

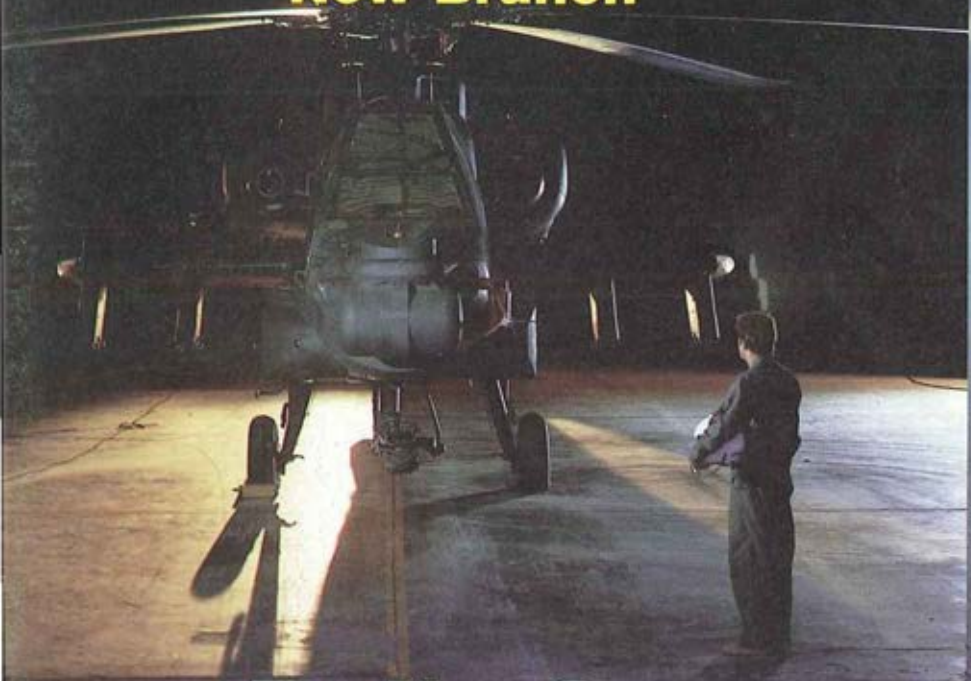
**1983 SPECIAL ISSUE: "SIMULATION IN TRAINING"  
LIFT-OUT DIRECTORY — AAAA'S INDUSTRY MEMBERS**

# **Army Aviation**

SEPTEMBER 30, 1983

## **AH-64A | APACHE**

**The New Generation Attack  
Helicopter for the Army's  
New Branch**



**Rolls Out**  
**30 September 1983**



Hughes Helicopters, Inc.

# Army Aviation

SEPTEMBER 30, 1983

VOL. 32 — NO. 9

ARMY AVIATION

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endorsed by the Army  
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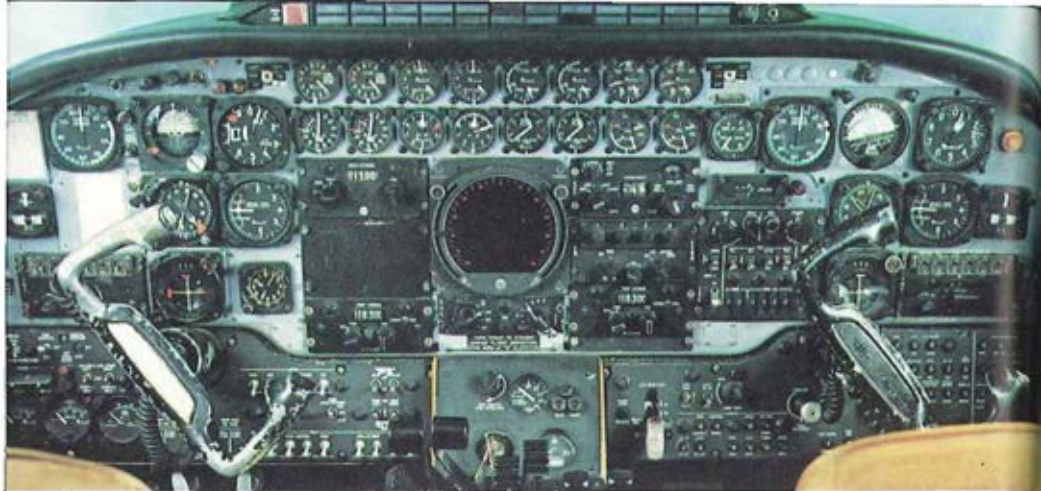
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## AAAA group studies US-based World Helo Championship in '84

**A**T AAAA's 16 July Nat'l Executive Board meeting in Arlington, VA, the Board approved Member-at-Large **BG R.F. Mollinell's** proposal that the 1984 **Fifth World Helicopter Championship (WHC)** be conducted in the U.S. with possible support from OSD and the other Services, provided that all Services and other civil agencies be brought into the picture (NAA, HCA, AAAA, AHS, HAI, Whirly Girls, FAA, etc.).

The Board also approved his proposal that an interim AAAA International Affairs Committee be established to determine the support for a US-based WHC and his offer to pursue the matter with OSD and the other Services once this basic data is obtained.

AAAA President **Jim Smith** then appointed **LTG H.W.O. Kinnard** (Chairman), **LTG R.R. Williams**, **BG R.F. Mollinell**, **COL J.J. Stanko**, and **Mr. L.D. Kulk** to the International Affairs Committee, and requested it to work with the HCA and provide guidance with regard to the following questions:

(1) What countries would participate in a US-based WHC? Mexico, Canada, Italy-Agusta, France-Aerospatiale/TX, are possibilities.

(2) Cost of championships? Transportation, housing, meals, judging, etc. What expenses are to be paid by the participating nations? What would the U.S. underwriting be and by whom?

(3) What agency should administer a 1984 WHC, to include the preparation of the basic letters of invitation?

(4) What should AAAA's commitment - fiscal and otherwise - be within the process?

The President requested that the Committee meet as soon as practicable, provide interim reports on its actions through the AAAA National Office, and be prepared to report its findings at the 19 October AAAA Nat'l Board meeting in Washington, D.C.

In an earlier action, HCA Vice President **John Zugschwert** read the following letter into the record:

June 30, 1983

Mr. John F. Zugschwert  
Executive Vice President  
Helicopter Club of America  
1 Crestwood Road  
Westport, Conn. 06880

Dear Mr. Zugschwert:

I've had the staff review the bidding on the HCA request for us to host a 1984 World Helo Championship - and I've also given the idea close scrutiny. The conclusion in both cases is No.

The advantages are many - the disadvantages are legion. When I consider: that we would dedicate an aviation group headquarters and a combat aviation battalion for planning, coordination and support; that we are now in trouble with German people over helo increases here because of noise and night training; that we are moving in Pershing II amid peace demonstrations; that U.S. Corps will be fully committed to tank gunnery, REFORGER, and changing over to BRADLEY and M1, then there is no way we can take on the logistics of an international Helo Championship. Sorry I can't be more positive to the idea, but it is a burden we cannot now afford. Best wishes.

Glenn K. Otis  
General, U.S. Army  
Commander in Chief  
Hq. USAREUR/7Army



## ARMY AVIATION ASSOCIATION

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LTC (Ret.) Bob Sweeney writes: "More needs to be done to ensure adequate recognition of our annual honorees. They're truly deserving individuals and I believe their awards should be presented by the Army's top leaders — namely, the Secretary of the Army, the Chief of Staff, the SMA, etc. To accomplish this, significant prior planning must be done on our part to coordinate schedules or to consider moving the convention to a site where the possibility of this occurring is greater. The senior officers at each of our last two Awards Banquets would lend prestige to any audience; however, they are not yet "at the Top" and if we are to uphold our tradition of being "Above the Best," we should exhaust our efforts to ensure our head table supports that tradition. Our Association needs, and our honorees deserve, recognition by these individuals."

It would be simple, as we did in the first 20 years of AAAA's existence, to hold each year's Convention—and its Awards Banquet—in Washington, D.C., thereby facilitating SA/CSA/MSA attendance. However, the Ass'n is committed to a triennial Convention site rotation plan that will bring its professional and social activities to many other members — primarily the younger members — who annually, for one reason or another, cannot come to Washington, or who do not choose to do so.

At the same time, AAAA has always invited "the Top" to be present at our Awards Banquets in Atlanta and St. Louis as well as Washington and it has done so well in advance of each year's function. The fact that several key Department of the Army dignitaries could not be present at the past two ceremonies is unfortunate. In each case official duties prevailed and prevented their attendance. It's my intention, as your President, to invite these same officials to present our 1984 awards. In my view, however, their recent stand-ins were "at the Top" in our profession and I don't believe any of our Awardees or banquet attendees can fault either the '82 or '83 program where the presentation of honors was made by our most distinguished aviators and logisticians.

While I acknowledge Bob Sweeney's point, I think all members should know that our future sites are being rotated to assure that the convention, and its professional sessions, industry exhibits, and social activities, are made readily available to many AAAA members from other parts of the country who might not otherwise attend a Washington convention, regardless of the head table makeup one way or the other.

James C. Smith  
Major General, Ret.  
President, AAAA





# The optoelectronic helicopter.

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The U.S. Army Applied Technology Laboratory is developing the advanced digital optical control system, or ADOCS, which further increases reliability by being impervious to electrical disturbances. Not only does ADOCS eliminate heavy mechanical linkages, its light weight and low cost permit multiple redundancy for extra protection against crippling enemy fire.

Prior to actual flight, ADOCS will be pre-tested on our moving-base flight simulator with its multi-window, nap-of-the-earth display . . . the only one of its kind in the industry. It's another example of Boeing's leading edge, the restless search that has

brought about fiberglass blades, composite structures, high-speed rotors, an electronic vibration suppressor . . . a search that continues to develop bladeless main rotors, advanced cockpits, tilt rotor design and more. It's the search for the better helicopter, the Boeing priority.



**BOEING HELICOPTERS**

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***"It's been a challenging summer."***

*Actions taken on the recent reorganization in ODCSOPS, the transitioning of aviation units in the CBAA, and the possible World Helicopter Championships in the U.S. in '84, as well as a progress report on the aviation branch and an update on aviation simulation.*

**L**OOKING back over my first two months "in office," I can safely say that it has been a challenging summer for the aviation team here in Washington. We have been fully engaged, with the other services, outlining our entire helicopter program for the Secretary of Defense at the **Defense Resources Board (DRB)**.

This is a very significant effort for us, and the outcome will essentially shape the direction of Army Aviation through the end of this century. That, plus continuing work on our research and development efforts for the **Light Combat Helicopter (LCH)**, and establishing the Army position on the **Joint Services Vertical Lift Aircraft (JVX)** program, have kept us hopping. I hope to have more details on these activities for you next month.

For this September report, however, I want to key on our recent reorganization in ODCSOPS; where we are on accelerating the transition of aviation units to the Cavalry Brigade (Air Attack) structure; the possibility of having the **1984 World Helicopter Championships** here in the United States next summer; a progress report on the aviation branch; and, in keeping with the theme of this issue, an update on aviation simulation.

### **Reorganization**

As you know, my principal job in ODCSOPS has been as the Deputy Director for Requirements and Army Aviation Officer. It is still the same job, only expanded and with a new name. This summer, Requirements Directorate absorbed the Force Management Directorate and the Army Force Modernization Office, creating the **Force Development Directorate (DAMO-FD)**.

**ABOUT THE AUTHOR**  
Brigadier General (P) Robert F. Molinelli serves as the Deputy Director of Requirements and Army Aviation Officer, Office of the Deputy Chief of Staff for Operations and Plans, DA.

The incentive behind the change was to more closely link force modernization efforts with the organizations that employ our new systems. Basically, action officer responsibilities are now oriented on organizations (i.e. Attack Helicopter Battalion, Combat Support Aviation Battalion, etc.) rather than systems only.

**Combat Division**, which includes the Aviation, Armor, and Infantry teams, is now **Combat Maneuver Division (DA-MO-FDD)**. Colonel John A. "Buzz" Lasch is the new Division Chief, coming to us from the Army War College this summer.

We also have three new Force Integration Staff Officers on the Aviation Team: **MAJ(P) Joe Sutton** is taking on attack helicopter and aviation force structure responsibilities; **MAJ(P) Ralph Hiatt** took over the combat aviation battalion and the utility helicopters from **MAJ(P) John Riggs**, who departed recently enroute to command in Korea; **MAJ Jim Richards** is now responsible for the air cavalry squadron, observation helicopters (including AHIP), and night vision goggles.

Reorganization growth created the need for a Army Aviation Officer. **COL Tom Berta** is assigned to that position. I am very pleased to have these officers join the team.

### Accelerated Army 86 transition

The Army 86 plan for aviation units calls for the gradual conversion of existing units to **Cavalry Brigade (Air Attack) (CBAA)**, **Corps Aviation Brigades (CAB)**, and **Regimental Combat**

### Aviation Squadrons (RCAS).

Currently, the program is to transition to eight CBAA's and three RCAS in the Active Component, and several **Combat Support Aviation Companies (CSAC)** in the Reserve Components between FY85 and FY89. However, the Army Staff was recently tasked to explore the possibility of accelerating the transition plan during this same period.

The Aviation team, working with TRADOC and the Aviation Center, has developed several alternatives to accomplish the desired acceleration. These alternatives have been briefed to the MACOM Commanders and Deputy Chiefs of Staff and will be discussed in detail at the commanders conference next month. We hope to get a decision to proceed in the very near future. More on this in "Army Aviation" as decisions are made.

### 1984 WHC

In 1981, the U.S. Helicopter Team, primarily made up of Army Aviators, won the world team and crew championships in Poland. Traditionally, the country winning the **World Helicopter Championships (WHC)** is offered the opportunity to host the next competition in their country.

The WHC is sponsored by the **Federation Aeronautique Internationale (FAI)**, an international association consisting of all the National organizations, groups, and clubs subscribing to the statutes.

The **Helicopter Club of America (HCA)** is a member of the FAI and, as such, has asked DOD to support them in hosting the 1984 WHC. They specifically asked that all services be requested to participate and that DOD grant the use of a U.S. military installation as the competition site. HQDA has been tasked by OSD to evaluate their request and to solicit the participation of all the services.

To date, initial WHC information briefings have been conducted, and the ser-

#### Second Generation

"My youngest son, Dale, has been accepted for flight school in January 1984; here's his AAAA application. Let's get him started in the Quad-A and hope he enjoys it as much as I have these last 25 years . . . and keep those SPOOF Rosters coming!

James O. Goldsberry  
CW4, Ret.  
Fredericktown, MO



vices and CONUS MACOMS are in the process of conducting support cost analysis. On 30 September 1983, HQDA will provide a recommendation to the Secretary of Defense on DOD support of the 1984 championships. I know there will be a lot of enthusiasm within the Army to form another team for this competition — and I hope it will work out for us to do so.

### Aviation Branch

I imagine that all of you would like to know when the branch transfer process will begin and when you can pin on your new aviation branch insignia. Most aviators, other than those in the Medical Service Corps, will be transferred to the Aviation Branch.

Initiatives being considered are:

(1) Individuals holding SC 15 or 71 as their only specialty will automatically be transferred to the aviation branch;

(2) Individuals holding an additional specialty that is not an accession specialty, i.e., 41, 49, 54, etc., in combination with SC 15 and 71 will automatically be considered for transfer to the Aviation branch;

(3) Individuals possessing SC 15 or 71 in conjunction with another accession specialty, i.e., 11/15, 12/15, 71/95, 71/91, will be given an opportunity to choose the specialty in which he or she is most qualified.

The specific details of these initiatives are nearing a decision point. Individuals will be notified personally and career decisions will be made by the individual in conjunction with MILPERCEN.

Requests will be evaluated on their own merits consistent with the Army's need for officers in those specialties. When you are notified by MILPERCEN that you are now a member of the branch, you may then wear the aviation insignia if it is available for purchase.

The Aviation Warrant Officer is a member of the Aviation Branch. We are

### ASE Symposium

The Army Aviation Ass'n, in cooperation its industry member firms and the Office of the Project Manager, Aircraft Survivability Equipment, are sponsoring the first AAAA ASE Symposium to jointly explore the whole range of operational needs and capabilities of these technologies. Under the technical direction of Colonel Curtis J. Herrick, Jr., PM-ASE, the two-day professional meeting will be held on Nov. 15-16 at the Loral Electronic Systems new facility in Yonkers, N.Y.

The 1983 Symposium is open to all interested AAAA members (U.S. citizens only) and will be at a secret, "no foreign" level. Registration forms and a program outlining the Symposium's presentations, speakers, and panelists may be obtained from AAAA, 1 Crestwood Road, Westport, CT 06880 - Phone: (203) 226-8184.

soliciting a decision which will permit Warrant Officer aviators to wear the same branch insignia as the Aviation commissioned officer. Improved personnel management policies and procedures can be expected as a result of the inclusion of all aviators in the Aviation Branch.

### Simulation

The theme of this issue of **Army Aviation** is "Simulation in Training." Since the days of the "blue canoes," the Army has been serious in its outlook and use of flight simulators. Besides their role in building individual aviation proficiency, they have been key to a standardization program that is used by every Army Chief of Staff as an example of how to do it right. I am pleased to say that we are still moving ahead in the area of simulation equipment and technology. Since 1969, the Army has fielded 28 "aircraft-oriented" **flight simulators (FS)** of four different types. Beginning with the UH-1 FS, which gave us an excellent emergency and instrument procedures training device, we progressed to more soph-

isticated simulators using camera mod-board visual technology. The CH-47 and AH-1 FS were developed and fielded in the mid-70's, giving the Army expanded training capability in the areas of **night vision goggles (NVG)** and weapons systems.

We have now moved even further toward an all-purpose simulator with the advent of computer generated imagery. Both the UH-60 and AH-64 FS will give us a nap-of-the-earth and extensive weapons system training capability, as well as the existing instrument and NVG capability. They are being fielded to locations in CONUS and overseas where aviation units are concentrated. We have

a solid, supportable program that will continue to improve in the future.

Aviation simulators uniquely complement our flight training programs, both at the training base and in sustaining our aviators in the field. In these days of high ammunition costs, they are a must for achieving and maintaining weapons systems proficiency in the AH-1 and AH-64.

Meanwhile, we continue to explore developing technologies to ascertain applicability to low cost simulation devices. I encourage and support the efforts of all of those who enthusiastically develop, field and use our flight simulators—they are essential for continued professionalism in Army Aviation. ■■■■

## Three primes select "teams" for '85-'88 LHX competition

**T**HREE major airframe manufacturers have announced the names of their team members in the competition for the Army's **Advanced Rotorcraft Technology Integration Program (ARTI)**.

Phase 1 of the ARTI Program will develop and demonstrate advanced electronic systems and cockpit concepts for the Army's next generation of **Light Helicopters (LHX)**.

The expected Phase 1 completion date is Dec 31, 1985 with the engine development set for FY 85, the airframe in FY 86 and the weapons systems development to start in FY 88.

The Sikorsky Aircraft ARTI Team includes:

Martin Marietta Aerospace, Northrop Electro-Mechanical Division, Collins Gov't Avionics Division, and the Norden and Hamilton Standard divisions of UTC.

Bell Helicopter Textron's team to enter

the 6,000-unit, single-pilot cockpit design:

Sperry Flight Systems Defense Systems Division (cockpit displays and subsystem management), Honeywell Military Avionics Div. (flight control and guidance), and Texas Instruments (target acquisition, navigation, survivability, and subsystems integration).

The ARTI Team of the Boeing Vertol Company includes:

Boeing Military Airplane Co. (avionics systems integration), Westinghouse Defense and Electronic Center (sensor fusion system support), and the Harris Corp. (rotorcraft systems automation and pilot displays).

Hughes Helicopters is expected to compete in this multi-billion dollar program which may also draw participation from several major European firms. Army sources indicate the IOC for the multi-mission **Light Helicopter (LHX)** will probably not take place prior to 1994.

A large motion simulator rig is shown in a laboratory setting. The rig consists of a platform with a control console and a steering wheel, mounted on a base with multiple hydraulic actuators. The platform is tilted upwards. The background shows a clean, industrial environment with white walls and a concrete floor. The entire image has a blue color cast.

**A 28-Page  
Update on  
SFTS's**

# **Simulation in Training**





by Dr. Jay R. Sculley

## *Raising a few caution flags*

**M**Y first exposure to the manner in which Army Aviation does business occurred two years ago when I first took office and became familiar with the community's superb long range research and development planning.

All involved, I found, spoke with one voice, and had documented aircraft developmental intentions not only through the next five years and into the extended planning annex, but also well past the year 2,000. This planning by Army Aviation's leadership, the focus on the future, on the convergence of technologies, on the capturing of those technologies to provide better tools with which the aviator could fight, became a symbol within the Pentagon of efficiency, and how Army Aviation could achieve its goals toward the overall betterment of the Service.

That efficiency, I should again emphasize, has as its foundation the concentration on sound planning in research directed toward the development of the most combat effective aircraft, weapons

#### ABOUT THE AUTHOR

A 1962 VMI graduate, Dr. Jay R. Sculley, the Assistant Secretary of the Army (Research, Development and Acquisition), serves as the Scientific Advisor to the Secretary of the Army.

systems, and flight simulators we are capable of producing.

While planning, research, development, and procurement appear to be moving relatively smoothly at the moment among our aviation programs, I want to discuss some matters which do concern me, only because we have done so well in the past.

#### The leading edge

In the case of flight simulation, the Army operates literally on the leading edge of technology, and I would be terribly disappointed were we to lose our hold. My intent is to raise a few caution flags which, while certainly not "showstoppers," could fail to roundout what otherwise does and will continue to constitute one of the Army's true success stories, i.e., our flight simulator program.

The true measure of effectiveness of the equipment we develop, as I see it, is very fundamentally its capacity to do either of two things: first, increase the capability of the aviator to fight the battle and win; or, second, increase the aviator's capability to train to fight and win.

It has been my experience, however, that we too often place emphasis on the

former, forgetting that training must be as important a portion of the R&D planning equation as is the actual development of any major weapon system we produce.

I want to focus for a moment on training tied to simulator research and development, because it is absolutely essential that we hold training in its proper perspective and recognize its importance. I say this because, as I review the funding profiles of simulator programs over the years, I see an erratic history which does not reflect at all the funding profiles of the aircraft the simulators replicate.

### **Falling behind**

During periods when the aircraft themselves enjoyed full financial support, the associated simulator programs often fell far behind. The best example I can think of occurred last year with the Army Systems Acquisition Review Council's addressing the APACHE Advanced Attack Helicopter production decision.

When "training" was raised for discussion, it became clear we had fallen years behind in planning for a simulator with which we were to train our aviators to operate perhaps the most sophisticated helicopter in the world.

It was only through the direct involvement of the Army's senior leadership and the extraordinary efforts of the DARCOM community that the Combat Mission Simulator, as the simulator for the APACHE is designated, was brought back on track as a program. Even with such centralized management, however, the best we could offer was an "interim" device, though ostensibly a good one which could meet the Aviation Center's 1985 training requirements.

The machinery was only then set in motion to field the prototype system at Fort Rucker in time for the arrival of the first APACHE transition students.

The lesson here, though quite simple, is singularly important. We must retain in proper perspective and recognize the significance of training as we plan the development of sophisticated hardware. Early definition of training requirements demands as much advanced planning as does the development of the system itself.

The planning, properly done, will also define simulator needs and associated costs for any additional training device development. This process, however simplistic it may seem, will assure retaining a level of funding in the simulator lines which will provide the delivery of the requisite devices to the field well ahead of the receipt of the first production items into which our pilots must transition.

Failure to retain this focus on training in the development of Army aircraft, and failure to retain sufficient monies in the simulator funding profiles, limits our ability to assure flight standardization and safety both at the Center and in the field, and does a grave disservice to our aviators.

We must always bear in mind that the most important link in the projection of raw aviation combat power on the battlefield is the aviator, and his success in battle is directly related to the quality of response we provide to his training needs.

### **Needs versus wants**

The second item I'd like to discuss is one which I view as extremely important, not only in simulator development, but also in every aspect of research and development in which we, the Army, collectively participate. This is the determination of how much is really required for effective training — not "desired," but "required."

In the world of flight simulation, numerous questions still exist with respect to defining capabilities which are absolutely essential.

For example, is a motion base necessary for the aviator already proficient in operating a specific aircraft?

Are simulator requirements the same when satisfying the training needs of aviators at Fort Rucker (institutional training) versus Fort Hood (continuation training)?

How much detail should be presented by visual systems for the conduct of nap-of-the-earth flight?

How much resolution is needed in visual systems for effective target acquisition recognition, and weapons delivery training?

When the Combat Mission Simulator is procured in its "interim" configuration, what tasks and skills will not be adequately trained and will these warrant the cost of the Preplanned Product Improvement Program?

These are tough questions, but, clearly ones with which we must deal. Unfortunately, responses will not come quickly. Answers, properly developed, will require a far better understanding of what constitutes cost effective training, as well as the degree of simulation and fidelity truly needed to maximize the learning potential of Army Aviators.

The salient point in discussing the satisfying of "actual" versus "desired"

training needs is tied directly to one of my earlier comments relating to cost of systems. Sophisticated flight simulators are extremely expensive, although they do amortize very quickly due to fuel and weapons cost offsets. However, up front, simulators do require a sizeable investment.

### Three benefits

Once we can collectively begin to pare down simulator requirements in the context of more precisely meeting training needs, we'll be better able to reduce development and procurement costs of such devices. This, in turn, will accomplish a number of things.

First, we can procure more of what we "need" rather than what we "want," and more accurately articulate our actual funding requirements.

Second, by defining training needs more precisely through a more comprehensive aviation training analysis, we will probably find a wealth of potential through the identification of training devices from the hierarchy available. Devices range from part task trainers, cockpit procedures trainers, gunnery procedures trainers, and operational flight trainers, to weapons systems trainers, combat mission simulators and integrated combat team trainers. The discipline of defining and refining requirements will logically also lead to other alternatives to our current "full-up" devices.

Third, the focus on "needed" versus "desired" will similarly offer alternatives to the Army in the provision of less costly, less sophisticated training devices to the field, for example, to the Aviation Battalion or Cavalry Squadron Commander searching for better ways to train his aircrews and ground personnel. This last item, I submit, is where we'll find our greatest payoff from the more accurate definition of training requirements.

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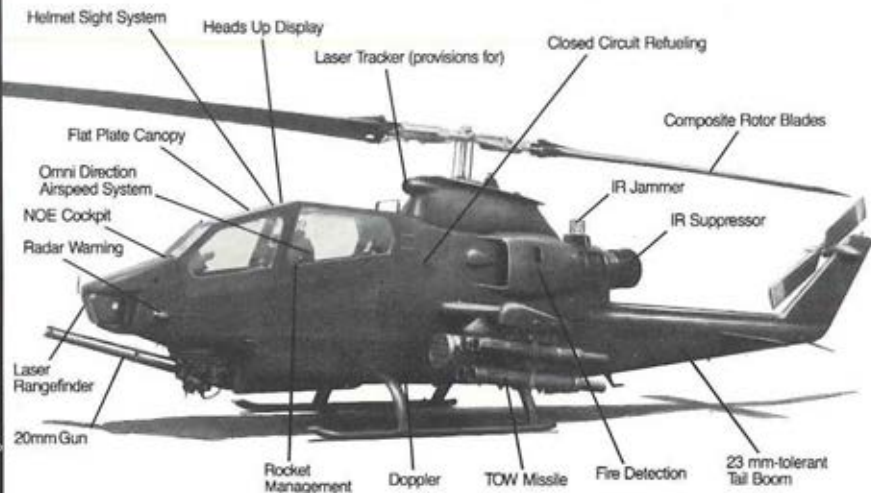
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## LHX development

Our next major aviation development will be the LHX family of aircraft. LHX will be as technologically advanced as any system ever envisioned for the Army and needs simulation to be planned as an integral part of its total development. We will have the opportunity with LHX to apply all of those lessons learned from our past simulator experience to ensure that this package will arrive in the field with a complete, planned, and fully integrated training system.

In addition to a coordinated flight and mission training system, LHX will need a strong research simulation base to refine its design and optimize the man-machine interface for the total system. Simulation support for the LHX will embrace the entire development cycle of the system and include research, system verification, flight training, and interactive combat mission simulation.

LHX is the system that needs and will get the very best in training design and equipment. We need to start today to guarantee that simulation really does become an integral part of all new weapons systems development.

In summary, I think that in the field of simulation we have only begun to discover our true training potential. The dedication of those involved in develop-

ing requirements, in developing hardware, in manufacturing the prototype and production items, and in developing the training programs for their use, still remains the key to providing our aviators the best possible tools with which to prepare for combat. No one person or agency in any of these disciplines, however, carries the guidon for the total Army simulator program.

Each segment, each element, is uniquely essential to the provision of this incredibly effective training capability. Of utmost importance, however, is the constant awareness by all that good training of the type our flight simulators can provide, will far better prepare our aviators to fight and win on the next battlefield. This, as we are keenly aware, is the basic purpose of training and the mission of every Army Aviator in our force structure.

## A proud story

As I mentioned earlier in this discussion, the story of flight simulation in the Army has been one of enormous success. All who have participated in its relatively brief life span can be justifiably proud. It is absolutely essential, however, that we always retain our recognition of its importance to the aviator, and explore every opportunity to gain increased benefits from its extraordinary potential for training benefit. ■■■■



## AVIATION VETERAN MOVES TO DA

Richard B. Lewis, II, Technical Director of the USA Aviation Research and Development Command, St. Louis, MO, has been transferred to the Pentagon to become the Director of Army Research and Technology. Lewis will report directly to Lt. Gen. James A. Merryman, the Army's Deputy Chief of Staff for Research, Development and Acquisition. The new position represents a reorganization of the Army's ODC-SRDA to strengthen and consolidate management of the technical base.

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## **SFTS:** A Key Role in Readiness

When it comes to helicopter training, the U. S. Army comes to Link.

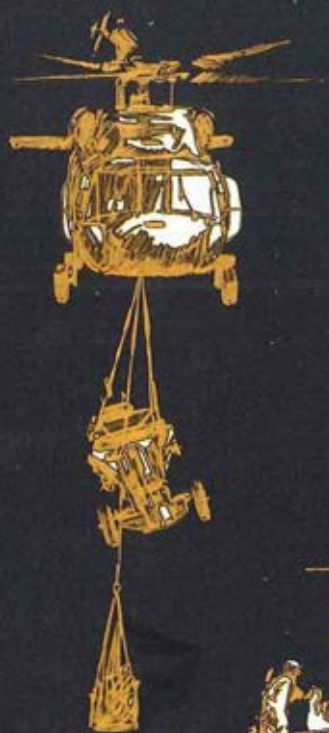
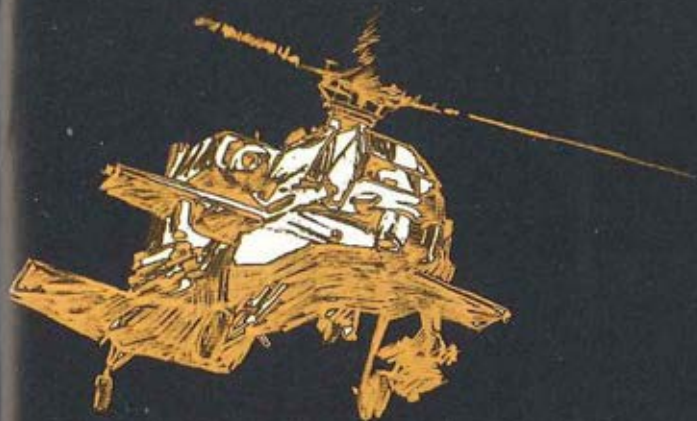
The Army has been doing so since 1971 when it launched the Synthetic Flight Training System (SFTS). Link first provided simulators for UH-1H pilots. This training proved so successful that the Army chose Link to support all other SFTS programs: CH-47D, AH-1S, UH-60A and AH-64A.

When it comes to training, the Army goes with Link.



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by Major Rene I. Beauchamp

## ***SFTS: Combat without casualties!***

**T**HE Army is the recognized lead service for rotary wing aviation, and has more rotary wing aircraft than any other service.

In developing and executing a pilot training program that supports initial and continuation rotary wing pilot training, the Army has developed a family of flight simulators that meets the special training problems of preparing a pilot to fight and survive on the complex battlefield of today and tomorrow.

### **Astronauts and simulation**

Space shuttle astronauts **Engle, Truly, Young, and Crippens** experienced nothing new when they completed their history-making flights in the spring and fall of 1981. What was new was their training program; a program that prepared them for space flight relying totally on their training in flight simulators.

Full simulation for full accreditation is already an established fact with space shuttle astronauts, and is well on the way to becoming a fact within civil aviation. The reason behind the increased use of

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A Staff Officer in the Weapons Systems Division of Office, Deputy Chief of Staff for Research, Development and Acquisition, Major (P) Rene I. Beauchamp is a 1969 graduate of flight school.

flight simulators is logical, but not completely obvious.

Although simulators, particularly those which provide a replication of the aircraft, are generally accepted as an instrument/emergency procedure trainer, what is not well understood is how the simulator can transform an aviator into a combat pilot.

In other words, how can a pilot be effectively trained to react to the stress, sound, and fury of the battlefield without endangering himself and risking the loss of the aircraft, and how can this be done within reasonable cost? To do this is an enormous undertaking, however, with the use of flight simulators it can be done.

### **A new family**

The Army's new family of **flight simulators (FS)** UH-60 FS, CH-47 FS, AH-1 FS, and AH-64 **Combat Mission Simulator (CMS)** are designed to provide training in normal operations and emergency procedures.

Furthermore, because of the out-the-window visual system, offensive and defensive mission training can also be introduced safely and at a fraction of the cost of training in the actual aircraft.

Attack helicopter pilots can move,



shoot, and communicate as they would in a real engagement and, moreover, so can the enemy weapon systems that are incorporated in the simulator. If the pilot does not properly position his aircraft, mask, engage and move again, he may find himself in an untenable position and shot down.

The Army's utility and cargo helicopter simulators will also have many similar mission related training tasks as the attack type simulators.

In addition, it will also be able to train pilots in sling load operations interacting in a combat area of operation. The task loading of the pilot in the simulator is realistic and, therefore, the stress on that pilot is also realistic. The rising cost of weapons and fuel, plus the decreased availability of firing ranges and aircraft, necessitates that an alternate training method be undertaken.

### **No substitute for flying**

In so doing, the Army has also touched upon a training method that provides an even better trained pilot. Simulators in the military will never replace flying the aircraft. They will, however, ensure that when the pilot does fly the aircraft, he or she will be highly trained and capable of completing the mission.

The new family of flight simulators will permit the Army to realistically train for war in a totally safe environment and,

moreover, do so within affordable constraints.

More importantly, there is no other medium that completely integrates tactics, enemy weapons, terrain, electronic warfare, NBC, night training, laser, FLIR, direct view optics, tanks, artillery, communications, etc., into a totally safe training scenario **except the flight simulator.**

The future holds an even more expanded call for flight simulators than what we see today. The Army will be developing the LHX aircraft through the use of a research engineering flight simulator called the **Rotorcraft Systems Integration Simulator (RSIS).**

From concept design through full system development, the way the Army builds helicopters will be drastically altered because of the introduction of simulation. Exploring system design, flight characteristics, weapon systems integration, cockpit controls, and display layouts, as well as research in expanding the flight envelope of the helicopter, can be more effectively performed in the RSIS.

Simulators can efficiently and effectively train pilots to fight and survive in the battlefield of tomorrow. Exploring new tactics, as well as testing existing doctrine with simulation is a reality today, and with simulation training, we will enhance our ability to meet the challenges of tomorrow. ■■■■

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### **AAAA conducts major nationwide survey**

In a random early September survey conducted among its 10,000+ CONUS-based members, the Army Aviation Ass'n (AAAA) is endeavoring to determine its membership's desires on future Convention sites and facilities. The 1,031 members were selected by computer with every tenth member on the AAAA's U.S. Zip Code List being sent a questionnaire. BG James M. Hesson, Ret., developed the survey and will report its findings to the National Board and the Association membership in mid-October. ■■■■



by LTC(P) Bobby R. Adams

## *The Synthetic Flight Training System Program*

It was nearly half a century ago that the U.S. Army became the world's first major user of flight simulation devices. This occurred in 1934 when the Air Corps overcame difficulties of flying the mail in bad weather by acquiring half a dozen Link trainers. These "Blue Boxes" proved so effective that 10,000 of them were used during World War II to train more than half a million Allied airmen.

Today, the Army is training its aviators through the use of the **Synthetic Flight Training System (SFTS)** program. The SFTS consists of over 100 simulator cockpits for such helicopters as the UH-1H, CH-47C, AH-1S, UH-60A and AH-64A.

### **How it works**

Most of you are probably familiar with the above, but how did we get there? What happens from the time the Army decides it needs a more efficient way of training aviators until the time the simulator provides that capability?

These simulators do not spring into being overnight. Today's training

systems are so complex, incorporating so much advanced technology, that it takes several years to bring a project to full fruition.

Development of a simulator starts with the generation of a **Training Device Requirement (TDR)**. As the proponent agency for TRADOC, Fort Rucker is responsible for its conception. The TDR is the document that outlines the need of the user for some device to provide a better method of training personnel. The TDR is sent to TRADOC and is staffed through various Army commands to insure that the device is required and is the best solution to the problem.

### **The procurement phase**

Once the TDR has been approved, DARCOM is tasked to procure the device. In the case of flight simulators, the Aviation Systems Division, Office of the **Project Manager, Training Devices (PM TRADE)** holds the charter to procure all SFTS devices. Therefore, the TDR is sent to PM TRADE and through close coordination with Fort Rucker, TSARCOM, and other commands, a Specification is developed.

The Specification details exactly what **(COMBAT/Continued on Page 58)**

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A North Georgia College ROTC graduate, Lt. Col. (P) Bobby R. Adams, Chief, Aviation Systems Div., PM for Training Devices, completed OFWAC (1964) and ORWAC (1966).





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**BELLIVEAU, Paul E.**, (MR) (AAAA 1980) Sanders Associates, Inc., 95 Canal Street, Nashua, NH 03061. Bus: (603) 885-3704. B: Oct 22. Job: Manager, ALO-156 Development, Sanders Associates, Inc. Educ: NE Univ, ASEE BBA. Prev Svc: USAF. 4 yrs. Orgn: Old Crews.

**BENDORF, Harry**, (BG) (AAAA 1981) Boeing Vertol Co., 1700 North Moore Street, Rosslyn, VA 22209. Job: Director, Washington Office, Boeing Vertol Co. Educ: BA MA. Prev Svc: USAF. 30 yrs. BG.

**BENZ, Tucker**, (MR) (AAAA 1981) Northrop Corp., 500 E. Orangeflor Ave., Anaheim, CA 92801. Bus: (714) 871-5000. Res: (714) 661-5939. W: Jeralyn. B: Jan 28. Job: Mgr Advanced Programs Marketing, Northrop Corp. Educ: USC, BS. Prev Svc: USA. 2 yrs. Orgn: AUSA, AFA.

**BERNARD, Bernard S.**, (MR) (AAAA 1982)

American Electronic Labs., P.O. Box 552, Lansdale, PA 19446. Bus: (215) 822-2929. Job: Senior VP Marketing, American Electronic Labs.

**BEVERAGE, Arthur W. Jr.**, (MR) (AAAA 1966) Garrett Corp., 1 First Nat'l Plaza, 1900, Dayton, OH 45402. Bus: (513) 224-0728. Res: (513) 433-3858. W: Mary. B: Oct 18. Nickname: Art. Job: Assistant Manager, Dayton Office, The Garrett Corp. Educ: Univ of ME, BS; AZ State, Cert in Mgmt. Orgn: ADPA.

**BEVILACQUA, Louis A.**, (MR) (AAAA 1981) General Electric Co., 1000 Western Ave, MD24008, Lynn, MA 01905. Bus: (617) 594-7617. Res: (617) 887-6489. W: Bobbie. B: Feb 5. Nickname: Lou. Job: General Manager, Turbohaft Engine Projects Dept. General Electric, Educ: Cornell Univ, BSME; NE Univ, MS.

**BLACKWOOD, John C.**, (MR) (AAAA 1983) 600 Hicks Road, Room 6123, Rolling Meadows, IL 60008. Bus: (312) 259-9800. W: Carol. B: Aug 11. Job: Program Manager, ANIALQ-162, Northrop Corp., DSD. Educ: Univ of WA, BSME; Def Sys Mgmt Coll, PMC.

**BLANK, Richard**, (MR) (AAAA 1981) Rockwell-Collins, 1704 Brookdale Lane, NE, Cedar Rapids, IA 52402. Bus: (319) 395-8227. Res: (319) 393-5605. W: Suzanne. Ch: Joel, Laura. B: Aug 26. Job: Senior Mktg Engr, Rockwell Int, Collins-GAD. Educ: U.C. Davis, BS AB MS.

**BOIVIN, Richard**, (MR) (AAAA 1983) 100 Cutsping Circle, Stratford, CT 06497. Bus: (203) 386-6545. W: Beverly. Ch: Nicole, Denise. B: Mar 11. Nickname: Dick. Job: Materiel Manager, BLACK HAWK, Sea Hawk, Sikorsky Aircraft, Div UTC. Educ: Fairfield Univ, BSS Econ. Prev Svc: USAF. 6 yrs. SP4.

**BONSWOR, Ralph E.**, (MR) (AAAA 1982) Litton Aero Products, 26540 Agoura Road, Calabasas, CA 91302. Bus: (213) 880-5200. W: Marguerite. Ch: John, Stephen, Susan, Michael. B: Oct 22. Nickname: Ralph. Job: Mgr., Military Marketing, Litton Aero Products. Educ: Univ of FL; Univ of Riverside, Mill Sci. Prev Svc: USA, USAF. Ret: 1967. 25 yrs. MAJ.

**BOSKING, William H.**, (MR) (AAAA 1980) 8814 Galeshead Road, Alexandria, VA 22309. Bus: (703) 841-0102. Res: (703) 360-9511. W: Patricia. Ch: William. B: Apr 2. Nickname: Bill. Job: Senior Consultant - Tactical C3, Calculon Corp., Arlington, VA. Educ: Univ of NB, BS; Univ of MO, MS. Prev Svc: USA. Ret: 1979. 20 yrs. LTC.

**BOTWAY, Donal L.**, (MR) (AAAA 1981) 8 Edgemarh Hill Road, Westport, CT 06890. Bus: (203) 227-9613. Res: (203) 227-9613. Ch: Denise, Suzanne. B: Jun 30. Nickname: Don. Job: President, Donal Botway Associates, Westport, CT. Educ: MA Inst of Tech, BS. Prev Svc: USA. Ret: 1946. 3 yrs. LT. Orgn: AUSA.

**BOWERS, Frame J. III**, (MR) (AAAA 1971) 106 Fieldstone Drive, Terrace Park, OH 45174. Bus: (513) 243-8810. Res: (513) 831-8552. W: Judy. Ch: Jennifer, David. B: Feb 8. Job: Manager, CFM56 Technical Publications, General Electric-AEG. Educ: USMA, BS; Princeton, MS; Xavier, MBA. Prev Svc: USA. 14 yrs. CPT. Orgn: AUSA.



**BOZZELLI, Joseph**, (MR) (AAAA 1980) 320 Passaic Avenue, Spring Lake, NJ 07762. Bus: (201) 449-7232. W: Anna. Ch: Joseph, John, C.J., Mary. B: Jul 8. Job: J.B. Avionics, 320 Passaic Avenue, Spring Lake, NJ. Educ: Marietta, BS. Orgn: AFA.

**BRANTLEY, Danon L.**, (MR) (AAAA 1982) Northrop Worldwide Aclt, P.O. Box 108, Lawton, OK 73502. Bus: (405) 353-2733. Res: (405) 536-5496. B: Aug 2. Nickname: Dan. Job: Director, Business Development, Northrop Worldwide Aircraft Svcs, Inc. Educ: Univ of FL, BSBA. Prev Svc: USA, USN, USAF, USMC. Ret: 1978. 27 yrs. LTC. Orgn: AUSA.

**BRAUE, George C.**, (MR) (AAAA 1983) 2031 Riva Ridge, San Antonio, TX 78248. Bus: (512) 492-1564. Res: (512) 492-1683. W: Louise. Ch: Scott David, Christy Anne, Mark Craig. B: May 21. Nickname: Brown. Job: Area Marketing Manager, H. Koch & Sons. Educ: E. Stroudsburg State, BS Health & Phys Ed. Prev Svc: USN, USAF, Ret: 1975. 30 yrs. LTC. Orgn: AFA.

**BRAY, H. Victor**, (MR) (AAAA 1972) Northrop Corp., 1000 Wilson Blvd., Suite 2300, Arlington, VA 22209. Bus: (703) 525-6767. Res: (703) 356-8431. W: Phyllis. Ch: Tom, Deb, Sue. B: Aug 27. Nickname: Vic. Job: Manager, Field Marketing, Northrop Electro-Mechanical Div. Educ: VA Mil Inst; Univ of W. MI, BS Math. Prev Svc: USA. 3 yrs. 1LT. Orgn: AHS, AUSA.

**BRENNAN, Sylvia J.**, (MS) (AAAA 1983) Spectrolab, Inc., 12500 Gladstone Avenue, Sylmar, CA 91342. Bus: (213) 365-4611. Job: Marketing Administrator, Spectrolab, Inc. Orgn: AUSA.

**BRIDGES, Ed A.**, (MR) (AAAA 1959) Northrop Worldwide Aclt, Box 518, Fort Rucker, AL 36862. Bus: (205) 598-4545. Res: (205) 792-5486. W: Fern. B: Oct 20. Job: Manager, Fort Rucker Div., Northrop Worldwide Aircraft Services, Inc. Prev Svc: USA, USAF. 11 yrs. SFC. Orgn: AUSA, AAAAA Offices/Misc: Past VP, Grand Canyon Chapter.

**BROOKS, Arnold**, (MR) (AAAA 1970) General Electric Company, 1000 Western Avenue, Lynn, MA 01905. Bus: (617) 594-2808. Res: (617) 592-0656. W: Lenore. Ch: George, Peter, Matthew, David. B: Nov 1. Nickname: Arnie. Job: Manager-Adv Engineering Programs, General Electric Co. Educ: Columbia Univ, BS; Princeton Univ, MA. Orgn: AHS, AUSA.

**BROWN, Arthur W.**, (MR) (AAAA 1976) 9110 Doty, Beaumont, TX 77707. Bus: (713) 975-9889. Res: (713) 866-3845. W: Kathleen. Ch: Amy. B: Nov 18. Job: Director of Operations, Armadillo Airways, Houston, TX. Prev Svc: 7 yrs.

**BROWN, David K.**, (MR) (AAAA 1982) 2903 Kragl Drive, Churchville, MD 21028. Bus: (301) 838-9292. Res: (301) 734-7572. W: Eileen. Ch: Dave, John, Cheryl, Lauri. B: Feb 23. Nickname: Dave. Job: District Manager, Russell Associates, Inc. Educ: Univ Buffalo, AA; Howard & Harford CC. Prev Svc: USN, 4 yrs. E7. Orgn: HCA, AHS, AUSA, AFA, NAPE.

**BROWN, Milton**, (COL) (AAAA 1982) Nat'l Aeronautic Assoc., 621 15th Street, N.W., Washington, DC 20005. Bus: (202) 347-2908. W: Jeannette. Ch: Stephen,

Larry, Jerry, Kelly. B: Jul 24. Nickname: Mil. Job: Secretary, Contest & Records Board, National Aeronautic Association. Educ: Univ of MD, BS. Prev Svc: USAF. Ret: 1971. 29 yrs. COL. Orgn: AFA.

**BROWN, William P.**, (MR) (AAAA 1982) Hughes Helicopters, Inc., Centinela & Teale Streets, Culver City, CA 90230. Bus: (213) 305-5559. Res: (213) 707-0859. W: Donna. Ch: Timothy, Catherine, Todd. B: Aug 31. Nickname: Bill. Job: VP-Engineering, Hughes Helicopters, Inc. Educ: ND State, BS; MA Inst Tech, MS. Orgn: AHS, AUSA.

**BROWN, Willis J.**, (MR) (AAAA 1983) Emerson Electric Co., Electronics & Space Div, St. Louis, MO 63136. Bus: (314) 553-2718. Job: Marketing Manager, Emerson Electric Co., Electronics & Space Div. Educ: Auburn Univ, BS; Univ of Puget Sound, MBA. Prev Svc: USA. 6 yrs.

**BRUCE, Richard H.**, (MR) (AAAA 1982) 39 Duner Road, Burlington, VT 05401. Bus: (802) 657-6332. Res: (802) 862-9143. W: Barbara. Ch: Jennifer, Kathie. B: Aug 28. Nickname: Dick. Job: Manager, Airborne Weapons Application, General Electric Co. Educ: Univ of VT, BS Elect Engrg. Prev Svc: USAF. Orgn: AUSA.

**BULAKOWSKI, John A.**, (MR) (AAAA 1976) 162 Lorann Drive, Naugatuck, CT 06770. Bus: (203) 386-6357. Res: (203) 729-9663. W: Deborah. Ch: Adam, Paul. B: May 26. Nickname: Jack. Job: Black Hawk Business Manager, Sikorsky Aircraft. Educ: Manhattan Coll, BSME; UB, MSME; UCONN, MBA. Orgn: AHS, AUSA.

**BULT, Ken**, (MR) (AAAA 1982) Garrett Turbine Engine Co., 2401 East Magnolia Street, Phoenix, AZ 85038. Bus: (602) 231-1365. Res: (602) 897-1325. W: Charlene. Ch: Elizabeth, Karen. B: Jan 12. Nickname: Ken. Job: Supervisor-Army Systems ILS, Garrett Turbine Engine Co. Educ: Purdue Univ. Prev Svc: USA. 2 yrs.

**BURGE, Quanton C.**, (MR) (AAAA 1983) 10002 Nash Lane, Apt. 2, Mabelvale, AR 72103. Bus: (501) 367-3633. Res: (501) 455-0645. W: Marian Jean. B: Oct 26. Job: Civil Draftsman, Garver & Garver, Inc. Prev Svc: USAF. 3 yrs.

**BURGER, Douglas A.**, (MR) (AAAA 1982) Gould Inc., NAVCOM Systems, 4323 Arden Drive, El Monte, CA 91731. Bus: (213) 442-0123. Res: (714) 526-7519. Job: Director of Marketing, Avionics Gould, NAVCOM Systems Division. Educ: Univ of MD, BA; Geo Wash Univ, MS. Prev Svc: USAF. Orgn: AFA.

**BURKDAL, Richard L.**, (MR) (AAAA 1982) Dalmo Victor Operations, 1515 Industrial Way, Belmont, CA 94002. Bus: (415) 594-2714. Res: (415) 342-1725. Ch: Donald, Karen. B: Jul 20. Nickname: Dick. Job: Director of Marketing, Dalmo Victor Operations. Educ: Purdue, BSME; Univ of Santa Clara, MBA.

**BURGHES, Gregory B.**, (MR) (AAAA 1975) Hughes Helicopters, Inc., Centinela & Teale Streets, Culver City, CA 90230. Bus: (213) 305-5712. B: Sep 1. Nickname: Greg. Job: Manager, AAH Marketing, Hughes Helicopters, Inc. Educ: The Citadel, Pol Sci. Def Sys Mgmt Coll. Prev Svc: USA, 5 yrs. CPT. AAAAA Offices/Misc: Past VP,

## **B** The Industry Team

Southern California Chapter.

**BUTLER, W.D.**, (MR) (AAAA 1978) Singer Company, Wings Prof Pk, Donnell Blvd, Daleville, AL 36322. W: Susie. Ch: Cory. Nickname: Dave. Job: Office Manager, Fort Rucker Sales Office, Link Flight Simulation Div. Orgn: AUSA.

## CCCCCCCC

**CAINE, Alan**, (MR) (AAAA 1981) Lucas Aerospace Limited, 155 Route 46 West, Fairfield, NJ 07006. Bus: (201) 227-8000. Res: (201) 825-7419. Job: Manager, Advanced Programs-Marketing, Lucas Aerospace. Orgn: AHS.

**CALDWELL, David E.**, (MR) (AAAA 1983) Western Aircraft Maint, Inc, 4444 Aeronca Street, Boise, ID 83705. Bus: (208) 386-6748. Res: (208) 345-1329. B: Mar 3. Job: VP Marketing, Western Aircraft Maintenance, Inc. Educ: Big Bend College, AA. Prev Svc: USN. 4 yrs.

**CAMPBELL, W.C.**, (MR) (AAAA 1974) Detroit Diesel Allison, P.O. Box 894, Indianapolis, IN 46206. Bus: (317) 242-5396. Res: (317) 844-2508. Job: Director, Gas Turbine Sales, Allison Gas Turbine Operations. Educ: MI State Univ, BA Mech Engr. Prev Svc: USN. 3 yrs. LT. Orgn: HCA, AHS, AUSA, AFA.

**CAMPBELL, William H.**, (MR) (AAAA 1979) 2061 Dyan Way, Maitland, FL 32751. Bus: (305) 352-4653. Res: (305) 645-0350. W: Joan. Ch: Tracy. B: Oct 31. Nickname: Willy. Job: Director Fire Control Systems, Martin Marietta. Educ: Columbia, BA BSEE; Harvard, MBA. Prev Svc: USNR. 3 yrs. LT. Orgn: AUSA.

**CANTERBURY, Ann**, (MS) (AAAA 1978) 815 Derhake Road, Florissant, MO 63033. Bus: (314) 731-5802. Res: (314) 831-7648. Ch: Kathryn Lynne, Jennifer Ann. B: Apr 11. Job: Admin. Assistant, Avco Lycoming Div. Educ: So. Il Univ, BS. AAAAA Offices/Misc: Trea, Lindbergh Chap.

**CAPORALI, Renzo**, (MR) (AAAA 1979) Grumman Aerospace Corp, MS C33-05, Bethpage, NY 11714. Bus: (516) 575-3696. W: Norma. Ch: Michael. B: Apr 12. Nickname: Doc. Job: VP-Developments, Grumman Aerospace. Educ: Clarkson, BSC MME; Princeton, MSAE Ph.D. Prev Svc: USNR. 14 yrs. LCDR.

**CARLSON, Walter A.**, (MR) (AAAA 1979) 3457 Tyler Court, Ellicott City, MD 21043. W: Marion. B: Dec 13. Nickname: Walt. Bus: (703) 920-5204. Res: (301) 465-0819. Job: Manager, Army Programs Development, Sanders Associates, Inc., Educ: Tufts College, BSEE. Orgn: AUSA, AHS.

**CARUSO, Richard P.**, (MR) (AAAA 1982) 5 Thayer Street, Northboro, MA 01532. Job: Lowell Technological Institute, Plastics Engineering.

**CARVER, Oliver T.**, (MR) (AAAA 1981) RCA Corp., Automated Sys., P.O. Box 588, Burlington, MA 01803. Bus: (617) 229-3241.

# C

## The Industry Team

Job: Manager, ATE Systems, RCA Corp. Educ: WVA Univ, NE Univ, BS Med.

**CASEY, Curtis J.**, (MR) (AAAA 1982) Dalmo Victor Operations, 1515 Industrial Way, Belmont, CA 94002. B: Mar 7. Nickname: Curt. Bus: (415) 995-1414. Res: (408) 264-2640. Job: Marketing Product Manager, Dalmo Victor Operations, Textron. Educ: American Tech Univ, BS MS. Prev Svc: USA. Ret: 1979. 20 yrs. CW3. Orgn: AUSA.

**CHAPDELAINE, Jack D.**, (MR) (AAAA 1982) Dayton-Granger, Inc., Marlech, 812 Nw 1st St, Fort Lauderdale, FL 33311. Bus: (305) 463-3451. Job: Exec VP & Gen Mgr, Martech, Inc, Affiliate of Dayton-Granger, Inc.

**CHERNOWITZ, George**, (MR) (AAAA 1967) 705 Grand Avenue, Ridgefield, NJ 07657. Bus: (201) 945-8203. Job: Director, American Power Jet. Orgn: AHS.

**CHILDERS, William R.**, (MR) (AAAA 1983) Solar Turbines Inc., Turbomach, 4400 Rufin Rd, San Diego, CA 92123. Bus: (619) 238-6769. W: Judy. Ch: Sharon, William. B: Jul 18. Nickname: Bill. Job: Manager, Product Support, Turbomach. Educ: College of Notre Dame, BS. Prev Svc: USN. 8 yrs. Orgn: AHS, AUSA, AFA.

**CHILTON, James P.**, (MR) (AAAA 1981) McDonnell Douglas Corp., 5301 Bolsa Avenue, Huntington Beach, CA 92647. Bus: (714) 896-3402. Res: (213) 670-3734. W: Shirley. Ch: Kevin, Theresa, Timothy, James. B: Mar 17. Nickname: Jim. Job: Program Manager, Mast Mounted Sight, McDonnell Douglas Astronautics. Educ: BS Aero Engrg, MS Aero Engrg. Prev Svc: USNR. 2 yrs. CDT.

**CHREIMAN, Paul E.**, (MR) (AAAA 1983) Brownell and Company, Inc., Main Street, Moodus, CT 06460. Bus: (203) 673-8625. Res: (203) 526-3038. B: Apr 20. Job: Industrial Sales Manager, Brownell & Co., Inc. Educ: Lycoming College, BA.

**CIMINERA, Michael**, (MR) (AAAA 1979) Grumman Aerospace Corp., MS C31-05, Bethpage, NY 11714. Bus: (516) 575-7533. Job: Director Advanced Systems Technology, Grumman Aerospace Corp.

**CLAQUE, Stanley K.**, (MR) (AAAA 1982) Perkin-Elmer Corp., 100 Wooster Heights Road, Danbury, CT 06810. Bus: (203) 797-6102. W: Ellen. B: Nov. Nickname: Ken. Job: Manager Program Support, Perkin-Elmer Corp. Educ: Univ of NE, BA. Prev Svc: USAF. Ret: 1978. 22 yrs. Orgn: Old Crows.

**CLANCY, Thomas M.**, (MR) (AAAA 1978) Sanders Associates, Inc., 95 Canal Street, Nashua, NH 03061. Bus: (603) 885-4731. Res: (603) 882-8285. W: Alice. Ch: Kathleen, Joanne, Thomas, Timothy, Christopher. B: Sep 8. Nickname: Tom. Job: Director, Advanced Technology, Sanders Associates, Inc. Educ: Tufts Univ, BSEE; Union Coll, MS. Orgn: AUSA, ADPA, Old Crows.

**CLARK, Richard B.**, (MR) (AAAA 1976) 1 Scenic Drive, Suite 505, Highlands, NJ 07732. Bus: (201) 872-1471. W: Maria-Luz. Ch: Leslie, Margaret. B: Nov 19. Job: Mktng Mgr, Teledyne Electronics, Highlands, NJ. Educ: St. Louis Univ, BS. Prev Svc: USAF, USN. 5 yrs. 1LT.

**CLAUSEN, Linden E.**, (MR) (AAAA 1982) Midland-Ross Corp., Grimes Div., 550 Route 55, PO Box 247, Urbana, OH 43078. Bus: (513) 652-1461. W: Joy. Nickname: Lin. Job: Customer Engineer, Midland-Ross Corp., Grimes Div. Prev Svc: USA. Orgn: AUSA, AFA.

**CLINE, Glib D.**, (MR) (AAAA 1982) Dayton-Granger, Inc., 812 N.W. 1st Street, Fort Lauderdale, FL 33311. Bus: (305) 463-3451. Job: Executive VP, Dayton-Granger, Inc.

**CLYONS, John B.**, (MR) (AAAA 1976) Pequot Adv., 108 Pierce Avenue, Bridgeport, CT 06604. Bus: (203) 333-6635. Res: (203) 333-6635. Job: Pequot Adv.

**COATES, O.E.**, (MR) (AAAA 1974) Litton Systems, Inc., 5500 Canoga Avenue, Woodland Hills CA 91365. Bus: (213) 715-2922. Res: (213) 837-4003. W: Barbara. Ch: Chad. B: Oct 10. Nickname: Sam. Job: Sr. Program Manager, Litton Systems, Inc. Educ: Augustana, So. Dakota. Orgn: AUSA. Prev Svc: USN. 4 yrs. PO1.

**COENSON, Martin**, (MR) (AAAA 1970) Bendix Corporation, MS 2/17A, Route 46, Teterboro, NJ 07608. Bus: (201) 393-3332. Res: (203) 226-8836. W: Rita. Ch: Steven, Barbara, Craig, Douglas. B: Feb 5. Job: Sr. PM, Bendix Corp., Teterboro, NJ.

**COLLIN, Sid R.**, (MR) (AAAA 1978) ITT, 1707 L Street, N.W., Washington, D.C. 20036. Bus: (202) 296-0989. W: Anne. B: Jul 4. Job: Director Field Marketing, ITT Avionics. Educ: Princeton, BS. Prev Svc: USN. 1 yrs. SIC. Orgn: AUSA.

**CONNOR, Jack E.**, (MR) (AAAA 1982) Lockheed Missiles & Space, 4534 N. Lindbergh, Suite 521, Bridgton, MO 63044. Bus: (314) 731-4207. Res: (314) 527-5855. W: Pat. Ch: Kathy. B: Jul 26. Nickname: Jack. Job: Manager, St. Louis Office, Lockheed Missiles & Space. Prev Svc: USN. Ret: 1981. 21 yrs. CDR. Orgn: NHA.

**COOK, Wayne A.**, (MR) (AAAA 1983) Conroy, Marable, Holleman, P.O. Box 388, Clarksville, TN 37040. W: Carol Sue. Ch: Tiffany, Carrie. B: Oct 20. Job: Gen Sales Mgr-Conroy, Marable and Holleman. Educ: Austin Peay State Univ, BS.

**COPE, Lawrence**, (LTC) (AAAA 1982) Loral Electronic Systems, 1911 Jefferson Davis Hwy, 904, Arlington, VA 22202. Bus: (703) 920-5606. Res: (301) 867-0835. Ch: Tracy, Wendy, Andrea. B: Jan 19. Nickname: Larry. Job: Market Analyst, Loral Electronic. Educ: Central MI Univ, MBA; AF Inst of Tech. Prev Svc: USAF. Ret: 1980. 21 yrs. LTC.

**COPELAND, William L.**, (MR) (AAAA 1982) Suncoast Int Adrs, Box 23500, Tampa, FL 33623. Bus: (813) 885-7000. Res: (813) 596-1580. W: Shirley. Ch: Theresa, William, Cynthia, John, Angela. B: Feb 19. Nickname: Bill. Job: Manager, DOD Requirements, E-Systems, Inc., MEMCOR Div. Educ: Armstrong State, BBA; USC, MA Sys Mgmt. Prev Svc: USA. Ret: 1990. 20 yrs. Major. Orgn: AUSA, ADPA, AFCEA,

Armor Assoc., TROA, AAAA Offices/Misc: VP, Suncoast Chapter.

**CORL, Ronald**, (MR) (AAAA 1978) Grumman Aerospace Corp., MS B20-05, Bethpage, NY 11714. Bus: (516) 575-2744. Res: (516) 423-6073. W: Edie. B: Nov 5. Nickname: Ron. Job: Manager EW Requirements, Grumman Aerospace Corp. Educ: Colgate Univ, Alfred Univ; Univ of NC. Prev Svc: USNR. Ret: 1965. 22 yrs. LCDR. Orgn: AOC.

**COSCINA, Michael A.**, (MR) (AAAA 1968) Solar Turbines Inc., Turbomach, 4400 Rufin Rd, San Diego, CA 92123. Bus: (619) 238-5754. B: Sep 19. Nickname: Mike. Job: General Manager, Marketing. Educ: GM Inst of Tech, BSIE; USN Post Grad School, BS/AE. Prev Svc: USN. Ret: 1966. 15 yrs. LCDR.

**COUGHENOUR, W.R.**, (MR) (AAAA 1976) Beech Aircraft Corp., 7315 Huntington Road, Wichita, KS 67206. Bus: (316) 681-7189. W: Pat. Ch: Kurt, Lauri. B: Dec 7. Nickname: Bill. Job: VP, Aerospace Programs, Beech Aircraft Corp. Educ: Wichita Univ, BSIE. Orgn: AFA.

**COX, Robert T.**, (MR) (AAAA 1981) King Radio Corp., 400 North Rogers Road, Olathe, KS 66062. Bus: (913) 782-0400. Job: President, King Radio Corp.

**CRAWFORD, W.J. III**, (MR) (AAAA 1974) General Electric Co., 1000 Western Avenue, Lynn, MA 01905. Job: General Electric Company.

**CROMWELL, Charles H.**, (MR) (AAAA 1979) 6709 Georgia St, Chevy Chase, MD 20815. Bus: (703) 528-3373. Res: (301) 652-3921. Job: Consultant, Charles H. Cromwell, Inc. Educ: Princeton, BS MS. Prev Svc: USN. 2 yrs. Orgn: AHS, AUSA, AFA.

**CUNNINGHAM, Forrest T.**, (MR) (AAAA 1981) King Radio Corp., 400 North Rogers Road, Olathe, KS 66062. Bus: (913) 782-0400. Job: Systems Engineering Consultant, King Radio Corp. Educ: Naval Post Grad School, MSEE. Prev Svc: USN. Ret: 1979. 21 yrs. LCDR.

**CUSHING, Wilson J.**, (MR) (AAAA 1979) Emerson Electric, 8100 West Florissant, St. Louis, MO 63136. Bus: (314) 553-2463. Res: (314) 532-1495. W: Marvella. Ch: Donna, Tamara, Kevin. B: Sep 6. Nickname: Wil. Job: Manager Sales Promotion, Emerson Electric Co. Educ: Alfred Univ, BS Bio Chem. Ret: 1967. 21 yrs. MAJ. Orgn: AUSA, AFA.

**CUSSIGH, Bruno**, (ING) (AAAA 1978) Costruzioni Aeron Agusta, Casella Postale 460, 21013 Gallarate, Italy. Job: Director, Marketing Development & Planning, Costruzioni Aeronautiche Giovanni Agusta SPA. Orgn: AUSA, AHS, HAI, ERC.

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**DAHM, Joseph**, (MR) (AAAA 1982) Rockwell Collins, 141 Brentwood Drive, NE, Cedar Rapids, IA 52402. W: Jeanne. Ch: Valerie, Jeffrey, Marshall. B: Nov 18. Bus: (319) 395-5308. Res: (319) 377-5635. Job: Engineering Manager, Rockwell Int'l. Educ: Iowa State Univ, BSEE.

**DALTRY, Robert P.**, (MR) (AAAA 1978) Singer Company, 118 W. First St, Suite



600, Dayton, OH 45402. Bus: (513) 222-8942. W: Mary Lou. Ch: Bobby, John, Danny. B: Mar 3. Job: Regional Manager, Kearfoot Division of The Singer Co. Educ: Grove City College, BA Acctng. Orgn: AUSA, AFA, AUVS, ADPA.

**DANGELMAIER, Ralph A., (MR) (AAAA 1983)** General Electric Co., 1000 Western Avenue, Lynn, MA 01910. Job: General Electric Company.

**DAUER, A.J., (MR) (AAAA 1979)** Garrett Corp., A/Research, 2525 W. 190th, Torrance, CA 90509. Bus: (213) 512-1007. Nickname: Tony. Job: Sales Manager, Environmental and Energy Systems. Educ: Univ of ND, BSME. Prev Svc: USAF. 2 yrs. 1LT. Orgn: AHS.

**DAVIS, Charles E., (MR) (AAAA 1980)** Bell Helicopter Textron, P.O. Box 482, Dept 81, Fort Worth, TX 76101. Bus: (817) 260-2448. Res: (817) 469-7733. W: Martha. Ch: Robin, Charles Jr, Jefferson. B: Sep 21. Nickname: Charley. Job: VP/Product Engineer, Bell Helicopter Textron. Educ: Univ of TX, BS; SMU, MS; Univ of Dallas, MBA. Prev Svc: USN. Orgn: AHS, AUSA.

**DAVIS, Chuck L., (MR) (AAAA 1982)** Route 1, Lot 113, Rolling Meadows, O'Fallon, MO 63366. Bus: (314) 878-7747. Res: (314) 625-9951. W: Mae. Ch: Chuck Jr, Mary Lynn, Lorraine, Norma Jean. B: May 20. Nickname: Chuck. Job: Assistant PM-Aviation SDC, COBRO Corp. Educ: El Paso CC. Prev Svc: USA. Ret: 1980. 25 yrs. SMAJ. Orgn: AUSA.

**DAY, Dennis J., (MR) (AAAA 1981)** 2501 Blue Ridge Drive, NE, Cedar Rapids, IA 52402. Res: (319) 364-7718. W: Patricia. Ch: Kevin, Stephen, Brian, Shawn. B: Mar 8. Job: Director of Engrg, CTPD, Rockwell Int'l, Cedar Rapids, IA. Educ: Univ of Detroit, BS.

**DEBURKATE, Donald E., (MR) (AAAA 1983)** Rr 1, Toddville, IA 52341. Bus: (319) 395-4747. Res: (319) 395-0087. W: Elaine. B: Jun 20. Nickname: Don. Job: Mgr, Integrated Logistics Spl, Rockwell-Collins Telecom Prod/Div. Educ: Purdue Univ, BSCE. Prev Svc: USN. Ret: 1973. 26 yrs. LT.

**DEEGAN, Michael, (MR) (AAAA 1981)** Teledyne Systems Co., 1501 Wilson Blvd, Suite 900, Arlington, VA 22209. Bus: (703) 522-2550. Res: (703) 759-6445. W: Kathy. Ch: Laura, Michael, Maureen, Edward. B: Jul 21. Nickname: Mike. Job: Washington Representative, Teledyne Systems Co. Educ: Univ of AL, BS; CA State, MBA. Prev Svc: USAF. 13 yrs. MAJ. Orgn: HCA, AHS, AUSA, AFA.

**DELANEY, Samuel J., (MR) (AAAA 1974)** ITT Gilliland-766 Shrewsbury, Tinton Falls, NJ 07724. Bus: (201) 747-6228. Res: (201) 493-8416. W: Jean. Ch: Timothy, Scott. Nickname: Sam. Job: Regional Manager, ITT Gilliland. Educ: Amer Inst of Tech, BSCE. 3 yrs. AAAA Offices/Misc: VP, Monmouth Chapter.

**DEL GROSSO, Tony J., (MR) (AAAA 1978)** Singer Co., Link Div., 118 W. First St, Suite 600, Dayton, OH 45402. Bus: (513) 222-8948. Job: District Sales Manager, Link Division, Singer Co., Dayton, OH. Prev Svc: USA. 9 yrs. CW3. Orgn: AHS, AUSA, AFA.

**DEMOS, George C., (MR) (AAAA)** Western Gear Corp., P.O. Box 629, Jamestown, ND 58401. Bus: (701) 252-6250. Res: (701) 252-2912. W: Mae. Ch: Mary. B: Aug 27. Job: Marketing Manager, Western Gear Corp., Jamestown, ND. Educ: Univ of MN, AB; Loyola Univ of LA. Prev Svc: USA. Orgn: AUSA.

**DENDY, John C., (MR) (AAAA 1981)** Hughes Helicopters, Inc., Centinela and Teale Streets, Culver City, CA 90230. Bus: (213) 305-4809. Job: VP, Light Helicopter Programs, Hughes Helicopters, Inc. Educ: Auburn Univ, BSEE. Orgn: NAA.

**DERAGON, Frederick G., (MR) (AAAA 1979)** Garrett Corp., A/Research, 2525 W. 190th, Torrance, CA 90509. Bus: (213) 512-2889. Res: (213) 377-9484. W: Joan. Ch: Kathleen, Rick, Peter. B: Jul 30. Nickname: Fred. Job: VP-Sales, A/Research Polytechnic Institute, BA. Prev Svc: USA. 2 yrs. Orgn: AUSA, AIAA, SAE.

**DEROO, W.J., (MR) (AAAA 1979)** Detroit Diesel Allison, P.O. Box 894, Indianapolis, IN 46206. Bus: (317) 242-4569. Res: (317) 849-3593. W: Lois. Ch: Linda, Mark. B: Feb 15. Nickname: Walt. Job: Senior Sales Engineer. Educ: Univ of IL, BS; St Johns Univ, MBA. Prev Svc: USN. 1 yr.

**DEER, R.E., (MR) (AAAA 1979)** 400 Collins Rd, NE 124-303, Cedar Rapids, IA 52498. Res: (319) 395-3202. Res: (319) 363-5492. W: Doris. Ch: Dennis, Sandy, Jacki. B: Aug 24. Nickname: Dick. Job: VP & Gen Mgr, Collins-Gov't Avionics Div, Rockwell Int'l. Educ: Univ of Cincinnati, BSCE; USC, MSEE. Orgn: AHS, AAAA Offices/Misc: Pres, Cedar Rapids Chapter.

**DESJARDINS, Stanley P., (MR) (AAAA 1983)** Simula Inc., 2223 S. 48th Street, Tempe, AZ 85282. Bus: (602) 894-2396. Ch: Sandra. B: Oct 21. Nickname: Stan. Job: President, Simula Inc. Educ: Univ of ID, BSME. Prev Svc: IDNG. 3 yrs. MSGT. Orgn: AHS, SAE.

**DEUSER, David A., (MR) (AAAA 1980)** Litton Systems, Inc., 26540 Agoura Road, Calabasas, CA 91302. Bus: (213) 880-5200. W: Doris. Ch: Matthew, Kristi, Jill. B: Jan 6. Nickname: Dave. Job: President, Litton Aero Products. Educ: Evansville College, BSCE. Prev Svc: USA. 1 yr.

**DEWANE, John R., (MR) (AAAA 1981)** 5775 Wayzata Boulevard, Box 689, Minneapolis, MN 55440. Bus: (612) 542-5775. Res: (612) 559-3308. W: Judith. Ch: Kelly. B: Mar 4. Job: VP & Gen Mgr, Commercial Aviation., Honeywell, Inc., Minneapolis, MN. Educ: Univ of WI, ME; Univ of MN, MBA. Prev Svc: USN. 4 yrs. LCDR. Orgn: AUSA, AFA.

**DEYO, Ray, (MR) (AAAA 1983)** Hughes Helicopters, Centinela & Teale Streets, Culver City, CA 90230. Bus: (213) 305-3317. W: Joan. Ch: David, Janet. B: Jul 26. Job: Dir, AAA Advanced Programs, Hughes Helicopters, Inc. Educ: USC, BS.

**DINSMOORE, Lee F., (MR) (AAAA 1972)** Brooks and Perkins, AAR, 17515 W. Nine Mile Rd, 750, Southfield, MI 48075. Bus: (313) 559-3550. W: Janet. Ch: Christopher. B: Oct 8. Job: Dir Advertising & Public Relations, Brooks and Perkins, AAR. Educ: MI State Univ, Comm Arts. Orgn:

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**D** The Industry Team  
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AUSA, AFA.

**DISETH, Dianne L., (MS) (AAAA 1981)** 449 Chery Hill Road N.W., Cedar Rapids, IA 52405. Bus: (319) 395-5390. Res: (319) 396-9348. Job: Customer Relations Rep, Rockwell-Collins, Cedar Rapids, IA. Educ: Univ of Iowa, BA. AAAA Offices/Misc: Sec, Cedar Rapids Chapter.

**DIXON, John W., (MR) (AAAA 1978)** E-Systems, Inc., P.O. Box 226030, Dallas, TX 75266. Bus: (214) 661-1000. Job: Chairman of the Board and CEO. Educ: Geo Wash Univ, BS; Univ of Miami, MS. Prev Svc: USA.

**DODGE, S.D., (MR) (AAAA 1977)** Boeing Vertol Co., P.30-24, P.O. Box 16858, Philadelphia, PA 19142. Bus: (215) 522-3755. Res: (215) 494-3457. W: Marjorie. Ch: Robert, Terrence, Timothy, Stephanie. B: Jun 20. Nickname: Stu. Job: CH-47 U.S. Military Programs, Program Manager, Boeing Vertol Co. Educ: Univ of MA, BSCE; Drexel Inst, MSCE; Harvard, PMD.

**DOLAN, Edmund J. Jr., (MR) (AAAA 1982)** Daimo Victor Operations, 1090 Vermont Ave, NW 1100, Washington, DC 20005. Bus: (202) 289-5840. Res: (703) 938-7461. W: Joyce. Ch: Kathleen, Kimberly, Kellie, Ted. B: Sep 24. Job: Washington Representative, Daimo Victor Operations, Belmont, CA. Educ: ProV College; Catholic Univ, BS. Prev Svc: USA. Ret: 1981. 22 yrs. LTC. Orgn: AUSA.

**DONEHOOD, John C., (MR) (AAAA 1978)** Litton Systems, Inc., 4854 Olde Village Ct., Dunwoody, GA 30038. Bus: (404) 396-5013. Nickname: John. Job: Southeastern Region Manager, Litton Systems, Inc. Educ: Auburn Univ, BS; Univ of FL, MS. Orgn: AHS, AUSA, AFA.

**DONNELLY, Leonard T., (MR) (AAAA 1970)** 8 Dianne Drive, Neptune, NJ 07753. Bus: (201) 229-1400. Res: (201) 922-3426. W: Anita. Ch: Cathy Rose. B: Dec 19. Nickname: Len. Job: Northeast Regional Manager, Varo, Inc. Orgn: AUSA, Old Crows, ADPA, AFCEA, AAAA Offices/Misc: VP, Monmouth Chapter.

**DORRENBACHER, C. James, (MR) (AAAA 1982)** McDonnell Douglas Corp., 5301 Bolsa Avenue, Huntington Beach, CA 92647. Bus: (714) 896-4400. Res: (714) 547-3678. W: Beverly. Ch: John, Stephany, Teri, Randi, Jan. B: Jan 6. Nickname: Jim. Job: VP & General Manager, Astronautics, McDonnell Douglas Corp. Educ: Purdue, BS; Univ of IL, MS. Orgn: HCA, AHS, AUSA, AFA, NSIA, AIAA.

**DOYLE, Tom J., (MR) (AAAA 1976)** Grumman Aerospace Corp., Stuart, FL 33494. Bus: (305) 287-5300. Res: (305) 287-2892. W: Mary. Ch: Donna, Richard, Leslie, Jeff, Tom. B: Oct 21. Nickname: Tom. Job: OV-1 Mohawk Program Manager, Grumman Aerospace Corp. Educ: US Merchant Marine Academy, BS; LI Univ, MS. Prev Svc: USN. LTJG. Orgn: AUSA.

**DRAZIN, Louis A., (MR) (AAAA 1981)** HR Textron, Inc., 25200 West Rye Canyon



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Road, Valencia, CA 91355. Job: VP-Marketing, HR Texttron, Inc. Educ: USC, BS; UCLA. Orgn: AUSA, AHS, AFA, NSIA, Navy League. Prev Svc: USA.

**DROGE, Art J.** (MR) (AAAA 1977) Howell Instruments, 108 South Franklin Avenue, Valley Stream, NY 11580. Bus: (516) 561-9220. Res: (516) 953-4288. W: Jane. Ch: Art Jr, John. B: Jan 30. Job: Regional Sales Manager, Howell Instruments. Educ: Duke Univ; MIT, BSME. Prev Svc: USN. 9 yrs. LCD.

**DUGANNE, John A.** (MR) (AAAA 1980) McDonnell Douglas Corp., 5301 Bolsa Avenue, Huntington Beach, CA 92647. Bus: (714) 896-1748. Res: (714) 556-6727. W: Happy. B: Dec 16. Nickname: Jack. Job: Manager, PGM Development, McDonnell Douglas Corp. Educ: BMS. Prev Svc: USAF. Ret: 1960. 21 yrs. COL.

**DUNHAM, Leon** (MR) (AAAA 1982) Soncraft, Inc., 8859 S. Greenwood Avenue, Chicago, IL 60619. Bus: (312) 933-9200. Res: (312) 268-0874. W: Constance. Ch: Deborah, Denise. B: Mar 24. Nickname: Little D. Job: Business Area Manager, Soncraft, Inc. Educ: Il Inst Of Tech. Prev Svc: 6 yrs. MSGT.

**DUNLAP, Glen R.** (COL) (AAAA 1979) Fort Rucker National Bank, P.O. Box 368, Fort Rucker, AL 36362. Bus: (205) 598-2401. Res: (205) 774-9004. W: Christine. Ch: Glen Jr, Susan. B: Jun 20. Nickname: Glen. Job: President & CEO, Fort Rucker National Bank. Educ: Univ of Omaha, BGE; Univ of OK. Prev Svc: USAF. Ret: 1973. 31 yrs. COL. Orgn: AHS, AUSA.

**DUNN, Jack A.** (MR) (AAAA 1958) 3307 Moravia Drive, Lithonia, GA 30058. Bus: (404) 458-0246. Res: (404) 981-4845. W: Joan. Ch: Jerry, Joseph, Judy. B: Apr 2. Job: Automotive Operations Supervisor, Southern Bell Telephone. Educ: USMA, BA Arts/Sci/Lit; Univ of TN, MS. Prev Svc: USA. USAF. Ret: 1976. 22 yrs. LTC.

**DUNNE, Richard C.** (MR) (AAAA 1980) Eaton Corp., All Div, Commack Road, Deer Park, NY 11729. Bus: (516) 595-5741. Res: (516) 669-7772. W: Kathleen. Ch: Anne, Kevin, Beth. B: Sep 9. Nickname: Dick. Job: Assistant to the President, Eaton Corp., All Div. Educ: Iona, Academy of Aeronautics, BA. Prev Svc: USMC. 2 yrs. Orgn: AFA, Navy League.

**DURYEA, D. Corydon** (MR) (AAAA 1982) American Electronic Labs., Crystal Brk Bldg, State Road 35, Eatontown, NJ 07724. Bus: (201) 542-6433. Res: (101) 542-5191. W: Christine. Ch: Corydon Jr, Victoria, Edward. B: Apr 20. Nickname: Cory. Job: Regional Mktg Mgr, American Electronic Labs. Prev Svc: USAF. 6 yrs. CPT. Orgn: HCA, AHS, AUSA, AFA, AFSA, TMSA, AOC.

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**EAGLES, H.D.F.** (MR) (AAAA 1980) Marconi Avionics Inc., 4500 N. Shallowford Rd., Atlanta, GA 30338. Bus: (404)

394-7800. W: Ruby. Ch: Elizabeth, Alison. B: Nov 19. Nickname: Harry. Job: President, Marconi Avionics Inc. Educ: Univ of Kent, England, MA. Orgn: AHS, AUSA.

**EAKIN, Donald R.** (MR) (AAAA 1981) Northrop Corp., 500 E. Orangeflow Ave., Anaheim, CA 92801. Bus: (714) 871-5000. Res: (213) 860-1792. W: Shoren. B: Jul 29. Job: Program Manager, Northrop Corp., Electro Mechanical Div. Educ: UCLA, BS. Orgn: AUSA.

**ECKERMAN, Richard C.** (MR) (AAAA 1960) 748 Northvalley Drive, Westlake Village, CA 91362. Bus: (213) 715-2556. W: Betty. B: Jun 29. Nickname: Rich. Job: Program Manager, Litton Systems, Woodland Hills, CA. Educ: UCLA, BS MS. Prev Svc: USA. 2 yrs. CPL.

**ECKMAN, C.E.** (MR) (AAAA 1980) E-Systems, Inc., Serv-Air, Inc., PO Box 1669, Greenville, TX 75401. Bus: (214) 454-2000. Res: (214) 455-8735. W: Marva. Ch: Chara, Dale, Sherry, Marni. B: Jun 18. Job: VP-Gen Mgr, E-Systems Serv-Air. Educ: Univ of TX, BSEE. Orgn: AUSA, AFA, AOC, Navy League.

**ELDER, Perry** (MR) (AAAA 1983) USPA and IRA, 805 Providence Blvd., Clarksville, TN 37040. Bus: (615) 647-6516. Res: (615) 647-9416. W: Elizabeth. B: Jan 29. Job: Registered Representative, USPA & IRA. Educ: NE LA State Univ, BS; W. KY Univ, MPA. Ret: 1980. 25 yrs. COL. Orgn: AUSA.

**See additional "Late Listings" at the rear of this Roster.**

**ELLIS, Charles W.** (MR) (AAAA 1968) Boeing-Vertol Co., P32-79, P.O. Box 16886, Philadelphia PA 19142. Bus: (215) 522-3111. Res: (215) 358-9126. W: Madalene. Ch: Stephen, John, Kathleen. B: Oct 8. Nickname: Chuck. Job: VP, JVX Program, Boeing-Vertol Co. Educ: MIT, BS MS. Prev Svc: USN. 3 yrs. Orgn: AHS, AUSA.

**ELLIS, William R.** (MR) (AAAA 1958) Hughes Helicopters, Inc., Centinela and Teale Streets, Culver City, CA 90230. Bus: (213) 305-5079. B: Jul 11. Nickname: Bill. Job: VP-Marketing, Hughes Helicopters, Inc. Educ: USMA, BS; GA Tech, BAE MSAE. Prev Svc: USA. 10 yrs.

**ENGBERGER, John K.** (MR) (AAAA 1977) Consolidated Controls, 15 Durant Avenue, Bethel, CT 06801. Bus: (203) 743-6721. Res: (203) 775-3701. W: Lula. Ch: Jan, Kim, John. B: Dec 31. Job: VP/Gen Mgr, Consolidated Controls Corp. Educ: UCONN, BSEE. Prev Svc: USAF. 2 yrs. 1LT.

**EUSANIO, Lawrence A.** (MR) (AAAA 1977) Calspan Corp., P.O. Box 400, Buffalo, NY 14225. Bus: (716) 631-6868. Job: Principal Operations Analyst, Calspan Corp. Educ: State Univ of NY, BS MS. Orgn: AUSA.

**EVANS, William J.** (MR) (AAAA 1978) United Technologies Corp., 1825 Eye St., NW, Suite 700, Washington, DC 20006. Bus: (202) 785-7423. Res: (203) 887-7243. W: Elizabeth. Ch: William Jr, Bette Ann, Joan, Richard. B: Mar 4. Nickname: Bill.

Job: VP, United Technologies Corp. Educ: USMA, BS; USAWC; AFSC. Prev Svc: USAF. Ret: 1978. 32 yrs. GEN. Orgn: AUSA, AFA.

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**FAHEY, Andrew P.** (MR) (AAAA 1982) CAI-Div Repton Optical Inc, 550 West NW Hwy, Barrington, IL 60010. Bus: (312) 381-2400. Res: (312) 967-6488. Ch: Andrew, Kathleen, Timothy, Julie, Kelly, William. B: Nov 19. Nickname: Andy. Job: Sales Manager, CAI, Div of Repton Optical, Inc. Educ: Christian Brothers College, BSEE. Orgn: AUSA, AFA.

**FARLEY, Helen M.** (MS) (AAAA 1983) Clarksville Floor Cover, 606 Spring Street, Clarksville, TN 37040. Bus: (615) 647-4947. Res: (615) 645-6088. W: Deceased. Ch: Larry, Marsha. B: Feb 6. Job: Owner, Clarksville Floor Covering Co.

**FARNER, Fred H.** (MR) (AAAA 1978) Avn Contractor Employees, P.O. Drawer 309, Daleville, AL 36322. Bus: (205) 598-6358. Res: (205) 598-2594. W: Elaine. B: Jul 4. Job: President, Aviation Contractor Employees, Inc. Prev Svc: USA. Ret: 1968. 23 yrs. LTC. Orgn: AUSA.

**FARRINGTON, Thomas** (MR) (AAAA 1982) Input Output Computer Svc, 400 Totten Pond Road, Waltham, MA 02254. Bus: (617) 890-2299. W: Juarez. Ch: Christopher, Trevor, Tomeeka. B: Nov 11. Job: President, Input Output Computer. Educ: NC Agric & Tech Inst, BSEE.

**FAUST, E.F. (COL)** (AAAA 1975) Nat'l Bank-Fort Sam Houston, 1422-E Grayson, San Antonio, TX 78286. Bus: (512) 223-2951. Res: (512) 656-5578. W: Betty. Ch: Jerry, Mark, Candy. B: Oct 14. Job: Senior VP, National Bank of Fort Sam Houston. Educ: McNeese State Univ, BA. Ret: 1972. 27 yrs. COL.

**FERZACCA, Albert L.** (MR) (AAAA 1982) Martin Marietta Corp., 6801 Rockledge Dr, MP 320, Bethesda, MD 20817. Bus: (301) 897-6617. Res: (301) 299-8502. W: Lila. Ch: Michael, Phillip. Job: Director Army Programs, Martin Marietta Aerospace. Educ: Manhattan College, BS; USC, MS. Prev Svc: USAF. Ret: 1975. 20 yrs. MAJ. Orgn: AHS, AUSA, AFA.

**FISETTE, Robert A.** (MR) (AAAA 1977) Martin Marietta Corp., 375 Av Louise, Boile 3, 1050 Brussels, Belgium. W: Nancy. B: Apr 3. Nickname: Bob. Job: Executive Director, European Operations, Martin Marietta Corp. Educ: MIT, BS. Prev Svc: USN. 4 yrs.

**FLEISCHMANN, George** (MR) (AAAA 1982) Dynalcraft Corp., 6801 Calmont, Fort Worth, TX 76116. Bus: (817) 732-4481. Res: (817) 732-2794. B: Feb 15. Nickname: Flash. Job: Division Controller, Dynalcraft Corp. Educ: Univ of AR, BSBA. Prev Svc: USAR. 2 yrs.

**FLEITZ, William V.** (MR) (AAAA 1980) Rockwell Intl, 1745 Jefferson Davis Hwy, 1200, Arlington, VA 22202. Bus: (703) 553-6614. Nickname: Bill. Job: Marketing Manager, Defense Electronic Operations, Rockwell Intl. Prev Svc: USN. Ret: 1977. 30 yrs. CDR. Orgn: AHS, AUSA, AFCEA.

**FLEURY, Peter A.** (MR) (AAAA 1978)

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**Kaiser Electronics**, 2701 Orchard Park Way, San Jose, CA 95134. Bus: (408) 946-3000. Res: (408) 559-3219. B: Mar '25. Nickname: Pete. Job: Marketing Manager, Kaiser Electronics. Educ: Park College, BA. 18 yrs. Orgn: OTHR. AAAA Offices/Misc: Past VP, Mississippi Valley Chapter.

**FLOWERS, James**, (MR) (AAAA 1982) Grumman Aerospace Corp., (AUSA) 1833 33494. Bus: (305) 287-5300. Res: (305) 287-9105. W: Linda. Ch: Lisa, Katie. B: Jan 22. Nickname: Jim. Job: Mohawk Assistant Program Manager, Grumman Aerospace Corp. Orgn: AUSA.

**FONTE, Robert**, (MR) (AAAA 1982) Pall Corp., Aircraft Porous Media, Inc., 6301 49th N., Pinellas Park, FL 33565. Bus: (813) 522-3111. Nickname: Bob. Job: VP Sales, Aircraft Porous Media, Inc., Pall Corp.

**FORD, E.**, (MR) (AAAA 1982) Canadian Marconi Company, 2442 Avenue Trenton, Montreal, Que, Canada H3P 1Y9. B: Mar 12. Bus: (514) 341-7630. Res: (514) 931-2280. Job: Applications Engineer, Canadian Marconi Company. Prev Svc: USA. 2 yrs. LT. Orgn: AUSA.

**FORNEY, Jackson L.**, (MR) (AAAA 1975) Northrop Worldwide Actl, PO Box 108, Lawton, OK 73502. Bus: (405) 353-2733. W: Judith Ann. Nickname: Jack. Job: VP, Business Development, Northrop Worldwide Aircraft Services, Inc.

**FORREST, Harold R.**, (MR) (AAAA 1978) Northrop Worldwide Actl, P.O. Box 108, Lawton, OK 73502. Bus: (405) 353-2733. Res: (405) 536-8215. B: Nov 16. Nickname: Hal. Job: Director Research & Planning, Northrop Worldwide Aircraft. Educ: OK State Univ, BS.

**FORZANI, Luciano**, (COM) (AAAA 1982) Costruzioni Aeron Agusta, Casella Postale 480, 21013 Gallarate Italy. Bus: 0331-229233. Res: 0331-790259. W: Carla. Ch: Stefano, Enrica. B: Jun 3. Job: Director Flight Operations. Chief Test Pilot, Agusta. Educ: Scientific Lyceum. Prev Svc: ITAF. 14 yrs. LTC. Orgn: AHS, SETP.

**FOULK, James B.**, (MR) (AAAA 1978) 1104 E. Wheel Road, Bel Air, MD 21014. Bus: (301) 836-7722. Job: President, The Service Engineering Co., Bel Air, MD. Educ: Univ of DE, BS. Orgn: AHS.

**FOWLER, John C.**, (MR) (AAAA 1981) Honeywell Inc., 5100 Gambles Drive, St. Louis Park, MN 55416. Bus: (612) 542-4850. Job: Marketing Manager, Military Avionics Div., Honeywell, Inc.

**FOWLER, Robert**, (MR) (AAAA 1958) DeHavilland Aircraft Ltd, 37 Hibiscus Court, Weston Ontario, Canada. Bus: (416) 633-7310. Res: (416) 742-8502. W: Lorna. Ch: Stephen, Georgeanne, Patricia, Laurie, Heather. B: Sep 19. Nickname: Bob. Job: Chief Engineering Test Pilot, DeHavilland Aircraft of Canada. Prev Svc: RCAF. 4 yrs. LT. Orgn: CAHS, SETP.

**FRANCIS, Edward M.**, (MR) (AAAA 1980) 880 Bayberry Lane, Orange, CT 06477. W: Lori. Ch: Todd, Ryan. B: Sep 12. Job: Program Manager, Avco Lycoming Div. Educ: USMA, BS; Boston Univ, MS. Prev Svc: USA. 6 yrs. CPT. AAAA Offices/Misc: Sec, Connecticut Chapter.

**FRITTS, Orle C.**, (MR) (AAAA 1982) Calspan Corp., c/o Arvin, 1531 13th St., Columbus, IN 47201. Bus: (812) 329-3273. Job: President, Calspan Corp. Orgn: AHS, AUSA, AFA.

**FUCCI, Fred**, (MR) (AAAA 1970) Chandler Evans Inc, Colt-Ceco-Charter Oak Blvd, West Hartford, CT 06101. Bus: (203) 238-0651. Res: (203) 561-1879. W: Elizabeth. Ch: Mark, Joe, Paul, John. B: Dec 12. Job: Manager, Marketing, Chandler Evans, Inc. Colt-Ceco. Educ: Wake Forest College, BS. Orgn: AHS.

**FULLER, Christopher**, (MR) (AAAA 1959) 115 Pootaluck Path, Stratford, CT 06497. Bus: (203) 388-4184. W: Joyce. B: Apr 29. Job: Chief, System Safety, Sikorsky Aircraft, Div of UTC. Educ: Univ of ME, BA; USC, MS. Prev Svc: USAR. Ret: 1981. 20 yrs. MAJ. Orgn: AHS. AAAA Offices/Misc: Past VP, Army Avn Center Chapter.

**FULLER, Donald A.**, (MR) (AAAA 1981) Bendix Corp., Flight Systems Div., Teledyne, NJ 07608. Bus: (201) 393-2142. Job: Director of Marketing, Bendix Corp-FSD. Orgn: AUSA, AFA.

**FULLER, William L.**, (MR) (AAAA 1969) 1959 Waltz, Warren, MI 48091. B: Feb 13. Nickname: Bill. Bus: (313) 777-7100. Res: (313) 754-4377. Job: Logistics Consultant, Cadillac Gage Co. Prev Svc: 11 yrs.

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**GAGNON, Fred L.**, (MR) (AAAA 1982) Kollman Instrument Co., Daniel Webster Highway So, Merrimack, NH 03054. Bus: (603) 889-2500. W: Virginia. Ch: Cheryl, Sandra. B: Aug 22. Nickname: Fred. Job: VP & General Manager, Kollman Instrument Co. Educ: Univ of CA, BSEE. Prev Svc: USN. 3 yrs.

**GALLAGHER, Frank M.**, (MR) (AAAA 1982) Sikorsky Aircraft, North Main Street, Stratford, CT 06497. Bus: (203) 386-6414. Res: (203) 266-5479. Ch: Frank II, Tara, Erin. B: Apr 10. Job: Engineering Test Pilot, Sikorsky Aircraft, Stratford, CT. Educ: USNA, Engrg & Foreign Aft. Prev Svc: USMC. 9 yrs. MAJ. Orgn: AHS.

**GARRETT, Craig J.**, (MR) (AAAA 1983) 86 Stowe Avenue, Milford, CT 06460. Bus: (203) 384-7521. Res: (203) 878-1569. Job: Configuration Manager H-76, Sikorsky Aircraft, Div of UTC. Prev Svc: USA. Orgn: AHS, AFA.

**GARRETT, Joseph H. Jr.**, (MR) (AAAA 1979) Rockwell Int'l, 1745 Jefferson Davis Hwy, 1200, Arlington, VA 22202. Bus: (703) 553-6680. Res: (703) 340-1449. Job: VP Marketing & Communications DEO, Rockwell, Int'l. Educ: OK State Univ. Prev Svc: USA. 2 yrs. Orgn: HCA, AHS, AUSA, AFA.

**GENCHI, Joseph D.**, (MR) (AAAA 1981) Linton Systems, Inc., 5500 Canoga Ave., Ms 28, Woodland Hills, CA 91365. Bus: (213) 715-4160. Res: (213) 706-1736. W: Linda. Ch: Denise, Sandra, Stacie. B: May 25. Nickname: Joe. Job: Advanced Program Manager, Linton Guidance & Control Systems, Inc. Educ: Univ AZ, BS; So. CA, MBA; Pepperdine Univ.

**GEORGE, Daniel T.**, (MR) (AAAA 1977) Perkin-Elmer Corp., 1911 N. Fort Myer

Drive, Suite 809, Arlington, VA 22209. Bus: (703) 528-4080. Res: (703) 780-5197. W: Gloria. Ch: Danielle. B: Feb 2. Nickname: Danny. Job: Manager, Washington Office, Perkin-Elmer Corp., Norwalk, CT. Prev Svc: USAF. Ret: 1966. 27 yrs. COL. Orgn: AUSA, AFA.

**GEYER, David W.**, (MR) (AAAA 1983) Teledyne Systems Co., 19601 Nordhoff Street, Northridge, CA 91324. Bus: (213) 866-2211. Res: (213) 991-6593. W: Jane. Ch: Michael, Thomas, Martha, Steven, Michael Jr. B: Apr 3. Job: VP, Teledyne Systems. Educ: Univ of CO, BSEE; NY Univ, MSEE. Orgn: AFA.

**GIALLOURAKIS, Bill**, (MR) (AAAA 1982) 90 Monmouth Street, P.O. Box 1055, Red Bank, NJ 07075. Bus: (201) 747-7555. Res: (201) 530-7510. W: Antonia. Ch: Christina, Cosmas, Starnie. B: Nov 28. Nickname: Bill. Job: President and Attorney at Law. Educ: USMA, BA; Purdue, MSEE; Farhigh, MBA; Seters. Ret: 1981. 23 yrs. COL. Orgn: AUSA.

**GILBERT, Leslie H.**, (COL) (AAAA 1958) 8420 Sulky Court, Alexandria, VA 22308. Bus: (202) 223-1800. Res: (703) 780-8570. W: Ruth. Nickname: Les. Job: AAH Marketing Manager, Hughes Helicopters, Washington, DC. Prev Svc: USA. Ret: 1973. 28 yrs. COL. Orgn: AHS, AUSA. AAAA Offices/Misc: NEB.

**GILDEA, James R.**, (MR) (AAAA 1982) RCA Corp., Automated Sys., P.O. Box 588, Burlington, MA 01803. Bus: (617) 272-4000. Res: (617) 475-4273. W: Sonia. Ch: Robert, Maureen, Colette, Michele. B: Sep 27. Job: Manager Systems Projects, RCA, Burlington, MA. Educ: Drexel PA Univ, BS; Northeastern, MS. Prev Svc: USA. 2 yrs. Orgn: AUSA.

**GILLIVER, Kenneth W.**, (MR) (AAAA 1981) Gould Inc, NAVCOM Systems, 4323 Arden Drive, El Monte, CA 91731. Bus: (213) 442-0123. Res: (213) 963-2152. W: Marilyn. B: Nov 18. Job: VP Electronic Warfare, Gould, Inc., NAVCOM System Div. Educ: St. Cloud State Univ, BS. Prev Svc: USN. Orgn: AUSA, AFA.

**GIVENS, Gerald**, (MR) (AAAA 1983) Marconi Avionics Inc, 4500 N. Shallowford Road, Atlanta, GA 30338. Bus: (404) 394-7800. Job: Senior Systems Engineer, Marconi. Educ: Univ of AL, BSEE.

**GOLDMAN, Leonard**, (MR) (AAAA 1967) 34 Loretta Drive, Syosset, NY 11791. Bus: (516) 498-8256. Res: (516) 921-0211. W: Lila. Ch: Barbara, Howard, Brad. B: Jul 28. Job: President, Worldwide Technology Research Corp. Educ: Univ of Dayton, AB. Prev Svc: USAF. 4 yrs. SGT. Orgn: AHS, AIAA.

**GOO, A.M.S.**, (MR) (AAAA 1980) Boeing Company, 3801 S. Oliver St, MS K1510, Wichita, KS 67210. Bus: (316) 526-2887. Res: (316) 733-2655. W: Shln Cun. Ch: Marilyn, Steven, Beverly. B: May 21. Nickname: Abe. Job: Executive Vice President, K15-10, Boeing Military



# G The Industry Team

Airplane Co. Educ: Univ of IL; MIT, BS. Prev Svc:AAF. 1 yr.

**GOODMAN, Sam, (MR) (AAAA 1980)**  
Chandler Evans Inc, Colt-Ceco-Charter Oak Blvd, West Hartford, CT 06101. Bus: (203) 236-0651. Res: (203) 233-0160. W: Lillian. Ch: Kay, Jerry. B: Jun 28. Nickname: Sam. Job: Chief Support Marketing. Colt Industries, Inc., Chandler Evans Inc. Educ: NY Univ, UCLA, BS. Prev Svc: USA. Ret: 1937. 3 yrs. LT. Orgn: AHS, AUSA, AFA.

**GOODWIN, Ralph C., (MR) (AAAA 1978)**  
389 Beecroft Place, Oakhurst, NJ 07755. Bus: (201) 222-8611. Res: (201) 229-6982. W: Mary. Ch: Ralph, Leonard, Lucille, Robin, Bonnie, Lloyd. B: Jul 18. Job: Manager, Government Marketing, Rockwell Int'l, W. Long Branch, NJ. Educ: NE Univ, BS. Prev Svc: USN. 4 yrs. RT1.

**GOOLEY, David R., (MR) (AAAA 1982)**  
Daniels Mfg. Corp., PO Box Drawer 7088, Bloomfield Hill, MI 48302. Bus: (313) 338-9611. Job: Senior Engineer, Daniels Manufacturing Corp.

**GOULDING, Bruce R., (MR) (AAAA 1982)**  
PO Box 294, 755 N. Stone Street, W. Suffolk, CT 06093. Bus: (203) 243-7384. Res: (203) 666-1509. W: Gretchen. Ch: Expecting Jan 84. B: Jul 15. Job: Mktg Rep-Asst to PM, SH-2F Lamps MUI Helicopter, Kaman Aerospace. Educ: Univ of Rochester, BA. Prev Svc: USN. 5 yrs. LCDR.

**GRAFTON, Daniel A., (MR) (AAAA 1983)**  
Beech Aersop Serv, Inc., 615 Stonewall Street, Jackson, MS 39213. Bus: (601) 362-0710. Nickname: Dan. Job: Manager-Accounting/Computer Services, Beech Aerospace Services, Inc. Educ: Univ of S. AL, BS; MS College, Masters. Prev Svc: USAF. 4 yrs.

**GRIFFIN, Robert W., (MR) (AAAA 1982)**  
Kollsman Instrument Co., Daniel Webster Highway So, Merrimack, NH 03054. Bus: (603) 889-2500. Res: (617) 396-3194. W: Gloria. Ch: Lynn, Holly. B: Apr 14. Nickname: Bob. Job: Director E-O Marketing, Kollsman Instrument Co. Educ: NE Univ, BSEE MBA.

**GRIMES, Dallas B., (MR) (AAAA 1975)**  
Avco Lycoming Division, 550 South Main Street, Stratford, CT 06497. Bus: (203) 385-2635. AAAA Offices/Misc: Past Pres, Connecticut Chapter.

**GRIMM, Charles R., (MR) (AAAA 1982)**  
Pall Corporation, 7070 Moon Lake Road, New Port Richey, FL 33552. Bus: (813) 849-9999. W: Carol. Ch: Dean, Lorraine, Kyle. B: Oct 28. Nickname: Charlie. Job: Vice Pres Sales, Pall Land & Marine Corp. Educ: Adelphi Univ, BA MBA.

**GRINA, K.I., (MR) (AAAA 1975)**  
Boeing Vertol Co., P32-04-PO Box 16858, Philadelphia, PA 19142. Bus: (215) 522-3310. Res: (215) 566-5295. W: Neilson. Ch: Douglas, Lell. B: Jun 1. Nickname: Ken. Job: VP Engineering, Boeing Vertol Co. Educ: Univ of MN, BA Aero Engng. Orgn: AHS, AUSA.

**GROCOTT, Douglas, (GEN) (AAAA 1980)**  
Singer International, 66 Rue De Livourne Bte 2, 1050 Brussels, Belgium. Bus: 02536-70-51. Res: 02354-44-50. W: Jean. B: Feb 8. Nickname: Pinky. Job: Director Int'l, Singer Brussels Belgium. Prev Svc: RAF. Ret: 1977. 35 yrs. GEN.

**GROSS, Arthur, (MR) (AAAA 1982)**  
American Electronic Labs, P.O. Box 552, Lansdale, PA 19448. Bus: (215) 822-2929. Job: Marketing Manager, American Electronic Labs.

**GROVER, Fred, (MR) (AAAA 1976)**  
26071 Ramjit Court, El Toro, CA 92630. Bus: (714) 752-7500. Res: (714) 951-1807. W: Betty. B: Aug 28. Job: Director, Business Development, Ultrasystems, Inc., Def & Space Sys. Educ: BS MS.

**GUSTAFSON, Tom, (MR) (AAAA 1983)**  
AAMCO Transmissions, 130 Kraft Street, Clarksville, TN 37040. Bus: (615) 552-0221. Res: (615) 648-2815. W: Joan. B: Dec 29. Nickname: Gus. Job: Owner-Operator, AAMCO Transmissions. Prev Svc: 4 yrs.

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**HALISKY, J.J., (MR) (AAAA 1981)**  
Rockwell Int'l - MSD, 1800 Satellite Boulevard, Duluth, GA 30136. Bus: (404) 476-4191. Job: Director Operations, Missile Systems Div, Rockwell Int'l. Educ: Notre Dame, BA BS.

**HALLFIN, L.W., (MR) (AAAA 1981)**  
Honeywell Inc., 2600 Ridgway Pkwy., Minneapolis, MN 55413. Bus: (612) 378-5290. Job: Director of Marketing, Military Avionics Div., Honeywell, Inc.

**HAMILTON, Barbara K., (MS) (AAAA 1982)**  
790 Capri Circle, Boothwyn, PA 19061. Bus: (215) 522-2147. Res: (215) 485-5758. W: Thomas. Ch: Thomas. B: Jul 9. Nickname: BK. Job: Logistics Support, Boeing-Vertol Co. Educ: Widener Univ, BA; DE Law School, MBA JD.

**HAMILTON, Wilson S., (MR) (AAAA 1983)**  
Beech Aersop Serv., Inc., 615 Stonewall Street, Jackson, MS 39213. Bus: (601) 362-0710. Res: (205) 881-5517. W: Ann. Ch: Claire, Geoffrey, Karl, Scott, Christopher. B: Apr 12. Nickname: Ham. Job: Assistant Manager-Missile Targets, Beech Aerospace Services, Inc. Educ: Youngstown Univ, BS Edu.

**HAMLIN, Hilburn J., (MR) (AAAA 1982)**  
American Electronic Labs, P.O. Box 552, Lansdale, PA 19448. Bus: (215) 822-2929. Res: (603) 429-7601. W: Mary. B: Sep 18. Nickname: Jim. Job: Manager Programs, American Electronic Labs, Montgomeryville, PA. Educ: Drexel-Syracuse, BS; IN Inst of Tech. Prev Svc: USN. 6 yrs. EM2. Orgn: AOC.

**HARBAUGH, John W., (MR) (AAAA 1982)**  
23347 Wagon Trail Road, Diamond Bar, CA 91765. Bus: (213) 666-6282. Res: (714) 861-4622. W: Nancy. Ch: John Max, Jenny Joy, Julia Ann. B: May 10. Job: Sales Manager/VP, Featherlike Prod. Fabric A/C Parts. Educ: Woodbury Univ, BS.

**HARBER, Bobby D., (LTC) (AAAA 1960)**  
Science Applications, Inc., 3855 Lucas & Hunt Rd, No. 218, St. Louis, MO 63121. Bus: (314) 382-5995. Res: (314) 741-1872. W: Brooksie. Ch: Noble, Nancy, Norman,

Jessica. B: Oct 16. Nickname: Bob. Job: Senior Systems Analyst, Science Applications, Inc. Educ: Univ of TN, BS; GA Inst of Tech, MS. Ret: 1983. 23 yrs. LTC. Orgn: AHS, AUSA, AAAA Offices/Misc: Past VP, Rhine Valley Chapter.

**HARDY, H. Dale, (MR) (AAAA 1980)**  
General Electric, Hammersmith, London, W8, England. Bus: 01-741-0911. W: Barbara. B: Dec 30. Job: Manager, Market Development, General Electric. Educ: Puttifer, BS; USC, MS; Geo Wash Univ, MBA. AAAA Offices/Misc: Past VP, Bonn Area Chapter.

**HARRIGH, Emmanuel, (MR) (AAAA 1982)**  
American Electronic Labs, P.O. Box 552, Lansdale, PA 19448. Bus: (215) 822-2929. Res: (215) 282-4587. Nickname: Manny. Job: Marketing Mgr, Service Dept., American Electronic Labs. Educ: Lehigh Univ, BS. Prev Svc: USAF. Orgn: AHS, AFA.

**HARRIS, Edward, (MR) (AAAA 1969)**  
Gruman Aerospace Corp., 107 Ketcham Road, Syosset, NY 11791. Bus: (516) 575-2382. Res: (516) 681-3856. W: Alice. Ch: Robert, Susan. B: Oct 26. Job: Manager Army Programs, Advanced Systems, Gruman Aerospace Corp. Educ: City College Polytech, BS. Orgn: AUSA.

**HARRIS, M.F., (MR) (AAAA 1982)**  
Rockwell Int'l, 2013 Cunningham Dr, Suite 201, Hampton, VA 23666. Bus: (804) 538-6161. Res: (804) 651-9213. W: Jennifer. Ch: Michael Jr. B: Sep 21. Nickname: Ch: Mike. Job: Mgr Gov't Marketing, Rockwell Int'l, Del Elect Opns, Hampton Reg Off. Int'l. Educ: Citadel, BS; Troy State Univ, MS; GWU, MA. Prev Svc: USAF. 17 yrs. MAJ. Orgn: AUSA, AFA, AFCEA, Old Crows, Navy Institute.

**HART, Roger, (MR) (AAAA 1982)**  
Canadian Marconi Co., 2442 Trenton Avenue, Montreal Quebec H3P 1Y9. Bus: (514) 341-7630. Job: Manager, Marketing Services-Avionics, Canadian Marconi Co.

**HARVEY, R. Frederick, (MR) (AAAA 1982)**  
Detroit Diesel Allison, PO Box 894, Speed Code Ur, Indianapolis, IN 46226. Bus: (317) 242-5147. Res: (317) 271-7658. W: Shaheen. Ch: Eric, Laura. B: Apr 13. Nickname: Fritz. Job: Dir, Model 250 Engine Sales, Allison Gas Turbine Opns, GMC.

**HARVEY, Thomas E., (MR) (AAAA 1979)**  
Dynalectron Corp., 6801 Calmont, Fort Worth, TX 76116. Bus: (817) 732-4781. Res: (817) 284-0287. W: Margie. Ch: Thomas Jr, Jimmy, Becky. B: Feb 12. Job: Field Services Division Manager, Dynalectron Corp. Educ: Sacramento & Amarillo College. Prev Svc: USAF. Orgn: AUSA, AFA.

**HATTENDORF, Edwin R., (MR) (AAAA 1983)**  
91d Glenbourne Drive, Boonton, NJ 07005. Bus: (201) 393-2168. Res: (201) 334-6463. W: Bonnie. Ch: Laura, Elaine, Edwin Jr. B: Oct 31. Nickname: Ed. Job: Systems Manager, Avionics, Bendix Flight Systems Div. Educ: Univ of IL, BSEE MSEE. Prev Svc: USAF. 4 yrs. SSGT.

**HATTIN, Ronald F., (MR) (AAAA 1968)**  
Litton Systems, Inc., 19231 Dunbridge Way, Gaithersburg, MD 20879. Bus: (202) 554-2570. Res: (301) 840-1017. W: Frances. Ch: Pamela, Kimberley, Ronald II, Patricia. B: Jun 3. Nickname: Ron. Job: Director



Navy Requirements, Litton Systems, Inc. Educ: USNA, BS. Prev Svc: USAF, USN. Ret: 1956. 8 yrs. 1LT. Orgn: AHS, AUSA.

**HAVILL, F. W., (MR)** (AAAA 1981) 1800 Satellite Boulevard, Duluth, GA 30136. Bus: (404) 476-4191. Job: Program Manager, TADS Laser Tracker.

**HAY, Lee Roy, (MR)** (AAAA 1982) E-Systems, Inc., Greenville, TX 75401. Bus: (214) 454-4433. Res: (214) 454-0409. W: Anita. B: Sep 3. Nickname: Lee Roy. Job: Market Development, E-Systems, Inc. Educ: Univ of Dayton, AE. Prev Svc: USN. Ret: 1976. 29 yrs. LTC.

**HEASLIP, R.T., (MR)** (AAAA 1968) DeHavilland Aircraft Ltd, Military Sales Rep-USA, Downsview Ont M3K 1Y5 Canada. Bus: (416) 833-7310. Res: (416) 889-1003. W: Jean. Ch: Rob, Ron, Scott. B: Jun 23. Nickname: Bob. Job: Group Manager-Military Sales, DeHavilland Aircraft of Canada. Educ: Canadian Forces Staff College. Ret: 1968. 26 yrs. LTC.

**HECHT, Robert M., (MR)** (AAAA 1982) 320 Beach Drive, Annapolis, MD 21403. Bus: (301) 266-4444. Res: (301) 268-2964. W: Susan. B: May 14. Nickname: Bob. Job: Senior Engineer, ARINC Research Corp. Educ: PA State Univ, BS; Univ of New Orleans, MS. Prev Svc: USAR, 1LT.

**HECKLER, Art, (MR)** (AAAA 1979) Fairchild Weston Sys, Inc, 300 Robbins Lane, Syosset, L.I., NY 11791. Bus: (516) 349-2563. Res: (516) 587-6706. B: Feb 2. Nickname: Art. Job: Director of Marketing, Fairchild Weston Systems, Inc. Educ: Polytechnic Inst of Bklyn, BSEE.

**HEIN, Richard A., (MR)** (AAAA 1960) General Dynamics Corp., P.O. Box 2507, MZ 44-52, Pomona, CA 91766. Bus: (714) 987-0075. Res: (714) 877-3228. Ch: Robin. B: Dec 1. Nickname: Richard. Job: Army Marketing Manager, General Dynamics Pomona Div. Educ: VA Mil Inst, BA; W. State Coll of Law. Prev Svc: USA, 7 yrs. CPT.

**HEITZMAN, D. E., (MR)** (AAAA 1981) P.O. Box 1359, 1601 North Plano Road, Richardson, TX 75080. Bus: (214) 783-2004. B: Dec 5. Job: VP Marketing, Electrospace Systems, Inc.

**HELBERT, Bruce G., (MR)** (AAAA 1983) Daimo Victor Operations, 15125 Industrial Way, Belmont, CA 94002. Bus: (415) 595-1414. Job: Senior Research Scientist, Daimo Victor Operations.

**HEMENWAY, Ward, (MR)** (AAAA 1983) Avco Lycoming Div., 550 South Main Street, Stratford, CT 06497. Bus: (203) 385-3351. W: Susan. Job: Director, Military Aviation Programs, Avco Lycoming Div. Educ: USMA, BS MBA. Prev Svc: USAF. Ret: 1976. 30 yrs. COL. Orgn: AHS, AUSA.

**HENDERSON, H.B., (MR)** (AAAA 1963) General Dynamics Corp., 1120 W. Mercury Blvd, Suite 210, Hampton VA 23666. Bus: (804) 838-1300. Res: (804) 896-4432. W: Geraldine. Ch: Scott, Kary. B: Dec 26. Nickname: Buzz. Job: Corporate Manager, General Dynamics Corp. Educ: Univ of CO; USC, BS. Prev Svc: USN. Ret: 1963. 20 yrs. CPT. Orgn: AUSA, AFA.

**HENDERSON, James R., (MR)** (AAAA 1982) Science Applications, Inc., 2109 W.

Clinton Ave., 800, Huntsville, AL 35805. Job: Science Applications, Inc.

**HENDERSON, James H., (MR)** (AAAA 1983) USPA and IRA, 605 Providence Blvd., Clarksville, TN 37040. Bus: (615) 647-6516. Res: (615) 467-8745. W: Jane. Ch: Jeanette, Joanne. B: Jun 18. Nickname: Jim. Educ: Univ of No. AL, BS; USMC, MSSM. Prev Svc: USA, 8 yrs.

**HENRY, William S., (MR)** (AAAA 1982) Teledyne Ryan Aeron., 1501 Wilson Blvd., Arlington, VA 22209. Bus: (703) 522-2550. W: Marjorie. Nickname: Bill. Job: Vice President Marketing, Teledyne Ryan Aeron., San Diego, CA & Wash. Educ: USMA, West Point, IN Univ, BS. Prev Svc: USA. Ret: 1958. 11 yrs. MAJ. Orgn: AUSA, AFA.

**HERBERT, Charles J., (MR)** (AAAA 1961) Harris - GASD, P.O. Box 94000, Melbourne, FL 32901. Bus: (305) 727-5084. Res: (305) 777-0422. W: Tanya. Ch: Sandra, Marla, Paul, Chuck, John, Charles Jr. B: Oct 3. Nickname: Charlie. Job: VP & General Manager, Harris-gasd. Educ: GA Inst Tech, BSEE; FL Inst Tech, MSSM. Prev Svc: USA, 3 yrs. E5. Orgn: AHS, AUSA.

**HICKOK, Richard C., (MR)** (AAAA 1982) GE-Bldg, 37404, 1000 Western Avenue, Lynn, MA 01910. W: Sandra. Ch: Christine, Valerie. B: Dec 13. Nickname: Dick. Bus: (617) 594-3166. Res: (617) 887-8459. Job: GE27 Project General Manager, General Electric Co. Educ: Penn State, BS Aero; RPI, MS Aero; Northeastern, MBA. Orgn: AUSA, AHS, HCA, AFA.

**HILGENDORF, Robert, (MR)** (AAAA 1985) Midland-Ross Corp., Grimes, 550 Route 55, PO Box 247, Urbana, OH 43078. Job: Director of Engineering, Midland-Ross Corp., Grimes Div.

**HILL, Jack J., (MR)** (AAAA 1982) 4240 Cottage Grove Pkwy SE, Cedar Rapids, IA 52403. Res: (319) 362-0738. W: Becky. Ch: Tim, Katie. B: Oct 28. Job: Program Manager, Rockwell Int'l, Educ: Univ of Iowa, BS. Prev Svc: USA, 2 yrs. 1LT.

**HIRSH, Norman B., (MR)** (AAAA 1971) Hughes Helicopters, Inc., Bldg 365 M/S C200, Culver City, CA 90230. Bus: (213) 305-5448. Res: (213) 377-4711. W: Sharon. B: Apr 20. Nickname: Norm. Job: VP/AAH Program, Hughes Helicopters, Inc. Educ: Purdue Univ, BS; UCLA. Prev Svc: USA. Orgn: AHS, AUSA, AFA. AAAAA Offices/Misc: Past Pres, Southern California Chapter.

**HOENISCH, David E., (MR)** (AAAA 1978) Hughes Airtel, PO Box 9399, Bldg A1 M/S 3B983, Long Beach, CA 90810. Bus: (213) 513-4507. W: Kathleen. Ch: David II, Leslie. B: Feb 23. Nickname: Dave. Job: Manager, Advanced Project Marketing, Hughes Aircraft Co-Support Sys. Educ: USC, BS. Prev Svc: USMC, 4 yrs. SSGT. Orgn: ADPA, NSIA, USAA.

**HOGAN, Veigh E. Jr, (MR)** (AAAA 1983) Deutsch Company, MCD, 660 Central Parkway, Florissant, MO 63031. Bus: (314) 227-5009. Job: Contractor Applications Engineer, Deutsch Company, MCD.

**HOLKE, Swen, (MR)** (AAAA 1983) SAAB-Scania Combitech AB, SAAB Instruments-Box 1017, 50551-1 Jorkoping Sweden. Bus: (463) 611-9780. Job: Pro-

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gram Manager Helicopter Sights, SAAB-Scania Combitech AB.

**HOLLAND, John L., (MR)** (AAAA 1982) E-Systems Memcor, P.O. Box 23500, Tampa, FL 33630. Bus: (813) 885-7000. Res: (813) 962-8526. W: Marie. Ch: John Jr. B: Jan 15. Job: Manager, Electronic Warfare Requirements, E-Systems, Memcor Div. Educ: Armstrong State, BBA; Ctr MI Univ, MA. Ret: 1980. 23 yrs. MAJ. Orgn: AUSA, AOC, TMSA, AMA, AFCEA.

**HOLLE, Walter A., (MR)** (AAAA 1962) Route 1, Woodburn, IN 46797. Bus: (219) 749-8531. Res: (219) 632-4361. W: Anna. Ch: Stephen, John. B: Oct 2. Job: Assistant Secretary, Hardware Wholesalers, Inc. Prev Svc: 4 yrs. 1LT.

**HOLT, Paul W., (MR)** (AAAA 1969) 128 Mill Harbour Condo, Estate Golden Rock, St Croix US Virgin Island 00820. Bus: (809) 778-0046. Res: (809) 773-2071. W: Gail. Job: Controller, Virginia Islands Mfg Co., P.O. Box 1448, St. Thomas, VI. Educ: Brown Univ, BA. Orgn: AHS.

**HOLTMAN, Carol, (MS)** (AAAA 1982) 2275 West 25th, San Pedro, CA 90732. Bus: (213) 305-4261. Res: (213) 833-2507. H: John. Ch: Patrick, Michael. B: Aug 10. Job: Manager Public Relations/Visitor Services, Hughes Helicopters, Inc. Educ: El Camino Jr College; UCLA, AA. Orgn: AHS, AUSA, AAAAA Offices/Misc: Treas, Southern California Chapter.

**HOLUK, Steven K., (MR)** (AAAA 1969) 110-34 73rd, Suite 1-E, Forest Hills, NY 11375. Bus: (212) 544-6784. Res: (212) 544-6784. W: Wanda. Ch: Stephen, John, Diane, Elaine. B: Mar 30. Nickname: Steve. Job: Consultant, Energy Maintenance Corp. Prev Svc: USN, 2 yrs. Orgn: AHS, AMA.

**HONICKMAN, Stephen N., (MR)** (AAAA 1983) 1870 Clover Ridge Court, Chesterfield, MO 63017. Bus: (314) 391-7090. Res: (314) 532-1134. W: Florence. Ch: Neal, Mindy. B: Mar 15. Job: ASE Contractor-STG ElectroSystems. Educ: NJIT, S.C.D.; NYU, MEE; CCNY, BEE.

**HODDENPYLE, James W., (MR)** (AAAA 1975) Howell Instruments, 3479 West Vickers Blvd., Fort Worth, TX 76107. Bus: (817) 336-7411. Job: Regional Sales Manager, Howell Instruments, Inc.

**HOOKER, James E., (LTC)** (AAAA 1971) MUSCAT, Department of State, Washington, DC 20520. W: Phyllis. Ch: James Jr, Bruce. B: May 26. Nickname: Jim. Job: Aviation Safety Inspector (Ops), FAA-Flight Standards Advisor to the Gov't of the Sultanate of Oman. Educ: N. TX State; Univ of Hawaii. Prev Svc: USA, Ret: 1969. 22 yrs. LTC.

**HOOKS, Roy P., (MR)** (AAAA 1978) Northrop Worldwide Acft, 1306 N.E. Quail Creek Cir, Lawton, OK 73501. Bus: (405) 353-2733. Res: (405) 355-6221. W: Rose. Ch: Harlan, Jon, Christopher. B: Nov 3. Job: Manager, Administration, Northrop Worldwide Aircraft Services, Inc. Educ:

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## The Industry Team

Troy State Univ, BS Bus Admin. Ret: 1975. 20 yrs. MAJ.

**HORNBERGER, Christopher, (MR) (AAAA 1983)** P.O. Box 405, MS 3405, Texas Instruments, Lewisville, TX 75057. Bus: (214) 462-4700. Job: Manager, Marketing Support Defense Suppression Division, Texas Instr.

**HORNER, L. M., (MR) (AAAA 1978)** Bell Helicopter Textron, P.O. Box 482, Dept. 10, Ft Worth, TX 76101. Bus: (617) 280-2103. W: Patricia. Ch: Julia, John, Carter. Nickname: Jack. Job: President, Bell Helicopter Textron. Educ: Yale Univ. BS Ind Admin. Prev Svc: USMC. Orgn: MCAA, NHA.

**HORNING, Richard, (MR) (AAAA 1981)** Emerson Electric Company, 8100 W. Florissant, St. Louis, MO 63136. W: Carol. B: Jan 11. Nickname: Dick. Job: Manager, Market Planning, Emerson Electric Co. Educ: Interamerican Univ, MBA. Prev Svc: USAF. Ret: 1979. 20 yrs. LTC.

**HORSEY, Kenneth E., (MR) (AAAA 1964)** 145 Hilltop Circle, Trumbull, CT 06611. Bus: (203) 386-7073. Ret: (203) 375-1246. W: Jean. B: Sep 14. Nickname: Ken. Job: Int'l Program Management, Sikorsky Aircraft, Stratford, CT. Prev Svc: USAF. Orgn: HCA, AHS, AUSA. AAAA Offices/Misc: Past Pres, Connecticut Chapter.

**HOSPODOR, Andrew T., (MR) (AAAA 1981)** Rca Corp., Automated Sys., P.O. Box 586, Burlington, MA 01803. Bus: (617) 229-3301. W: Rose Marie. B: Jan 30. Nickname: Andrew. Job: Div VP and General Manager, RCA Corp., Automated Systems. Educ: Cornell Univ, BME; Lehigh Univ, MSME MBA. Orgn: AFCEA, Old Crowds.

**HOTCHKISS, John F., (MR) (AAAA 1981)** Bendix Corp., 1000 Wilson Boulevard, Arlington, VA 22209. Bus: (703) 276-2180. Ret: (703) 532-1461. W: Jerra. Ch: John, Jeffrey, Holland. B: Jun 28. Job: Director Advanced Programs, Bendix Aerospace-Electronics Group. Educ: West Point, USC. BS. Prev Svc: USAF. 5 yrs. Orgn: AUSA, AFA.

**HOWARD, Mike, (MR) (AAAA 1982)** King Radio Corporation, 400 North Rogers Road, Olathe, KS 66062. Bus: (913) 782-0400. Job: Director of Contracts, King Radio Corp. Educ: Univ of TX, BBA Finance. Prev Svc: USAF. 8 yrs. CPT.

**HUBBLE, R. M., (MR) (AAAA 1983)** Beech Aircraft Corp, 9709 E. Central, PO Box 85, Wichita, KS 67201. Bus: (316) 681-8335. Ret: (316) 945-8501. W: Roberta. Ch: Brett. B: Nov 12. Job: Contract Administrator, Beech Aircraft Corp. Educ: Wichita State Univ, BBA.

**HUCKABY, Robin D., (MR) (AAAA 1983)** Marconi Avionics Inc., 4500 N. Shallowford, Atlanta, GA 30338. Bus: (404) 394-7800. Ret: (404) 972-7521. Nickname: Rob. Job: Engineering Program Manager, Marconi Avionics Inc. Educ: GA Inst of

Tech, BA Elect Engrg. Orgn: AHS.

**HUDSON, John G., Sr, (MR) (AAAA 1978)** 322 S. Waco, Apt. 12, Weatherford, TX 76086. Ret: (817) 594-7522. Ch: John Jr, Kathryn. B: Mar 19. Educ: Univ of MD, St. Louis Univ. Prev Svc: USA, USAF. 2 yrs.

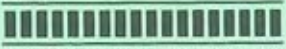
**HUGHES, Stan M., (MR) (AAAA 1977)** Hughes Aircraft Co., 5629 Princeton Ave, No. B, Columbus, GA 31909. Bus: (404) 324-4195. Ret: (404) 563-4890. W: Karen. B: Jan 9. Nickname: Stan. Job: Manager, Columbus Regional Office, Hughes Aircraft Company. Educ: Humboldt State College, BA. Prev Svc: USN. 4 yrs. LT.

**HUISMANN, John B., (MR) (AAAA 1983)** 606 South Neil Street, Champaign, IL 61820. Bus: (217) 359-3951. Job: VP, Marketing, Frasca International, Inc.

**HUMFELD, Harold E., (MR) (AAAA 1970)** Howell Instruments, 3479 West Vickery Blvd., Fort Worth, TX 76107. Bus: (817) 336-7411. Ret: (817) 924-9833. W: Jennie. Ch: Mary, Gary. B: Nov 15. Nickname: Max. Job: VP-Military Requirements, Howell Instruments, Inc. Educ: UCLA, AB. Prev Svc: USAF. Ret: 1967. 30 yrs. MG. Orgn: AHS, AUSA, AFA.

**HURST, Donald E., (MR) (AAAA 1982)** Teledyne Ryan Aeron., 2701 Harbor Drive, San Diego, CA 92138. Bus: (619) 291-7311. Job: Chief of Contracts and Pricing, AH-64, Teledyne Ryan Aeronautical.

**HYATT, Bland, (MR) (AAAA 1979)** Fairchild Weston Sys, Inc., 1235 Jefferson Davis Hwy, Suite 904, Arlington, VA 22202. Bus: (703) 521-0448. Ret: (703) 360-2354. W: Renee. B: Aug 14. Nickname: Bud. Job: Director, Washington Region, Fairchild Weston Systems, Inc. Prev Svc: USAF. Ret: 1974. 31 yrs. COL. Orgn: AOC, AUVS.



**IERARDI, Philip N., (MR) (AAAA 1974)** General Electric, Suite 520, 47 Perimeter Ctr East, NE, Atlanta, GA 30346. W: Suzanne. Ch: Catherine, David, James. B: Aug 27. Nickname: Phil. Job: Manager, Southeast District, General Electric Co. Educ: NE Univ, BSME. Prev Svc: USANZ. 5 yrs. SGT. Orgn: AHS, AUSA, AFA, IAIA, SAE. AAAA Offices/Misc: Past Treas, Southern California Chapter.



**JASIEWICZ, Joseph W., (MR) (AAAA 1964)** 233 Derby Avenue, Unit 315, Derby, CT 06418. Bus: (203) 222-2105. Ret: (203) 734-4818. Ch: Joseph. B: Jan 26. Nickname: Joey. Job: Technical Representative, Sikorsky Aircraft, Stratford, CT. Educ: Telerboro School of Aeronautics. Prev Svc: USCG. 3 yrs.

**JAY, Benny, (MR) (AAAA 1977)** Tracor Aerospace, 6500 Tracor Lane, Austin, TX 78721. Bus: (512) 926-2800. Ret: (512) 345-8420. W: Nancy. Ch: Cynthia, Debra, Bradley, Marcus. B: Mar 19. Nickname: BJ. Job: Division VP for Strategic Planning, Tracor Aerospace Group. Educ: Abilene Univ, BS; Carnegie Mellon Univ, MS. Univ of TX.

**JENNEY, David S., (DR) (AAAA 1971)** 109

Wilbrook Road, Stratford, CT 06497. Bus: (203) 386-6782. Ret: (203) 378-2037. W: Janet. Ch: Lauri, John, Faith. B: May 18. Nickname: Dave. Job: Chief-Technical Engineering, Sikorsky Aircraft, Stratford, CT. Educ: WPI, BS; UCONN, MS; RPI, Ph.D. Orgn: AHS.

**JOHN, Mark W., (MR) (AAAA 1978)** 3244 Darby Road, Haverford, PA 19041. Bus: (215) 522-3357. Ret: (215) 896-0175. W: Lynthia. Ch: Oliver. B: Sep 6. Job: Deputy Director-Int'l Marketing, Boeing Vertol. Educ: Brown, BA; Harvard Law School, JD. Orgn: AHS.

**JOHNSON, Curtis G., (MR) (AAAA 1983)** First National Bank, P.O. Box 607, Clarksville, TN 37040. Bus: (615) 431-3513. Ret: (615) 647-5145. W: Marsha. Ch: Curtis Jr. B: Sep 29. Job: Assistant VP and Manager of Branch Office. Educ: Austin Peay State Univ. Prev Svc: USN. Orgn: AUSA.

**JOHNSON, L. Ron, (MR) (AAAA 1983)** P.O. Box 745, Goldenrod, FL 32733. Bus: (305) 678-6955. Ret: (305) 678-8026. B: Jan 4. Nickname: RJ. Job: Director of Logistics, Appli-Mation Inc., Orlando, FL. Prev Svc: USA. 17 yrs. CW2. AAAA Offices/Misc: VP, Suncoast Chapter.

**JOHNSON, Richard L., (MR) (AAAA 1982)** Input Output Computer Svc, 776 Shrewsbury Avenue, Tinton Falls, NJ 07724. Bus: (201) 530-0608. Ret: (201) 741-4153. W: Marge. Ch: Richard Jr, Edwin. B: Aug. Nickname: Dick. Job: Technical Representative, Input Output Computer Services, Inc. Educ: Fairleigh Dickinson, MSEE; NC A&T College, BSME. Prev Svc: USA. 2 yrs. Orgn: AFCEA.

**JOHNSON, Robert M., (MR) (AAAA 1983)** Appli-Mation Inc., 6955 Hanging Moss Road, Orlando, FL 32807. Bus: (305) 678-8055. Ret: (305) 831-0354. W: Barbara. Ch: Susan, Sandra, Martin, Bruce, Chris. B: Sep 12. Nickname: Bob. Job: President, Appli-Mation, Inc. Educ: OH State Univ, BS; USN Postgrad Sch, BS. Prev Svc: USN. 9 yrs.

**JOHNSON, Roger P., (MR) (AAAA 1971)** 4737 Browder Lane, Rolling Hills Estates, CA 90274. B: Feb 18. Bus: (213) 541-7719. Job: President, R P J Associates, Inc. Educ: Univ of MI, BSE, MSE.

**JONES, James P., (MR) (AAAA 1982)** E-Systems Inc, Memcor Div, P.O. Box 23500, Tampa, FL 33623. Bus: (813) 885-7000. Ret: (813) 391-4387. W: Wanda. B: Jan 14. Nickname: Jimmy. Job: VP & General Manager, Memcor Division of E-Systems, Inc. Educ: Auburn Univ, MBA.

**JONES, W.P., (MR) (AAAA 1972)** P3005, P.O. Box 16858, Philadelphia, PA 19142. Bus: (215) 522-3436. Ret: (215) 328-1098. W: Gerry. Ch: Casey, Dave, Bob, Rod, Vicki, Ty, Mel. B: Sep 24. Nickname: Bill. Job: Director, Helicopter Programs, Boeing Vertol Co. Educ: Univ of MD, BS. Prev Svc: USA. 4 yrs. Orgn: AHS, AUSA, NSIA.

**JORDANIDES, Spero, (MR) (AAAA 1969)** 67 Franklin Street, Ansonia, CT 06401. Bus: (203) 234-4690. Ret: (203) 734-4558. B: Sep 20. Nickname: Sam. Job: QA Specialist-Aerospace, Pratt & Whitney, North Haven, CT. 4 yrs. SSGT. Orgn: AHS, AFA.

**JORIO, Aldo, (SIG) (AAAA 1982)** Costruzioni Aeron Agusta, Casella Postale 480,



SV: RCAF. Ret: 1968. 20 yrs. MAJ.

**KENYON, Norris E.**, (MR) (AAAA 1966) General Electric Co., 1000 Western Ave., MD45208, Lynn, MA 01910. Bus: (617) 594-2000. Res: (617) 887-2012. W: Dorothea. Ch: Steve, Dave, Jeff, Terry Lynn. B: Jun 3. Nickname: Norrie. Job: Mgr Lynn Marketing Communications, General Electric Co. Educ: Univ of RI, BS. Prev Svc: USA. 2 yrs. LT. Orgn: AHS, AUSA.

**KEPHART, Clair**, (MR) (AAAA 1982) Box 486, RD No. 1, Cresco, PA 18326. Bus: (717) 522-3256. Res: (717) 595-3177. W: Dawn. B: Oct 10. Job: Manager Publications & Training, Boeing Vertol Co., Philadelphia, PA. Educ: Northrup Univ. Prev Svc: USAF. Ret: 1957. 3 yrs. CPT. Orgn: AHS.

**KESTEN, Arthur H.**, (MR) (AAAA 1957) Westport, CT 06880. Bus: (203) 226-8184. Res: (203) 227-0759. W: Doty. Ch: Dale, Lynn. B: Dec 5. Nickname: Art. Job: Publisher, Army Aviation Magazine, Westport, CT. Educ: SAA, USAR-Ret; Cornell Univ, BA 49. Ret: 1956. 14 yrs. MAJ. Orgn: HCA, AHS, AUSA, AFA, AAAAA Offices/Misc: Executive Vice President-AAAA; Hall of Fame.

**KESTEN, Dorothy**, (MRS) (AAAA 1957) Army Aviation Magazine, 1 Crestwood Road, Westport, CT 06880. Bus: (203) 226-8184. Res: (203) 227-0759. W: Arthur. Ch: Dale, Lynn. B: Apr 9. Nickname: Dotty. Job: Vice President, Ladd Agency. Educ: Cornell Univ, BS. AAAAA Offices/Misc: Hall of Fame.

**KIMMITT, J. Stanley**, (MR) (AAAA 1981) Hughes Helicopters, Inc., 1140 Conn Ave NW, Suite 1005, Washington, DC 20036. Bus: (202) 223-1800. Res: (703) 538-2507. W: Eunice. B: Apr 5. Nickname: Stan. Job: VP-Government Affairs, Hughes Helicopters, Inc. Educ: Univ of MT; UT State Univ, BS; GWU. Ret: 1966. 25 yrs. COL.

**KIRK, Robert L.**, (MR) (AAAA 1979) Vought Corp., P.O. Box 225907, Dallas, TX 75265. Bus: (214) 266-2011. W: Elise. B: Jan 4. Job: President & Chief Executive Officer, Vought Corp. Educ: Purdue, BS; Univ of MI; USC. Prev Svc: USN. 3 yrs. LTJG.

**KIRSCHMAN, Richard H.**, (MR) (AAAA 1982) 6241 Sandycreek Ct, Florissant, MO 63033. Bus: (301) 741-4949. W: Mary. Job: Mgr St. Louis Office, AFINC Research, Annapolis, MD. Educ: Univ of MI, BS; USC, MS. Prev Svc: USAF. 7 yrs. CPT.

**KLINE, Charles R.**, (MR) (AAAA 1982) Westinghouse Elec. Corp., PO Box 1693, Balt-Wash Aprt., Baltimore, MD 21203. Bus: (301) 765-4702. Res: (301) 465-0825. W: Doris. Ch: Melissa. B: Apr 25. Nickname: Chuck. Job: Manager, Electro Optical Systems, Westinghouse Electric Corp. Educ: Univ of MO, BS; Rolla, Prev Svc: USA. 2 yrs. Orgn: UVA, AUSA, ADPA.

**KNAPP, Lewis G.**, (MR) (AAAA 1980) 320

21013 Gallarate, Italy. Bus: 0331-229228. Res: 0331-262391. W: Silvana. Ch: Cristina. B: Dec 26. Job: Chief EH-101 Avionic Design, Augusta. Educ: Electrical Engineer. Orgn: AHS.

**JOSE, Dwayne K.**, (MR) (AAAA 1981) Bell Helicopter Textron, P.O. Box 482, Dept. 03, Fort Worth, TX 76101. Bus: (817) 280-3156. Res: (817) 923-1234. W: Chris. B: Jul 22. Nickname: Dwayne. Job: Senior VP-Marketing, Bell Helicopter Textron, Educ: Iowa State, BS. Prev Svc: USAF. 5 yrs. CPT. Orgn: AHS, AUSA.

**JOYCE, Donald**, (MR) (AAAA 1982) 2611 Kirk Avenue, Broomall, PA 19008. Bus: (215) 522-3224. Res: (215) 356-6657. W: Claire. Ch: Sharon, Christina. B: Dec 2. Job: Manager Product Support, Boeing Vertol, Philadelphia, PA. Educ: Kingston England, BS. Orgn: AHS.

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**KAOK, Robert L.**, (MR) (AAAA 1981) Vought Corp., P.O. Box 225907, Dallas, TX 75265. Bus: (214) 266-7369. Res: (214) 256-1657. W: Patricia. B: Oct 10. Job: Director Technology Market Development, Vought Corp. Educ: Univ of KS, BS. Prev Svc: USAF. 3 yrs. Orgn: AUSA.

**KABACI, Mike**, (MR) (AAAA 1979) Avn Contractor Employees, P.O. Drawer 399, Daleville, AL 36322. Bus: (205) 598-4540. Res: (205) 774-6074. W: Faye. B: Aug 2. Job: Director of Training, Aviation Contractor Employees, Inc. Ret: 1969. 20 yrs. CWS.

**KACHIGIAN, Sarkis**, (MR) (AAAA 1980) 553 Farview Avenue, Wyckoff, NJ 07481. Bus: (201) 881-2108. Res: (201) 891-5436. W: Anne. Ch: Susan, Steven, Margaret. B: Jan 9. Nickname: Rex. Job: Program Manager, Singer-Kearfott Div. Educ: Brown Univ, BSEE. Prev Svc: USA. 3 yrs.

**KALISTA, Clifford J.**, (MR) (AAAA 1980) P.O. Box 482, Fort Worth, TX 76101. Bus: (817) 280-3182. Res: (817) 485-3481. W: Betty. B: Feb 11. Job: VP-Int'l Marketing, Bell Helicopter, Fort Worth, TX. Educ: St. Norbert, BA. Prev Svc: USA. Ret: 1959. 17 yrs. MAJ. Orgn: AHS, AUSA, AFA, AAAAA Offices/Misc: Past NEB.

**KANE, Richard**, (MR) (AAAA 1981) E-Systems Memcor Div., P.O. Box 23500, Tampa, FL 33630. Bus: (813) 885-7000. Nickname: Dick. Job: Director, DOD Requirements, E-Systems, Memcor Div. Ret: 1980. 23 yrs. LTC.

**KANE, Thomas**, (MR) (AAAA 1980) Grumman Aerospace Corp., MS 805-5, Bethpage, NY 11714. Bus: (516) 575-7400. W: Jane. Ch: Abby, Thomas, Kristen. B: Aug 13. Nickname: Tom. Job: VP Business Development, Grumman Aerospace Corp. Educ: Manhattan Coll; Hofstra Univ; Columbia Univ. Prev Svc: USN. LCDR.

**KAPLAN, David H.**, (MR) (AAAA 1982) Bell Helicopter Textron, Mercantile Ctr., No 2605, St. Louis, MO 63101. Bus: (314) 621-1661. Res: (314) 241-7023. W: Shirley. B: Jul 24. Job: Chief R&T Requirements, Bell Helicopter Textron, Inc. Educ: Rensselaer Poly Inst, BAE; Poly NY, MS. Orgn: AHS, AUSA, AIAA, Twirley Birds.

**KARR, Allan V.**, (MR) (AAAA 1979)

Hamilton Standard, 1690 New Britain Avenue, Farmington, CT 06032. Bus: (203) 677-3018. B: Nov 16. Nickname: Al. Job: Senior Mktg Engr, Hamilton Standard, Div UTC. Educ: UCONN, BSEE; Univ of New Haven, MBA. Prev Svc: USA. 3 yrs. 1LT. Orgn: AHS, AFA.

**KASTRINELIS, P.L.**, (MR) (AAAA 1978) General Electric Co., 1000 Western Ave., MD24009, Lynn, MA 01905. Bus: (617) 594-5239. Res: (617) 887-5797. W: Barbara. Ch: Peter, Michael, Timothy. B: Jun 5. Job: General Manager, J85/CJ610/CF700 Project, General Electric Co. Educ: Duke Univ, BSME. Prev Svc: USAF. 3 yrs. CPT.

**KAUFMAN, Alan S.**, (MR) (AAAA 1981) ITT, 3900 Washington Avenue, Nutley, NJ 07100. Bus: (201) 284-3748. Job: Director Engineering, ITT Avionics. Educ: NY Univ, BSEE MSEE.

**KEFFER, Thomas J.**, (MR) (AAAA 1982) American Electronic Labs., P.O. Box 552, Lansdale, PA 19446. Bus: (215) 822-2929. Res: (215) 687-3757. W: Edna. Ch: Kathleen. B: Jun 8. Nickname: Tom. Job: VP, CAI Marketing, American Electronic Labs. Educ: Univ of PA; Univ of Drexel, BSEE. Prev Svc: USN. 4 yrs.

**KEITH, David L.**, (MR) (AAAA 1982) IGW Systems, Inc., 9000 Precision Drive, Indianapolis, IN 46236. Bus: (317) 898-9000. Res: (317) 852-5860. W: Gweneth. Ch: Eric, Kelly, Dianna, Linda. B: Oct 13. Job: VP-Marketing, IGW Systems, Inc., Indianapolis, IN. Educ: Purdue. Prev Svc: USAF. 3 yrs. A2C. Orgn: AHS.

**KELLER, R. J.**, (MR) (AAAA 1980) Fairchild Weston Sys, Inc., P.O. Box 10249, Sarasota, FL 33578. Bus: (813) 379-5555. W: Rosemary. B: Mar 28. Nickname: Joe. Job: VP & General Manager, Fairchild Weston Systems, Inc. Educ: The Citadel, BS Physics. Prev Svc: USAF. 3 yrs. 1LT.

**KELLY, Kenneth J.**, (MR) (AAAA 1982) 885 Sport Hill Road, Easton, CT 06612. Bus: (203) 386-7025. W: Julie. Ch: Steve, Diana. B: May 19. Nickname: Ken. Job: Director Gov't Business, Sikorsky. Educ: Notre Dame, BS; NYU, MS; UCONN, MBA. Prev Svc: USMCR. LTC. Orgn: AHS, AUSA, AFA, ANA, NL, MCAA, MCROA, IEEE.

**KEMP, J. C.**, (MR) (AAAA 1983) Littion Systems, Inc., 5500 Canoga Ave, MS 77, Woodland Hills, CA 91365. Bus: (213) 715-4005. Res: (213) 883-4511. W: Nancy. Ch: Elizabeth, Carter. B: Sep 15. Job: Manager Helicopter Programs, Littion Systems, Inc. Educ: USNA, BS; Naval PG Sch, MS; GWU, MBA. Prev Svc: USN. Ret: 1973. 34 yrs. CPT. Orgn: AHS.

**KENDRICK, John A.**, (MR) (AAAA 1969) Grumman Corp., 1000 Wilson Blvd., Arlington, VA 22208. Bus: (703) 276-4936. Ch: David, Karen. B: Mar 24. Job: Director, Army Opns Programs, Grumman Corp. Educ: Hofstra; Univ of MD, BS. Orgn: AHS, AUSA.

**KENNEDY, Art**, (MR) (AAAA 1982) Garrett Manufacturing Ltd, 255 Altwell Drive, Rexdale, Ont, Canada M9W 5B8. Bus: (416) 675-1411. Res: (416) 793-0046. W: Margot. Ch: Sean, Sioban. B: Nov 20. Nickname: Art. Job: PVD Sales Manager, Garrett Manufacturing Ltd. Educ: Univ of W. Ontario, B.Sc. Radio Physics. Prev



# K The Industry Team

Shore Road, Stratford, CT 06497. Bus: (203) 386-6444. Res: (203) 377-0602. W: Vivienne. B: Feb 22. Job: Chief New Product Engineering, Sikorsky Aircraft, Stratford, CT. Educ: Univ of Bridgeport, BS. Orgn: AHS.

**KNAPP, Richard E., (MR) (AAAA 1981)** Hughes Helicopters, Inc., Centinella & Teale Streets, Culver City, CA 90230. Bus: (213) 305-3770. Job: Director, Military Marketing, Hughes Helicopters, Inc. Educ: Univ of MI, BS; Univ of IA, MBA. Prev Svc: USA. 5 yrs. Orgn: AHS, AUSA.

**KOOB, Robert A., (COL) (AAAA 1975)** Fort Campbell Bank, P.O. Box 528, Fort Campbell, KY 42223. Bus: (502) 439-4141. Res: (502) 885-6888. W: Pam. B: Aug 27. Nickname: Bob. Job: VP & Manager, Fort Campbell Bank, Educ: Univ of MD, BS; Babson College, MBA. Prev Svc: USA. Ret: 1974. 32 yrs. COL. Orgn: AUSA, ASMC.

**KORANDA, Julie A., (MS) (AAAA 1982)** 400 Collins Road NE, Rockwell Int'l MS 124-313, Cedar Rapids, IA 52408. Bus: (319) 395-4265. Res: (319) 377-3779. W: Ronald. Ch: Ronald, Reginald. B: Mar 1. Job: Marketing Administrator, Rockwell Int'l, Collins-Gov't Avionics Group.

**KRAMPITZ, David A., (MR) (AAAA 1974)** 27 Birchwood Drive, Northford, CT 06472. Bus: (203) 386-5313. Res: (203) 484-2684. W: Susan. Ch: Carrie, Timothy, Julia. B: Aug 19. Job: Chief Tool Inspection/Calibration, Sikorsky Aircraft, Stratford, CT. Educ: Tufts, BS; UCONN, MS. Orgn: AHS.

**KRAPE, Ronald E., (MR) (AAAA 1971)** General Electric Co., APRD-AEFO-777 14th St NW, Washington DC 20005. Nickname: Ron.

**KREMONAS, Joseph N., (MR) (AAAA 1973)** Martin Marietta Corp., 6801 Rockledge Dr., 0300, Bethesda, MD 20817. Job: VP-Marketing, Martin Marietta Aerospace. Orgn: AHS, AUSA.

**KRONENFELD, H.A., (MR) (AAAA 1981)** Gould Inc, NAVCOM Systems, 4323 Arden Drive, El Monte, CA 91731. Bus: (213) 422-0123. Job: Director Marketing Administration, Gould Inc., NAVCOM Systems Div. Educ: Ohio State Univ. Prev Svc: USAF, CPT.

**KUCYK, Peter M., (MR) (AAAA 1981)** Bendix Corp., 1400 Taylor Avenue, Baltimore, MD 21204. Bus: (301) 321-5285. Res: (301) 577-6088. W: Joan. Ch: John, David. B: Jul 9. Job: Marketing Mgr, Environmental & Process Instruments Div, Bendix Corp. Educ: U.S. Naval Academy, BS. Prev Svc: USN. 7 yrs. Orgn: AUSA, AFA.

**KULIK, Leonard D., (MR) (AAAA 1977)** Bell-1090 Vermont NW, Suite 1100, Washington, DC 20005. Bus: (202) 289-5856. Res: (703) 573-8819. W: Diane. Nickname: Len. Job: Washington Representative, Bell Helicopter Textron. Educ: Univ of IL, BA; Central MI Univ, MBA. Prev Svc: USA. Orgn: AHS, AUSA. AAAA Offices/Misc: NEB, Trea, Washington, DC Chapter. Past

Sec, Washington, DC Chapter.

**KUNDROTAS, Alexander P., (MR) (AAAA 1982)** Dalmo Victor Operations, 1515 Industrial Way, Belmont, CA 94002. Bus: (415) 595-1414. W: Violet. B: Apr 29. Nickname: Al. Job: VP-Planning & New Business Development, Dalmo Victor Operations. Educ: Univ of IL, BSEE. Prev Svc: USA. 2 yrs.



**LABANSKY, John L., (MR) (AAAA 1975)** 9 Woodsend Avenue, Huntington, CT 06484. Bus: (203) 386-7028. Res: (203) 736-2188. W: Shirley. B: Nov 2. Job: Marketing Representative, Sikorsky Aircraft, Stratford, CT. Educ: Central Michigan Univ, BS MBA. Prev Svc: USA. 12 yrs. Orgn: AHS, AUSA, AAAA Offices/Misc: VP, Connecticut Chapter. Past Sec, Connecticut Chapter.

**LAGRACE, R.C., (MR) (AAAA 1980)** Hr Textron Inc., 25200 West Rye Canyon Rd., Valencia, CA 91355. Bus: (805) 259-4030. B: Aug 27. Job: Director Sales-Contracts, Servo Controls, Hr Textron, Inc. Educ: CA State Univ of Northridge, BS.

**LAMB, Joe B., (MR) (AAAA 1978)** Northrop Corp., 1000 Wilson Blvd., Arlington, VA 22209. Bus: (703) 525-6767. Res: (703) 370-0873. W: Joy. B: May 15. Nickname: Joe. Job: Senior Field Rep., Northrop Corp., Electro-Mech. Div., Anaheim, CA. Educ: Omaha, BS; Geo Wash Univ, MSBA. Prev Svc: USA. Ret: 1973. 31 yrs. COL. Orgn: AHS, AUSA, AFA.

**LAMBRECHTS, Michael E., (MR) (AAAA 1982)** Godesberger Allee 121, 5300 Bonn 2, West Germany. Bus: 0228-376714. Res: 02223-23370. W: Maria. Ch: Brigitte. B: Sep 21. Nickname: Mike. Job: Director-Germany, Hughes Aircraft Int'l. Educ: Tech Inst, BS; Ecole, MS. 3 yrs. LT. Orgn: AFA.

**LAMMERS, David G., (MR) (AAAA 1982)** 400 Collins Road, N.E., MS 124-315, Cedar Rapids, IA 52408. W: Kathleen. Ch: Martin, Marybeth, Julie. Peter. Nickname: Dave. Job: Helicopter Programs Mgr, Collins Gov't Avionics Div, Rockwell Int'l. Educ: Univ of Dayton, BSEE. Orgn: AHS.

**LAMPITOC, Richard T., (MR) (AAAA 1973)** Teleflex, Inc., Aero/Def Group, P.O. Box 218, North Wales, PA 19454. Bus: (215) 699-4861. Res: (215) 584-6832. W: Nancy. Ch: Cathy, Darryl, Caren. Chris. B: Oct 6. Job: Sales & Marketing Manager, Teleflex, Inc., North Wales, PA. Educ: UR-SINUS, Penn Stoc. Prev Svc: USAF. 3 yrs. AIC. Orgn: AHS, AUSA, AFA.

**LANGEVIN, Ted, (MR) (AAAA 1982)** Deutsche Company, AFC, 8 Liberty Circle, Newport News, VA 23602. Bus: (804) 595-2206. Job: Reg Mgr, Deutch Aerospace Fitting Co.

**LANGWORTHY, Everett W., (COL) (AAAA 1982)** Nat'l Aeronautic Assoc., 821 15th Street, N.W., Washington, DC 20005. Bus: (202) 347-2808. W: Joan. Ch: John, Jo Ann, Robert. B: Aug 17. Nickname: Ev. Job: Executive Director, National Aeronautic Association. Educ: Univ of MA, BA; Geo Wash Univ, MA. 30 yrs. COL.

**LANING, Clifford L., (MR) (AAAA 1982)** 54

Farview Farm Road, Georgetown, CT 06829. Bus: (603) 669-4615. Res: (203) 938-3518. W: Mary Ann. Ch: Joseph, Catherine, Kerry. B: Aug 3. Nickname: Cliff. Job: Manager, Business Development, Sanders Microwave Div. Educ: USC, BSEE. Ret: 1976. 17 yrs. CDMR.

**LATHAM, Michael E., (MR) (AAAA 1978)** Howell Instruments, P.O. Box 738, St. Charles, MO 63301. Bus: (314) 346-6911. Res: (314) 63301. Bus: (314) 846-6911. Res: (314) 925-2414. W: Sheila. Ch: Laurie, Steve, Paul, Scott. B: Apr 11. Nickname: Mike. Job: Regional Manager, Howell Instruments, Inc. Educ: Tarleton State College. Prev Svc: USN. 4 yrs. Orgn: AFA.

**LAUER, Albert C., (MR) (AAAA 1972)** Hughes Aircraft Company, HQ USEU COM, Box 35, APO New York 09128. Bus: 07031-27-30-77. W: Norma. B: Jul 9. Nickname: Abe. Job: Manager, European District, Hughes Aircraft Co. Educ: Ohio State, MS; USN Postgrad School. Prev Svc: USN. Orgn: AUSA, AFA, ANA. AAAA Offices/Misc: Past VP, Colonial Virginia Chapter.

**LAWTON, John, (MR) (AAAA 1974)** 32 Fairfield Place, West Caldwell, NJ 07006. Bus: (201) 575-8000. Res: (201) 267-4967. W: Dorothy. Ch: Robert, Meredith. B: Nov 10. Job: President, LSI Avionic Systems Corp. Educ: Rutgers Univ, BS; NJIT, MS. Prev Svc: USA. 2 yrs. Orgn: AFA.

**LAY, Chris A., (MR) (AAAA 1979)** Fairchild Weston Sys, Inc, 300 Robbins Lane, Syosset, LI, NY 11791. Bus: (516) 349-2285. Res: (516) 271-2399. W: Ann. Ch: Charlene, Chris Ann, Cynthia. B: Aug 15. Job: VP, Int'l Marketing, Fairchild Weston Systems, Inc. Educ: MIT, MS; USMA, MS. Prev Svc: USAF. 10 yrs. CPT. Orgn: AFA.

**LEBLANC, Maurice, (MR) (AAAA 1979)** Sanders Associates, Inc., 95 Canal St., MER 155-2250, Nashua, NH 03061. Bus: (603) 889-3184. Res: (603) 881-8369. Ch: Adam, Tracey. B: Jan 6. Job: Manager, IRCM Department, Sanders Associates, Inc. Educ: Lowell Tech Inst, AS BS. Prev Svc: USAF. 6 yrs. Orgn: AHS.

**LEFF, Martin J., (MR) (AAAA 1972)** Avco Lycoming Division, 550 South Main St., Stratford CT 06497. Bus: (203) 385-2351. Res: (203) 372-5675. W: Judith. Ch: Christopher, Jacqueline, Jill, Lisa. B: Feb 16. Nickname: Marty. Job: VP Marketing & Product Support, Avco Lycoming Div. Educ: CGNY, ME; Univ of Bridgeport, MA. Prev Svc: USA. Ret: 1956. 2 yrs. Orgn: AHS, AUSA, AFA. AAAA Offices/Misc: Past Pres, Connecticut Chapter.

**LENNIOS, A.Z., (MR) (AAAA 1978)** Kaman Aerospace Corp, Old Windsor Rd, PO Box 2, Bloomfield, CT 06002. Bus: (203) 243-7213. Res: (203) 567-7143. W: Sue. Ch: Karen, Keith. B: Nov 23. Nickname: Andy. Job: Director of Research & Technology, Kaman Aerospace Corp. Educ: MIT, BS MS; UCONN, Ph.D. Orgn: AHS.

**LEONE, Nicholas, (MR) (AAAA 1978)** Emerson Electric Co., 8100 W. Florissant, St. Louis 3673, St. Louis, MO 63136. Bus: (314) 553-3673. Res: (314) 994-3047. W: Margaret. Ch: Sandra, Gayle, Michele. B: Jan 16. Nickname: Nick. Job: Senior Systems Planner, Emerson Electric Co. Educ: Rensselaer Poly, B.Ch; Ctr MI Univ, MS.

Ret: 1978. 20 yrs. MAJ. Orgn: AUSA, AFA.

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Robert, Daniel, Christopher. B: Nov 22. Job: Manager Product Sales, Northrop Precision Products Div, El Monte, CA. Educ: Univ of DE, BSEE. Prev Svc: USMCR. Ret: 1975. 4 yrs. MAJ. Orgn: AFA.

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**LOVERA, Bruno, (ING) (AAAA 1978)** Costruzioni Aeron Agusta, Casella Postale 480, 21013 Gallarate, Italy. W: Denise. Ch: Sergio, Marco. B: Feb 19. Job: Director of Engineering, Agusta. Educ: Politecnico di Milano. Prev Svc: Italian AF. 1 yr. LT. Orgn: AHS.

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**LYNCH, Gordon P., (MR) (AAAA 1979)** Boeing Company, P.O. Box 3999, MS 82-03, Seattle, WA 98124. Bus: (206) 773-3745. Res: (206) 630-1344. W: Janice. Ch: Ayn. B: May 30. Job: Manager, Army Information Systems, Boeing Aerospace. Educ: BA MA. Prev Svc: USA. Ret: 1978. 30 yrs. COL. Orgn: AUSA.

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## The Industry Team

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**MARETT, Richard C., (MR) (AAAA 1981)** 303 22nd Street, N.E., Cedar Rapids, IA



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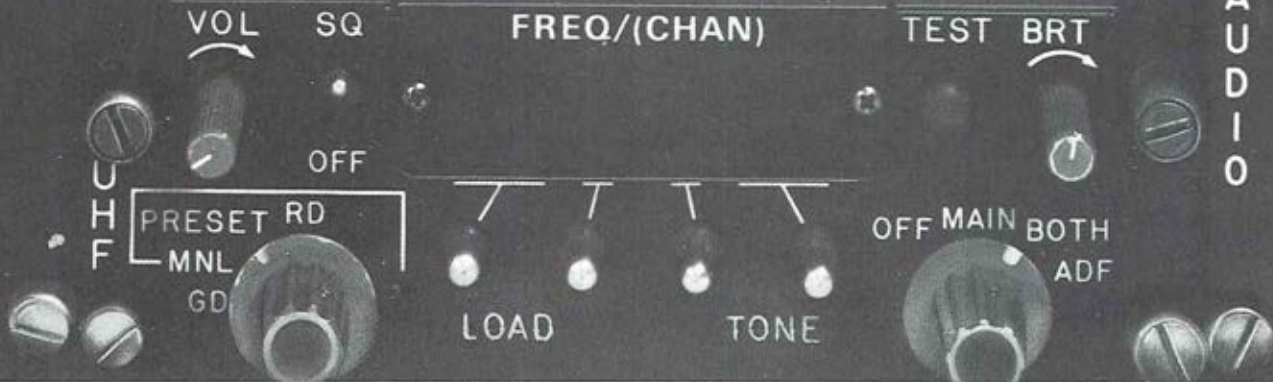
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**MARTIN, Stanley Jr, (MR)** (AAAA 1980) Bell Helicopter Textron, P.O. Box 482, Dept. 81, Fort Worth, TX 76101. Bus: (817) 260-3747. Res: (214) 522-4739. W: Pat. Ch: Christina, Deborah, Richard. B: Mar 4. Nickname: Stan. Job: VP/JVX Engineering, Bell Helicopter Textron. Educ: MA Inst of Tech, BS. Prev Svc: USAF, 4 yrs.

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**McCALL, Charles D., (MR)** (AAAA 1979) Boeing Vertol Company, P32-52, P.O. Box 16886, Philadelphia, PA 19142. W: Joyce. Ch: Tom, Pat, Hugh, Dave, Deb, John, Steph. B: Jul 1. Nickname: Chuck. Bus: (215) 522-3080. Res: (215) 876-7053. Job: Director of Military Projects, Boeing-Vertol Company. Educ: Seattle Univ, BS; Northwestern. Orgn: AUSA, AHS.

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## NNNNNNNNNN

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**NATHAN, Robert L.**, (MR) (AAAA 1975) 7600 Teal Drive, S.W., Huntsville AL 35802. W: Carolyn. Ch: Ken, Sharon. B: May 28. Nickname: Bob. Job: Owner, Arlyn Associates. Educ: Aero Univ, BS AEE. Prev Svc: USA. 2 yrs. Orgn: AUSA, ADPA.

**NEAL, Jeffery A.**, (MR) (AAAA 1978) GE-Elect Sys Div-Far East, Court St, Plant 3, Rm 21B, Syracuse, NY 13221. Bus: (315) 456-7886. W: Sally. Ch: Wendy, Brian. B: Apr 13. Job: New Business Development-Far East, GE-Electronic Systems Div. Educ: Embry-Riddle Aero Univ, BS. Prev Svc: USA. 7 yrs. CPT. Orgn: AUSA.

**NEALON, Emmett E.**, (MR) (AAAA 1974) 233 Dexter Drive, Bridgeport, CT 06606. Bus: (203) 222-2127. Res: (203) 372-7698. W: Kathleen. Ch: Sharon, Michael, Kevin, Kim, Christopher. B: Nov 5. Job: Manager Int'l Analysis, Sikorsky Aircraft, Stratford, CT. Educ: Parks College of St. Louis Univ, BS. Prev Svc: USA. Orgn: AHS.

**NESSSELL, Harry H.**, (MR) (AAAA 1980) Bendix Corp., P.O. Box 9327, Fort Lauderdale, FL 33310. Bus: (305) 776-4100. Res: (305) 731-2458. W: Mildred Mae. B: Nov 22. Nickname: Harry. Job: Mgt Sales Manager, Bendix Air Transport Avionics Div. Educ: Univ of MN, BEE. Orgn: AUSA, AFA.

**NEUGEBAUER, Al**, (MR) (AAAA 1983) Hughes Helicopters, Inc., Centinella & Teale Streets, Culver City, CA 90230. Bus: (213) 305-5087. Job: Mktg Mgr, Light Military Helicopters, Hughes Helicopters, Inc.

**NEWMAN, John H.**, (MR) (AAAA 1980) Singer Company, 40th Ave at Common,

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**NIJWISMA, Harlan**, (MR) (AAAA 1976) 4519 Indian Creek Road, Marion, IA 52302. Job: Rockwell Int'l, Collins Division.

**NIXON, Jack**, (MR) (AAAA 1982) Deutsch Co., MCD, 720 Manchester Rd, Suite 216, St Louis, MO 63011. Bus: (314) 227-5009. W: Toni. Job: Industrial Sales Manager, Deutsch Co., MCD.

**NOKES, Robert E.**, (MR) (AAAA 1981) 10419 Gulldale, San Antonio, TX 78216. Bus: (512) 342-3300. W: Carol. Ch: Thomas, Stephanie, Karel, Cecilia, Ted. B: Aug 1. Nickname: Bob. Job: President/CEO, Helicopter Logistics, Inc. Educ: Univ of Wash, BS; NYU, MBA; Harvard. Prev Svc: USA. 10 yrs. CWQ. Orgn: AHS.

**NOLLETT, Pasquale**, (MR) (AAAA 1978) P.O. Box 365, Red Bank, NJ 07701. Bus: (201) 747-7280. Res: (201) 842-6036. W: Joan. B: Oct 10. Nickname: Pat. Job: VP Business Development, Numax Electronics Inc. Prev Svc: USAF. Ret: 1987. 21 yrs. CW4. Orgn: AFA.

**NOWREY, Thomas A.**, (MR) (AAAA 1980) Boeing Vertol-Box 16858, Philadelphia, PA 19142. Bus: (215) 522-2402. Res: (215) 481-1992. W: Rita. Ch: Kathleen, Tom, Linda, Pat, Denise. B: Sep 5. Nickname: Tom. Job: Boeing Vertol Co. Orgn: AHS, AUSA, ADPA. AAAAA Offices/Misc: NEB, Pres, Delaware Valley Chapter. Past SRVP, Delaware Valley Chapter.

**NYE, James**, (MR) (AAAA 1983) General Electric Co., 1000 Western Avenue, West Lynn, MA 01910. Bus: (617) 594-5319. Res: (617) 631-5584. W: Suzanne. Ch: Julia, Lisa, James, Richard. B: Dec 12. Nickname: Jim. Job: Manager GE27 Advanced Programs, General Electric Co. Educ: Univ of Toledo, BSME. Orgn: AHS.

## OOOOOOOO

**OAKES, Harold S. Jr**, (MR) (AAAA 1974) No. 27 Derby Shire, Derby, CT 06418. Bus: (203) 366-4114. Res: (203) 735-2556. W: Ruth. B: Sep 7. Nickname: Hal. Job: Manager Electronic Systems Integ., Sikorsky Aircraft Division. Educ: Univ of CO, BS; MIT, MS. Prev Svc: USN. 4 yrs. Orgn: AHS.

**O'CONNOR, Thomas W.**, (MR) (AAAA 1963) Rockwell Int'l, 1745 Jefferson Davis Hwy, Arlington, VA 22202. Bus: (703) 553-6653. Res: (703) 671-0823. B: Dec 29. Nickname: Tom. Job: Manager Eastern Region, Rockwell Int'l, Collins Avionics. Educ: Univ of Tampa, BS; Geo Wash Univ. Prev Svc: USA. Ret: 1975. 21 yrs. LTC. Orgn: AUSA, AFA, AFCEA, Navy League.

**O'DONNELL, Vincent C.**, (MR) (AAAA





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1963) UTC Norden, 1 Industrial Way, A-8, Eatontown, NJ 07724. Bus: (201) 389-3030. Res: (201) 531-8973. W: Dorothy. Ch: Ann, Betty, Michael, Richard, Patricia, Alice. B: Apr 3. Nickname: Vince. Job: Norden Systems, UTC. Educ: Seton-Hall Univ, BS. Prev Svc: USNR. Ret: 1946. 3 yrs. Office: AHS, USA, AFCEA, IEEE. AAAA Offices/ Misc: Sec. Monmouth Chapter.

**OGLE, William W., (MR) (AAAA 1983)** Beech Aerospace Services, Inc., 615 Stonewall Street, Jackson, MS 39213. Bus: (601) 362-0710. Res: (601) 825-0844. W: Elizabeth. Ch: Martha, Anne Marie. B: Jul 20. Nickname: Bill. Job: Manager-Industrial Relations, Beech Aerospace Services, Inc. Educ: VA Poly Inst, BS; Pepperdine Univ. Prev Svc: USMC. Ret: 1990. 20 yrs. LTC.

**OLNEY, T. Dave, (MR) (AAAA 1978)** 604 W. McNair, Chandler, AZ 85224. Bus: (602) 891-3095. W: Kathryn. Ch: Ann, Scott. B: Apr 1. Nickname: Dave. Job: Manager-Public Affairs, Hughes Helicopters, Inc., Mesa, AZ. Educ: Colorado College, AB. Prev Svc: USA. Ret: 1972. 6 yrs. CPT. Orgn: AHS, USA, ADPA. AAAAA Offices/ Misc: Past Sec. So. California Chapter.

**OLSEN, J.J., (MR) (AAAA 1982)** Western Aircraft Maint., 4444 Aeronca Street, Boise, ID 83705. Bus: (208) 386-8565. Res: (208) 342-7181. W: Grace. B: Jun 22. Nickname: JJ. Job: President, Western Aircraft Maintenance, Inc. Educ: USNA, BS. Prev Svc: USNR. Ret: 1977. 29 yrs. O5.

**OSSI, R.R., (MR) (AAAA 1983)** Avco Lycoming, 550 South Main Street, Stratford, CT 06497. Bus: (203) 385-3542. Job: Mgr Advanced Technology Marketing, Avco Lycoming. Orgn: AHS, AIAA, SAE.

**OWEN, William M., (MR) (AAAA 1971)** Solar Turbines Inc., Turbomach, 4400 Rufin Rd, San Diego CA 92123. Bus: (619) 238-8641. Job: Manager, Advanced Programs.

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**PAQUETTE, Dean R., (COL) (AAAA 1957)** Control Data Corp., 1117 Priscilla Lane, Alexandria, VA 22308. W: Shirley. Ch: Neta, Kingsley, Diane. B: Jul 15. Bus: (703) 998-4693. Res: (703) 780-9445. Job: Manager Defense Planning, Control Data Corp. Educ: Univ of MD, BS; Geo Wash Univ, BS. Prev Svc: USA. Ret: 1976. 30 yrs. COL. Orgn: AHS, AHS.

**PARNELL, Robert L. Jr, (COL) (AAAA 1972)** Rockwell Int'l, 1745 Jefferson Davis Hwy, Suite 1200, Arlington, VA 22202. Bus: (703) 553-8654. Res: (703) 360-1739. W: Mary. B: Jan 23. Nickname: Bob. Job: Manager, Army Accts., Defense Electron-

ics Opns., Rockwell Int'l. Educ: Princeton, BS MS. Prev Svc: USMC. Ret: 1972. 30 yrs. COL. Orgn: AHS, AUSA.

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**PAULSON, L.C., (MR) (AAAA 1981)** Honeywell Inc., 5100 Gambles Drive, St. Louis Park, MN 55416. Bus: (612) 542-4841. B: Jun 19. Job: Product Manager, Honeywell, Inc. Educ: MS BAE. Prev Svc: USNR.

**PEDONE, Vito, (COL) (AAAA 1982)** American Electronic Labs., P.O. Box 2733, Arlington, VA 22202. Bus: (703) 548-9085. Res: (703) 979-1992. W: Geraldine. Ch: Vito. B: Jun 30. Nickname: Vito. Job: Consultant, American Electronic Labs. Educ: NWC; Univ of MD, BA; Geo Wash Univ, MS. Prev Svc: USAF. Ret: 1972. 31 yrs. COL.

**PERRY, James S., (MR) (AAAA 1980)** Eaton Corp, All Div, Broad Hollow Road, Farmingdale, NY 11735. Bus: (516) 595-6204. Res: (516) 421-4228. W: Virginia. Ch: Jim, Jill, Jean. B: Nov 30. Nickname: Jim. Job: Division Director, AC&I Div., Eaton Corp., All Div. Educ: Rensselaer Poly, BEE. Prev Svc: USN. 2 yrs. Orgn: AUSA.

**PETERSON, John E., (MR) (AAAA 1983)** Hughes Aircraft Co., P.O. Box 7500, Hampton, VA 23666. Bus: (804) 872-8500. W: Marge. Job: Mgr Norfolk-Hampton District, Corp Mktg, Hughes Aircraft Co.

**PETERSON, Robert A., (MR) (AAAA 1980)** Dynalectron Corp., P.O. Box 1107, Lake Hurst, NJ 08733. Bus: (201) 657-0057. Res: (201) 363-6809. W: Dorothy. Ch: Jim, Penny, Bill, Gary. B: Mar 10. Nickname: Pete. Job: Division Manager, Dynalectron Corp., Army Support Div. Educ: NMSU, AB. Prev Svc: USA. Ret: 1968. 20 yrs. MAJ. Orgn: AUSA, AFA.

**PETTIT, Thomas W., (MR) (AAAA 1965)** Embry-Riddle Aero Univ, Int'l Campus Star Route, No. 540, Bunnell, FL 32010. Bus: (904) 673-3180. Res: (904) 672-5218. W: Patricia. Ch: Michael, Matthew. B: Sep 1. Nickname: Tom. Job: Director, Center for External Studies, Embry-Riddle Aero Univ. Educ: ERAU, BS; Troy State, MS EDS. Prev Svc: USA. Ret: 1979. 26 yrs. CW4. Orgn: AHS, HAI, NBAA, NATA, PAMA, ATCA. AAAAA Offices/Misc: Past NEB; Past Pres, Fort Bliss Chapter; Past Treas, Fort Wolters Chapter.

**PETTLER, Eugene D., (MR) (AAAA 1982)** 6828 Lasaine Avenue, Van Nuys, CA 91406. Bus: (213) 305-5191. Res: (213) 343-5323. W: Sandra. Ch: Lynne, Gric. B: Dec 21. Nickname: Gene. Job: Project Engineer, Hughes Helicopters, Inc., Culver City, CA. Educ: Geneva Heald, BSEE. Prev Svc: USNR. Ret: 1946. 3 yrs.

3RD. Orgn: AHS.

**PHOTOS, Nicholas T., (MR) (AAAA 1982)** Photonics Technology Inc., P.O. Box 432, Luckey, OH 43443. Bus: (419) 666-0762. Res: (419) 475-1439. W: Mary. Ch: Katherine, Thomas. B: Jul 2. Job: VP Manufacturing, Photonics Technology, Inc. Educ: Univ of Toledo. Prev Svc: USA. 2 yrs.

**PIERCE, John P. Jr, (MR) (AAAA 1973)** Solar Turbines Inc., 499 So. Capitol St, SV, Suite 424, Washington, DC 20003. Bus: (202) 482-5080. Res: (703) 780-2758. Job: Manager, Gov't Relations, Turbomach Div., Solar Turbines, Inc. Educ: USNA, BS. Prev Svc: USN. 5 yrs.

**PIKE, Bruce, (MR) (AAAA 1979)** Howell Instruments, 3479 West Victoria Blvd., Fort Worth, TX 76107. Bus: (817) 336-7411. Res: (817) 921-2970. W: Patricia. Ch: Paula, Bruce Jr, Steve, Emily. B: Aug 19. Job: SrVP, Howell Instruments, Inc. Educ: TX Univ, BSME. Prev Svc: USMC. 4 yrs. CPT.

**PINCUS, Yale H., (MR) (AAAA 1979)** Hughes Helicopters, Inc., Centinela & Teles Streets, Culver City, CA 90230. Bus: (213) 305-3226. Res: (213) 645-5961. Job: Mgr, Mktg Communications, Hughes Helicopters, Inc.

**PIPER, Stephen F., (MR) (AAAA 1978)** Loral Electro-Optical Sys, P.O. Box 7101, Pasadena, CA 91109. Bus: (213) 351-5555. Res: (714) 673-7757. W: Janice. Ch: Jill Anna, Kristi Lynn. B: Mar 17. Nickname: Steve. Job: VP-Marketing, Loral Electro-Optical Systems, Pasadena, CA. Educ: Univ of NH, BS; NE Univ; Univ of CA. Prev Svc: USA. 2 yrs. 1LT. Orgn: AHS, USA, AFA.

**POGUST, Fred B., (MR) (AAAA 1980)** Eaton Corp, All Div, Broad Hollow Road, Farmingdale, NY 11735. Bus: (516) 595-6250. Res: (516) 922-6649. Job: Director Flight Guidance Systems, Eaton Corp., All Division. Educ: Univ of CO, BS. Prev Svc: USNR. Ret: 1946. 2 yrs. PO3. Orgn: AUSA, AFA.

**PONDER, William R., (MR) (AAAA 1982)** Science Applications, Inc., 2109 W. Clinton Ave., 800, Huntsville, AL 35805. Bus: (205) 533-5900. Res: (205) 347-6869. W: Sue. Ch: John, Robert. B: Apr 13. Nickname: Bill. Job: Consultant, Science Applications, Inc. Educ: Clemson, BS. Ret: 1979. 30 yrs. COL. Orgn: AUSA.

**POOLE, Allan K., (MR) (AAAA 1968)** United Technologies Corp, 151 Old Tavern Road, Orange, CT 06477. Bus: (203) 222-2110. W: Alice. B: May 28. Job: Vice President Product Support, Sikorsky Aircraft, Stratford, CT. Educ: Princeton, BS; Harvard, MS MBA. Prev Svc: USA. 2 yrs. SGT. Orgn: AHS, AUSA.

**POTEATE, Blair, (MR) (AAAA 1980)** 167 Dennis Drive, Williamsburg, VA 23185. Bus: (804) 878-2822. W: Esther. Job: Chief, RM & MT Tech Area, Applied Tech Lab. GS: 15. Educ: V.P.I., BSME. Geo Wash Univ, MS Engrg Mgt. Orgn: AHS.

**POTTER, Greg L., (MR) (AAAA 1981)** 5337 W. Palo Verde Avenue, Glendale, AZ 85302. Bus: (602) 932-7280. Res: (602) 934-2257. W: Laverne. Ch: William. B: Jun 8. Job: Marketing Rep, Goodyear Aerospace Corp., Litchfield Park, AZ. Educ:

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**POWELL, Rayner C.**, (MR) (AAAA 1981) 466 Derby Millford Road, Orange, CT 06477. Bus: (203) 385-3194. Res: (203) 799-2608. W: Lorna Joan. B: Oct 11. Nickname: Ray. Job: T53/T55 Customer Service Manager, Avco Lycoming. Educ: Willstedden/Hendon, London.

**PRICE, George**, (MR) (AAAA 1973) 79 Russet Drive, Guilford, CT 06437. Bus: (203) 386-6889. Res: (203) 453-9197. W: Ruth. Job: Manager, New Product Development, Sikorsky Aircraft, Stratford, CT. Educ: NYU, BS MS. Prev Svc: USAF, 4 yrs. CPT. Orgn: AHS.

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**PROCH, John E.**, (MR) (AAAA 1973) 90 Washington Avenue, Seymour, CT 06483. Bus: (203) 222-2329. Res: (203) 888-6866. W: Phyllis. Ch: Edward, Sandra. B: Dec 20. Job: Publication Manager, Model UH-60A, Technical Publications, Sikorsky. Prev Svc: USN, 6 yrs.

**PURDY, Ed J.**, (MR) (AAAA 1982) American Electronic Labs., P.O. Box 552, Lansdale, PA 19446. Bus: (215) 822-2929. B: Apr 29. Nickname: Ed. Job: ASE Advertising Manager, American Electronic Labs. Educ: Univ of PA, BA; Syracuse Univ, MS. Prev Svc: USA, 6 yrs. E6.



**QUINN, Carey K.**, (MR) (AAAA 1982) Westinghouse Elec. Corp., 8505 Overbrook Road, Fairfax, VA 22031. Bus: (202) 833-5122. W: Martha. Ch: Bruce. B: Dec 6. Nickname: Ck. Job: Director, Army Programs, Westinghouse Electronic Corp. Educ: USNA, BS. Prev Svc: USN, 4 yrs. Orgn: AHS, AUSA, AOC, ADPA.

**QUINN, Charles E.**, (MR) (AAAA 1978) Avn Contractor Employees, P.O. Drawer 399, Daleville, AL 36322. Bus: (205) 598-6340. Res: (205) 347-9112. W: Marie. Ch: Bill, Mike, Leigh, Pat, Andy. B: Mar 18. Job: Director Flight-Adv Div, Aviation Contractor Employees, Inc. Educ: Troy State Univ, BA. Prev Svc: USA, USMC. Ret: 1965. 22 yrs. MAJ. Orgn: AUSA.

**QUIRK, Thomas G.**, (MR) (AAAA 1982) Westinghouse Elec. Corp., PO Box 746, Ball-Wash Apt., Baltimore, MD 21203. Bus: (301) 765-3968. B: Jan 23. Job: Manager Marketing Communications, Westinghouse, Defense Systems. Educ: Loyola, AB.



**RACHLIN, Michael S.**, (MR) (AAAA 1979) Garrett Corp., 1625 I Street NW, Suite 520, Washington, DC 20006. Bus: (202) 331-1873. Job: VP-Government Relations, The Garrett Corp. Educ: Stevens Inst Tech, BSME.

**RAMSEY, Harold J.**, (MR) (AAAA 1982) PSC Box 7316, APO New York 09012. Bus: 06374-2152. Res: 06374-2152. B: Nov 11.

Job: Mil Rep Div & Mid-East, Cherry Aero Fasteners, Div of Textron Inc. Educ: CC of the Air Force, Aircft Maint Tech. Prev Svc: USAF. Ret: 1981. 30 yrs. E9.

**RAND, Robert L.**, (MR) (AAAA 1982) 1836 Maywood Court, Upland, CA 91786. Bus: (213) 442-0123. Res: (714) 981-7041. W: Lorinda. Ch: Lora, Paul. B: May 14. Nickname: Bob. Job: Director R&D, Gould Inc., NAVCOM Systems Div., El Monte, CA. Educ: Univ of MO, BSEE; FL State Univ, MS; FLIT, MS.

**RARRICK, Marilyn B.**, (MRS) (AAAA 1982) 402 Hickory Bend Road, Enterprise, AL 36330. Bus: (205) 255-3889. Res: (205) 347-4241. Ch: Damon. B: Nov 6. Job: Education Specialist, US Army Aviation Center, Fort Rucker, AL. Educ: SF State Univ, BA; Univ of MD, MA; Goethe Univ. Orgn: AUSA.

**RAST, Gary F.**, (MR) (AAAA 1961) United Technologies Corp., 1825 Eye St., NW, Suite 700, Washington, D.C. 20005. Bus: (202) 785-7482. Res: (703) 938-3941. W: Sylvia. Ch: Stuart, Denise. Job: VP-Govt Requirements, Sikorsky Aircraft Div., UTC. Educ: Univ of ME, BS, 5 yrs. Orgn: Navy League, MCAA, NHA.

**RAUCH, S.**, (MR) (AAAA 1977) Canadian Marconi Co., 415 Leggett Dr., Box 13330, Kanata, Ont, Canada K2K 2B2. Bus: (613) 592-6500. B: Apr 22. Job: Group Manager, Canadian Marconi Co. Educ: McGill Univ, B.Eng M.Eng.

**RAVEN, Harry**, (MR) (AAAA 1981) ITT, 500 Washington Avenue, Nutley, NJ 07110. Job: Director, Public Relations and Advertising, ITT Avionics.

**REAL, Jack G.**, (MR) (AAAA 1980) Hughes Helicopters, Inc., Centinela and Teale Sts., Culver City, CA 90230. Bus: (213) 305-4330. Res: (213) 998-2622. W: Janet. Ch: Patricia, Daniel. Nickname: Jack. Job: President & CEO, Hughes Helicopters, Inc. Educ: Michigan Tech Univ, BS.

**REED, William C.**, (MR) (AAAA 1980) Bendix Corp., East Joppa Road, Baltimore, MD 21204. Bus: (301) 583-4498. Res: (301) 828-6358. W: Mary. B: Jul 21. Nickname: Bill. Job: Marketing Manager, Communications Div, Bendix Corp. Prev Svc: USAF, 4 yrs. Orgn: AUSA.

**REINHART, Donald F.**, (MR) (AAAA 1983) 15 Main Street, Holmdel, NJ 07733. Bus: (201) 946-8883. Res: (201) 222-1225. W: Miluse. Ch: Sue Ann, Karl. B: Jul 11. Nickname: Don. Job: Worldwide Sales Mgr, Simulation/Aerospace Systems, Perkin Elmer. Educ: LaSalle, AAS; Univ of Buffalo. Ret: 1971. 20 yrs. MSGT.

**RICHARDS, Anthony C.**, (MR) (AAAA 1981) Teledyne Ryan Aeron., 2701 Harbor Drive, San Diego, CA 92138. Bus: (714) 291-7311. Nickname: Tony. Job: VP-Helicopter Programs, Teledyne Ryan Aeronautical. Educ: Penn State, BS. Prev Svc: USN, 5 yrs. CPT. Orgn: AUSA, AFA.

**RICHIE, Frank G.**, (COL) (AAAA 1977) Control Data Corp., 1800 North Beauregard St., Alexandria, VA 22311. Bus: (703) 998-4693. Res: (703) 671-5553. W: Elizabeth. B: Jun 25. Nickname: Frank. Job: Director, Govt Planning & Development, Control Data Corp. Prev Svc: USAF. Ret:



1972. 30 yrs. COL. Orgn: AUSA, AFA.

**ROBINSON, Donald W.**, (MR) (AAAA 1977) Kaman Aerospace Corp, Old Windsor Rd, PO Box 2, Bloomfield, CT 06002. Bus: (203) 243-6311. Res: (203) 673-3614. W: Pauline. Ch: Louise, Douglas, Gordon, Paula. B: Sep 28. Nickname: Don. Job: Vice President, Planning & Marketing, Kaman Aerospace Corp. Educ: NE Univ, BS ME; Rensselaer Polytech, MS. Orgn: ADPA.

**RODGERS, Daniel L.**, (MR) (AAAA 1980) King Radio Corp., 400 North Rogers Road, Olathe, KS 66062. Bus: (913) 782-0400. Job: Director, Special Programs Department, King Radio Corp. Educ: Univ of MO, MSEE; Univ of AK, BSEE.

**RODRIGUEZ, Joe**, (MR) (AAAA 1983) Teledyne Systems Co., 19601 Nordhoff Street, Northridge, CA 91324. Bus: (213) 886-2211. W: Julie. Ch: Brian, Ralph, Carmen, Nicholas. B: Jan 12. Nickname: Joe. Job: VP, Teledyne Systems Co. Educ: MIT, BSSEE MSB; Brooklyn Poly, MEE. 2 yrs. 1LT.

**ROEMER, Scot C.**, (MR) (AAAA 1982) Emerson Electric Company, 8100 W. Florissant, Sta 3141, St. Louis, MO 63136. Bus: (314) 553-3141. B: Aug 2. Job: Asst to the President, Emerson Electric, Electronics & Space Div. Educ: Wash Univ, MBA Finance. Orgn: ADPA, Navy League.

**ROLLING, Robert E. Jr.**, (MR) (AAAA 1982) Lockheed Missiles & Space, 2124 East St. Elmo Drive, Austin, TX 78744. Bus: (512) 448-6195. W: Roberta. Ch: Steven, Robert, Craig, Lynn, Rachelle. B: Jul 6. Job: Director RPV Systems, Lockheed Austin Div, Lockheed Missiles & Space. Educ: Univ of CA, MS. Prev Svc: USA, 3 yrs.

**ROLSTON, Bert D.**, (MR) (AAAA 1982) Vowell Helicopters, PO Box 322, Port Hedland, W. Australia 6721. Bus: (091) 73-1992. Res: (091) 73-1372. W: Sharon. Ch: Bert Jr, Kim. B: Jul 5. Job: Helicopter Engineer/Pilot, Vowell Helicopters. Educ: Embury-Riddle; Univ of FL; Fla SU, MD A&P. Prev Svc: USA, 5 yrs. AAAA Offices/Misc: Past Sec, Latin American Chapter.

**ROSEN, Kenneth M.**, (DR) (AAAA 1973) 677 Goose Lane, Guilford, CT 06437. Bus: (203) 386-5467. Res: (203) 453-9680. W: Harriet. Ch: Larry, Seth. B: May 18. Nickname: Ken. Job: Manager Air Vehicle Design & Development, Sikorsky Aircraft, Div UTC. Educ: R.P.I., BME/MSEE; CCNY, Ph.D. Orgn: AHS, AUSA, ASME, Navy League.

**RUSIN, John**, (MR) (AAAA 1982) Dynallectron Corp., 6801 Calmont Avenue, Fort Worth, TX 76116. Bus: (405) 737-3443. Res: (405) 733-4588. B: May 30. Nickname: Honest John. Job: Planner-Administrator, Dynallectron Corp. Prev Svc: 3 yrs.

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827-8596. W: Vera. B: Jul 5. Nickname: Tom. Job: Mktg Mgr, Honeywell, Inc. Educ: USMA. Prev Svc: USAQ. 7 yrs. Orgn: AHS, AUSA, AFCEA, ION, ADPA.

**RUTHERFORD, William G.**, (MR) (AAAA 1966) Beech Aircraft Corp., 1777 N. Kent St., Suite 809, Arlington, VA 22209. Bus: (703) 276-1000. Res: (703) 250-5056. W: Florence. Ch: John, Nancy, Linda. B: Sep 5. Nickname: Bill. Job: VP-Government Relations, Beech Aircraft Corp. Educ: San Bernardino College. Prev Svc: USA. Ret: 1967. 22 yrs. LTC. Orgn: AHS, AUSA, AFA.

**RYBAK, Frank**, (MR) (AAAA 1963) 7460 Commune Court NE, Cedar Rapids, IA 52401. Bus: (319) 395-3036. Res: (319) 393-5643. W: Joyce. Ch: Scott, Erika. B: Oct 1. Job: Program Manager, Rockwell Int'l, Collins Gov't Avionics. Educ: Central MO State Univ, BS Math.

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**SABOE, Michael S.**, (MR) (AAAA 1969) 103 Suzanne Circle, Trumbull, CT 06611. W: Rita. Ch: Michael, Lois, Rita, Terry, Beth, Jim, Bernie. B: Sep 29. Nickname: Mike. Bus: (602) 231-1086. Res: (203) 268-4122. Job: Consultant, 'Creative Strokes'. Educ: Villanova, BME. Orgn: AUSA, AHS, HCA, AFA, NMA, ASME. AAAA Offices/Misc: Past Pres, Connecticut Chapter.

**SALHANI, M.**, (MR) (AAAA 1979) Canadian Marconi Co., 2442 Trenton Avenue, Montreal Quebec Canada H3P 1Y9. Bus: (514) 341-7630. Job: Prod Mgr, Canadian Marconi Co. Educ: McGill Univ, BEng MBA.

**SALZMANN, Alexander R.**, (MR) (AAAA 1978) Grumman Aerospace Corp., 28 Winoka Drive, Huntington Station, NY 11746. Bus: (516) 575-6360. Res: (516) 549-5496. W: Jenny. Ch: Melody, Mindy, Lee, Tim, Rob, Scott. B: Jan 26. Nickname: Bob. Job: Director Advanced EW Programs, Grumman Aerospace Corp. Educ: City College of NY, BEE MEE. Orgn: HCA, AHS, AUSA, AFA, AOC, IEEE.

**SANCHEZ, Miguel**, (MR) (AAAA 1963) Construcciones Aeronautic, Rey Francisco, 4 Madrid-8, Spain. Job: Manager Advertising and Marketing Support, Construcciones Aeron. S.A.

**SANDERS, Robert T.**, (MR) (AAAA 1980) Boeing Co., P.O. Box 3999, MS 85-11, Seattle, WA 98124. Bus: (206) 773-0455. W: Darcy. Ch: Kim, Dana, Robin. Nickname: Bob. Job: Customer Relations Manager, BAC. Educ: Washington State Univ. Prev Svc: USA. 2 yrs. Orgn: ADPA, NDTA, Navy League.

**SANDFORD, John**, (MR) (AAAA 1979) DeHavilland Aircraft Ltd, Garratt Blvd,

Downsview Ont M3K 1Y5 Canada. Bus: (416) 633-7310. Res: (416) 270-6437. W: Shirley. Ch: Gina, Bradley. B: Jul 9. Nickname: John. Job: President and CEO, The DeHavilland Aircraft of Canada, Ltd. Educ: Cranfield Inst of Tech, MSC Aero.

**SANSEVIERI, Daniel F.**, (MR) (AAAA 1983) 104 Burke Road, Peterborough, ON 0K3A58. Bus: (603) 924-7084. Res: (603) 924-7161. W: Nancy. B: Jul 2. Nickname: "D". Job: Manufacturers Repr/Owner, United Sales Agency. Educ: Franklin Pierce College, BA Bus Admin.

**SATTERWHITE, James J.**, (MR) (AAAA 1983) Sikorsky Aircraft, North Main Street, Stratford, CT 06602. Bus: (203) 386-4191. Res: (203) 245-7955. W: Nancy. Ch: Michael, Dana. B: Feb 6. Nickname: Jim. Job: Program Manager, SH-60B Seahawk, Sikorsky Aircraft, Stratford, CT. Educ: USMA, BS; MIT, MS. Prev Svc: USA. Ret: 1980. 21 yrs. LTC. Orgn: AHS.

**SAVENELLI, Louis P.**, (MR) (AAAA 1983) Avco Lycoming Div., 550 South Main Street, Stratford, CT 06497. W: Virginia. Nickname: Lou. Job: Manager, Marketing Communications, Avco Lycoming Div.

**SCHATZ, William H.**, (MR) (AAAA 1983) Boeing Vertol, Box 16856, Philadelphia, PA 19142. Bus: (215) 522-2296. W: Diana. Ch: Lisa, Billy, Franny. B: May 11. Nickname: Bill. Job: Program Administrator, Program Mgt Office, Boeing Vertol. Educ: BS Ind Mgmt, Assoc Indus Engrg. Prev Svc: USAF, AAAA Offices/Misc: Sec, Delaware Valley Chapter.

**SCHLENK, William F.**, (MR) (AAAA 1972) 392 McKinley Avenue, Bridgeport, CT 06604. Bus: (203) 386-4780. W: Natalie. Ch: Natalia, James, Barbara, Billy, Leonard, Susan. B: Mar 2. Nickname: Bill. Job: Systems Attribute Mgr, BLACK HAWK, Sikorsky ACo, Stratford, CT. Educ: Fairfield Univ, BS. 2 yrs. CPL. Orgn: AHS, AFA.

**SCHMITT, Martin J.**, (MR) (AAAA 1981) McDonnell Douglas Corp., 5301 Bolla Avenue, Huntington Beach, CA 92647. Job: Dir, Adv. Program Dev. & Marketing, McDonnell Douglas Corp.

**SCHNAIDT, Loren C.**, (MR) (AAAA 1980) Solar Turbines Inc., 11500 Olive Blvd, Ste 222, St. Louis, MO 63141. Bus: (314) 432-7880. Res: (314) 842-1372. W: Sandy. Nickname: Lorah. Job: Midwest Mktg Mgr, Turbomach Div-Solar Turbines. Educ: AF Academy, BS; Webster, MA. Prev Svc: USAF. 6 yrs. Orgn: AHS, AUSA, AFA.

**SCHROEDER, Albert W.**, (MR) (AAAA 1982) A.B.A. Industries, Inc., 6200 118th Avenue North, Largo, FL 33543. Bus: (813) 541-6681. W: Helen. Ch: Anna, Albert, Kate. B: Mar 9. Nickname: Al. Job: Senior VP & General Manager, A.B.A. Electro-mechanical Systems, Inc. Educ: Univ of IL, BS. Prev Svc: USA. 6 yrs.

**SCHULER, Liwellyn C.**, (MR) (AAAA 1976) Kaman Aerospace Corp., Old Windsor Rd, Box 2, Bloomfield, CT 06002. Bus: (203) 653-8661. W: Jean. B: Nov 22. Nickname: Lew. Job: VP-Engineering, Kaman Aerospace Corp., Bloomfield, CT. Educ: Univ of WI, BS; Univ of MN, AE. Prev Svc: USA. Orgn: AHS, AUSA.

**SCHULSTAD, George**, (MR) (AAAA 1982)

Lucas Aerospace Ltd, P.O. Box 5569, Irving, TX 75062. Bus: (214) 659-9121. Job: VP Aerospace Mktg, North America, Lucas Industries. Educ: Geo Wash Univ, MBA. Orgn: ANA. Prev Svc: USAF. Ret: 1977. 26 yrs. BG.

**SCHULZ, William**, (MR) (AAAA 1982) Arinc Research Corp., 1222 Normandy Pl, PO Box 1375, Santa Ana, CA 92702. Bus: (714) 547-7594. Job: Sr Analyst, Arinc Research Corp. Educ: IIT, EE. Prev Svc: USA.

**SCHWANNAUER, R.R.**, (MR) (AAAA 1981) Teledyne Ryan Aeron., Brown Eng, Cummings Res Pk, Huntsville, AL 35807. Bus: (205) 532-1967. Res: (205) 539-3064. W: Beverly. Ch: Robert, Mark. B: Sep 15. Nickname: Swan. Job: VP Advanced Programs, Teledyne Brown Engineering. Educ: MIT, BS Aero Engrg. Prev Svc: USAF. 2 yrs. 1LT. Orgn: AFA, ADPA.

**SCHWEIGER, Bernie A.**, (MR) (AAAA 1983) King Radio Corp., 400 North Rogers Road, Olathe, KS 66002. Bus: (913) 782-0400. W: Jodi. Ch: Ryan, Kyle. B: Oct 31. Nickname: Bernie. Job: Mkt Applications Engineer, King Radio Corp. Educ: KS Univ, BSME. Prev Svc: USA. 2 yrs.

**SCURLOCK, R.S.**, (MR) (AAAA 1981) Teledyne Ryan Aeron., 2701 Harbor Drive, San Diego, CA 92138. Bus: (619) 291-7311. Res: (619) 222-2103. W: Liz. Ch: Cecilia, Brad. B: Feb 16. Nickname: Bob. Job: VP-Contracts, Pricing and Procurement, Teledyne Ryan Aeronautical. Educ: Air War College, MS; GWU, MBA; USV, BS; Ohio State Univ, MS MBA BS. Prev Svc: USAF. Ret: 1979. 30 yrs. MG.

**SEAY, Oscar L. Jr.**, (MR) (AAAA 1971) c/o Dynalene Corp., 70th Trcn (AVIM), APO New York 09028. B: Dec 29. Job: Aircraft Mechanic Supervisor, Dynalene Corp. Prev Svc: USA, USAF. 6 yrs. SGT.

**SEMANCIK, George J.**, (MR) (AAAA 1982) Kollsman Instrument Co., Daniel Webster Highway So, Merrimack, NH 03054. Bus: (603) 889-2500. Res: (603) 882-4151. Job: Director of Engineering, Kollsman Instrument Co. Educ: Carnegie Mellon Univ, BS; Univ of NH, MSEE MBA. Prev Svc: USN. Ret: 1957. 4 yrs. Orgn: AHS, AUSA.

**SEMCKEN, Duane**, (MR) (AAAA 1983) 2 Ausereh Ct, Huntington, NY 11743. Bus: (516) 293-1660. Res: (516) 271-8307. W: May. B: May 13. Job: General Electric Co. Educ: Polytechnic Institute of NY, BAE. Prev Svc: USN. CPT. Orgn: AHS, AFA.

**SHAVER, William**, (MR) (AAAA 1982) Republic Electronics, 75 Broadhollow Road, Melville, NY 11747. Bus: (516) 249-1414. Job: Director of Marketing, Republic Electronics, Inc.

**SHEPARD, Alexander D.**, (MR) (AAAA 1983) Defence Helicopter World, 46 London End, Beaconsfield HP9 2JH England. Job: Publisher, Defence Helicopter World.

**SHERER, Michael R.**, (MR) (AAAA 1982) Wings, Inc., 501 N. Daleville Avenue, Daleville, AL 36522. Bus: (205) 588-4270. W: Anita. B: Feb 21. Job: Retail Aviation-Mail Order, Wings, Inc. Orgn: AHS, AUSA.

**SHINE, Daniel J.**, (MR) (AAAA 1980) Sanders Associates, Inc., 95 Canal St, MERR 121124, Nashua, NH 03061. Bus:

(603) 885-2970. Res: (617) 688-3502. W: Rosanne. Ch: Matthew, Jonathan. B: Feb 17. Nickname: Dan. Job: Manager, Business Development, Sanders Associates, Inc. Educ: Merrimack College, BA; Georgetown Univ, MS. Orgn: AUSA.

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**SHRINER, E. Cole, IV, (MR) (AAAA 1982)** Occidental Life Insurance, Fraunhofer Strasse 19 IOG, 6800 Mannheim, FRG 4. Bus: 0621-722530. Res: 0621-722530. Educ: Jacksonville State Univ, BA Mktg.

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**SKUDRNA, Joseph T., (MR) (AAAA 1982)** Bendix Comm Div, Dept 460, East Joppa Road, Towson, MD 21204. Bus: (301) 583-4101. Res: (301) 628-0731. W: Mary. B: Oct 1. Nickname: Joe. Job: Engineering Manager, Bendix Communications Div. Educ: John Hopkins Univ, BSEE.

**SMALL, Charles D., (MR) (AAAA 1977)** General Electric Co., 777 14th Street, N.W., Washington, DC 20005. Bus: (202) 637-4214. Res: (301) 949-7119. W: Marysya. Ch: Charles, Krysia, Andrea, Meredith. B: Oct 17. Nickname: Charlie. Job: Manager, Army Programs, General Electric Co. Educ: MIT, BS. 4 yrs. CPT. Orgn: AUSA.

**SMITH, David O., (MR) (AAAA 1980)** 16126 Shadybank, Dallas, TX 75248. Bus: (214) 357-1811. Res: (214) 458-1448. W: Nancy. Ch: Tara Leigh, Davy. B: May 29. Nickname: Dave. Job: VP General Aviation, AvAll, Dallas, TX. Educ: Dartmouth, AB BS; UB, MBA. Prev Svc: USA. Ret: 1965. 3 yrs. CPT. Orgn: HCA, AHS, AUSA, AFA.

**SMITH, Douglas G., (MR) (AAAA 1982)** Box 5837, Orlando, FL 32805. Bus: (305) 352-5041. Res: (305) 362-9580. W: Marti. Ch: Matthew. B: Feb 21. Nickname: Doug. Job: Marketing Manager TADS/PNVs, Martin Marietta, Orlando Aerospace. Educ: Ohio Univ, BS. Orgn: AHS, AUSA, ADPA. AAAA Offices/Misc: VP, Suncoast Chapter.

**SMITH, Fred L., (MR) (AAAA 1977)** Kaman Aerospace Corp., Old Windsor Rd, PO Box 2, Bloomfield, CT 06002. Bus: (203) 243-6313. B: Jun 12. Job: President, Kaman Aerospace Corp. Educ: USMA, BS; RPI, MS. Prev Svc: USA. 3 yrs. Orgn: AHS.

**SMITH, Harry J., (MR) (AAAA 1968)** 350 Grant Avenue, Easton, NJ 07724. Bus: (201) 544-1199. Res: (201) 544-9282. W: Marilyn. Ch: Patricia, Harry, Allison. B: May 26. Job: District Mgr Mktg, The Singer Co., Kearfott Div. Educ: BA. Prev Svc: USA. Orgn: AUSA, AFCEA, Old Crows. AAAA Offices/Misc: VP, Monmouth Chapter.

**SMITH, Robert C., (MR) (AAAA 1976)** E-Systems, Inc., 1901 No. Moore St, 609, Arlington, VA 22209. Bus: (703) 524-2310. W: Patricia. Ch: Cynthia, Andrew, Christo-

pher. B: Feb 1. Nickname: Bob. Job: VP, Customer Relations, E-Systems, Inc. Educ: Univ of Rochester, BSME. Prev Svc: USAC. 3 yrs. 2LT. Orgn: EIA, AIA, NSIA, Navy League.

**SMITH, Winton, (MR) (AAAA 1979)** Singer Co., Kearfott Div., 90 New Dutch Lane, Fairfield, NJ 07006. Bus: (201) 575-3000. Res: (201) 746-9963. Job: VP-Logistics, Kearfott Div., The Singer Co. Educ: Univ of ID, BSEE. Prev Svc: 4 yrs. CPT.

**SNEED, Thomas M., (MR) (AAAA 1983)** Northrop Corp., 500 E. Orangethorpe Ave., Anaheim, CA 92801. Bus: (714) 871-5000. Res: (714) 559-8955. W: Carol. B: Dec 22. Job: Program Manager, Advanced Systems, Northrop Corp.

**SOEHNLEIN, John R., (MR) (AAAA 1976)** 10 High Ridge Terrace, Oxford, CT 06483. Bus: (203) 386-7029. W: Carol. Ch: Alison, Gregory, Barry. B: Aug 1. Nickname: John. Job: Army Marketing Representative, Sikorsky Aircraft, Stratford, CT. Educ: Acad Aero, AAS BS; Polytech, MS; UB, MBA. Prev Svc: USAR. Ret: 1976. Orgn: AUSA, Old Crows. AAAA Offices/Misc: Past Treas, Connecticut Chapter.

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**SOREL, Donald E., (MR) (AAAA 1977)** 299 Villiar Hill Drive, Westbury Manor, Chesterfield, MO 63017. Bus: (314) 291-5720. Res: (314) 469-1291. W: Linda. Ch: Donna Lyn, Scott. B: Apr 21. Nickname: Don. Job: Mid-West Representative, Pratt & Whitney Aircraft, Div. of UTC. Educ: Bryant, BS; UB, MBA. Orgn: AHS, AUSA, AFA.

**SPENCER, Fred J., (MR) (AAAA 1978)** Rockwell Int'l, 6911 Lemmon N., MS-446-100, Dallas, TX 75209. W: Carolyn. Ch: Janet, Susan. B: Nov 20. Job: Mgr Mktg & Bus Dev, Airborne Systems, Rockwell. Educ: OK State Univ, EE; So. Methodist Univ, MSEE. Prev Svc: USAF. 4 yrs. SSGT. Orgn: AFA.

**SPRINGER, Charlie, (MR) (AAAA 1982)** A.B.A. Industries, Inc., Precision Mach, 42 Walsh, Medford, MA 02156. B: Apr 18. Bus: (617) 396-9865. Job: VP-Sales, Precision Machine Div., A.B.A. Industries, Inc. Prev Svc: USAF. 5 yrs. SSGT.

**ST. ONGE, Robert J., (LTC) (AAAA 1979)** 525 Stonehouse Rd, Trumbull, CT 06611. Bus: (203) 385-2781. Res: (203) 261-2578. W: Lois. Ch: Robert, Peter, Thomas, Timothy, Susan, Nancy, Anne. B: Nov 23. Nickname: Saint. Job: T-55 PM, Avco Lycoming Div. Educ: USMA. Prev Svc: USA. Ret: 1967. 22 yrs. LTC. Orgn: AUSA.

**ST. PIERRE, Raymond J., (MR) (AAAA 1979)** Hughes Aircraft Company, 7777 Bonhomme-Suite 1810, Clayton, MO 63105. Bus: (314) 862-6660. Res: (314) 394-2382. W: Martha. Ch: Michelle, Julie, Jeannette, Raymond, Michael. B: Oct 28. Job: Asst Mgr St. Louis District, Hughes Aircraft Co. Educ: Bellarmine College, AB. Prev Svc: USMC. 4 yrs. CPT. Orgn: HCA, AHS, AFA, AIAA, ADPA.

**STALEY, Charles F., (MR) (AAAA 1979)** 3356 Cove Road, Jupiter, FL 33458. Bus:

## The Industry Team

(305) 840-6181. Res: (305) 746-7368. Ch: Teresa, Charles, Scott. B: Apr 13. Nickname: Chuck. Job: Program Mgr, Pratt & Whitney Aircraft. Educ: Univ of KY, BS MS. Orgn: AHS.

**STANDKE, Helmut, (MR) (AAAA 1980)** Consolidated Controls, 2338 Alaska Avenue, El Segundo, CA 90245. Bus: (213) 772-5301. Res: (213) 346-8710. W: Magdalene. Ch: Randy, Gary, Ingrid, Richard. B: Oct 10. Job: PM, Consolidated Controls. Educ: Berlin State Engrg College, BS Engrg. Prev Svc: USN. 5 yrs. NCO.

**STAP, John Jr., (MR) (AAAA 1973)** 10001 Hwy W, 20, Suite 103B, Huntsville, AL 35806. Bus: (205) 772-9646. W: Char. Job: Director, Southern Region, Martin Marietta Aerospace Marketing. Educ: Univ of MI, BSME. Prev Svc: USNA, CDR. Orgn: AIAA, AAS, ADPA. AAAA Offices/Misc: VP, Tennessee Valley Chapter.

**STEEG, George F., (MR) (AAAA 1983)** Eaton Corp, AIL Div, 1755 Jefferson Davis Hwy, Suite 901, Arlington, VA 22202. Bus: (703) 892-0400. W: Constance. B: Dec 21. Job: Eaton Corp, AIL Div. Educ: Rensselaer Poly Inst, BEE MEE; GWU, MS. Prev Svc: USN. 3 yrs. ET2. Orgn: AUSA, AFA.

**STELTER, F.H., (MR) (AAAA 1981)** RCA Corp., Automated Sys., Route 38, Bldg 206-2, Cherry Hill, NJ 08358. Bus: (609) 338-5170. Job: VP-Mktg, RCA Corp-GSD.

**STERN, Peter M., (MR) (AAAA 1982)** 1450 Melville Avenue, Fairfield, CT 06430. Bus: (203) 226-8184. Res: (203) 374-7288. B: Dec 7. Nickname: Peter. Job: Advertising Mgr, Army Aviation Magazine, Westport, CT. Educ: Univ of Rochester. Orgn: AHS, AFA.

**STEVES, John W., (MR) (AAAA 1982)** Daimo Victor Operations, 1090 Vermont Ave NW, Suite 1100, Washington, DC 20005. Bus: (202) 289-5842. W: Hope. Ch: Thomas, Jeffrey, Joanna. B: Jul 17. Nickname: John. Job: Director, Washington Operations, Daimo Victor Operations, Educ: Univ of ME, BSEE. Prev Svc: USN. 3 yrs. Orgn: NSIA, Old Crows.

**STOFER, Gerald B., (MR) (AAAA 1980)** 1825 Eye Street, NW, Suite 700, Washington, DC 20006. Bus: (202) 785-7479. Res: (703) 931-3750. Job: Washington DC Rep, Sikorsky Aircraft Div, UTC.

**STOPPER, Joseph P., (MR) (AAAA 1975)** Northrop Corp., 500 East Orangethorpe Ave, Anaheim, CA 92801. Bus: (714) 871-5000. Res: (714) 871-6336. W: Deanna. Ch: Mary, Eddie. B: Jun 8. Nickname: Joe. Job: Mgr-Bus Dev & Mktg, Electro Mechanical Div. Educ: Harvard; Univ of CA; Amer Univ; Rutgers Univ, BS.

**STORA, Michael J., (MR) (AAAA 1982)** Harris-Gov't Spt Sys Div, 6801 Jericho Turnpike, Syosset, NY 11791. Bus: (516) 364-0400. Job: Bus Dev Mgr, Harris-Gov't Spt Sys Div. Educ: CA W. Univ, BSBA. Prev Svc: USN. 8 yrs. EB. Orgn: AHS, AUSA.



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**STRED, Gordon J., (MR) (AAAA 1975)** Singer Co., Link Div., Blinghamton, NY 13902. Bus: (607) 772-3518. Res: (607) 797-5692. W: Gladys. Ch: Pamela, Susan. B: Nov 8. Nickname: Gordon. Job: VP-Mktg, Singer-Link Flight Simulation Div.

**STREIPS, Eugene A., (MR) (AAAA 1973)** 800 Spring Valley Road, Altamonte Springs, FL 32714. Bus: (305) 352-2804. W: Kaye. Ch: Marcus, Nicky. B: Aug 12. Nickname: Gene. Job: Director, Business Development, Martin Marietta Aerospace. Educ: N. Univ, BSEE, MIT, MSEE. Prev Svc: USA. 5 yrs. AAAA Offices/Misc: Past Trea, Bonn Area Chapter.

**STROME, Gerald M., (MR) (AAAA 1977)** Hughes Aircraft Co., 8433 Fallbrook, Canoga Park, CA 91304. Bus: (213) 702-3608. Res: (213) 998-9135. Ch: Lorette, Glen. B: Mar 22. Nickname: Gerry. Job: Army Marketing Manager, Hughes Aircraft Co., Missile Systems Group. Educ: CCNY, BEE, UCLA, MBA. Prev Svc: USMC. 4 yrs. Orgn: AUSA.

**STUELPNAGEL, Thomas R., (MR) (AAAA 1969)** 1682 Rico Place, Palos Verdes Estates, CA 90274. Bus: (213) 373-2872. Res: (213) 373-2872. W: Shirley. Ch: Richard, John, Julie. B: Jun 23. Job: Consultant. Educ: Univ of CA, BS; Univ of WA, MS. Prev Svc: USMC. 4 yrs. Orgn: HCA, AHS, AUSA.

**STUETZER, Mary L., (MRS) (AAAA 1979)** Rockwell Int'l-MSD, 1800 Satellite Boulevard, Duluth, GA 30138. Bus: (404) 446-4257. Res: (404) 977-2832. W: F. John. B: Nov 13. Job: Cust Rel, Rockwell Missile Systems, Duluth, GA. Educ: Western MI Univ. Orgn: AUSA, AFA.

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**STURNO, Joseph A., (MR) (AAAA 1979)** 93 Lincoln Place, Waldwick, NJ 07463. W: Patti. Ch: David, Melissa, Phillip. B: Aug 6. Bus: (516) 420-1108. Res: (201) 652-3035. Job: Military Marketing, Northeast U.S., Sperry Flight Systems. Educ: NJ Inst, BS; Fairleigh Dickinson, MBA. Prev Svc: USMC. 3 yrs. CPL. Orgn: AHS.

**SUN, Cedric, (MR) (AAAA 1982)** Pall Corp., Aircraft Porous, 30 Sea Cliff, Glen Cove, NY 11542. Bus: (516) 671-4000. Res: (516) 271-3774. Nickname: Cedric. Job: VP-Mktg, Aircraft Porous Media, Inc. Educ:

Lafayette College, BSME. Orgn: AHS.

**SUNDING, Kenyon G., (MR) (AAAA 1974)** Lord Corp., 1635 West 12th Street, Erie, PA 16512. Bus: (814) 456-8511. Res: (814) 833-5924. B: Jul 19. Job: Manager Aerospace Sales, Lord Corp., Erie, PA. Educ: SDS&MT, BSME. Univ of Pittsburgh, MBA. Prev Svc: USA. 2 yrs. Orgn: AHS, AUSA.

**SUTHERLAND, Howard L., (MR) (AAAA 1970)** Sutherland Div Serv Inc., Suite 326, 4534 N. Lindbergh, Bridgeton, MO 63044. Bus: (314) 731-0303. Res: (314) 878-2661. W: Vivian. Ch: Mark, Barbara, Mary. B: Jan 9. Job: President, Sutherland Diversified Services, Inc. Educ: Univ of KS; Purdue Univ, Aero Engr. Prev Svc: USA. Orgn: Navy League.

**SWAN, Richard A., (MR) (AAAA 1982)** Midland-Ross Corp., Grimes Div., 550 Route 55, PO Box 247, Urbana, OH 43075. Bus: (613) 652-1461. W: Mary Ann. Ch: Stephanie, Andrea. B: Sep 16. Nickname: Dick. Job: Manager, Military Contracts, Midland-Ross Corp., Grimes Div. Educ: Univ of Cincinnati, BA. Prev Svc: USA. 8 yrs. Orgn: AUSA, AFA, HAL.

**SWINDELL, Brennon R., (MR) (AAAA 1958)** Bell Helicopter Textron, Box 482, Dept. 14, Fort Worth, TX 76101. Bus: (817) 280-2372. Res: (817) 488-7789. W: Marty. Ch: Steven, Margenia, Bryan, Mitchell. B: Aug 16. Nickname: Ray. Job: Dir, US Gov't Mktg, Bell Helicopter Textron. Educ: OK State Univ, BS. Prev Svc: USA. Ret: 1975. 21 yrs. LTC. Orgn: AHS, AUSA, AFA.

**TAUSSIG, Barrett, (MR) (AAAA 1978)** Emerson Electric Co., 8100 W. Florissant, St. Louis, MO 63136. Bus: (314) 553-2093. Job: Director, Marketing Armaments, Emerson Electric.

**TAYLOR, Randall L., (MR) (AAAA 1983)** 2223 S. 48th Street, Tempe, AZ 85282. B: Jun 24. Bus: (602) 894-2395. Job: Manager, Products Division, Simula, Inc. Educ: Brigham Young Univ, BE MS.

**TEJEDOR, Jose Luis, (MR) (AAAA 1983)** Construcciones Aeronautica, Rey Francisco 4, Madrid-6, Spain. Bus: 34-1479-7911. B: Jul 7. Job: C-212 Sales Technology, Construcciones Aeronauticas S.A.

**THALMANN, Claude, (MR) (AAAA 1982)** A.B.A. Industries, Inc., Polytronic-Pilatusstrasse, 1125 CH5630 Muri Switzerland. Bus: (415) 745-1145. W: Liliane. Ch: Cedric, Bertrand, Marie-France. B: Sep 9. Job: President, Polytronic, Ltd. Educ: Eng Physics. Ret: 1982.

**THOMAS, Creed, (MR) (AAAA 1977)** Howell Instruments, 2427 Heutte Drive, Norfolk, VA 23518. Bus: (804) 587-4966. Res: (804) 583-4670. Job: Regional Sales Manager, Howell Instruments, Inc.

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**THOMIS, Jan A., (MS) (AAAA 1982)** Teledyne Systems Co., 19601 Nordhoff

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**THOMPSON, George, (MR) (AAAA 1981)** 1209 George Street, Rosenberg, TX 77471. Bus: (713) 342-6601. Res: (713) 232-6135. W: Lynn. Ch: Gus, Karen. B: Apr 13. Job: Exec VP/Gen Mgr/Co-Owner, Radio Stations KFRR AM & KFRR FM. Educ: Univ of GA, ABJ. Prev Svc: 12 yrs. LTC.

**THORNTON, Thomas F., (MR) (AAAA 1982)** TSI Defense Systems Div., 500 Cardigan Rd, PO Box 43394, St. Paul, MN 55164. Bus: (612) 483-0900. W: Nancy. B: Dec 8. Nickname: Tom. Job: Marketing Manager, TSI Defense Systems of TSI.

**THORPE, Rod N., (MR) (AAAA 1979)** 400 Collins Road N.E., Cedar Rapids, IA 52498. Bus: (319) 395-3002. Nickname: Rod. Job: Marketing Director, Rockwell Int'l, Collins-Gov't Avionics Div. Orgn: AHS, AUSA, AFA. AAAA Offices/Misc: VP, Cedar Rapids Chapter.

**TINTER, Jeffrey S., (MR) (AAAA 1983)** Solar Turbines Inc., 499 S. Capitol St. SW 422, Washington, DC 20003. Bus: (202) 484-5080. Nickname: Jeff. Job: Sales Engineer, Turbomach.

**TODD, Edgar F., (MR) (AAAA 1978)** Beech Aircraft Corp., 1777 N. Kent St., Suite 809, Arlington, VA 22209. Bus: (703) 276-1000. W: Karen. Ch: Missy, April. B: Jul 14. Nickname: Ed. Job: Manager, Aerospace Mktg, Beech Aircraft Corp. Educ: Nebraska, BS MB. Prev Svc: USA. Ret: 1975. 25 yrs. COL. Orgn: AUSA, AFA, ADPA.

**TOMB, Robert N., (MR) (AAAA 1980)** Messerschmitt-Bolkow-Blomh, Suite 506, 1625 I Street NW, Washington, DC 20006. Bus: (202) 293-7741. Res: (301) 770-4325. W: Mary. Ch: Roberta, Kathleen, William. B: Nov 21. Nickname: Bob. Job: United States Representative, Messerschmitt-Bolkow-Blomh GmbH. Educ: Univ of Pittsburgh, BS; Harvard Bus, MS. Prev Svc: USN. 3 yrs. LCDR. Orgn: HCA, AHS, AUSA, AFA.

**TOPF, Philip A., (MR) (AAAA 1981)** 1642 47th Street N.E., Cedar Rapids, IA 52402. Bus: (319) 395-3165. Res: (319) 393-4959. W: Dorothy. Ch: Paul, Richard, James, Mary, Curtis. B: Oct 10. Job: Engineering Manager, Rockwell Int'l, Cedar Rapids, IA. Prev Svc: USA.

**TORGERSON, Robert, (MR) (AAAA 1983)** 42 Filmyer Court, Swedesboro, NJ 08085. Bus: (215) 522-2712. Res: (609) 467-3547. Job: Mgr PR & Advertising, Boeing Vertol Co. Orgn: AHS, AUSA.

**TOWLE, Thomas J., (MR) (AAAA 1957)** Dayton-Granger, Inc., 3000 Alway, Costa Mesa, CA 92626. Bus: (714) 662-1927. Ch: Kathleen, Leslie, Allison. B: Jan 1. Nickname: Tom. Job: Marketing Manager, Dayton-Granger, Inc. Educ: Seton Hall Univ, BS; LA State Univ, MS. Ret: 1975. 21 yrs. LTC. Orgn: NTA, AEA, HAL, NDPA.

**TRENT, Conrad T., (MR) (AAAA 1981)** PPE Associates, Inc., P.O. Box 2265, Stamford, CT 06906. Bus: (203) 322-2500. Res: (203) 233-8468. W: Catherine. B: Nov 8. Nickname: Connie. Job: President, CEO, PPE Associates, Inc., Stamford, CT. Prev Svc: USA. Ret: 1962. 14 yrs. CPT.

# The Industry Team

**TROUTMAN, George G.**, (MR) (AAAA 1980) Bell Helicopter Textron, 1090 Vermont Ave NW, Suite 1100, Washington, DC 20005. Bus: (202) 289-5855. Res: (301) 627-1327. W: Dorothy, Ch: Glenn, Diane, Sandra. B: Feb 11. Job: VP, Bell Helicopter Textron. Educ: Univ of IL, BS; USAF Inst of Tech. Prev Svc: USAF. Ret: 1965. 22 yrs. Orgn: AUSA, AFA.

**TYER, Alton A.**, (MR) (AAAA 1983) Boeing Company, P.O. Box 3999, MS 82-50, Seattle, WA 98124. Bus: (206) 773-3182. Res: (206) 841-3634. W: Lois. Ch: Jason, Amy. B: Sep 21. Job: J-Stars Program Manager, BAC. Educ: WA State Univ, BSEE; San Jose State Univ, MSEE.

UUUUUUUU

**URIARTE, Juan De**, (MR) (AAAA 1983) Construcciones Aeronautic, 5903 Osceola Road, Bethesda, MD 20816. Bus: (301) 320-2216. W: Victoria. Ch: Victoria, Juancho, Pablo, Jose. B: Nov 30. Job: Regional Director for US & Canada, Casa Int'l. Educ: Univ of Madrid, ETSIA EITA. Prev Svc: 2 yrs. LT.

**URIAS, George P.**, (MR) (AAAA 1979) McDonnell Douglas Corp., 2600 North 3rd, St. Charles, MO 63301. Ch: Lisa, Elizabeth. B: Jul 21. Job: VP-Marketing, Electronics, McDonnell Douglas Corp. Educ: USC, Mech Engr & Indus Mgmt. Prev Svc: USAF, 5 yrs. SGT. Orgn: AUSA.

VVVVVVVV

**VADEN, V. Geary**, (MR) (AAAA 1983) Boeing Co., P.O. Box 3999, MS 85-55, Seattle, WA 98124. Bus: (206) 773-0463. Job: Air Defense Futures Manager, BAC.

**VELLA, Gregory J.**, (MR) (AAAA 1982) Daniels Mfg. Corp., PO Box Drawer 7088, Bloomfield Hill, MI 48302. Bus: (313) 338-9611. W: Valerie. Ch: Nichole. B: Jun 3. Job: General Manager, Daniels Manufacturing Corp. Educ: Univ of MD, BS Mech Engr.

**VERMEULEN, Ronald J.**, (MR) (AAAA 1982) Brooks and Perkins, AAR, 12633 Inster Road, Livonia, MI 48150. Bus: (313) 522-2000. Job: Design Engineering Manager, Brooks and Perkins, AAR.

**VESTAL, Jack E.**, (MR) (AAAA 1966) Dynalcraft Corp., 1313 Dolly Madison Blvd, McLean, VA 22101. Bus: (703) 356-0480. Res: (703) 908-9682. W: Ruth. Ch: Dave, Lee Ann. B: Mar 14. Nickname: Jack. Job: VP-Government Services, Dynalcraft Corp. Educ: SW MO State Univ. Prev Svc: USN, 6 yrs. AAAA Offices/Misc: Past VP, Trinity River Chapter.

**VIDETTO, William G.**, (MR) (AAAA 1975) Emerson Elec., MS-3610, 8100 W. Florissant Ave., St. Louis, MO 63136. Bus: (314) 553-0610. Res: (314) 536-1345. Ch: Andrew, Mark, Matthew, Paul, William, Beth, Luke. B: Jan 17. Job: Manager, Marketing Operations, Advanced Programs, Emerson Electric. Prev Svc: USA, 2 yrs. SFC.

**VINCI, Vincent**, (MR) (AAAA 1982) Rockwell Int'l MSD, 1800 Satellite Boulevard, Duluth, GA 30136. Bus: (404) 446-4252. Res: (404) 993-7721. B: May 28. Educ: Seton Hall Univ, BA. Prev Svc: USA, 2 yrs.

**VON TEIN, Volker**, (DIPL-ING) (AAAA 1983) Messerschmit-Bolkow-Blöhm, Hcptr & Transp, PO Box 801140, 8000 Muenchen 8 W Germany. W: Sigrid. Ch: Ursula, Christine. B: Jan 24. Job: Director Engineering. Educ: Dipl-Ing, Technical Univ in Munich. Orgn: AHS.

**VOSEL, Donald M.**, (LTC) (AAAA 1982) Fort Rucker National Bank, P.O. Box 368, Fort Rucker, AL 36362. Bus: (205) 598-2401. Res: (205) 894-6369. W: Virginia. Ch: Jeff, Mark, Lee Ann. B: Jun 22. Job: Assistant VP, Fort Rucker National Bank. Educ: Penn State, BS; USC, MS. Prev Svc: USA. Ret: 1975. 24 yrs. LTC. Orgn: AHS, AUSA.

WWWWWWW

**WADDELL, Walter G.**, (MR) (AAAA 1976) 27455 N. Garza Drive, Saugus, CA 91350. Bus: (805) 259-4030. Res: (805) 259-6817. W: Wilma. B: Nov 19. Nickname: Walt. Job: Marketing Manager, Space Products Group, HR Textron, Valencia, CA. Educ: AA. Prev Svc: USN. Orgn: AHS.

**WADE, Michael R.**, (MR) (AAAA 1969) 221 Duck Hole Road, Madison, CT 06443. Bus: (203) 385-3538. Res: (203) 245-0545. W: Patricia. B: May 7. Nickname: Mike. Job: Manager T-53 Military Engine Program, Avco Lycoming, Stratford, CT. Educ: MI State, BA; Fairleigh Dickinson, MPA. Prev Svc: USA. 17 yrs. CPT. Orgn: AHS.

**WALKER, Curtis L.**, (MR) (AAAA 1980) 21000 Brookpark Road, MS 302-2, Cleveland, OH 44135. Bus: (216) 433-4000. Res: (216) 779-4972. W: Mary Sue. Ch: Scott, Jeanne, Walker Laufer, Stan. B: Dec 15. Nickname: Curt. Job: Chief, Engines & High Temperature Components Div; AVRADCOM. Educ: Univ of Ok, BSME Aero. Orgn: AHS.

**WALKER, Dayton J.**, (MR) (AAAA 1981) Honeywell Inc., 1625 Zarthan Ave, Box 38, Minneapolis, MN 55440. Bus: (612) 542-4919. W: Susan. B: Feb 14. Job: Program Manager, Honeywell, Inc. Educ: Univ of MN, BS.

**WALKER, Robert W.**, (MR) (AAAA 1979) Sanders Associates, Inc., 3322 S Memorial Pkwy, No. 1, Huntsville, AL 35801. Bus: (205) 881-1940. Res: (205) 881-5691. Ch: Teresa. B: Mar 1. Job: Regional Manager (Southern Region), Sanders Associates, Inc. Educ: NE Univ, BS MBA. Prev Svc: USN, 4 yrs. Orgn: AHS, AUSA, AFA, AOC, IEEE, AIAA, TMSA, ITEA, ADPA, USNI, ASC, NSIA.

**WALLACE, Bud**, (MR) (AAAA 1981) Hughes Aircraft Co., Bldg E1 MS A167, El Segundo, CA 90245. Bus: (213) 616-6608. W: Sherry. Job: Manager Marketing, Helicopter Avionics Applications, Hughes Aircraft.

**WALLER, Henry A.**, (MR) (AAAA 1975) Consolidated Controls, 2338 Alaska Avenue, El Segundo, CA 90245. Bus: (213) 772-5301. W: Betty. Ch: Daniel, Greg. B: Sep 11. Nickname: Hank. Job: VP Marketing, Consolidated Controls Corp. Educ: Polytechnic Institute of NY, BME. Prev Svc: USN. Orgn: SAE, AIAA, HW.

**WATERS, Robert C.**, (MR) (AAAA 1980) 4615 Woodfield Road, Bethesda, MD 20814. Bus: (213) 765-1010. Res: (301)

493-8883. W: Joyce. Ch: Karen, James, Stephen, Michael. B: Apr 12. Nickname: Bob. Job: Marketing Manager, Bendix Electrodynamics, N. Hollywood, CA. Educ: Monmouth, BS. Prev Svc: USN. Orgn: HCA, AHS, AUSA, AFA, Elks, Navy League, NSIA, The American Legion.

**WATKINS, Billy J.**, (MR) (AAAA 1983) P.O. Box 396, Vandalia, OH 45377. Bus: (513) 667-5119. W: Fran. Ch: Connie, Sandy, Terri. B: Sep 1. Job: Owner, Watkins Associates. Prev Svc: USAF, 4 yrs. Orgn: AUSA, AFA.

**WATKINS, Brock**, (MR) (AAAA 1981) Emerson Electric Co., 8100 W. Florissant, St. Louis, MO 63136. Bus: (314) 553-2825. Res: (314) 355-5596. Job: Marketing Manager Armaments, Emerson E&S Div. Educ: Embury-Riddle Aero Univ, BS. Prev Svc: USA. Orgn: AFA.

**WATSON, L. E.**, (MR) (AAAA 1978) Chandler Evans Inc., Colt-Coco-Charter Oak Blvd, West Hartford, CT 06101. Bus: (203) 236-0651. Res: (203) 833-2430. W: Janet. Ch: Terri, Holly. B: Apr 14. Job: Manager, Sales Administration, Chandler Evans, Inc. Colt-Coco. Educ: Univ of MI, BS; Rensselaer Polytechnic. Prev Svc: USNR, 3 yrs.

**WEATHERBEE, William H.**, (MR) (AAAA 1983) Sanders Associates, 95 Canal Street Nc A11-02, Nashua, NH 03061. Bus: (603) 885-4892. Res: (603) 673-2072. Job: Manager Army Programs, Sanders Associates. Educ: Syracuse Univ, BSEE. Orgn: AUSA.

**WEBER, John S.**, (MR) (AAAA 1981) Hughes Aircraft Co., PO Box 902, Bldg E1B162, El Segundo, CA 90245. Bus: (213) 616-1116. Res: (213) 670-3902. W: Margery. B: Apr 15. Nickname: Jack. Job: Manager Marketing, Helicopter Systems, Hughes Aircraft Co. Prev Svc: USN.

**WEDDING, Donald K.**, (MR) (AAAA 1982) Photonics Technology Inc., P.O. Box 432, Luckey, OH 43443. Bus: (419) 866-0033. Res: (419) 841-7288. W: Mary Ellen. Ch: Carol Ann, Donald Jr, Mary, Daniel. B: Oct 28. Nickname: Don. Job: VP-Mktg, Photonics Technology, Inc. Educ: Univ KY, BS; Univ of Toledo, MS; Univ of Pitt, MBA; Univ of Louisville, MD. Orgn: AUSA, AFA.

**WEICHSEL, Hans**, (MR) (AAAA 1958) Bell Helicopter Textron, PO Box 482, Dept H-1, Fort Worth, TX 76101. Bus: (817) 280-2111. Res: (817) 451-6374. W: Gillette. Ch: Hans Bradley, Herbert, Linda. B: Aug 25. Job: SrVP & General Mgr, CSS Div, Bell Helicopter Textron. Educ: Univ of MI, BS. Orgn: AHS, AUSA.

**WENZEL, Robert F.**, (MR) (AAAA 1981) Vought Corp., P.O. Box 225907, Dallas, TX 75265. Bus: (214) 266-7382. Res: (214) 478-3662. W: Bea. Ch: Karne, Todd, Scott. B: Apr 23. Nickname: Bob. Job: Director-Law 6 Program, Vought Corp. Educ: USC, BSME MSME. Prev Svc: USAAC, 3 yrs. Orgn: AUSA, AFA, ADPA.

**WERNER, Richard E.**, (MR) (AAAA 1983) 5



# W The Industry Team

**Snijdersdreef, 1900 Overijse, Belgium. Bus: (322) 640-4878. W: Wilhelmina. Ch: Erika. B: Dec 2. Nickname: Dick. Job: Director European Region, Martin Marietta Aerospace. Educ: PA State Univ, BS; State Univ of NY, MS; Rollins, MS.**

**WESER, Al, (MR) (AAAA 1983) World Turbine Services, 11108 Osgood, San Antonio, TX 78233. Bus: (512) 657-6528. Res: (512) 496-3847. W: Karen. Ch: Matthew, Stephanie. B: Sep 9. Job: President, World Turbine Services, Inc. Educ: San Antonio College, Assoc Engrg. Prev Svc: USA. 3 yrs. PVT.**

**WESSEL, James A., (MR) (AAAA 1983) Appl-Mation Inc., 6955 Hanging Moss Road, Orlando, FL 32807. Bus: (305) 678-6955. Res: (305) 699-1631. W: Mary Sue. Ch: Mark, James, Keith. B: Nov 26. Nickname: Jim. Job: VP, Appl-Mation, Inc. Educ: Univ of Cincinnati. Prev Svc: USN. 4 yrs. AE2. Orgn: ANA.**

**WEST, David J., (MR) (AAAA 1978) Bendix Corp., 2150 NW 62nd Street, Fort Lauderdale, FL 33309. Bus: (305) 776-4100. B: Jul 23. Job: Manager, Business Development, Bendix ATAD. Educ: Syracuse Univ, BS; So. Il. Univ, MBA. Prev Svc: USAF. 14 yrs. MAJ. Orgn: AHS, AUSA, AFA.**

**WETZEL, Harvey H., (MR) (AAAA 1959) 1051 S. Dobson, No. 97, Mesa, AZ 85202. Bus: (602) 897-4175. W: Barbara. B: Jun 22. Job: Senior Field Rep, Motorola, Inc. Prev Svc: USN. 3 yrs. RM2C.**

**WHITE, Earl J. Jr., (MR) (AAAA 1982) Rockwell Int'l, 1745 Jefferson Davis Hwy, Suite 1200, Arlington, VA 22202. Bus: (703) 553-6611. Res: (703) 768-7820. W: Gloria. B: Dec 21. Nickname: Whitey. Job: Dir Gov't Mktg, Rockwell Int'l-DEO. Educ: Shurtleff College, BA. Prev Svc: USA. 7 yrs. Orgn: ADPA, AFCEA, Navy League.**

**WHITE, J., (MR) (AAAA 1977) ITT, 390 Washington Avenue, Nutley, NJ 07110. Bus: (201) 284-2503. Res: (201) 825-8077. W: Martha Jean. Ch: James, Amy. B: Feb 23. Nickname: Jim. Job: PM ALQ-136, ITT Avionics Div. Educ: Univ of MI, MS Elect Engrg. Prev Svc: USAF. Ret: 1976. 20 yrs. LTC. Orgn: AFA.**

**WHITE, John W., (MR) (AAAA 1979) 626 Haystack Ldg. Rd., Newport News, VA 23602. Bus: (804) 876-2413. Res: (804) 877-1142. W: Josie. Ch: Paul, Bill, Leigh Ann, Jane. Job: Ch Aero Technology Div., Applied Technology Lab. GS. 15. Educ: NC State Univ, BME; GWU, MSA. 3 yrs. Orgn: AHS, AUSA.**

**WHITTENBURY, Clive G., (DR) (AAAA 1974) 511 Trinity Avenue, Yuba City, CA 95991. Bus: (916) 743-0703. Res: (916) 671-2372. W: Rachel. Ch: John, Elizabeth. B: Sep 27. Job: Executive VP, Erickson Group. Educ: Illinois, BS; Manchester, Ph.D. Orgn: AHS.**

**WIEMANN, Frank R., (MR) (AAAA 1983) Honeywell, Inc., 1200 E. San Bernardino Rd, West Covina, CA 91790. W: Judy. Ch: John, Denise. B: Jan 26. Nickname: Frank.**

**Bus: (213) 331-0011. Job: Director of Marketing, Honeywell, Inc., T&CSO. Educ: Mankato State Univ, BS.**

**WIGHT, Albert B., (MR) (AAAA 1983) Sanders Associates, Inc., Daniel Webster Highway S., Nashua, NH 03061. Bus: (603) 885-3571. W: Margaret. Ch: Barbara, Donald, Thomas. B: Jun 16. Nickname: Al. Job: President, Sanders Associates, Inc. Educ: Bates College, BA; WA Univ, BSEE. Prev Svc: USA. 3 yrs. SGT.**

**WILLIAMS, Charles S., (MR) (AAAA 1982) Embry-Riddle Aero Univ, Int'l Campus Star Rt. 540, Bunnell, FL 32010. Bus: (904) 673-3180. W: Elizabeth. Ch: Betty, Allison. B: Nov 18. Nickname: Chuck. Job: VP-Provost, Int'l Campus, Embry-Riddle Aero Univ, Educ: USNA, BS; Stanford Univ, MA. Prev Svc: USN. Ret: 1978. 38 yrs. RADM.**

**WILLIAMS, John W., (MR) (AAAA 1972) Bell Helicopter, P.O. Box 482, Fort Worth, TX 76101. Bus: (817) 280-3418. Res: (817) 280-3418. W: Bonnie Jane. Ch: Jennifer. B: Feb 14. Job: Sr Test Pilot, Bell Helicopter. Educ: Texas Wesleyan College, BA. Prev Svc: USA. 8 yrs. CW2. Orgn: HCA, AHS.**

**WILLIAMS, Lawrence E., (MR) (AAAA 1981) 9 La Vida Via, Downingtown, PA 19335. Bus: (215) 647-9335. Res: (215) 269-8698. W: Audrey. Ch: Ann, David, Lawrence III. B: Jul 23. Nickname: Larry. Job: Sales, Wagner Wines. Educ: Univ of MD, BS. Prev Svc: USAC. 17 yrs. 1LT. Orgn: QB, AORA.**

**WILLIAMS, Richard T., (MR) (AAAA 1978) 16 Whitney Gate, Smithtown, NY 11787. Bus: (516) 595-6212. Res: (516) 979-6029. W: Helen. B: Feb 11. Nickname: Dick. Job: Group Leader, Eaton Corp., All Div. Educ: Manhattan College, BSEE. Orgn: AHS, AUSA, Old Crows.**

**WILLIAMS, Warren J., (MR) (AAAA 1982) P.O. Box 849, 268 Broad Street, Red Bank, NJ 07701. W: Bertha. Ch: Jeffery, Michelle. B: Feb 15. Job: Sr Systems Representative, Emerson Electric Co. Educ: TN State Univ, BSEE; Poly Inst of NY. Orgn: AUSA.**

**WINTER, Thomas C. Jr., (DR) (AAAA 1982) Ball Aerospace Systems Div., 1411 Jefferson Davis Hwy, Suite 804, Arlington, VA 22202. Bus: (703) 521-1150. Res: (703) 471-4309. W: June. Ch: Thomas III, Catherine. B: Jun 19. Nickname: Tom. Job: Manager, Advanced Technology Planning, Ball Aerospace Systems Div. Educ: GWU, MBA; UCLA, Ph.D. MA; USMA, BS. Ret: 1976. 20 yrs. LTC.**

**WITT, Francis M., (MR) (AAAA 1982) McDonnell Douglas Corp., P.O. Box 426, St. Charles, MO 63301. Bus: (314) 925-4857. B: Aug 11. Nickname: Beau. Job: Marketing Rep, McDonnell Douglas Electronics Co. Educ: Troy State Univ, BS. Prev Svc: USA. 8 yrs. Orgn: AUSA.**

**WOHL, Gerald, (MR) (AAAA 1982) 10330 Nightmist Court, Columbia, MD 21044. Bus: (301) 997-1587. Res: (301) 997-1587. W: Joyce. Ch: Rose, Paivda. B: Jul 6. Nickname: Jerry. Job: VP, Columbia Research Service. Educ: Syracuse Univ, BA. Orgn: AUSA, AFA.**

**WOHLFERT, D.C., (MR) (AAAA 1978) General Dynamics Corp., 1745 Jefferson Davis Hwy, Arlington, VA 22202. Bus:**

**(703) 553-1274. W: Janice. Ch: Mark, Shane, Wendy. B: Aug 8. Job: Manager-Tactical Systems, General Dynamics Corp. Educ: Milw Sch. AAS BSEE; AL A&M, MBA.**

**WOLFE, Donis, (MR) (AAAA 1980) The Mitre Corp., 1820 Dolly Madison Blvd., McLean, VA 22102. Bus: (703) 827-7195. B: Mar 14. Nickname: Don. Job: The Mitre Corp., Washington, DC. Educ: BS MS MBA. Prev Svc: USA. 12 yrs.**

**WOLSTENHOLME, Neil, (MR) (AAAA 1978) Marconi Avionics Inc., 4500 N. Shallowford Road, Atlanta, GA 30338. Bus: (404) 394-7800. Job: Manager, Product Support, Marconi Avionics Inc.**

**WOLVERTON, James R., (MR) (AAAA 1981) Honeywell Inc., 5100 Gambles Drive, St. Louis Park, MN 55416. Bus: (612) 542-5563. Res: (612) 933-5296. W: Marlys. Ch: Loren. B: Feb 22. Nickname: Jim. Job: Bus Area Mgr, Integrated Avionics & Targeting Sys, Honeywell. Educ: USNA, BS; AFIT, MS; CMU. Prev Svc: USAF, USN. Ret: 1979. 24 yrs. COL. Orgn: AFA.**

**WOOD, Gregory A., (MR) (AAAA 1983) Box 2500, Room 2007, Daytona Beach, FL 32014. Bus: (904) 257-3037. W: Madge. Ch: Alexa, Joel, Nicholas. B: Nov 7. Nickname: Gregg. Job: Marketing Manager, Army Systems, General Electric. Educ: Embry-Riddle Aero Univ, BS. Prev Svc: USA. 4 yrs. CW2. Orgn: AUSA.**

**WOODS, David L., (MR) (AAAA 1965) Singer Co., Colesville Rd, Binghamton, NY 13902. Bus: (607) 772-3106. W: Elaine. B: Jan 3. Job: Army/Navy Marketing Manager, Singer Co., Link Div. Educ: The Citadel, BSEE. Prev Svc: USA. 3 yrs. CPT. Orgn: AHS, AUSA.**

**WOODS, Robert M., (MR) (AAAA 1983) 7010 Surrey Drive, N.E., Cedar Rapids, IA 52402. Bus: (319) 395-5910. Res: (319) 377-4556. W: Phyllis. Ch: Reid, David. B: Jul 7. Nickname: Bob. Job: Collins Govt Avionics Div, Rockwell Int'l. Educ: Iowa State Univ, BSC. AAAAA Offices/Misc: VP, Cedar Rapids Chapter.**

**WOSICKI, Walter J., (MR) (AAAA 1960) Martin Marietta Corp., 6801 Rockledge Drive, Bethesda, MD 20804. Bus: (301) 897-6818. Res: (703) 250-4585. W: Judy. Ch: David, Carrie, Kim. B: Feb 21. Nickname: Walt. Job: Dep Dir, Army Programs, Martin Marietta Aerospace. Educ: West Point, BS; USC, MS. Prev Svc: USA. Ret: 1959. 20 yrs. LTC. Orgn: AHS, AUSA.**

**WRIGHT, Garland T., (MR) (AAAA 1983) Bonanza No. 430, 3431 Fort Campbell Blvd., Clarksville, TN 37040. Bus: (615) 431-4256. Res: (615) 647-5913. W: Mildred. Ch: Rickie, Vickie, Paul. B: Dec 20. Nickname: Gt. Job: Owner, Bonanza No. 430, Montgomery Enterprises Inc., Clarksville, TN. Prev Svc: USA. Ret: 1968. 20 yrs. 1SGT. Orgn: AUSA.**

**WYNE, Robert O., (MR) (AAAA 1972) 2227 Drake Ave SW, Suite 30, Huntsville, AL 35805. Bus: (205) 882-3300. Res: (205) 881-0875. W: Pat. Ch: Linda, Nancy, Robert. B: Feb 28. Nickname: Bob. Job: Mgr Huntsville Office, Rockwell Int'l-MSD. Educ: Univ of KS, BSME. Prev Svc: USA. 2 yrs. Orgn: AUSA. AAAAA Offices/Misc: Sec, Tennessee Valley.**

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**YAGLINSKI, Joseph**, (MR) (AAAA 1982)  
PO Box 34, Ridley Park, PA 19078. Bus:  
(215) 522-3550. Res: (215) 872-0493. W:  
Marion. B: Jan 12. Job: Manager, CH-47  
Field Service, The Boeing Vertol Co.  
Educ: Temple Univ. Prev Svc: USAF, 2 yrs.  
SSGT.

**YERKES, George M.**, (MR) (AAAA 1983)  
EMGE Aeromarine Int'l, 6 Terry Drive,  
Newtown, PA 18940. Bus: (215) 968-7500.  
Res: (215) 794-8682. W: Judith. B: Oct 6.  
Nickname: Skip. Job: President, EMGE  
Aeromarine Int'l. Educ: USNA, BS. Prev  
Svc: USN. 7 yrs. LCDR.

**YOUNG, Warren R.**, (MR) (AAAA 1982) 39  
North Greenway Road, Armonk, NY  
10504. Bus: (914) 273-8456. Res: (914)  
273-8457. W: Lilia. Ch: Gregory. B: Apr 2.  
Job: Freelance Writer, Av&Helo, Warren

R. Young, Armonk, NY. Educ: Purdue, BS.  
Prev Svc: USA. Res: 1945. 1 yrs. CPL.

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**ZABLOCKY, Gerald W.**, (MR) (AAAA 1982)  
21 Normandy Road, Pine Brook, NJ 07058.  
Bus: (201) 393-2524. Res: (201) 227-1289.  
W: Lucile. Ch: Paul, Peter, Michael,  
Christopher. B: Dec 26. Nickname: Gerry.  
Job: Marketing Manager, Bendix Test  
Systems Div. Educ: Fairleigh Dickinson,  
BS; Stevens, MSEE MBA. Prev Svc: USAF.  
Res: 1957. 4 yrs. SGT. Orgn: AUSA.

**ZEBROWSKI, Edward A.**, (MR) (AAAA  
1977) Eaton Corp, AIL Div, Commack  
Road, Deer Park, NY 11729. Bus: (516)  
595-3094. Res: (516) 757-2376. W: Mar-  
garet. Ch: Carol, Christine, Catherine,  
John. B: Mar 12. Nickname: Ed. Job: Mgr  
Business Development, Eaton Corp., AIL  
Div. Educ: Polytechnic Inst of Bklyn, MS.

Y The Industry Team

Prev Svc: USA. PFC. Orgn: AOC.

**ZINCONE, Robert**, (MR) (AAAA 1983) 18  
Sunset Hill Avenue, Norwalk, CT 06851.  
Bus: (203) 396-4208. Res: (203) 866-0785.  
W: Irene. B: Apr 11. Job: Senior VP,  
Research & Engineering, Sikorsky Air-  
craft Div. Educ: Acad of Aero; UB, BSME;  
Columbia Univ, MSEM.

**ZINK, Robert C.**, (MR) (AAAA 1978)  
Magnavox, Telecomm Dept 991, 1313 Pro-  
duction Road, Fort Wayne IN 46808. Bus:  
(219) 429-6377. Res: (219) 749-9803. W: An-  
nette. Ch: Alan, Laurie. B: Oct 6.  
Nickname: Bob. Job: Senior Product  
Manager, Magnavox Co., Fort Wayne, IN.  
Prev Svc: USN. Res: 1964. 22 yrs. AT1.  
Orgn: AUSA, AFA.

LISTING OF INDIVIDUAL MEMBERS OF AAAA'S 90 INDUSTRY (CORPORATE) MEMBER FIRMS

# THE INDUSTRY TEAM

**A.B.A. Industries, Inc.**

Joseph R. Beerman  
Bruce W. Haring  
Charlie Springer  
Robert J. Sweet  
Claude Thalman

**Advanced Structures Division,**

**TRE Corporation**

Jack O. Dunn  
Frank J. Filippi  
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Gerald L. Maxwell  
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**Aircraft Gas Corporation**

D. B. Brodt  
Stan Piech  
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Bruno Cussigh  
Te Luciano Forzani  
Enrico Guerra  
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Luigi Passini  
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Jerry McNulty  
Glenn L. McDuffie  
Carey K. Quinn  
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# LATE LISTINGS

**CASEY, A.J.**, (MR) (AAAA 1983) Casey Copter, P.O. Box 121, Montreal AMF, Dorval Quebec H4Y 1A5 Canada. Bus: (514) 636-6155. Job: President, Casey Copter.

**FOKINE, Ted**, (MR) (AAAA 1982) SAAB-Scania Combitech AB, SAAB Instruments, Box 1017, S-551 11 Jonkoping Sweden. Bus: 46 (36) 128838. Res: 46 (144) 23000. W: Ann. B: Mar 8. Ch: Pernilla, Nicholas, Michael, Hans, Klas. Educ: NYU, BSEE MSEE. Job: Marketing Manager-Advanced Systems, SAAB-Scania AB. Prev Svc: USA.

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**NORWINE, Phillip C.**, (MR) (AAAA 1958) Bell Helicopter Textron, P.O. Box 482, Dept. 03, Fort Worth, TX 76101. Bus: (817)

280-3842. W: Jan. B: Mar 29. Job: Vice President-Market Development, Bell Helicopter Textron. Educ: Rensselaer Polytechnic Institute, BA Engrg. Prev Svc: USNR.

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**SHARPE, H.H.**, (MR) (AAAA 1977) Rockwell Int'l-MSD, 308 S. Parkway Avenue, Columbus, OH 43209. Bus: (614) 239-2590. Res: (614) 253-3433. W: Rita. Ch: Donald, Janet, Richard, Glenn, James. B: Mar 27. Nickname: Hank. Job: Manager-Int'l Operations, Rockwell Int'l-MSD. Educ: BAEE. Prev Svc: 3 yrs. Orgn: AUSA.



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E-SYSTEMS

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Droge, A.J.—Fleury, P.A. ....	8	Rutherford, W.G.—Shine, D.J. . . .	22
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Goodman, S.—Hattin R.F. ....	10	Stravato, A.G.—Trent, C.T. ....	24
Havill, F.W.—Hooks, R.P. ....	11	Troutman, G.G.—Werner, R.E. . . .	25
Hornberger, C.—Jorio, A. ....	12	Weser, A.—Wyne, R.O. ....	26
Jose, D.K.—Knapp, L.G. ....	13	Yaglinski, J.—Zink, R.C. ....	27
Knapp, R.E.—Leone, N. ....	14		

## INDUSTRY MEMBER CODE

Last Name, First Name, M.I.  
(First Membership Year)  
Residence Address  
City, State, and ZIP Code  
Business and Home Phones  
Name of Spouse and Children  
Date of Birth (Excluding Year)  
Nickname

**PROFESSIONAL DATA:**  
Company Job Title

Name of Member Firm  
City/State of Member Firm  
Colleges Attended  
Degrees Held  
Previous Military Service  
Year of Retirement  
Years of Active Military Service  
Retirement Rank/Grade Held  
Professional Organizations  
Honors/Awards Received

**IOCS****Tracor**  
*Aerospace***SAAB-SCANIA****SOLAR**  
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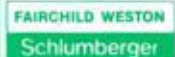
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## The SFTS Program

(Continued from Page 24)

the Army wants to buy. Sometimes it is a technically-oriented specification which states in technical terms what is required. For example, it might state that the visual system will be five channel, three window, 4,000 edge computer generated image, operating at 60 cycles.

Recently, the Army has tried to lead the way in allowing industry to "build a better mousetrap" by developing performance-oriented specifications. In this case, rather than specifying the exact design of the visual system, the specification says that the visual system must provide normal out-the-window viewing which will allow **Nap-of-the-Earth (NOE)** flight during all weather conditions in which the aircraft can fly.

Now the onus is on each contractor to respond with what he thinks is the best visual system to meet the requirement. PM TRADE and user representatives evaluate the responses.

Concurrently with the development of the "Specification", a complete contractual package, consisting of such things as contractual provisions, the Technical Proposal Requirements, Cost Proposal Requirements, Management Proposal Requirements, and the Contract Data Requirement List, is being put together.

As this entire package, which is called a **Request for Proposal (RFP)**, nears completion, the government must announce its intent to release the RFP and

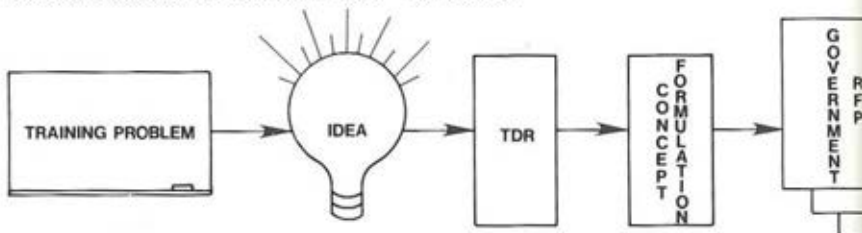
solicit "Letters of Capability" from all interested contractors. This is done through an announcement in a newspaper, the **Commerce Business Daily (CBD)**.

Once the RFP has been announced in the CBD, contractors have a specified amount of time in which to respond in order to be placed on the Bidders' List. If possible, PM TRADE likes to release a draft RFP in order to solicit contractors' comments to problem areas prior to the release of the formal RFP.

### A fair contest

Until the release of the RFP, contractors and the government can have an open relationship as to discussion of the government's need. However, once the RFP has been released the formal competitive process has begun and the government is prohibited from discussing anything relating to the program with any contractor without relating the same information to all of the bidders.

This is done to preclude giving any one contractor an "unfair advantage." All prototypes for the SFTS were procured through the competitive process. Each proposed production contract has to undergo close scrutiny by a Sole Source Review Board to determine if it should be competitive or sole source to the prototype contractor. In the case of the SFTS program it has been determined that it was more beneficial to the government to go sole source to the prototype manufacturer for the production simulators.



With the release of the RFP, all bidders are given a certain date by which their proposals must be received. Once the proposals are received a very methodical evaluation occurs.

A government team consisting of experts in various fields is assigned to evaluate each proposal. To preclude any prejudice, where possible all reference to a company's name is removed from the packages the evaluators see. Once the scores have been compiled, a decision is made as to which contractors are in the competitive range. Those determined to be in the competitive range remain in the competition.

### "Best value" bidding

Although there are various methods of selecting the successful bidder at this point, the selection process relies mostly on the "best value" procedure. This means that a contract is not necessarily made based on who in the competitive range submits the lowest cost bid. The evaluators decide, based on a combination of various factors, which company will provide the best system at an affordable price to meet the requirement.

After a period of negotiations with the contractor and an approval cycle, a contract is awarded. Traditionally, the time from the release of the RFP to the award of the contract has been approximately one year.

PM TRADE, with the cooperation and support of the Naval Training Equipment Center which provides most of the technical support to this process, has

tried some innovative procedures to reduce this lead time. As a result of these innovations, the **AH-64 Combat Mission Simulator**, one of the most complicated simulators purchased to date, took only six months to procure.

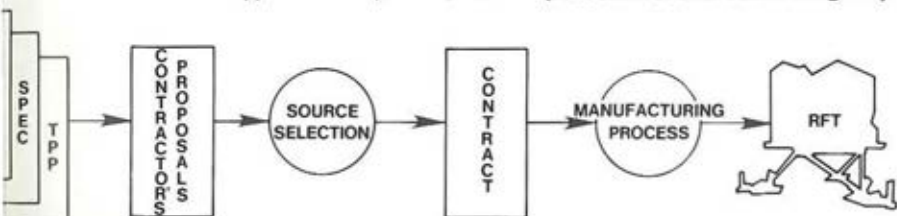
Now that the government has awarded a contract, the contractor merely has to deliver the simulator to the proper site. Not so! The development cycle for a prototype simulator typically is about three years. To date, the Link Flight Simulation Division of The Singer Company has been the contractor for all of the flight simulators of the SFTS program so it is only natural that their experience should be the basis for the following manufacturing description.

In order to provide a good proposal, the contractor has had to do a lot of preliminary design. Therefore, once the contract is awarded, the contractor is not really starting from a zero base line. He already knows basically what must be done.

### Getting underway

The first order of business is to get the long lead items under order. These are hardware items which due to their unique design or limited availability require 6-18 months from date of order to date of receipt. They include such things as computers, aircraft instrument panels, and other critical hardware parts.

While waiting for the long lead items to arrive, all is not idle. On the hardware side, decisions are being made on the (PROGRAM/Continued on Page 62)





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## The SFTS Program

(Continued from Page 59)

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most timely and least expensive method of providing all of the parts for the simulator. The contractor has such an extensive facility that it is capable of manufacturing a large amount of the parts required.

Therefore, they go through a "make or buy" decision to determine which is best for this particular contract. Many parts are even provided as Government Furnished Equipment. When the decision is made, purchase orders are sent or manufacturing requirements are established.

### An intricate process

Meanwhile, an intricate engineering process is going on. Not only must the hardware be arranged in the exact manner to allow the best training, but the software to drive the hardware must be developed. An engineering effort of 100,000 hours or more is not uncommon. When one realizes that the manufacturer must make a machine that is bolted to the ground perform exactly like a helicopter, it is not hard to understand why the engineering effort is significant.

To assist in this respect, the contractor has three important tools. These are: the **Computer Aided Design System (CADS)**; the **Computer Aided Manufacturing System (CAMS)**; and the **Software Development Facility (SDF)**.

CADS and CAMS have keyboards and screens on which engineers translate design data into punch tapes. Some are fed directly into huge automated milling machines which carve out various simulator parts. Other tapes control production of printed circuit boards which electronically control functions of each computerized flight training system. These procedures reduce the chances for human error and cut design time as much as 30%.

SDF is an engineering computer center equipped with more than 75 television terminals that can serve dozens of software engineers simultaneously. This enables them to make tests and correct errors long before the simulator is completed, significantly shortening the test period. The alternative would be to postpone the "debugging" until the simulator is available when only one engineer could work at a time, tying up the entire complex and greatly prolonging the hardware/software integration.

PM TRADE monitors this entire process, and at various key points conferences are held to discuss various issues. On a prototype, there is often a full-size mockup of the interior of the simulated cockpit to include the instructor station. This mockup is usually made of plywood and has all of the instruments and controls marked in the correct places.

### Time for changes

At this time, it may be decided that if this instrument on the instructor station or if this whole panel is lowered, the instructor will have better interaction with the student. After approval of the mockup, the interior configuration is pretty well established.

There are other conferences also. They include **Hardware Design Reviews**, **Configuration Design Reviews**, **Software Design Reviews**, and **Visual Design Reviews**. So as you see, the government remains a very active part of the team throughout the simulator's full development.

Every aspect of the simulator's operation is double-checked to be sure it conforms to specifications. With some simulators, such as the one for Space Shuttle Training, specifications are constantly being changed to reflect varying requirements for each flight. For example, **Astronauts John Young and Robert Crippen** logged more than 1,400 simulator hours prior to the first Shuttle launch,

proving that a simulator with proper configuration updates can provide all the mission training needed BEFORE the first flight of the vehicle.

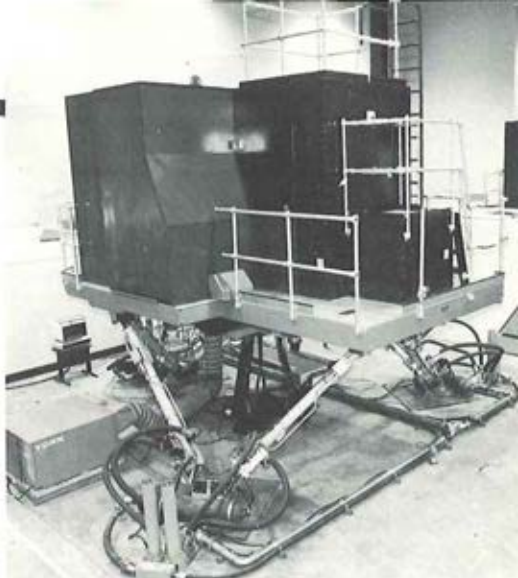
Once all of the critical parts have been bought or built the assembly process may begin. This normally occurs one to one-and-a-half years after contract award. It is at this point that the simulator begins to take on a personality of its own.

As assembly progresses, the task of integration increases, that of making all of various subassemblies talk to each other and act as one entity. Some instruments are simulated whereas others are stimulated. The difference is that a simulated instrument is receiving a false signal that causes the instrument to act like the real one while a stimulated instrument receives an input identical to the one it receives in the real world and, therefore, it reacts to the signal as it would in the aircraft. The time from subassembly until final assembly and integration is complete may take as long as a year.

### Test and re-test

The new simulator now undergoes a thorough in-plant test. Every knob, pedal, and control is tested for location and proper response. In addition, if there is a visual or other sensor system, it is necessary to insure that every cue provided the student will be as accurate as possible. For example, real time means exactly that. It will not be of any benefit and may even be detrimental if when the student rolls right it takes a second or two before the visual system reacts.

This test is usually first conducted by the contractor with government approval. Then a government team comes in to run their own separate test. Due to the complexity of the system as well as the test, this test period can take six months. Once the in-plant test is completed to everyone's satisfaction, the simulator is



A COBRA 2B33 SFTS

ready to be shipped to the field.

Depending on where it is going and how large it is, the shipment and installation of the simulator can vary in complexity. In its shipment stage, the simulator is dismantled as little as possible.

Once on site, all of it has to be put back together. In the case of those systems utilizing model board technology, this means that a model board in eight foot by four foot segments must be assembled to its 24 foot by 64 foot configuration. Regardless of the type of visual system it is still a monumental task to replace the simulator.

After on site installation, the government conducts an acceptance test and the simulator is fine-tuned to peak operation. Then and only then is the simulator ready for training. The process from the time the TDR is conceived until the first student is trained is approximately six years. Thus, it is easy to see that the fielding of the SFTS program requires a lot of cooperation and mutual effort among the various user and procurement agencies of the government and the simulator manufacturer. ■■■■





by Dr. James E. Hicks

## ***SFTS: A most welcome accident prevention tool***

**C**ONSIDER this situation for a moment. An AH-1 COBRA, with a crew of two, was on an area reconnaissance flight. About halfway into the mission, with the helicopter at 150 feet AGL and 120 KIAS, the pilot began a coordinated turn to the left to get a better look at some objects on the ground.

When the helicopter rolled uncommanded past 45°, the pilot corrected with right rear cyclic, which brought the nose up somewhat and momentarily corrected the excessive bank angle. When the pilot moved the cyclic back toward neutral, the helicopter again rapidly rolled left, this time to about an 80° bank angle. The pilot rapidly applied right rear cyclic and the aircraft responded with a rapid nose-up pitch rate.

When the pitch up reached 25° per second, the pilot rapidly moved the cyclic forward. The aircraft responded smartly and nosed down to the ground, still with a slight left roll. Rapid aft cyclic again brought the nose up at a rate of about 50° per second. The pilot continued to fight this emergency until the aircraft

crashed, as shown on the pitch rate "trace" in Figure 1.

Witnesses are unclear as to whether the main rotor separated from the helicopter (due to excessive flapping) before impact with the ground or during the crash sequence. In any case, the crash was non-survivable.

Another AH-1 crew on a similar mission experienced identical emergency conditions. In addition to the right rear cyclic response, because the pilot perceived a SCAS failure (stability and control augmentation), he disengaged the ROLL SCAS channel using the switch mounted on the pilot's instrument panel.

### **A safe return**

Some initial pitch attitude oscillations resulted but these rapidly died out as the aircraft converged on a stable attitude (see Figure 2). The aircraft then returned to base uneventfully.

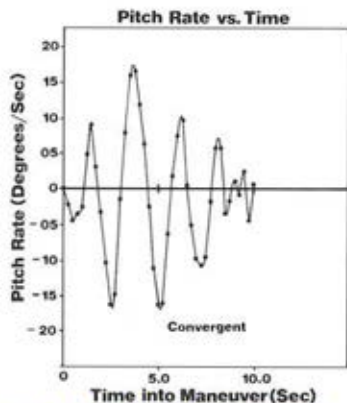
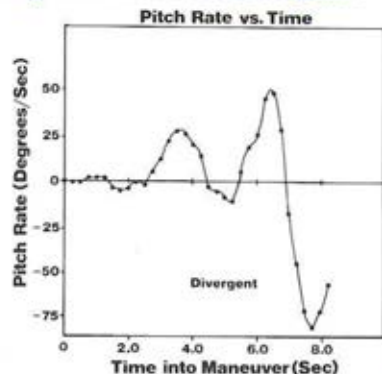
When he experienced the same emergency, a third pilot perceived a SCAS failure and "punched off" all SCAS channels using the cyclic mounted switch. No observable oscillations occurred and the flight ended uneventfully.

The first scenario discussed actually

#### **ABOUT THE AUTHOR**

Dr. James E. Hicks serves as the Chief of the Aviation Systems Division, Directorate for Systems Management, at the U.S. Army Safety Center, Fort Rucker, Alabama.

**Figure 1: Pitch Rate Divergence**



**Figure 2: Pitch Rate Convergence**

occurred in flight; the ensuing accident resulted in the loss of two rated aviators and one AH-1 helicopter. This flight was later duplicated in the AH-1 SFTS at Fort Rucker, with results varying among the three scenarios described. These flights, both simulated and real, demonstrated two points regarding flight simulators which the Army Safety Center feels strongly about.

### Emergency training

First, the current simulators, with both motion and visual capability, provide a valuable flight training capability. Pilots who reacted as in the first two scenarios had not received any emergency procedures training in the COBRA simulator — and either completely misinterpreted the emergency or used procedures not conducive to rapidly removing the problem.

Pilots who reacted as in the third scenario had received this training and responded quickly and accurately to the emergency. The Army Safety Center feels that SCAS failure at low altitude is only one example of a number of emer-

gency conditions for which recovery procedures training can be done more effectively, economically, and safely in the simulator than in the actual aircraft.

### An investigative tool

The second point these flights demonstrate is that these same simulators provide an equally valuable capability for accident investigation, a capability which, as yet, is largely untapped. During the investigation of the accident discussed above, physical teardown of the SCAS electronics boxes showed that malfunction of the ROLL SCAS probably occurred in flight — and would have resulted in an uncommanded left roll rate of about 30° per second.

Because this roll rate would have been clearly seen by the pilot but not so severe as to be uncontrollable, the accident investigation board was puzzled as to why the two rated pilots aboard did not react correctly and prevent the accident. Simulation of the accident flight using a variety of pilots showed that recognition of the malfunction was the key to success. (PREVENTION/Cont. on Page 75)



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by COL Arlen Deel  
and Mr. David Key

## ***SFTS R & D: Hard at work on the future . .***

**M**OST Army Aviators know what a training simulator is and how it is used to provide training for operational pilots in a familiar helicopter like the UH-1, AH-1, and UH-60.

Probably few know that there is a completely different use for simulators which are flown by test pilots and usually simulate helicopters that do not yet exist, and probably never will. There are engineering simulators used to support helicopter systems development.

### **Engineering R&D simulators**

The general term, **flight simulation**, can encompass a broad range of facilities from a pure computerized mathematical representation to a facility allowing the pilot to interact, or even a facility where real aircraft instrumentation and displays, and portions of the flight control system, can be involved. These latter types are usually categorized as "hot benches" or "iron birds" respectively, and they will not be addressed in this

#### **ABOUT THE AUTHORS**

COL Arlen Deel, Manager, Rotorcraft Systems Integrator Simulator (RSIS) Office, and David Key, Chief, Flight Control Division, serve at the Aeromechanics Laboratory, (AVRADCOM), Ames Research Center, Moffett Field, CA.

paper; neither will the pure analytical model.

Piloted simulation has become increasingly important to the Army because the perceived threat is forcing us to do more complex tasks while flying and fighting at very low altitude not only in day visual but night and poor weather conditions.

Helicopters are being given increased performance and systems are being added to provide information for the pilot to perform his tasks. These advances are leading us to highly complex cockpits jammed full of dedicated instruments. To alleviate the crowding the helicopter manufacturers are following the lead of the fixed-wing community by using multi-function displays and controls.

This certainly cleans up the cockpit but does not necessarily reduce the pilot's workload. Automatic monitoring can relieve the pilot, but when status information is required he has to remember how to get it and then take action to call it up. We have a very busy pair of crewmen in the APACHE but would like the next generation helicopter, the LHX, to perform the same mission with only one crewman.



Thus, the pilot who is currently fully occupied flying (flight path management) must also take on the tasks of navigation, communication, systems management, and battle captain roles (mission management) which currently fully occupy the co-pilot/gunner. Clearly, we will have to reduce the number of tasks the pilot has to perform, make the essential tasks easier, and replace the co-pilot with automation and artificial intelligence, such as computer prompting and decision aiding.

Such a drastic change in design philosophy means we will have to develop systematic design techniques to handle the man-machine interface. Purely analytical techniques are impractical because, though we can analytically represent the machine and environment, we currently cannot adequately model the pilot. A purely empirical approach of cut-and-try by building a helicopter and flight testing is expensive, time consuming, and could be dangerous.

Between these extremes lies the simulator; an analytical representation of the aircraft and environment with the real man inserted.

### Some recent results

In 1976 a program was started at the

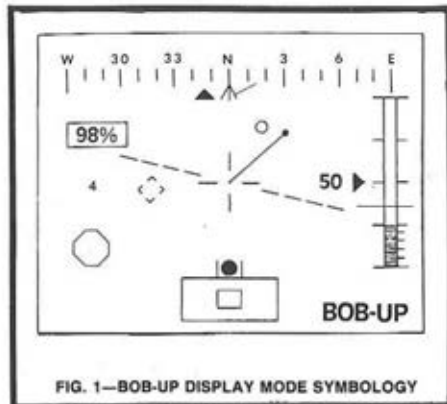


FIG. 1—BOB-UP DISPLAY MODE SYMBOLOGY

**Aeromechanics Laboratory (AL)** to perform research into helicopter handling qualities required while performing Army missions. This was done at NASA-Ames Research Center through the mechanism of the Army/NASA Joint Agreement. At that time, NASA-Ames had extensive facilities, but being primarily oriented toward fixed-wing aircraft, they could not simulate Army NOE flying.

The primary limitation was from the visual system which basically provided conventional airfield scenarios and did not have hills and trees to fly around to simulate NOE. A second limitation was computer capacity which was saturated by anything more than a rudimentary helicopter mathematical model.

In the intervening years, AL has worked with NASA to upgrade these capabilities to a level that has allowed some very useful contributions to be made to Army programs.

### AH-64 APACHE

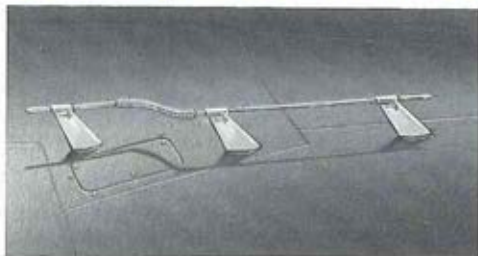
In 1979 a study was performed at the request of the AAH/TADS/PNVS PM to investigate concerns about the PNVS flight symbology (Figure 1). Since the scaling and dynamics of the flight symbology interact with the helicopter's response, a broad range of **stability and control augmentation (SCAS)** was simulated along with the changes to the symbol drive logic and dynamics.

On the basis of this work the APACHE contractor subsequently modified the symbol drive logic and also designed a hover horizontal-position-hold SCAS mode. The study also showed a need for altitude hold, but this has not yet been incorporated.

### Thrust response effects

A recent generic study investigated the effect the engine thrust response can have on handling qualities. There is a noticeable trade between excess power and engine response, especially with low

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inertia rotors. In addition, it was found that the workload involved in monitoring RPM can severely degrade handling qualities.

This suggests that it will be important for the LHX to have tight RPM governing, or a rotor system that can accommodate large changes in RPM. These facts can have a significant impact on a helicopter design, and analysis is currently being performed to develop a generalization of the data so that it can be incorporated into the new helicopter handling qualities specification.

### XV-15 tilt rotor

Throughout its ten-year development program this research vehicle (**Figure 2**) has been supported by simulation. The contractor's proposed designs were simulated during source evaluation; simulations before first flight permitted evaluation of failure modes and the development of cockpit procedures; simulations resulted in many proposed design changes which were subsequently adopted, modified, or discarded.

The many hours of simulator evaluation provided valuable training for the pilots and they were rewarded by no significant surprises when the first flight took place. As the development program progressed the mathematical model was refined to reflect test data and still continues to be a valuable tool for evaluating

control system refinements and investigating apparent flight test anomalies.

Although not intended for pilot training, R&D math model and high fidelity simulation would be a valuable aid to specifying simulator requirements if the aircraft was put into production. Also, since simulation was so valuable for the XV-15, it is planned to make similar use of simulation support on the JVX and LHX development efforts.

### Multi-axis side-stick control

In support of the **advanced digital optical control system (ADOCS)** program simulation has been used to develop control laws and the use of **multi-axis side-stick controls (SSC)**. The range of SSC studied covered a range from all four axis controlled on one controller to three plus collective, two plus collective and pedals, and also a large range of force-deflection characteristics.

It was found that high levels of augmentation reduced sensitivity to SSC configurations. However, at low augmentation levels — close to a basic BLACK HAWK or BLACK HAWK with the SCAS off — quite large differences in handling qualities resulted.


These results have been used in the ADOCS demonstrator aircraft design, and currently are being used in the JVX design efforts and will form a baseline for LHX control law/controller development.

These examples illustrate that an engineering flight simulator can be used to support R&D through the complete cycle: developing design criteria and specifications; helping the designer refine the design before any metal is cut; aiding preflight familiarization; problem solving during the flight test program; and creating a knowledge base from which the training simulator characteristics can be specified. Other potential uses involve investigating unusual accidents, assessing threats, and aiding tactics development.

FIGURE 2 — XV-15 RESEARCH VEHICLE



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## Future plans, the RSIS

Despite the upgrading of the facility by NASA and the resulting achievements described above, there are still basic limitations on Army research capabilities that will be required in the future, particularly in support of LHX development. To overcome these deficiencies the Aeromechanics Laboratory has a project, called **Rotorcraft Systems Integration Simulator (RSIS)**, which will develop major improvements to the motion, visual, and cab capabilities.

The **NASA Vertical Motion Simulator (VMS)** will be upgraded by replacing the six-legged synergistic system, which currently provides the three angular motions and surge with a new design developed by Franklin Research Center. The advantage of the new system is that it can provide larger simultaneous excursions and this will allow higher fidelity motion washouts to be used when simulating high agility NOE tasks (**Figure 3**).

The visual system and cab improvements are being developed under contract by American Airlines in a program called **Advanced Cab and Visual System (ACAVS)**. **Computer-generated imagery (CGI)** will be provided by an Evans and Sutherland CT-5A system which is expected to produce a high level

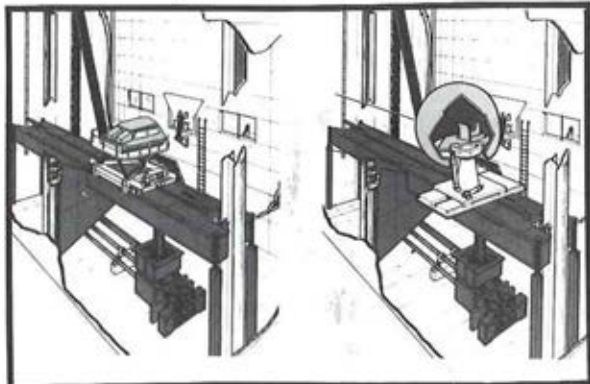
of detail over a field of  $140^{\circ} \times 60^{\circ}$ .

This imagery will be presented to the pilot by projection on the inside of a 20-foot diameter dome surrounding the pilot (**Figure 4**). This field-of-view is quite wide and is also capable of repositioning from straight ahead to cover other regions of particular interest such as the pilot's side in a side-by-side helicopter (**Figure 5**).

Though not yet incorporated in the contract, the visual field is potentially capable of being slaved to follow the pilot's head so that he would have a picture wherever he looked around the inside of the dome. This capability would be particularly useful for air-to-air combat engagements.

The cockpit will be a module that can be removed and a new one substituted without disturbing the visual system other than to raise the dome. This feature will allow elaborate cockpits, such as may be developed by a helicopter manufacturer during LHX development, to be easily interfaced with the motion system so that high-fidelity visual and motion cues can be provided the pilot in an evaluation task.

The cockpit being delivered with ACAVS will be a close representation of the BLACK HAWK. However, it will have



**FIGURE 3**  
**AN OVERVIEW OF THE**  
**RSIS PROGRAM**

**LEFT: THE EXISTING**  
**VERTICAL MOTION**  
**SIMULATOR (VMS)**

**RIGHT: FUTURE VMS WITH**  
**INTEGRATED ROTORCRAFT**  
**SIMULATOR MOTION**  
**GENERATOR (RSMG) AND**  
**AN INTERCHANGEABLE**  
**ADVANCED CAB AND**  
**VISUAL SYSTEM (ACAVS)**

easily removable instrument panels and consoles so it can be reconfigured to represent other rotorcraft or even fixed-wing aircraft. Although it will have a two-crew cockpit, only the pilot will get a high-fidelity visual presentation. The co-pilot will be able to view the screen but, being off center, the scene will be distorted.

This is not expected to be a serious compromise since usually it is only necessary to have one active pilot. The design will also allow easy reconfiguration to locate the pilot on the right and the co-pilot on the left, or vice versa.

### Conclusions

The man-machine interface is becoming the critical link in modern Army helicopter mission performance. In arduous operational situations, such as night NOE, the pilot is already limited in his ability to exploit the performance potential inherent in the helicopter. Much work needs to be done to ease these limitations in our current two-crew helicopters and advance our capabilities so that a single crew member can perform the mission in future vehicles such as LHX.

To study these man-machine interface issues, the man has to be included either analytically or actually. Currently we cannot adequately model and represent the pilot so we must study issues with the man himself. The flight simulator allows this to be done safely and relatively cheaply compared with flight test.

Simulation for helicopter system development and R&D has evolved to a point where useful contributions have been made to Army systems, and the Aeromechanics Laboratory program to incorporate the latest simulator state-of-the-art into the existing NASA-Ames Research Center facilities should extend the capability to many other Army tasks and allow development and evaluation of elaborate cockpits in a high-fidelity dynamic environment.

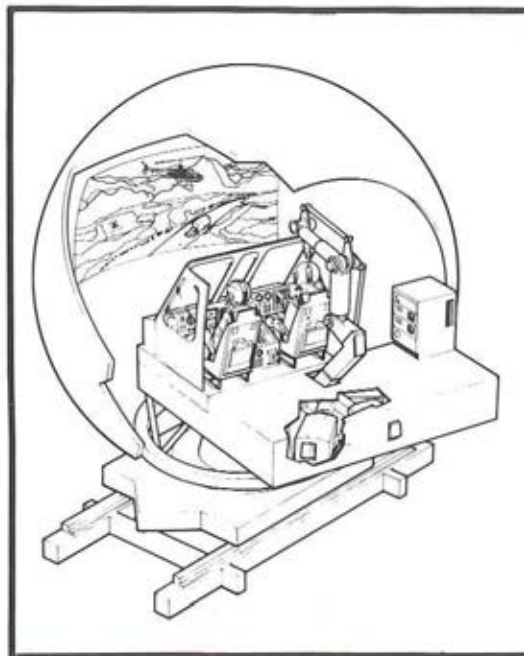
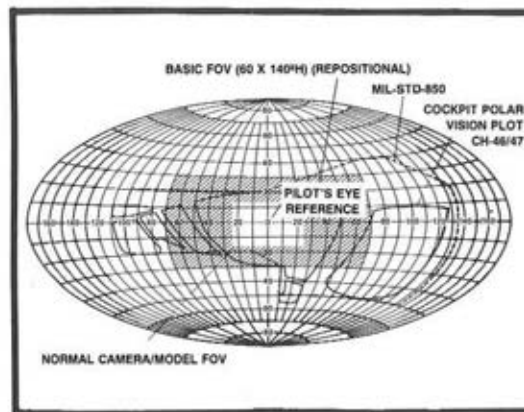


FIGURE 4 (ABOVE) — THE ADVANCED CAB AND VISUAL SYSTEM (ACAVS). FIGURE 5 (BELOW) — THE ACAVS FIELD OF VIEW





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## *The name of the game? Saving \$ . .*

**F**LIGHT simulators have been used to train pilots for about as long as we have had aircraft; the first flight simulators were developed about 1910.

However, the acceptance of flight simulators has been limited for several reasons: they do not respond as precisely as real aircraft; they are expensive to buy and to use; and pilots would rather fly than sit in a box on the ground.

### **New developments**

Several developments over the last ten years have made it important to review the extent to which simulators should be used in flight training programs: first, simulators have been significantly improved with features such as better flight equations and better visual and motion systems; secondly, the costs of flying have increased, due primarily to the increased cost of fuel; and, finally, the costs of acquiring simulators have also increased over the past decade.

About 25 studies show that skills learned in simulators can reduce the amount of flight time needed to learn the same skills when only aircraft are used for training. The amount of time saved

varies widely, depending particularly on the type of task for which the simulator is used. On average, about half the time spent in the simulator can be saved later in the air, compared to the time needed when pilots are trained only in aircraft.

As one would expect, it costs less to operate simulators than aircraft. The median ratio of military simulator/aircraft operating costs is about 0.10, based on data for Fiscal Years 1980 and 1981. The amount of savings in flight time costs is sufficient to amortize the acquisition costs of flight simulators within about two years, and in less than one year for a particular airline.

### **An important role**

There can be little doubt that flight simulators fill an important role both for the acquisition and maintenance of many flight skills such as primary and advanced flying, target acquisition, weapon delivery and aerial refueling.

It is important to remember, however, that the use of flight simulators should not be seen as a substitute for actual flying and, particularly, for high risk military flying. The best use of flight simulators is to supplement flying in aircraft so that pilots can get maximum benefits from the opportunities they need to exercise their combat skills.

IIII

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## Accident Prevention

(Continued from Page 65)

cessfully recovering the aircraft, and that failure to properly interpret the emergency led to varying degrees of pilot-induced oscillations (i.e., overcontrol) and the potential for a crash.

The simulator was able to highlight a systemic problem area — emergency procedures training — and allowed the accident board to go beyond chalking up another "pilot error" accident, which we all find unsatisfactory and incomplete.

Both of these capabilities of flight simulators — training and accident investigation — complement one another and provide a tremendous resource for accident prevention within the Army. The Army Safety Center is pursuing development of the accident investigation capability and is working with the Aviation Center, Aviation R&D Command, Research and Technology Lab, and Applied Technology Lab to that end.

### COME SEE US!

"Please note my change of address. I'm now in command of the NATO/SHAPE Support Gp (US) located at Mons, Belgium. The job entails command of a Belgian Air Base whose flight operations, to include navigation aids, are made under control of the Air Force. Chievres AB should more correctly be identified as Chievres Army Airfield, but there is much opposition to the change (Ha). Come see us!"

James B. Thompson  
COL, USA  
APO NY 09088

### Continued progress

The Training and Doctrine Command and others will continue to develop increasingly improved procedures to enhance the training capabilities of these simulators. Both of these capabilities will be sorely needed in the years ahead if Army Aviation is to maintain the level of operational readiness required by new and expanded missions in Air/Land Battle 2000.

IIII

## Applicants sought for up to \$6,000 in AAAA scholarships

The AAAA Scholarship Foundation, a separate non-profit educational activity created to provide scholarship aid to the sons and daughters of AAAA members and deceased members, announces the availability of assistance funds for the 1984 college-entry year.

### APPLICATION PROCEDURE

Student-applicants are asked to request the appropriate application forms by writing to the AAAA Scholarship Foundation at 1 Crestwood Road, Westport, CT 06880. Requests for applications must be received on or before December 15. All forms, together with other supporting data, are to be returned to the Foundation on or before January 21 to receive Awards Committee consideration. The student-prepared application should state the full

name of the applicant's parent-member and the address of the student, if different from the parent.

### ELIGIBILITY CRITERIA

The AAAA applicant must also be: (1) unmarried and a citizen of the United States, and (2) a high school senior who has applied to an accredited college or university for Fall, 1984 entry as a freshman. Program participation is limited to the children of members with an effective date of membership on or before March 31, 1983.

### SELECTION & NOTIFICATION

Selection of winners will be made during the month of February with each applicant to receive a list of the winners not later than 1 March.



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