VOLUME 23, ISSUE 3

Lockheed Martin Management Association Retirees

Newsletter

Looking Forward Towards A Wonderful Retiree Future!

MARCH 2015

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Needed: Staff Help

LMMAR needs volunteers to help keep LMMAR going. We have several vacancies on the Board and we particularly need a newsletter editor. If you think you can help please contact:

Norm Dhom, Membership Chair – (408) 732-2742

Jerry Vaughan, Treasurer – (408) 985-2708

NOTE: LMMAR LUNCHEON ON TUESDAY, MARCH 17

The Most Expensive Ship Ever

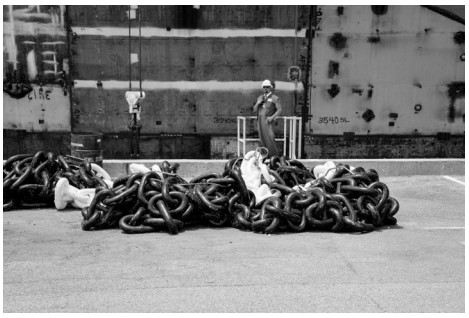
14 billion for a ship and they call it a Ford!

The United States is building its next generation of aircraft carrier, the FORD -class carriers. The U.S. Navy gave us

access to photograph construction of the USS Gerald R. Ford at Newport News Shipbuilding, Virginia.

The numbers behind the USS Gerald R. Ford are impressive; about $14 billion in total cost, 224 million pounds, about 25 stories high, 1,106 feet long, and 250 feet wide. But the sheer enormity of the ship and construction operation is hard to grasp until you're nearly face-to-metal with the massive military beast.

At Newport News Shipbuilding the power of new technology and 100 years of carrier design is built into every facet of the new ship. The Ford will handle up to 220 takeoffs and landings from its deck every day. Part of that quick turnaround is because, when aircraft like the new F-35 return for maintenance, the plane's network will already have alerted ground crews to what's needed so they can get the aircraft on its way faster than ever before.



The new FORD-class aircraft carrier will be the largest, most lethal ship ever when it joins the US fleet in 2016.

The scope of the ship's construction is hard to fathom, but that chain is made up of links weighing 360-pounds each. Replacing the 50-year-old Nimitz-class carrier, engineers at Newport News Shipbuilding designed the Ford to accept technology that won't be seen for decades. Some of those advance-

ments are expected, but most are as far-fetched as the Navy's newest drones were in 1963. Regardless of what the future brings, all of it will require more power, which is why the Ford will generate three times the energy of Nimitz-class carriers. The paint applied to the Ford actually isn't paint, but a "high solids coating" that lasts longer and doesn't break down as quickly. Newport News Shipbuilding rents acres of canvas to cover the hull when it applies the coating.

Moving the island house (the control tower) back further on the ship will accommodate an increased launch rate for the 75+ planes that will live aboard the carrier.

The Ford will be capable of launching and receiving up to 220 planes a day. That increased rate comes in part from replacing the steam-generated catapult systems like those on the USS Abraham Lincoln with an electromagnetic system that's more efficient and gentler on the multi-million-dollar jets. Even with the extra fuel and weapons needed to keep that pace, the Ford is equipped to remain at sea without replenishment for months at a time. For the first time the Navy will have no urinals on this carrier. Gender neutral toilets mean berthing can be swapped between male and female without concern and one unit means fewer spare parts and repair. The Navy is requesting larger pipes for the Ford to prevent blockage and unpleasant smells, which are common issues on carriers.

A carrier's effectiveness isn't judged by its plumbing, but by its ability to deliver lethal military force from these 4.5 acres of sovereign US territory. That lethality comes in many forms — like the weapons aboard the new F-35 Joint Strike Fighter.

The SeaSparrow Missile also factors into lethality with its ability to fly four times the speed of sound, turn on a dime, and intercept anti-ship missiles more than 30 miles out. Ford's lethality is also enhanced by the RIM 116 short-range defensive surface to air missile and the radar-guided, rotating 20 mm Gatling Gun called the Phalanx CIWS (Sea-Wiz). That lethality aims to help keep sailors safe and the enemy less so. When the Ford finally hits the water in a few years, it will look less like something from "Waterworld" and more like something from the future.

Bill Hammerlund—Illness

Bill and Jan Hammerlund have been LMMAR Executive Committee members for many years. Jan reported: On Feb. 5, Bill underwent surgery to fix a hernia and to implant a Peritoneal Dialysis catheter in his abdomen so he and I can drain the fluid that regularly accumulates in his belly. They made the incision for the hernia repair and discovered that he didn't have a hernia. The "hernia" bump under his skin was caused by a collection of metastasized cancer nodules. The cancer(s) is/are widespread, although they cannot say exactly where it originated. He is too weak to undergo exploratory surgery to discover the source of the cancer, or to tolerate chemotherapy. Bill is now under hospice care at home, with good days alternating with days of weakness and exhaustion.

Indago Unmanned Hellcopter

Western Australia's Emergency Services Commissioner called upon Lockheed Martin's Indago quad copter to assist with efforts to contain and extinguish a fire that had the potential to threaten lives and property.

In its first real-world firefighting tasking, the aircraft flew over the live fire and provided real-time intelligence to the Planning and Incident Management team. The Indago was able to

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provide information on the location of the fire edge, the intensity and location of hotspots, as well as identify people and assets at risk through smoke. The Indago also assessed damage and transmitted real-time images of activities occurring on the ground.

"After Indago's insertion into our firefighting operations, an estimated 100 homes were saved," said Wayne Gregson, Fire and Emergency Services Commissioner. "The Indago provided a critical capability while the manned aircraft were grounded at nightfall, and increased our ground operators' situational awareness."

For more than 80 years, manned aircraft have been employed in support of ground firefighting operations; currently, aircraft support is available to ground firefighters in Australia for approximately 12-14 hours per day during daylight hours only.

"The Indago can work to fight fires and provide information to operations day and night without risking a life," said Dan Spoor, vice president of Aviation and Unmanned Systems at Lockheed Martin's Mission Systems and Training business. "This real world application signifies the potential for using unmanned systems to augment manned firefighting operations, doubling the amount of time for fire suppression."

The Indago's industry-leading flight time and EO/IR gimbaled imager provides high quality data and enhanced situational awareness for operators to make real-time decisions. Indago is capable of providing tactical situational awareness and geo-location, increasing its value in missions such as firefighting.

"The Indago has shown its ability to operate in all weather and visibility conditions," said Tim Hand, Chief UAV Controller at Heliwest. "Since we began using it in November 2014, it has performed well in temperatures ranging from -12 degrees to 112 degrees; rain to snow; and smoke or dust."

The Heliwest Group, which is providing aircraft and services in support of the firefighting mission, first took delivery of the Indago in November 2014; since then, Heliwest has flown the Indago more than 200 hours in support of multiple civil operations including firefighting, task inspections and surveying.

Legion Pod

At Lockheed Martin, our targeting systems and sensors have a long history of innovation. Since the 1970s, we've used internal investment and pre-planned product improvement programs to provide warfighters with the latest and greatest in targeting technology. From our LANTIRN pods, M-TADS/PNVS and Missile Launch Detector to Target Sight System and Sniper Advanced Targeting Pod, we've continuously proven that our detection, identification, tracking and engagement capabilities are unmatched.

Now, we're introducing Legion Pod — our latest example of targeting and sensing innovation. Utilizing a combination of advanced technologies — and providing a legion of capabilities unlike any other system —Legion Pod enables warfighters to successfully complete their missions while staying out of harm's way. Want to learn more? Here are five fast facts about Legion Pod:

It's unique.

There's no question — Legion Pod sets itself apart from the competition. Using Lockheed Martin's IRST21 sensor, networking and advanced processing technology, Legion Pod provides high-fidelity detection and tracking of air-to-air targets in radar-denied environments. What exactly does that mean? It means that Legion Pod detects and tracks enemies while remaining hidden from radar. Then, it takes the data it collected, combines it, and shares it with allies.

It's flexible.

No, we don't mean that Legion Pod bends easily – or that it does backflips. What we mean is that Legion Pod is designed for flexibility, accommodating additional sensors within its current structure without costly system or aircraft modifications. So, if a customer requests another sensor capability be added, it can quickly be integrated in Legion Pod without redesigning the pod or affecting the host aircraft. Legion Pod is purposefully made with enough physical space, power and payload capacity to be able to do so.

It's transportable.

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Yes, this means what it sounds like — that Legion Pod can easily be moved. In our case, it means moved from aircraft platform to aircraft platform. How does that work? Legion Pod is designed with a standardized interface, or, as we often call it, a plug-and-play architecture. Think of Legion Pod like a USB stick — you simply plug it into an airplane, and it immediately knows what airplane it's on and what software it requires to operate.

It's production-ready.

All Legion Pod components have completed limited qualification, and flight tests will occur shortly. Why is that important? If a customer placed a large order of Legion Pods tomorrow, the production team could immediately begin producing and assembling parts of the pod while concurrently completing qualification testing and flight testing. Legion Pod is real — and it's ready to fulfill warfighters' needs.

It's sustainable.

Legion Pod is modular, meaning it's made up of line-replaceable units (LRUs) that can be removed and swapped out when repairs or upgrades are required. Think of it this way — instead of taking a 550-pound Legion Pod off an aircraft and removing it from the flightline for work, an operator can simply replace or repair a specific LRU while Legion Pod remains in place. The same applies for upgrades, ensuring that Legion Pod can easily evolve to meet customer requirements.

Next Generation Identification System

Most criminals depend on anonymity — hiding and even changing their identities to avoid apprehension and prosecution. But "flying below the radar" has gotten much harder for lawbreakers, thanks to the Federal Bureau of Investigation's (FBI) Next Generation Identification (NGI) system. The new system allows the FBI and other law enforcement agencies to spend less time waiting for results and more time keeping Americans and their families safe.

With delivery of NGI's fourth and final increment by Lockheed Martin, the FBI has completed deployment of a system that uses advanced technology to identify criminals far faster and more accurately. NGI provides state-of-the-art biometric investigative tools to more than 18,000 local, state, tribal and federal law enforcement agencies across the country, enabling them to identify suspects in less than 30 minutes for routine searches or, in cases involving the "repository of individuals of special concern (RISC)," in less than 10 seconds.

Sunshine Report

Get well cards were sent to the following members of LMMAR this past month.

Jean Abelow, Bill Hammerlund and Jack Pedretti

Sympathy cards were sent to the following members also.

Kirby Hollis (for his wife Mary Jane)Gen Pettee (for her husband Doug Sargent) Vern DeVincenzi (for his son)John E. Cunningham (sent to family)Irene Douglass (for her husband Douglas)

If a member knows of anyone ill or grieving, please send an email to Karen Stayrook at: karenstayrook@comcast.net

LMMAR Bridge

Feb 3 - Individual Duplicate - 1st Place – Dave Himmelblau, 2nd Place - Chuck Schmidt, and 3rd Place - Bob Vigeant.

Feb 5 - Pairs Duplicate - 1st Place – (tie) - Gary Bea & Chuck Schmidt and Dave Himmelblau & Dave Topka.

Feb 10 – No Game.

Feb 12 – No Game.

Feb 17 - Individual Duplicate - 1st Place – Gary Bea and 2nd Place - (tie) Roger Abegg, Ted Hinshaw, and Chuck Schmidt.

Feb 19 - Pairs Duplicate –1st Place – Chet Hayes & Ted Hinshaw and 2nd Place – (tie) Gary Bea & Chuck Schmidt and Dave Himmelblau & Dave Topka.

Feb 24 – Pairs Duplicate - 1st Place – Rodger Abegg & Bob Vigeant. and 2nd Place - Gary Bea & Chuck Schmidt.

Feb 26 - Pairs Duplicate –1st Place – (tie) Roger Abegg & Ted Hinshaw and Gary Bea & Chuck Schmidt.

Fiber LASER Weapon System

BETHESDA, Md., March 3, 2015 – Lockheed Martin's [NYSE: LMT] 30-kilowatt fiber laser weapon system successfully disabled the engine of a small truck during a recent field test, demonstrating the rapidly evolving precision capability to protect military

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forces and critical infrastructure.

Known as ATHENA, for Advanced Test High Energy Asset, the ground-based prototype system burned through the engine manifold in a matter of seconds from more than a mile away. The truck was mounted on a test platform with its engine and drive train running to simulate an operationally-relevant test scenario.

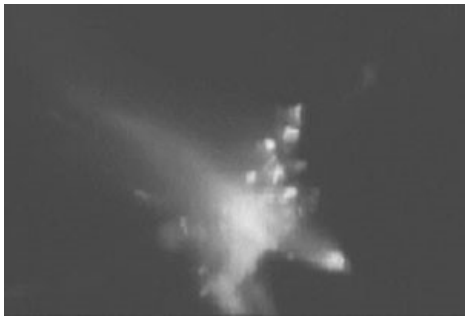
"Fiber-optic lasers are revolutionizing directed energy systems," said Keoki Jackson, Lockheed Martin chief technology officer. "We are investing in every component of the system – from the optics and beam control to the laser itself – to drive size, weight and power efficiencies. This test represents the next step to providing lightweight and rugged laser weapon systems for military aircraft, helicopters, ships and trucks.

"The demonstration marked the first field testing of an integrated 30-kilowatt, single-mode fiber laser weapon system prototype. Through a technique called spectral beam combining, multiple fiber laser modules form a single, powerful, high-quality beam that provides greater efficiency and lethality than multiple individual 10-kilowatt lasers used in other systems.

ATHENA is based on the Area Defense Anti-Munitions (ADAM) laser weapon system developed by Lockheed Martin in Sunnyvale, California, which has been proven in demonstrations against small airborne and sea-based targets. It incorporates the 30-kilowatt Accelerated Laser Demonstration Initiative (ALADIN) fiber laser developed by the company in Bothell, Washington.

High Energy LASER

Boeing's High Energy LASER Mobile Demonstrator (HEL MD) team has used a solid state laser to destroy mortars and unmanned aerial vehicles (UAVs). A laser destroys targets with pinpoint precision within seconds of acquisition, then acquires the next target and keeps firing.



In recent demonstrations, HEL MD used a 10-kilowatt, high energy laser installed on an Oshkosh tactical military vehicle. The demonstrator is the first mobile, high-energy laser, counter rocket, artillery and mortar (C-RAM) platform to be built and demonstrated by the U.S. Army.

Boeing is demonstrating that directed energy technologies can augment existing kinetic strike weapons and offer a significant reduction in cost per engagement. With only the cost of diesel fuel, the laser system can fire repeatedly without expending valuable munitions or additional manpower.

LMMAR Membership

New Members:

Martha A. Blake
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Eagle, ID 83616-6077
Ph: (208) 639-1527

Nik Djordjevic
1070 Lemon St
Menlo Park, CA 94025-6169
Ph: (650) 999-1287

Rejoined:

Gary Bea
1750 Karameos Ct
Sunnyvale, CA 94087
Sp: Autumn
Ph: 408 739-3186

Directories were mailed on 12 Feb. Those that ordered them should have them. I have a few extra, if someone wants one.

Point Of Contact For Address Changes And Other Member Concerns:

Lockheed Martin Mngmt Association Retirees

LMMAR B/163 O/ 3070S
P.O. Box 3504
Sunnyvale, CA 94088-3504

Norm_Dhom@Earthlink.Net

Norm Dhom,
Membership Chairman

AEHF System

Lockheed Martin [NYSE: LMT] has successfully integrated the propulsion core and payload module for the

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fourth Advanced Extremely High Frequency (AEHF) satellite nearly five months ahead of schedule. Reaching this critical milestone early accelerates AEHF-4 into its test flow and evidences the continued programmatic success of the nation's most protected military communications satellite system.

Now a critical element of U.S. national security, military satellite communications delivers vital connectivity to armed forces around the globe, making warfighters safer and more effective.

The Advanced Extremely High Frequency (AEHF) system provides vastly improved global, survivable, highly secure, protected communications capabilities for strategic command and tactical warfighters operating on ground, sea and air platforms. The system also serves international partners including Canada, the Netherlands and the United Kingdom.

A single AEHF satellite provides greater total capacity than the entire legacy five-satellite Milstar constellation. Individual user data rates will be increased five-fold, permitting transmission of tactical military communications, such as real-time video, battlefield maps and targeting data. In addition to its tactical mission, AEHF rovides the critical survivable, protected, and enduable communications links to national leaders including presidential conferencing in all levels of conflict.

Lockheed Martin is currently under contract to deliver six AEHF satellites and the Mission Control Segment. The program has begun advanced procurement of long-lead components for the fifth and sixth AEHF satellites.

The AEHF team includes the U.S. Air Force Military Satellite Communications Systems Directorate at the Space and Missile Systems Center, Los Angeles Air Force Base, Calif. Lockheed Martin Space Systems Company, Sunnyvale, Calif., is the AEHF prime contractor, space and ground segments provider as well as system integrator, with Northrop Grumman Aerospace Systems, Redondo Beach, Calif., as the payload provider.

For AEHF, Lockheed Martin is building on its proven record of providing progressively advanced spacecraft for protected, narrowband and wideband military satellite communications. Lockheed Martin built the legacy Milstar protected communications satellites, as well as the Defense Satellite Communications Systems (DSCS) wideband communications spacecraft for the U.S. Air Force. Lockheed Martin is also the prime contractor on the U.S. Navy's Mobile User Objective System (MUOS), next-generation narrowband tactical satellite communications system designed to significantly improve ground communications for U.S. forces on the move.

IRS Code Section 213(d) Eligible Medical Expenses

An eligible expense is defined as those expenses paid for care as described in Section 213 (d) of the Internal Revenue Code. Below are two lists which may help determine whether an expense is eligible.

For more detailed information, please refer to IRS Publication 502 titled, "Medical and Dental Expenses,"

Deductible Medical Expenses

Abdominal supports
Abortion
Acupuncture
Air conditioner (when necessary for relief from difficulty in breathing)
Alcoholism treatment
Ambulance
Anesthetist
Arch supports
Artificial limbs
Autoette (when used for relief of sickness/disability)
Birth Control Pills (by prescription)
Blood tests
Blood transfusions
Braces
Cardiographs
Chiropractor
Christian Science Practitioner
Contact Lenses
Contraceptive devices (by prescription)
Convalescent home (for medical treatment only
Crutches
Dental Treatment

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Dental X-rays
Dentures
Dermatologist
Diagnostic fees
Diathermy
Drug addiction therapy
Drugs (prescription)
Elastic hosiery (prescription)
Eyeglasses
Fees paid to health institute prescribed by a doctor
FICA and FUTA tax paid for medical care service
Fluoridation unit
Guide dog
Gum treatment
Gynecologist
Healing services
Hearing aids and batteries
Hospital bills
Hydrotherapy
Insulin treatment
Lab tests
Lead paint removal
Legal fees
Lodging (away from home for outpatient care)
Metabolism tests
Neurologist
Nursing (including board and meals)
Obstetrician
Operating room costs
Ophthalmologist
Optician
Optometrist
Oral surgery
Organ transplant (including donor's expenses)
Orthopedic shoes
Orthopedist
Osteopath
Oxygen and oxygen equipment
Pediatrician
Physician
Physiotherapist
Podiatrist
Postnatal treatments
Practical nurse for medical services
Prenatal care
Prescription medicines
Psychiatrist
Psychoanalyst
Psychologist
Psychotherapy
Radium Therapy
Registered nurse
Special school costs for the handicapped
Spinal fluid test
Splints
Sterilization
Surgeon
Telephone or TV equipment to assist the hard-of-hearing
Therapy equipment
Transportation expenses (relative to health care)
Ultra-violet ray treatment
Vaccines
Vasectomy
Vitamins (if prescribed)
Wheelchair
X-rays

Eligible Over-the-Counter Drugs

Antacids
Allergy Medications
Pain Relievers
Cold medicine
Anti-diarrhea medicine
Cough drops and throat lozenges
Sinus Medications and Nasal sprays
Nicotine medications and nasal Spray
Pedialyte
First aid creams
Calamine lotion
Wart removal medication
Antibiotic ointments
Suppositories and creams for hemorrhoids
Sleep aids
Motion sickness pills

Non-Deductible Medical Expenses

Advancement payment for services to be rendered next year
Athletic Club membership
Automobile insurance premium allocable to medical coverage-
Boarding school fees
Bottled Water
Commuting expenses of a disabled person
Cosmetic surgery and procedures
Cosmetics, hygiene products and similar items
Funeral, cremation, or burial expenses
Health programs offered by resort hotels, health clubs, and gyms
Illegal operations and treatments
Illegally procured drugs
Maternity clothes
Non-prescription medication
Premiums for life insurance, income protection, disability, loss of limbs, sight or similar benefits
Scientology counseling
Social activities
Special foods and beverages
Specially designed car for the handi capped other than an autoette or special equipment
Stop-smoking programs
Swimming pool
Travel for general health improvement
& more!

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MARCH 2015

Activity Calendar

- **LMMAR Executive Board Meeting**. First Monday of each month unless holiday conflict, then second Monday. 9:30 a.m. Bldg. 157-Satellite Room (off the cafeteria).

- **LMMAR Newsletter Mailing Session**. Volunteers needed **PLEASE**. Second Thursday of each month. 9:30 a.m. Bldg. 157-Litrium. Contact Norm Dhom (408) 732-2742.

- **LMMAR Bridge Card Players**. Join the fun! Every Tuesday and Thursday, 11:30 a.m. at the Willow Park Condominiums located at the NE corner of Moffet Blvd. and Middlefield Road in Mountain View. Entrance is from Moffet Blvd. Contact Dave Himmelblau, 'phone No. 650 968-1121.

- **Lockheed Martin Blood Bank Drive**. Second Wednesday of each month. 8:00 a.m.– 3:00 p.m. Bldg. 163. LMMAR Contact Norm Dhom (408) 732-2742.

- **Lockheed Martin Retirees Investment Group (LMRIG).** Meets last Thursday of each month, 1:00-2:00 p.m. in B163 at the corner of J Street and 1st Ave. (Employee Connection Building). Dues are $2. Contact Don Kinell (650) 948-1520 or Martin Abelow (408) 253-6924. Join us for lunch in the B-157 cafeteria prior to the meeting between 11:40-12:40.

- **LMMAR LUNCHEON SCHEDULE FOR 2015** March - St. Patrick's Day Luncheon at Michael's at Shoreline - 3/17
  July- Barbeque in Central Park, Santa Clara – Date not set
  October – Halloween Luncheon at Michael's at Shoreline 10/30
  December 11, Holiday Luncheon at Michael's at Shoreline 12/11

For your financial needs, please contact Star One Credit Union at www.starone.org or (866) 543-5202 toll free.

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