.

In the tradition of Walt Disney's Imagineer in Orlando and the overview of the Big Dig in Boston, the 2011 CSA Speakers Bureau offered an opportunity for CSA and AsMA members to learn about local, distinguished technical and commercial contributions of the annual meeting host cities. Alaska has a rich aviation history, molded by terrain that makes flying a preferred form of transportation. The Anchorage CSA Speaker Bureau featured two presentations to characterize aviation achievements north of the lower forty-eight. Mary O'Connor, MS presented select profiles of legendary figures in Alaskan aviation history. She coordinates the Aviation Safety in Alaska Program for the National Institute for Occupational Safety and Health's Alaska Pacific Regional Office. The office was

formed, as a field station to address occupational injuries and fatalities in high risk industries in Alaska, so her presentation illustrated the development of aviation safety programming in this region. To provide a commercial perspective on safety in this region, she was followed by Daniel Seybert, President of PennAir. He shared the experience of his airline in the promotion of safety in Alaska.



*Dick Leland, presents the President's Gavel Plaque to Guy Banta MD MPH from Eagle Applied Sciences, CSA's Second President.*

Marketing is an important Benefit of Affiliation for many member companies, and AsMA's annual scientific meetings exhibits are a unique marketplace for many companies interested in connecting more personally with the Association membership

The additional night of exhibits during the New Member Welcome Reception was an innovative twist this year that extended the opportunity to connect with the AsMA membership for exhibiting companies. The new venue allowed for meeting attendees to learn about the companies in a relaxed setting, and established the groundwork for new, marketing relationships for exhibitors. Amongst the exhibitors were 11 CSA member companies that took advantage of their exhibiting discount afforded through affiliation including: Aqua Lung America, Eagle Applied Sciences LLC, Environics Inc., Environmental Tectonics Corporation, Gentex Corporation, InoMedic Inc., Mayo Clinic, (Continued on page 7)

**Anchorage Accolades (cont. from page 6)**

Sperian Protection Optical Inc., UTMB Aerospace Medicine Residency Program, Verathon Medical, and Wyle. AsMA is always grateful to CSA members that participate in the exhibiting experience during the annual scientific meetings.

The CSMC hosts the Corporate Forum during the annual scientific meeting to introduce the Benefits of Affiliation to potential new members and to assist veteran CSA members in optimizing and customizing their relationship with the Association. Guy Banta, PhD MPH joined then AsMA President Marian Sides, AsMA Past President Andrew Belenkes, AsMA Executive Director Jeff Sventek, and CSMC members Drs. Dan Callan and Yvette DeBois in a series of presentations designed for corporate members to gain a better understanding of AsMA's goals, structure, and opportunities for commercial Advocacy.

CSA-sponsored panels in Anchorage extended the tradition of corporate member dedication to investigations that: (1) advance clinical and operational applications of the aeromedical sciences, (2) provide novel or less commonly included content to Association scientific forums, and/or (3) highlight similar findings that attract less represented sectors of aeromedical professionals to these scientific forums. With this focus, CSA research sponsorship supports not only the most cutting-edge and useful aeromedical research efforts, it supports growth of AsMA membership. Since many of our business members have an interest in research sponsorship, but lack the expertise to guide aeromedical research development for presentation and publication, the Corporate & Sustaining Membership Committee (CSMC) provides systematic, technical support to CSA for topic selection, development, and submission. Last May, CSA sponsored panels focused on occupational and environmental medicine presentations. *Global Survival: Search & Rescue Emergencies in Remote Wilderness and*

*Changing Environments, Flight Surgeon Support for the Drug-Free Workplace, and A Practical Review of the Human Intervention & Motivation System* were all well attended panel presentations that strengthened the scientific program and provided useful content for those operating and providing medical services in occupational and extreme environment settings.

Overall, the Anchorage meeting was a success for CSA and its leadership team. With the final strike of the gavel at the CSA Business Luncheon in Anchorage, the new leadership team assumed responsibility for the next developmental steps in the evolution of our new voice in AsMA and in the global aerospace industry.



*CSA President Guy Banta bestows Mary O'Connor, MS (CDC/NIOSH) and the President of PenAir, Daniel Seybert with their traditional honorary plaques for presenting at CSA's 2011 Speakers Bureau in Anchorage, Alaska.*

**Congratulations & Thanks 2010-11 CSMC for another successful year!**

Guy Banta PhD MPH, Lt Col. Christopher Borchardt, Eilis Boudreau, MD PhD, Clayton Cowl MD, Audie Davis MD, Yvette DeBois MD MPH, James DeVoll MD, Catherine Dibiasse RN, Alex Garbino, MD, David Hale MD, Peter Lee MD MS, Dick Leland, Margaret Matarese MD, David O'Brien MD, Janet Sanner, RN MSN, Col. Nora Taylor RN, Richard Trumbo MD, Col. Paul Young, MD



## Harvey Watt & Company Pilot Disability Insurance

We all know the challenges airman face throughout their careers and how often they find themselves grounded because of AeroMedical issues.

**Pilot Disability Insurance:** Harvey Watt offers the only American insured Pilot Loss of Medical License Insurance regulated, approved and guaranteed by US States with no union membership required and available to individuals and small groups. Traditional disability insurance that pays when a person cannot do their own occupation will only pay a pilot while the insurance company doctor feels he cannot go to work specifically excluding licensing requirements. Harvey Watt plans will consider a pilot disabled until his Medical Certificate is considered valid by the FAA.

- Inventor and Longest Provider of Pilot Loss of Medical License Disability Insurance
- Agents are paid by salary not commission
- Products Designed Specifically For Many Airlines and Unions
- NBAA endorsed products for corporate fixed and rotary pilots
- Portable Policies That Can Travel From Different Unions or Employers

- Develop and Implement Group Disability and Life Insurance Plans Specifically for Groups of All Sizes

Our experience: 1 in 20 Pilots are On Long Term Disability Every Year

**Professional Pilot Life Insurance:** *With over 60 years experience and the benefit of working closely with every major US and Canadian Airline, we have been able to show professional pilots and their spouse are typically in good health and a great insurable risk. Because of the fact that we work with nearly 45,000 pilots, our exclusive Professional Pilot Life Insurance delivers excellent rates and no exclusions except suicide within the first two years.*

For more information visit [HarveyWatt.com](http://HarveyWatt.com)



### Our Experience:

1 in 20 Pilots are on Long Term Disability Every Year

### Business Bullet —

## Boeing and US Army Announce Delivery of First Block III AH-64D Apache Attack Helicopter

Mesa, AZ - The Boeing Company and the U.S. Army recently celebrated delivery of the first AH-64D Apache Block III multi-role attack helicopter. The Block III Apache begins a new era in combat aviation by incorporating 26 new technologies designed to improve aircraft performance, increase payload and increase hover ceiling altitude at greater gross weights in warmer weather conditions. Boeing will produce 51 AH-64D Apache Block III helicopters for the Army under Low Rate Initial Production; other defense forces worldwide have already contracted for, or are considering upgrading to the Apache Block III.

For more information, please go to: <http://boeing.mediaroom.com/index.php?s=43&item=2000>



Boeing Company photograph



## Environics, Inc. Announces New Ownership

Environics Inc. recently announced that Catherine Dunn and Terrence Dunn have recently acquired ownership of the company, including all shares previously held by company co-founder, Edward Anderson. A certified Woman Owned Small Business, Environics is the sole licensed manufacturer of the Reduced Oxygen Breathing Device 2 (ROBD2) which simulates altitude exposure and has been utilized for hypoxia training and research.

As the majority owner and CEO of Environics Inc., Catherine Dunn, who joined Environics Inc. in 1990, will be involved in the long-term, strategic planning and will retain her current responsibilities, which include leading the worldwide sales team. Mrs. Dunn anticipates continued sales growth for both existing products and the exciting new systems currently being developed.

Mr. Terrence P. Dunn, who joined Environics in 1994, will serve as President and COO. He will continue to be responsible for the day-to-day operations of the company. In addition, the company added Rachel Stansel, Ph.D. as VP of Operations and Project Development. Stansel holds a Ph.D. in Molecular Biology from the University of North Carolina - Chapel Hill and oversees Production, Quality Control and Marketing.

Founded in 1986, Environics Inc. is a world leader in computerized gas flow instrumentation, with headquarters for design, manufacturing, sales and service in Tolland, Connecticut. Utilizing Environics innovative technologies, systems offer an exceptionally high level of accuracy and repeatability. Thousands of Environics' systems are currently in the field. In addition to standard applications, the company has developed an extensive library of custom designed systems and solutions to meet customers' needs.

## Business Bullet — FAA Procedures for Reporting Laser Incidents

Washington, D.C. - In a continuing effort to combat the growing problem of lasers directed at aircraft, the Federal Aviation Administration (FAA) has created a website to make it easier for pilots and the public to report laser incidents and obtain information on the subject. Laser event reports have increased steadily since the FAA created a formal reporting system in 2005 to collect information



from pilots, rising from nearly 300 in 2005 to 2,836 in 2010. Pilots have reported the most laser events in 2011 in Phoenix (96), Philadelphia (95) and Chicago (83). In June 2011, the FAA announced it would start imposing civil penalties of up to \$11,000 against people who interfere with a flight crew by pointing a laser into the cockpit of an aircraft.

**Laser event reports by pilots have increased from 300 in 2005 to 2,836 in 2010**

The new website can be found at <http://www.faa.gov/go/laserinfo>

## Smart Phone and Tablet Application for the 2012 AsMA Annual Scientific Meeting

— JEFFREY SVENTEK, MS, CASP, AsMA Executive Director



The Aerospace Medical Association tested an iPad meeting application in Anchorage. It was a huge success! The application basically reproduces the March edition of the AsMA journal (*Aviation, Space, and Environmental Medicine*) in digital format. The meeting application was made available to all as a free download from the iTunes Store. If you have an iPad and would like to download the meeting application and test

it, go here: <http://itunes.apple.com/us/app/asma2011/id430765463?mt=8>. The download is free.

The application provides users with all of the information necessary to enjoy the Annual Scientific Meeting. It provides users all of the approved and published abstracts for the entire meeting, a list of all social events for the meeting, a list of all exhibits and their location within the exhibit hall, the ability to build an itinerary for each day of the meeting, and the ability for physicians to electronically submit their CME participation. There are maps of the various hotels and meeting sites used in Anchorage as well as information needed during the Annual Business Meeting.

The company that designed the 2011 Meeting App, did so free of charge. They were looking for a large scientific meeting to beta-test their product and we agreed to serve

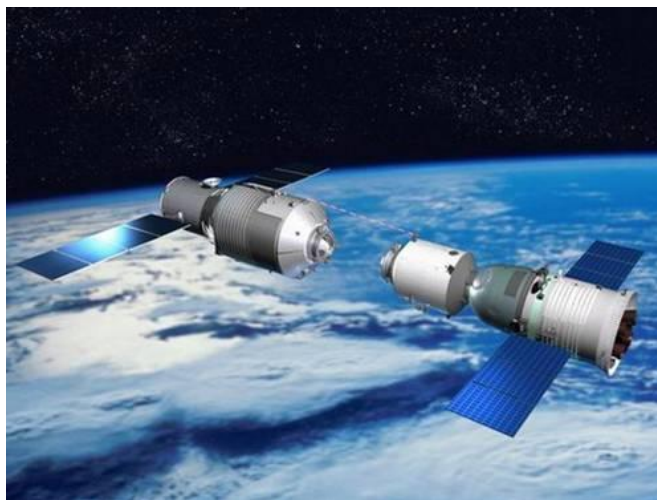
**This application provides users with all of the information necessary to enjoy the Annual Scientific Meeting**

as the test bed. We plan to continue working with this company and offer a Meeting App for the 2012 Annual Scientific Meeting in Atlanta. However, this year we must pay for the application development. The 2012 Meeting Application will be available for the iPad, iPhone and all Android-based smart phones and tablets. I am looking for corporate sponsors to help defray the cost of this application for the Atlanta meeting. All corporate sponsors that provide financial support for this effort will have their corporate logo prominently displayed on the splash page (first page that shows when the app is started). Also, all corporate sponsors will be recognized within the application via a separate list thanking them for their support. If we can generate enough financial support for the Meeting App, I will be able to make the 2012 App available for free download again.

If you are interested in providing financial support for the 2012 Annual Scientific Meeting application, please contact me at (703) 739-2240 ext 105 or at [jsventek@asma.org](mailto:jsventek@asma.org). Your support would be greatly appreciated.

## Business Bullet — Chinese Docking in Space

China - A pair of robotic Chinese spacecraft docked in orbit for the first time ever on November 2, 2011, marking a key step toward China's goal of building a space station and establishing a permanent manned presence in space. The historic meet-up was designed to test technologies that China will use to meet their goal of assembling a manned space station in orbit by 2020. China now joins a group that includes the United States, Russia, Japan and the European Space Agency, all of which have designed spacecraft capable of docking in orbit. For more information, see: <http://www.space.com/13477-china-space-docking-success-shenzhou8-tiangong1.html>



China National Space Administration

# Advanced Pilot Training Programs at the NASTAR Center

— Paul Comtois, Director of Advanced Pilot Training Programs, NASTAR

In 2007, the Environmental Tectonics Corporation (ETC) established a wholly owned subsidiary called the National Aero-Space Training and Research (NASTAR®) Center. The NASTAR Center is a non-government, world-class aerospace training facility that houses state-of-the-art simulation equipment, training courseware, and professional services. The mission of the NASTAR Center is to maximize human performance in extreme environments. The Center supports the training, research, and educational needs of the aerospace industry, including APT programs which are designed for the Corporate and Commercial pilot communities.

The goal of ETC's Advanced Pilot Training (APT) Programs is to develop academic and simulator based curriculum that allow trainees to experience the extremes of flight in a safe and controlled environment. The programs: Upset Prevention and Recovery Training (UPRT), Spatial Disorientation (SD), Situational Awareness (SA), Altitude Awareness, and others, focus on critical issues that don't always receive attention in traditional Airline Transport Pilot (ATP) category training programs.

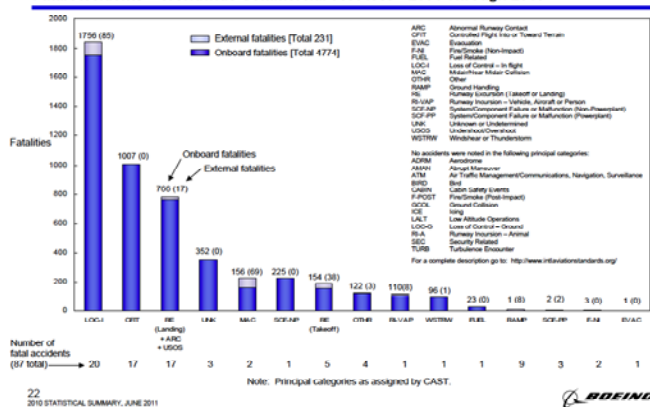
The need for a dynamic UPRT program has been highlighted by a number of recent high profile aviation accidents due to Loss of Control In-flight (LOC-I). As illustrated in the chart below, LOC-I is the number one cause of fatal aviation accidents and has been for a period of more than twenty years. The UPRT program not only takes advantage of ETC's technologies, but also capitalizes on its long history in the aviation physiology field. The Continuous G Devices (CGD) allow pilots to experience physical and physiological stressors, such as G forces, in a safe and controlled environment.

Spatial Disorientation, unfortunately continues to claim lives throughout the spectrum of aviation. The SD course offered gives pilots the necessary understanding and practical experience to handle visual and vestibular illusions frequently encountered in flight. Academic training covers topics such as the categories of SD, the human systems that contribute to our orientation, and how the limitations of the human body can present issues in flight. It is difficult to effectively replicate SD illusions safely in flight; fortunately, the unique training devices in place for the NASTAR Center's APT programs allow pilots to experience a multitude of visual and vestibular illusions.

Situational awareness is a crucial element in the flying world. The ever changing dynamics of the flight environment demand that one maintain good SA. The SA course is an academic only course; however, the skills learned must be applied when flying in our simulators and are applicable when flying the aircraft. According to the United States Air Force, SA is a continuous perception of self and aircraft in relation to the dynamic environment of flight, threats and mission, and the ability to forecast, and then execute tasks based on the perception. Our academics walk you through the critical elements of SA such as conscious and preconscious information processing, attention management, learned skill execution, and anomalies of attention.

Another extreme environment that can be experienced at the NASTAR Center is those associated with high altitudes and pressurized aircraft. Several recent incidents involving hypoxia and sudden loss of cabin pressure are reviewed during the academic portion of our Altitude Awareness course. Pilots engaged in this course can also experience these potentially fatal circumstances, but in a safe and controlled manner. The ability to directly experience your unique hypoxia symptoms and how to react in a sudden decompression scenario are vital. Additionally, topics such as time of useful consciousness, effects of hypoxia on vision, and atmospheric physics are a part

**Fatalities by CAST/ICAO Common Taxonomy Team (CICTT)  
Aviation Occurrence Categories  
Fatal Accidents – Worldwide Commercial Jet Fleet – 2001 Through 2010**



**The Nominating Committee Needs a Chairman**

**Contact Dick Leland (dletc@aol.com) for information**

**CSA Offices can augment your organization's visibility**



## Business Bullet — Aeromedical Evacuation of Libyan Fighters

BOSTON, Mass. -- Nearly two dozen wounded Libyan fighters were evacuated from the revolutionary battlefields of Libya to the birthplace of the American Revolution in October 2011. An Air Force C-17 Globemaster III assigned to the 172nd Airlift Wing from Jackson, MS transported the patients to Boston where they will be treated at Spaulding Rehabilitation Hospital in Salem, Mass., before returning to Libya. The Libyan Transitional National Council requested the transport of fighters to

American medical facilities because their injuries could not be treated in Libya. The success of the transport operation was due to a tight partnership between the Department of State and the Department of Defense and demonstrates America's support and goodwill to nations that are fighting for freedom. To read more, visit:

<http://www.dvidshub.net/news/79389/air-force-team-transport-wounded-libyan-fighters-us>

## David Clark Company Evaluates Commercial Space Suit Prototype at NASTAR Center

The David Clark Company, in conjunction with Southwest Research Institute (SWRI) recently conducted evaluations of a new space suit for commercial suborbital flights at the NASTAR® Center in Southampton, PA.

Two SwRI researchers and suborbital flight ticket holders, Drs. S. Alan Stern and Dan Durda, visited the National AeroSpace Training And Research (NASTAR) Center on November 2, 2011, where they evaluated a David Clark Company Contingency Hypobaric Astronaut Protective Suit (CHAPS) under *G* during a series of centrifuge runs in the NASTAR "Phoenix" STS-400 high performance human centrifuge. The CHAPS represents the latest generation of aerospace crew protective equipment for the commercial spaceflight market.

Stern and Durda completed 20 NASTAR centrifuge runs both in and out of the CHAPS suits, exposing them to both head-to-foot and thru-the-chest accelerations up to 6-Gs, typical of what space travelers could experience during suborbital flights. Suit evaluation areas included: suit fit, mobility, range of motion, comfort, field-of view, communications, suit to vehicle interface, and ability to perform basic tasks under *G*. To date, no other space company or research organization has assessed a pressure suit for commercial suborbital flights in a centrifuge.

"We're breaking new ground with this type of suit evaluation—it's more realistic and higher intensity than any suborbital launch exercise taken previously by any person or company in the world to date," said SwRI Principal Investigator Stern.

**"This test provided a deeper understanding of issues facing crew health and protection on commercial spaceflights"**

Added SwRI Co-Investigator Durda, "We are the first future space flyers to wear the David Clark CHAPS suit in centrifuge runs. We also provided detailed engineering feedback evaluations of the suit following the launch simulations."

Danel M. Barry, Vice President and Director of Research and Development for David Clark Company, acknowledged the significance of the test as it relates to aerospace crew protective equipment design. "Historically, the complexity of pressure suit systems was driven by the need to address a wide range of requirements associated to traditional government/military programs. The CHAPS was developed to address the specific requirements unique to commercial spaceflight operations. It provides fundamental contingency hypobaric protection and incorporates advanced materials to allow for a lightweight, comfortable and highly functional pressure suit system."

"This test provided a deeper understanding of issues facing crew health and protection on commercial spaceflights" said Brienna Henwood, Director of Space Training and Research at NASTAR Center. "We will be integrating the expertise and lessons learned into upcoming programs to provide our clients with the best, most realistic training available."

For more information about SwRI's suborbital program and flight crew training, contact Alan Stern, (303) 324-5269 or [astern@boulder.swri.edu](mailto:astern@boulder.swri.edu), or Dan Durda, (303) 546-9670 or [durda@boulder.swri.edu](mailto:durda@boulder.swri.edu).

## Environics Reduced Oxygen Breathing Device

Environics Inc. is pleased to announce that the Reduced Oxygen Breathing Device 2 (ROBD2), which simulates altitude exposure and can be utilized for both research and hypoxia training, is now available for purchase through the U.S. General Services Administration's Online GSA Advantage Portal. Environics is the only licensed manufacturer of the ROBD2. By purchasing through the GSA, customers can simplify their purchasing process and receive the government discount on their systems.

The system uses Thermal Mass Flow Controllers (MFC) to mix breathing air and nitrogen to produce the sea level equivalent atmospheric oxygen contents for altitudes up to 34,000 feet. The MFC's are calibrated on a primary flow standard traceable to the National Institute of Standards and Technology (NIST). The ROBD 2 introduces pressure changes and gas expansion as a function of altitude. Several safety features are built into the device: prevention of over pressurization of the subject's mask, prevention of reduced oxygen contents below those being requested for a particular altitude and an emergency dump switch that will supply 100% O<sub>2</sub> to subjects. The software is menu

driven, simplifying the use of the system for the field operator. Built-in self-tests verify all system component functionality before the operation of the system can begin. If any self-test fails the system will not operate.

To learn more about the ROBD2 or to order direct from Envionics, visit <http://www.envionics.com/> or call (860) 872-1111.

To place an order through the GSA, please [visit the GSA Advantage portal](#).



*Envionics, Inc. photograph*

## Business Bullet — Alternative Fuel Initiatives in Chicago

Chicago, IL - The Chicago Department of Aviation recently announced new sustainability initiatives including development of a massive solar panel installation, an alternative fueling station for private and commercial vehicles and a composting program for restaurants. The solar panels will provide a clean, renewable energy source to help power O'Hare while helping to grow the region's renewable energy market. The alternative fueling station will promote the use of electricity to power the city's new electric vehicles, and clean fuels such as ethanol, compressed natural gas, and biodiesel for conventionally fueled vehicles driven by the millions of travelers that frequent the airport each year. The new composting program will oper-

ate in partnership with 13 restaurants operating at Midway International Airport. Composting provides a cost-effective, sustainable waste disposal solution that will divert organic materials from landfills, provide natural, chemical-free fertilizer for food crops, and promote higher agricultural yields. See: <http://archive.constantcontact.com/fs035/1102463494613/archive/1108422079665.html>

# Reporting For Duty...

Reporting For Duty is a standing column to provide direction for members that want to optimize and customize the benefits of affiliation for their organizations. Read more about the ways you can Advertise, Network, Direct Research, Lead, Recruit, and Market in CSA.

## **Advertise** on the AsMA Website, the Corporate Page & in the CSA Courier.

Banner Ads on the AsMA Website are an exciting new way to augment the visibility of your organization. Many members use the *Corporate Page* published in *Aviation, Space, & Environmental Medicine* and our newsletter, the *CSA Courier*, to showcase corporate profiles, share commentary on business trend, announce corporate milestones, and highlight research achievements. If you have more editing or publishing experience, you may want to submit a newsletter standing column or feature article and attach your company byline. Demonstrate the leadership potential of your organization by considering Editor positions. The sky is just the beginning!

## **Network** at our Annual Scientific Meetings Exhibits and Receptions.

We all need to gain insight into trends in the industry, learn new strategies to overcome financial and operational obstacles, or in planning for personal career moves. Within the Association, the annual scientific meeting is the best vehicle for keeping the Networking chain strong. From Opening Ceremonies to the Honors Night, the activities create plenty of formal and informal ways to keep your finger on the pulse of our collective body. The *CSA Courier's* standing column, *Corporate to Corporate*, and *Aviation, Space, & Environmental Medicine* are formal tools used to facilitate connectivity amongst the membership. Please, remember as new opportunities, achievements, and milestones arise in your organization to share them with the Association in these publications.

## **Direct Research** by Developing and Sponsoring Scientific Panels & Workshops.

Many of our member organizations have research programs and objectives, or have a strong interest in the studies that drive the disciplines of aerospace medicine and the related sciences. Over the years, our CSA members have sponsored research spanning a variety of aeromedical topics from space pharmacology and hypoxia in the setting of underlying disease to dentistry and new basic science findings expanding hyperbarics. As a member, these achievements are claimed by all of our members, a privilege of affiliation. They can serve to bolster your current research programming or expand your research efforts. Joining the CSA Program Committee provides an excellent opportunity for corporate members to interact with industry experts in the Association, guiding the direction of research in our field for years to come.

Additionally, CSA supports student and resident research, by providing support and sponsorship to the Aerospace Medicine Student & Resident Organization (AMSRO), the aeromedical scientists and clinicians of tomorrow. Member companies participate, with other aeromedical experts, in the selection of the awardee for their Scientific Paper Award presented during the AsMA annual scientific meeting. Contributions to the research initiatives of CSA can help bolster the research agendas of your company, while networking you with the best minds of the related aeromedical sciences.

## **Lead** the Global Aerospace Medicine Corporate Community by Joining a CSA Committee, Initiative Workgroup, or by Becoming an Officer.

Recognition as an Affiliate of the Aerospace Medical Association (AsMA) provides corporate members the opportunity to have a voice in the business matters of the Association. Thus, resolutions placed before the Association's Council, positions regarding the development of legislation for aerospace medical funding, and general organizational management and financial decisions, as examples, all become within the purview of CSA membership by this status. Thus, CSA welcomes all of its members to participate in the structure established in our bylaws for leadership through our standing committees and offices. The work done by these groups and individuals fuels CSA initiatives, and presents new opportunities for our member businesses to grow.

There are many ways to lead in CSA! If your organization has been involved in the Affiliate over the years, or even if you are a new member with ideas and energy, consider an Officer or Committee Chairman post within the Affiliate. In particular, Officer posts can augment your visibility, positioning you in new ways for meaningful Networking. Though primary officer positions are filled, committee chairman positions remain available.

If you would like to get involved with a little less responsibility, several initiatives are underway and need all hands. The **Philanthropic Initiative** workgroup is developing a program to highlight the philanthropic achievements of the members. They explore giving on behalf of the Affiliate and create programming to attract philanthropists to our membership.

During the Atlanta meeting in May, (or now by contacting our Affiliate President, Dick Leland, electronically at [dletc@aol.com](mailto:dletc@aol.com)), learn more about ways leadership in CSA can help your organization meet its goals, augment visibility, and support health and safety throughout the aerospace medicine industry.

(Continued on page 13)



### **Recruit** New CSA Members and New Talent for Your Team.

Many companies find the diverse experts of AsMA, a rich resource for potential talent in their organizations. They connect to talented aerospace professional through annual meeting receptions and exhibiting activities.

CSA's Membership Committee joins the AsMA Corporate & Sustaining Membership Committee (CSMC) to recruit new corporate members to the Affiliate and help new companies meet their organizational goals through affiliation. As you identify potential members, present contacts to the CSMC Chairman, Dr. Yvette DeBois (undersearave@surfbest.net). New members are networked appropriately and made aware of opportunities and services available through affiliation. Growing CSA by identifying new potential members strengthens the collective voice for the global aerospace industry!

### **Market** Host Receptions, Events, and Sponsor Awards.

In addition to advertising in our publications, on our website and exhibiting at the annual scientific meeting, many of the corporate members sponsor receptions or awards during the annual scientific meeting. Some of these gatherings and hon-ors are recognized by the Association as a whole, while others are designed to attract members, constituents or affiliates of the Association with specific interests and expertise. Usually a Corporate member chooses an award to sponsor that is related to their own goals, or hosts a reception most likely to engage a particular target audience within the Association. Academic institutions, for example, traditionally host evening receptions during the annual meeting, offering a relaxed environment to development important recruitment relationships. Reception, event, and award sponsorship can be new vehicles for you to create relationships with specific groups and celebrate excellence in the aerospace medicine community !

## The CSA Has A Logo!

— Dick Leland



The 2011 elected CSA officers met during the May 2011 Scientific Meeting to make a game plan and discuss initiatives for the upcoming year. One initiative was to create a CSA logo. President-elect, Leroy Gross accepted the challenge and in July 2011 retained the services of one of his consultants to design the logo for CSA.

In an attempt to capture the meaning of CSA, reflect its membership, and reflect CSA's relationship to ASMA, a detailed design process was accomplished. A questionnaire was submitted to the CSA officers and to Dr. Yvette Dubois, CSMC to assist the design consultant in understanding the demographics and roles and responsibilities of CSA. The designer used the answers to design four proposed logos for consideration. The CSA officers reviewed the four drafts, selected two options, and requested modifications to two drafts for follow up review. The two modified draft logos were reviewed by the CSA officers and submitted to CSA membership for their vote. The final logo was selected by majority vote on November 10, 2011.

The CSA logo represents all members of CSA and CSA's supporting relationship with ASMA. The airplanes and a space vehicle create an aerial fly pattern that creates the appearance of the traditional medical caduceus. A stylized moon appears behind the space vehicle to represent space travel, while a stylized arch of the earth appears at the bottom of the symbol to symbolize environmental awareness. CSA's initials appear arched above the symbol.

The CSA Officers are developing guidelines for use of the CSA logo, which will be distributed to the CSA membership before the May 2011 Scientific Meeting. My sincere thanks and congratulations to Dr. Leroy Gross, MD MPH, CEO, InoMedic, Inc. for a Job Well Done.

## Corporate Overview — Environmental Tectonics Corporation

For over 40 years Environmental Tectonics Corporation (ETC) has been a world leader in the design, manufacture, delivery, commissioning and maintenance of physiological training devices around the globe. Offering a wide range of training devices ETC has hundreds of devices fielded in more than 86 nations.

All ETC training and research devices provide interactive, real time simulated flight environments. Through our array of devices, a variety of training and research environments are created including those for instrument / navigation, mission rehearsal, acceleration physiology, spatial disorientation, situational awareness, aircraft egress and ejection decision making, oxygen management, altitude physiology, night vision, night vision goggle use, and land/water survival training and research applications. Additionally, all systems, where applicable, offer full motion, high fidelity cockpits, leading edge, high fidelity flight dynamics models, high resolution real world visual databases and can be configured to emulate any aircraft in the world. ETC works with each individual client to make sure that their equipment is exactly what is needed to execute their objectives and within their budget for the most cost effective expenditure.

ETC manufactures human centrifuges, altitude chambers, sterilizers, hyperbaric chambers, spatial disorientation research and training devices, ejection seat simulators, upset recovery trainers, land and water survival training systems, aircraft simulators, and disaster management training systems. Current projects include the ATFS-400-31 high-performance human centrifuge for the United States Air Force, the GL-6000 spatial disorientation research device for the United States Navy, and a full aeromedical training center for a SE Asian customer.

Home of the AeroMedical Training Institute (AMTI) ETC offers courseware and training services on all devices. Whether it is student, operator or maintenance personnel training all curriculums are developed in accordance with each organization's own individual set of requirements. The AMTI provides training either at each client's own facility or on ETC equipment housed at ETC's National AeroSpace Training and Research Center (NASTAR Center). Training may be either refresher in nature or "ab initio".

For clients who prefer to have access to a complete, comprehensive training and research center, ETC offers the services of its NASTAR Center. Outfitted with ETC equipment, the NASTAR Center stands prepared to provide an

ideal training and research environment for all physiological training and research scenarios in instrument navigation, mission rehearsal, acceleration physiology, spatial disorientation, situational awareness, aircraft egress and ejection decision making, oxygen management, altitude physiology, night vision, and night vision goggle use.

NASTAR's staff of research scientists will work with each customer to develop the correct research protocol in accordance with their objectives. The NASTAR Center also has an Institutional Review Board (IRB) to support research projects.

Major training at the NASTAR Center include programs for spaceflight participants and suborbital scientists as well as advanced pilot training that includes altitude physiology, upset recovery, spatial disorientation, and situational awareness.

NASTAR supports science, technology, engineering and mathematics (STEM) education for students in grades K-12 and their teachers through outreach initiatives. Teachers can participate in such activities as a simulated suborbital space flight on the Phoenix STS-400 centrifuge and a 10,000-foot ascent in the Falcon 12/4 Altitude Chamber to experience Boyle's and Charles' Laws of Gases.

ETC's Integrated Logistic Support Business Unit has provided life cycle support and upgrade services customized for each customer's needs over the past 40 years as well. Often times equipment upgrade services are required to keep a piece of equipment safe and able to perform optimally. ETC provides life cycle support and upgrade services not only for their own equipment but for all other manufacturers' equipment regardless of age or geographic location.

ETC is a public American company with approximately 330 employees worldwide. The core team for our products has an average experience level of over 20 years. ETC is a certified Quality Company and holds British Standards Institute (BSI) ISO certifications to ISO 9001:2008 and ISO 13485:2003.



# Nuts & Bolts

The **Corporate & Sustaining Affiliate (CSA)** is holding its **third General Business Meeting and Luncheon** during the Atlanta AsMA annual scientific meeting on Monday, May 14th, at noon. All Primary & Alternative Representatives are welcome and encouraged to join CSA's President, Dick Leland (ETC), President-Elect Leroy Gross, MD (Inomedic, Inc.), Secretary-Treasurer David Hale (Pilot Medical Solutions), and Historian Mary O'Connor (CDC/NIOSH) for this exciting event! The meeting will provide background information on the affiliate for new comers and unique opportunities for positioning, networking, leadership, and contribution for all members. This year, the luncheon will include a **Feature Event**, a guest speaker providing insights on **Radiation Exposures in Long Duration Spaceflight**. The officers are also planning for the CSA Speakers Bureau, an event designed to highlight the annual meeting host city's technical, commercial and/or aerospace achievements.

The new leadership team for CSA has plans to support connectivity and Networking, as well as augment the visibility of corporate members. Already, Leroy Gross, MD (Inomedic, Inc.) has designed logo templates, and lead the officers in designing final graphic drafts for consideration by the CSA membership. The vote conducted last month decided that Logo Bravo (see page 15) would be the new seal for CSA. Other directives for the year include assistance to the Corporate & Sustaining Membership Committee in the revision of the Corporate Brochure, CSA website development, chairing and managing the newly "transitioned" Nominating Committee, and the launch of the Affiliate Long Range Planning Committee.

The **AsMA Corporate & Sustaining Membership Committee (CSMC)** will convene for their annual mid-year Business Meeting in this month, before the start of the Scientific Program Committee's annual review of scientific submissions for the May meeting. Issues for this joint gathering of Affiliate and Committee members will include advocacy for airline organizations, 2012 scientific panel sponsorship and research development, Bellagio 2, CSA Primer development, new ways to recruit across the aerospace industry, and collaborations with other AsMA affiliates and constituent organizations. The CSMC Chairman, Yvette DeBois, MD and CSA President Dick Leland will be presenting the work of the CSMC and CSA, respectively, as well as discussing pertinent issues of corporate interest to the AsMA Council during their November mid-year meeting. **The Corporate Forum Breakfast**, designed to apprise current corporate members of the benefits of affiliation and attract new members, will be held at 7:30am on Tuesday, May 15th.

Over breakfast, speakers from the CSMC, the AsMA Home Office, and senior members of the AsMA Council will present methods to Network, Market, Recruit, Research, Educate and offer an opportunity for the corporate members to involve the Association in issues affecting the aerospace marketplace.

CSMC members continue to model some traditional affiliate functions for the corporate members, while others as part of the **Transition Program**, are now managed by CSA leadership. To help CSA launch and contribute, in the tradition of other AsMA affiliate organizations, CSMC volunteers have served in key operational positions for CSA. Eilis Boudreau, MD PhD serves as the Affiliate Program Committee (APC) Chairman, lending her expertise to the development of the CSA Primer, research forum development, and annual scientific meeting presentation and sponsorship. Yvette DeBois, MD MPH provides infrastructure and stability for our member services program, while modeling the chairman position on the Affiliate Membership Committee (AMC). After years of support from Dan Callan, DO, a former CSMC member, the process of nominations and election is the latest program transitioned from CSMC modeled management to CSA for their independent oversight and execution. **The Nominating Committee needs a Chairman!** Interested members should contact CSA President Dick Leland ([dletc@aol.com](mailto:dletc@aol.com)) for details. The Nominating Committee now joins the History & Philanthropic Initiatives, the Speaker's Bureau, and the CSA Courier, all successfully transitioned from CSMC modeled management to CSA management.

The **Affiliate Membership Committee (AMC)** conducted new member solicitation activities, needs assessments, and contributed to the newsletter this year. The Affiliate welcomes three new organizations since the last issue of our newsletter: Go2 Altitude, HeartSine Technologies, Inc., and Instituto Nacional de Aviaco Civil. The CSMC solicitation team continues to engage in meaningful conversations with several aerospace organizations. They use solicitation guidelines developed to explain the benefits of affiliation and customize presentations. Similar guides have been developed for CSMC members conducting Needs Assessments. They are an opportunity for focused conversations with new members, as well as veteran members with new interests and directives, to assist members in choosing Affiliate activities to enhance mutual organizational objectives. (Continued on page 16)



## Nuts & Bolts (cont. from page 15)

Yvette DeBois, MD has been conducting these assessments throughout the year, following assessments conducted by Col. Nora Taylor during the Anchorage scientific meeting. For seven the Affiliate newsletter was produced by the CSMC to model that function for CSA. The newsletter was amongst several functions that the CSMC executed to assist CSA in launching and developing the infrastructure necessary for cohesiveness and networking for corporate members. For the second year, the **CSA Courier**, is produced and distributed primarily from Affiliate leadership efforts with CSA President Dick Leland and Greg Kennedy from ETC doing the heavy lifting. Harvey Watt & Company, the David Clark Company, Inc., CDC/NIOSH and the AsMA Home Office all contributed interesting feature stories while ETC/Nastar, Medaire, and Environics submitted informative company profiles to familiarize members with their organizations. CSA Secretary-Treasurer David Hale, MD (Pilot Medical Solutions) and Yvette DeBois, MD (CSMC) were additional contributors for this issue. Col. Paul Young, MD from the CSMC is guiding work with Chris Snee from ETC in review and development of Affiliate marketing tools, including the AsMA Corporate Brochure & internet access for CSA.

Col. Margaret Matarese, MD, Eilis Boudreau, MD PhD, and Yvette DeBois, MD, greeted the exhibitors during the 2011 annual scientific meeting in Anchorage, Alaska. The **Exhibitor's Program**, under the leadership of Dr. Matarese, has become an invaluable tool for recruitment. The greeters extended a personal message of gratitude to each exhibitor and identified organizations for future solicitation. The impact of annual meeting exhibiting on subsequent business functions is a focal interest to this workgroup, as well. During Needs Assessments, conducted after the Anchorage meeting, and onsite at the meeting, exhibitors applauded the new positioning of the New Member Welcome Reception to provide an exciting new venue for the marketplace! The reception venue within the exhibit area increased contacts and provided a refreshing, casual setting for exhibitors to connect with annual meeting attendees. The CSMC will be suggesting to Council that this new format be repeated for the Atlanta meeting in the spring.

In the past, the Affiliate has sponsored panels, developed workshops, convened teleconferences, and mailed solicitation packages, etc. without a common funding source. Efforts to characterize the financial needs of CSA began almost three years ago with records being maintained by former CSMC member Dan Callan, DO through the Finance Initiative. With a favorable vote from AsMA's Executive Committee last year, CSA now receives 10% of the annual revenue generated from corporate membership dues for operations, **closing the Finance Initiative**. So, the corporate members have resources for programming and operations, managed throughout the year by CSA's new Secretary - Treasurer David Hale from Pilot Medical Solutions.

During the New Orleans annual scientific meeting in 2007, the assembly expressed an interest in better characterizing the involvement of the corporate members within the Association over the years. A preliminary review of records at the Home Office confirmed a wealth of information on past members and aerospace commerce history. Deborah Lickteig from Eagle Applied Sciences, LLC is guiding the **History Initiative** workgroup in their task to capture the historical contributions of the Corporates to the Association. The database development is being funded courtesy of Eagle Applied Sciences, LLC, to categorize information for easy search and access. Ms. Lickteig reports that the research phase of the project has closed and database design is underway.

The **Philanthropic Initiative** is a new venture for CSA that was initially piloted by Marian Sides, PhD, former CSA President and Immediate Past President of the Aerospace Medical Association. This Initiative explores appropriate venues for giving on behalf of the members, develops programming to stimulate giving on behalf of aerospace industry enthusiasts, and identifies the philanthropic activities of the members. After passing the AsMA President gavel on to Fanancy Anzalone, MD (from American Airlines) this May, Dr. Sides plans to continue these efforts and encourages other CSA members to join her in celebrating corporate giving! Additionally, once returned, she will provide guidance to the plans for the second **Bellagio Project**. This international conference held traditionally in Bellagio, Italy joined established scientists and clinicians with upcoming aeromedical students and training residents in focused consideration of the studies to date and research voids on issues impacting cardiovascular health in long duration spaceflight. The venue and scope of Bellagio 2 planned tentatively for spring 2013 are under consideration now and interested sponsors and participants should contact Dr. Sides at [mbsides@sbcglobel.net](mailto:mbsides@sbcglobel.net) for more details. (Continued on page 17)

## Nuts & Bolts (cont. from page 16)

Under the direction of Eilis Boudreau, MD PhD, the **Affiliate Program Committee (APC)** has selected panels for sponsorship during the Atlanta meeting. CSA has sponsored panels exploring a variety of aeromedical issues from environmental medicine and toxicology to dentistry in space operations. Traditionally, topics for sponsorship have been chosen for their innovation, novel contribution to the scientific program, and/or their potential to create interest and support portions of the AsMA membership targeted for growth. Under the guidance of the APC, CSA is sponsoring and submitting two panels for evaluation by the Scientific Program Committee planned for presentation at the Atlanta scientific meeting. These entries are focused on exploring research needs to expand evidence-based practice in aerospace nursing and identifying strategies for productivity measurement and management in the international airline medical community, respectively. Dr. Marian Sides with Ramon Dominguez-Mompell, MD have gathered airline medical directors to present cost effectiveness and productivity metrics used to promote the viability of their departments. This panel will be a focused, practical follow-up to the introductory feature event panel on the decline of US airline medical departments presented during the CSA Business Luncheon two years ago. Additionally, CSA is sponsoring and submitting a panel chaired by CSMC member Col. Nora Taylor. She is joined by CSMC member Janet Sanner RN, as well as fellow Aerospace Nursing Primer Taskforce members Richard Gustavson RN and Marian Sides PhD to survey the contributions of nurses in a variety of aeromedical setting while identifying research voids impacting aerospace nursing practice. This will be the first installment in a two-part panel presentation to celebrate their work on the CSA Primer that re-launched this fall. Both panel presentations should support the Association by bolstering the comprehensiveness of scientific program, and by highlighting unique perspectives and topical challenges in today's aerospace clinical and operational experiences.

Development of the **CSA Primer**, formerly the Core Curriculum, was re-started this fall. Catherine Dibiase RN, Janet Sanner, RN, Marian Sides PhD, Faith Widders RN, Richard Gustavson, Col. Nora Taylor and Yvette DeBois, MD have taken the aerospace nursing section of the Primer to "cruise altitude." The Aerospace Nursing Primer is the first of the nine Primer texts under development for CSA by the CSMC to provide a tool to support independent, ongoing, scientific programming by CSA. The Primer will be a bridging resource to facilitate the ability of our non-medical corporate members with an interest in related research to develop scientific

programming by CSA. The Primer will be a bridging resource to facilitate the ability of our non-medical corporate members with an interest in related research to develop scientific programming for presentation and publication. Additionally, it will explain to business members, with an interest in research sponsorship and funding, the commercial benefits for supporting aeromedical research.

The **CSA Speakers Bureau** is a program, usually conducted on Tuesday evening during the annual scientific meeting, dedicated to bringing local commercial perspective or topical industry focus to our meeting. Leroy Gross, MD has developed several speaker options for the Atlanta meeting. The 2012 Speaker Bureau will follow last year's impressive, joint presentation in Anchorage by Mary O'Connor (CDC/NIOSH) and the President of PenAir, Daniel Seybert exploring safety in Alaska air operations and amongst Alaskan bush pilots.,

CSA and the CSMC have longstanding relationships with the **Aerospace Medicine Student & Resident Association**, providing opportunities for leadership, mentoring, and acknowledgement of excellence through sponsorship of their **Scientific Paper Award**. Contact CSA President Dick Leland ([dletc@aol.com](mailto:dletc@aol.com)) for details on award sponsorship and submission review participation.

The **Affiliate Nominating Committee (ANC)** will be working in January to identify talented leaders amongst our corporate members for select Officer positions in CSA. The selection of potential leaders for CSA is an important contribution, because they are charged with setting policy and procedures with a lasting impact on our new union. Marian Sides, PhD and Guy Banta, PhD MPH want to assist the current CSA officers in the growth process, as well, by launching its fourth and last standing committee, the **Long Range Planning Committee (LRPC)**. Members interested in participating in either of these vital committees should contact CSA President Dick Leland ([dletc@aol.com](mailto:dletc@aol.com)).

# CSA Member Companies

## November 2011

Aerospace Medical, PLC  
Aerospace Medicine Residency Program,  
UTMB  
Air Canada  
Aircraft Owners & Pilots Association  
Air Line Pilots Association  
Allianz Global Assistance  
American Airlines  
Aqua Lung America, Inc.  
Archinoetics/Fatigue Science  
Armed Forces Benefit Association  
Aviation Medicine Advisory Service  
Baxter Healthcare Corporation  
Cam Lock Limited  
Centers for Disease Control and Prevention/  
National Institute for Occupational Safety  
and Health  
Cobham Life Support  
David Clark Company, Inc.  
Eagle Applied Sciences, LLC  
Education Enterprises, Inc.  
Egyptian Aviation Academy  
Envionics, Inc.  
Environmental Tectonics Corporation  
Gentex Corporation

GO<sub>2</sub>Altitude  
HeartSine Technologies, Inc.  
Harvey W. Watt & Company  
Honeywell Safety Products  
Inomedic, Inc.  
Instituto Nacional de Aviação Civil  
International Federation of Air Line Pilots  
Associations  
Lifeport, Inc.  
Lockheed Martin  
Martin-Baker Aircraft Company Limited  
Mayo Clinic  
MedAire, Inc.  
NeuroKinetics Health Services (B.C.), Inc.  
NOMADiQ Defence Solutions  
Oregon Aero, Inc.  
Pilot Medical Solutions  
Psoria-Shield, Inc.  
South African Airways  
Spectrum Aeromed  
Universities Space Research Association  
(USRA)  
Verathon Medical Corporation  
Wyle