

Aeronautics

Star

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F-22 IOC

Raptor ready for combat

Empowering
Small Business

Caring
After Katrina

New F-16
Order For Greece

Missiles Achieving
New Speeds

Welcome to a new Star.

Your company newspaper has turned into a news magazine, published quarterly to cover Aeronautics from coast to coast and around the world. Inside you'll find bigger pictures, eye-catching graphics and more stories on the people who put the success into our mission.

You'll find some familiar content, as well. In fact, you'll see more. In the past we've published separate editions for each site, with some stories specific to each. Now we've expanded our editorial scope to carry each news story to every reader. This way we'll keep you better connected to each other than ever before.

Flip to the back cover, and you'll find an ad. No, it's not purchased real estate, but rather the first in a continuous series of Lockheed Martin advertisements developed for external publications. We figured you'd like to know what the company is proud to tell, because most often you made it happen.

We're excited to evolve along with our business. We hope our articles remind us all what we can do as a team, supporting the defense of our nation and its allies.

The stories we publish are your own. Thanks for letting us tell them.

Again, welcome.

The Star Staff



Aeronautics

Star

Aeronautics Star is published quarterly for the employees of Lockheed Martin Aeronautics Co. in Clarksburg, W. Va.; Fort Worth, Texas.; Johnstown, Pa.; Marietta, Ga.; Meridian, Miss.; Palmdale, Calif.; and Pinellas Park, Fla.

<http://www.lmaeronautics.com/lmaerostar>

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Our Vision:

Powered By Innovation, Guided By Integrity, We Help Our Customers Achieve Their Most Challenging Goals

Our Values:

Do What's Right
Respect Others
Perform With Excellence

EMPLOYMENT

Fort Worth 14,782
Marietta 7,072
Palmdale 3,918
Other 324
LM Aero Total 26,096
(as of March 31, 2006)

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RAPTOR Unleashed

F-22 Initial Operational Capability begins new era of air superiority

By Kate Lowe

It has been dubbed a “transformational” weapons system. The F-22 is a fighter like no other — distinguished by its speed, agility, stealth and precision.

On Dec. 13, 2005, Gen. Ronald E. Keys, commander of the Air Combat Command, issued a memorandum citing the accomplishments of the F-22 Raptor. Also in that memo, Keys announced his intent to declare Initial Operational Capability for the F-22 on Dec. 15.

“The F-22 fulfills a long quest to bring 5TH Generation capabilities of stealth, supercruise and precision to the warfighter today and for decades to come,” said Keys. “If we go to war tomorrow, the Raptor will go with us.”

The significance of this milestone may be hard for some of us to comprehend. Bringing a new major weapon system to the men and women of the armed forces does not happen often. To better understand the importance, it helps to review the history of legacy programs. According to U.S. Air Force fact sheets, the F-15 was declared IOC in 1972; the F-16 reached IOC in 1979; and the F-117 went operational in 1982. It has been decades since the Air Force was able to celebrate an IOC milestone for a fighter aircraft, and getting there has been a long and rewarding journey.



Photo by John Rossino

“We did it!” exclaimed LM Aero President Ralph D. Heath at the IOC ceremony, acknowledging the strong commitment partnerships demonstrated in achieving the milestone.



Photo by John Rossino

At the IOC ceremony Jan. 13, Heath stressed the Raptor’s vital importance for the Air Force’s future. Seated at right is Gen. John Corley, vice chief of staff, HQ U.S. Air Force.

The road to IOC . . .

- Jan. 26, 1973 First formal Advanced Tactical Fighter requirements document issued
- May 21, 1981 Request For Information issued to nine companies
- Oct. 31, 1986 Construction begins on two prototypes, YF-22 and YF-23
- Aug. 3, 1991 Engineering and Manufacturing Development contract awarded to the Lockheed Martin team
- Apr. 9, 1997 Raptor 01 officially rolled out at Marietta, Ga.
- Sept. 7, 1997 First flight of Raptor 01
- May 17, 1998 Formal flight testing begins at Edwards AFB, Calif.
- July 30, 1998 First in-flight refueling for Raptor 01
- Oct. 10, 1998 First supersonic flight for Raptor 01
- May 19, 1999 100th flight test sortie
- July 21, 1999 First supercruise flight
- Jan. 5, 2001 First flight of 4005, the first combat-capable avionics aircraft
- Apr. 18, 2001 1,000th flight test hour
- May 17, 2001 Maximum mach achieved
- Jan. 7, 2003 First F-22s delivered to the Air Warfare Center at Nellis AFB, Nev.
- Sept. 26, 2003 First F-22 delivered to Tyndall AFB, Fla.
- Apr. 29, 2004 5,000+ flight test hours and start of Initial Operational Test & Evaluation
- Sept. 2, 2004 First guided Joint Direct Attack Munition drop
- Oct. 27, 2004 First operational combat dedicated aircraft rolled out at Marietta, Ga.
- May 12, 2005 Delivery of first 27th FS aircraft to Langley AFB, Va.
- Oct. 15, 2005 First operational deployment of 27th FS F-22s from Langley AFB, Va., to Hill AFB, Utah
- Dec. 15, 2005 Initial Operational Capability declared for the F-22

The Celebration

The 27th Fighter Squadron at Langley Air Force Base, Va., celebrated this milestone with an official ceremony on Jan. 13, one month after the official declaration. Many military, government and industrial leaders attended the celebration, including Gen. John Corley, vice chief of staff, Headquarters, U.S. Air Force; Brig. Gen. Burt Field, 1st Fighter Wing commander; and Ralph Heath, LM Aero president.

The theme of the IOC ceremony was “Ready To Fight,” signifying the readiness of the aircraft for operational deployment.

Speaking at the event, Ralph Heath emphasized the readiness of the Raptor. “Our world is an ever-changing place and, as difficult as it may be to look into the future, the Raptor represents at least four decades of assurance that our soldiers, sailors, airmen and Marines can depend on air dominance wherever and whenever they may be called to serve,” he said.

“From today forward, commanders around the globe will be able to say ‘Where are the Raptors?’ knowing full well they have at their disposal the most overwhelming fighter capability ever imagined,” Heath continued.

One of the more profound moments at the IOC ceremony was when a testimonial video was shown. The video included the many “faces” of the F-22 Raptor team — the men and women who build, maintain and fly the plane.

The video’s premise — “What does the Raptor mean to me?” — helped drive home the grassroots meaning of the IOC message and emphasize the importance of the milestone being celebrated.

Brig. Gen. Field summed up what everyone must have been feeling. “As you can see, people have dedicated entire decades of their lives to see the F-22 reach this day,” he said. “They invested these years because they truly believed they could make a difference, not only in the aviation community, but in the very fabric of American liberty. From the research and development professionals to the engineers, from the maintainers to the pilots, and many, many more . . . each person in the F-22 community has contributed to the strength and integrity of this blanket of freedom the Raptor is now ready to protect and preserve.”

The Customer

Raptor fans are in every face you see at Langley Air Force Base. Just stop anyone in a blue or camouflage uniform, especially those proudly wearing the 27th or 94th Fighter Squadron patch, and it doesn’t take long to realize their perspective.

SSgt. Mark Kleiboeker, an avionics expediter on the F-22, was excited about IOC. In his three years of maintaining the Raptor and eight years of U.S. Air Force experience, he noted there is a big difference in where we are today, compared to where we were just three years ago. He said seeing all the integrated avionics tied in together helps see the bigger picture.



TSgt. Shawn Mullins

TSgt. Shawn Mullins has served in the U.S. Air Force for 12 years. As a weapons load crew chief, his experience affords him the basis on which to make comparisons to other programs. His take on the plane? “With the F-22, it’s a whole new ballgame and a lot easier to load.”



Lt. Col. Wade “Troll” Tolliver

The 27th FS Director of Operations, Lt. Col. Wade “Troll” Tolliver, boldly remarked, “With the F-22, America has bought an insurance policy for the future, and, as of Dec. 15, we are ready. As an American citizen with children and a family, I’m ready . . .”



Capt. John “Stiffler” Gration

“I’m very confident that no threat will be able to touch us . . . if there was only one jet in this world that I could fly, it would definitely be the Raptor,” Gration said.

His favorite F-22 attribute? “With the stealth advantage, they can’t even see you coming . . .”

See “Raptor” on page 20

LMents engaging new hires across LM Aero

By Tavia Askew

LMents, the networking, professional development and community service organization for new hires, is thriving at LM Aero. The tri-site organization, started primarily as a social outlet, has matured into an LM Aero resource for employees with less than five years experience with the company.

“When new hires come in, whether they are fresh out of college or experienced professionals, LMents provides a great opportunity for them to get engaged and meet people,” said Mark Hawthorne, the company’s On-Boarding manager, LMents tri-site consultant and Fort Worth advisor.

Indeed, that is one of the goals of the organization — to keep new hires engaged.

Hawthorne said he became concerned about short service retention during his involvement with Fort Worth’s pre-LMents new hire group. He was the HR representative with that group, but started to think



This Marietta LMents crew enjoys a sponsored social. The organization fosters networking and learning opportunities for employees of all ages with 1-5 years employment at LM Aero.

Photo courtesy of LMents

all sites could gain from a united new employee network.

“If someone were to transfer to another location, I wondered could we have a resource they could use to meet people and make that transition,” Hawthorne said.

All three sites had predecessor groups, NEON (New Employees Opportunity

Network) in Fort Worth; Palmdale had an active LMents group that was more social in nature; and Marietta had an informal organization called LMents, also more of a social organization for new hires.

Several participants in the predecessor organizations were asked to help organize the tri-site effort to have a more formal and uniform resource for new hires.

“I was chosen as one of the representatives for the LMents Task Force, and we all met last year in Fort Worth under the direction of Mark Hawthorne, who had a vision of creating a one-company, one-team model of what LMents was going to be,” said Kara Hughes, HR business partner and LMents Marietta president.

“That task force, which was made up of three representative from each site,

See “LMents engaging new hires” on page 29

Atherton Carty named ‘Most Promising Scientist’

By Rosie Rodela

Atherton Carty was one of four Lockheed Martin employees honored Feb. 18 at the Black Engineer of the Year Awards in Baltimore, Md. Carty, an aeronautical engineer who works for Advanced Development Programs (ADP) in Palmdale, received national recognition as the Most Promising Scientist.

The Black Engineer of the Year Award Conference celebrated its 20th year recognizing outstanding achievements of African-Americans in science, engineering, mathematics and technology fields.

Carty said that he never expected to be selected to receive such an award.

“I have the privilege of working alongside extremely intelligent people every day, and any one of them is deserving of such an honor,” he said.

“We are very proud of each of our award winners and honorees,” said Robert J. Stevens, Lockheed Martin chairman, president and CEO. “Their commitment to excellence and outstanding accomplishments serves as an inspiration to others.”

Carty joined LM Aero in 1997 as part of the Flight Sciences Division supporting high-speed initiatives within ADP. Since

that time he has supported a wide variety of conceptual design activities in addition to directing the maturation of the Rapid Conceptual Design effort.

He earned his master’s degree through George Washington University’s Joint Institute for the Advancement of Flight Sciences (JIAFS) at the NASA Langley Research Center. He received his bachelor’s degree in aerospace engineering from Syracuse University, which included a one-year study abroad at City University, London. ★



Lockheed Martin Photo

Atherton Carty (right) is presented with the Most Promising Scientist recognition from Ralph D. Health, LM Aero president, at the Black Engineer of the Year Awards Feb. 18.

LM Aero-Palmdale employee reveals painting talent

By Kristin Fox

“When once you have tasted flight, you will forever walk the earth with your eyes turned skyward, for there you have been and there you will always long to return.”

— Leonardo Da Vinci

These are the words that often inspire Anna Peters, a material technician for LM Aero-Palmdale. Peters has worked at Lockheed Martin for the past two and a half years and has enjoyed every moment.

In her free time, Peters has a passion for art and aircraft. Her talent for painting and her love for aviation inspire much of the art that she creates.

“I was born in Alaska and have painted for over 20 years,” said Peters. “I do not have a formal education in art, but it is my passion. Aviation is a part of my life, and I enjoy working for Lockheed Martin.



Photo by Denny Lombard

LM Aero-Palmdale employee, Anna Peters, proudly displays her one-of-a-kind F-22 painting.

“I am always captivated by the aircraft. I had the pleasure of flying with my father in my early teens and learned to bank and fly in a single engine Beechcraft Musketeer over the desert floor,” she said.

Peter’s latest artistic creation took more than five weeks to complete. She refers to it as “the extraordinary F-22 Advanced Aircraft emulating its immense power.”

Peters is hoping her most recent painting will be accepted into the American Society of Aviation Artists (ASAA) contest for the magazine publication, *Aviation Week*. She is also interested in obtaining college degrees in fine arts and engineering.

One thing is certain, she will continue to create works of art for many years to come. ★

On-call engineers exemplify customer commitment

By Daniel Penny

They are not sailors, soldiers, airmen or Marines. Nor are they Reservists or Guardsmen, but eight LM Aero engineers stepped up to the plate when the call went out for volunteers to support the C-130J in a combat zone in Southwest Asia.

When the U.S. Air Force first deployed the C-130J into combat zones, the request came to Aeronautics for personnel to fill a rapid-reaction engineering team. The contract called for a team to depart with 24 hours’ notice.

An original group of engineers came forward in November 2004 when the request came. Since then, the group had been on call until Jan. 31, 2006, when the Air Force became comfortable enough with the new aircraft to shed LM Aero’s on-call team.

Although not active anymore, the group embodied LM Aero’s commitment to supporting the warfighter and sustaining our products. This is their story.

Forming the team

Nate Goodwin, Roger Land, Girish Patel, James Shand, James Steffen, Dan Sullivan and Stan Watts, representing various disciplines, were the final group that supported U.S. forces in Southwest Asia.

After nearly a dozen immunizations, the seven corporate experts went through an intense training day to transform them into a front-line-ready support squad.

The seven-hour course exposed the group to nuclear, biologi-

cal and chemical (NBC) training. The team was fitted and issued NBC gear, which weighed more than 70 pounds. After anti-terrorism training, the group was ready to deploy.

In the fray

Two and a half months into the deployment, two engineers had an opportunity to learn from deployed C-130J operators and maintainers. Time was tight, and it fell on the prepared group of volunteers to supply two who would represent the program.

After a downselect, James Steffen, an avionics and defensive systems engineer, and Stan Watts, a propulsion engineer, were selected and waited for instructions. Late Thursday night, the phone call came with final approval. They were on an aircraft by Saturday.

Eight days later, Steffen and Watts completed their deployment. Their detailed trip reports were popular documents, as many learned from their observations, interviews and collected metrics.

No more of the seven were ever interrupted by late night phone calls or set up with spur-of-the-moment rendezvous. LM Aero’s maintainers trained the Air Force well, and a successful in-theater C-130J track record bloomed.

Nevertheless, seven were ready for 15 months to step into the front lines, bearing heat, sand and exhaustion, in order to preserve the Hercules legacy and soldiers’ lives. ★

Fort Worth site wins city environmental awards

By Mark E. Lewis

LM Aero-Fort Worth finished off 2005 with high honors from the City of Fort Worth Water Department. The site received two environmental awards at a luncheon saluting city industry for its 2005 performance excellence.

One award was for nine consecutive years of 100 percent compliance with federal industrial wastewater pretreatment regulations. The site has won it every year the award has been offered.

"It's very hard to achieve," said Ken Dalton, Hazardous Waste Control supervisor. "There were only four other recipients out of the entire city. We're looking forward to getting our tenth award in October."

Dalton also noted that Fort Worth's consistent success is a result of a strong partnership between the Air Force, the Maintenance department and the city. Ultimately the team's ideas and commitment keep the water safe . . . and the awards coming.

The second award recognized the significant efforts in the use of materials, processes or practices that reduce or eliminate wastes, leading to greater protection for natural resources and the environment.

The city singled out the F-35 and F-22 programs for their outstanding efforts. F-35 was honored for implementing "Design for the Environment," resulting in significant reductions in the use of hazardous materials. F-35 is leading the way in

thinking green while a project is in its formation stages.

"It's not common, but it's the right way to do things," said Marion Henderson, senior environmental engineer. "With legacy aircraft, it's difficult to change materials in the middle of the program. Designing with pollution control in mind from the onset helps save in the long run."

The F-22 program was also recognized for its use of a nonchromated primer on the exterior of the aircraft. Reducing chromates in production is a priority for many industries, and the Fort Worth example is also in practice at all Raptor production sites. ★

Telescope science helps preserve JSF stealth

Measuring in precise, snail-like movement ensures radar signatures are perfect

By Steve Porter

Astronomers aiming their telescopes to the heavens have long dealt with an elementary problem: the Earth turns. This makes the stars and planets appear to move, though the movement is so slow it is virtually impossible to detect with the naked eye.

That's why telescopes like the one at McDonald Observatory, located near Austin, Texas, are driven by motors that turn at a snail's pace, tracking the distant planets, stars and galaxies as they crawl across the night sky.

'Stellar' technology for F-35

Although the F-35 will cross the skies at supersonic speeds, LM Aero will be checking its low observable (LO) characteristics the same way astronomers focus on objects in the sky: at a snail's pace. The RCS (Radar Cross Section) Verification Test Facility will house a system to perform one of the last production steps before delivery of this 5TH Generation fighter to the customer.

The tests inside the facility will verify the plane's stealth. The nose of the aircraft will be suspended from the ceiling by a special line while the tail will be mounted on huge 28-foot pylons that rest on a giant 47-foot-diameter turntable. Two motors will slowly drive the turntable to achieve silky smooth motion, rotating the F-35 a full 360 degrees, while a fixed radar system measures thousands of pre-determined data points. Time required? About an hour.



The giant turntable in the new radar cross-section facility gets its movement science from renowned McDonald Observatory.

Lockheed Martin Photo

"This verification check has to be absolutely precise," said Ted King, Mate and Delivery engineer. "There can be no jerking, no hesitation of any kind. Astronomers need dead-on precision as they slowly track the star's movement — and so do we."

As if to emphasize the smoothness required, King points to the steel wheels that ride on a circular rail underneath the turntable, thereby rotating the table. Typically, the inside of any wheel travels less distance than the outside in any turning motion, but these wheels have been carefully beveled so that both sides travel exactly the same distance as they ride around the rail.

The two motor drives work in concert with each other, one pushing and one pulling, to achieve a rock-steady ride.

King said the rotation is so fluid you could fill a cup of coffee to the brim, set it on the F-35 wing and not spill a drop as the aircraft is rotated the full measure, even during the starts and stops in the process.

The entire system weighs around 100,000 pounds and was designed and built by Vertex RSI, a Richardson, Texas, company that develops earth station and base station communications products.

Most elements of the RCS Verification Test Facility will be in place by spring to start testing integration. As full-scale production of the fighter begins, all three of the F-35 variants will be hoisted onto the pylons for a 360-degree ride on the system's giant rails — an ironically slow start in the life of a fighter that will soon rush skyward at supersonic speeds. ★

Event recognizes Palmdale employees who put safety as a top priority

By Sue Marshall

Palmdale employees and their managers gathered for lunch on Jan. 16 to recognize those who, by supporting safety, have helped make LM Aero-Palmdale a safer place. Sixty-six employees were chosen by management, including a SAFTE team, a general safety committee, building managers and other individual contributors.

"Thanks to all of your efforts, we're on the right track," said Palmdale's production operations director, Gus Villanueva, who hosted the event. "Last year, we had 59 less recordable injuries and 272 fewer lost days. We are all in this together, and with safety's support and leadership, we will continue to drive our injuries down and make Palmdale an even safer place to work."

Jeff Ho, Palmdale safety manager, agreed.

"Everyone knows Target Zero is a corporate-wide initiative to reduce injuries," he said.



Photo by Paul Weatherman

Sixty-six Palmdale employees were recognized at a luncheon for their efforts in supporting Target Zero.

"But what Target Zero really says is even one preventable injury is too much. If we all work together to make safety a part of our jobs, we will make steady progress and reduce our injuries. I want to tell all employees to keep up the good work — if you see something that's not safe, do something about it!"

In addition to a filling Texas-style BBQ lunch, attendees were treated to a slide show highlighting the attendees' accomplishments. They also received Target Zero T-shirts and other tokens of appreciation. Lucky ticket holders received home safety equipment, such as fire extinguishers, flashlights and an auto safety kit.

"This event was wonderful," said attendee Jim Bietsch. "It was a nice way of letting employees know that senior management and ESH really do appreciate the safety improvement efforts we are making." ★



Lockheed Martin photo

Ginnette Nunez-Ciesla, LM Aero-Pinellas Human Resources manager, accepts the Business of Distinction Award from Pinellas Park/Mid-County Chamber of Commerce officials.

County honors LM Aero-Pinellas

By Mark E. Lewis

The Pinellas Park/Mid-County Chamber of Commerce selected LM Aero-Pinellas to receive a Business of Distinction Award, a rare honor for county businesses.

The award presentation was held at the chamber's installation banquet. Several members of the Pinellas management team attended the banquet to accept the award, which was presented in recognition of the Pinellas team's commitment to the community for business expansion and community service.

Specifically, the Business of Distinction Award goes to Pinellas Park businesses that have expanded staff, facilities or operations significantly; improved facilities through design or landscaping; participated actively in support of the community; created an innovative local marketing campaign or product; or provided exceptional customer service. ★

2005 Heart of Diversity Award honors F-22's Robert Copeland

By Tavia Askew

Robert Copeland, F-22 provisioning analyst, was the recipient of Marietta's Heart of Diversity Award for 2005. The award, presented by the Diversity Council, recognizes an LM Aero employee who has demonstrated a commitment to diversity in order to meet and exceed business objectives.

Copeland received the award because of his actions on diversity issues. He demonstrates knowledge and awareness about diversity issues and positively impacts his work environment.

"Diversity is one of the greatest gifts the world has to offer," Copeland said. "What kind of world would this be if we were all the same? There would be little or no growth in society because no fresh ideas would be expressed."

Indeed, Copeland is committed to making a difference and supports several company initiatives. He serves as a "Buddy Wingman" to help new employees through the employee orientation process and assist them as they settle into the F-22 program.

Copeland is also on the Workplace Enhancement Committee, an employee-run group that seeks to improve the workplace for all

employees. Copeland also started a Christmas donation program at work to collect gifts for abused, neglected and homeless children in the area.

As evidenced, Copeland tirelessly gives of himself not just to the company, but to his community as well. He sits on the board of directors for the Center for Children and Young Adults, which is an organization that helps abused, neglected and homeless children.

"One of my goals is to awaken people to the limitless potential and value of their own lives," Copeland said. ★



Lee Rhyant, left, executive vice president and general manager of the Marietta facility, and Tammy Paschal, previous Marietta Diversity Council chairwoman, presented Robert Copeland with the Heart of Diversity Award.

Caring After Katrina

All in the family

Meridian employees help strangers, extended Lockheed Martin family in stream of relief missions

Photos courtesy of Horace Williams

When Hurricane Katrina devastated the Gulf Coast region, Lockheed Martin employees offered assistance in many forms. Employees dug deep to offer money, clothing, toiletries and other donations. But a special group in Meridian gave the gift of time, sweat and labor, volunteering their services to help rebuild the homes and churches of ordinary citizens — and eventually other Lockheed Martin employees — affected by the storm.

A growing project

“One of our employees here was volunteering through his church to help rebuild La Moyne Boulevard Baptist Church in the Ocean Springs, Miss., area,” said Joe Mercado, LM Aero-Meridian plant manager. “We got together a group of folks and some donations provided by Marietta and went down to help.”

A small group of employees from the Meridian facility spent a day in Ocean Springs removing damaged materials from the church, putting up sheetrock and painting the repaired facility.

After that trip, the interest in helping snowballed. More day trips were scheduled.



Homeowner Deadra Rayford and Gary Philyan remove a ruined appliance.

“We brought up the volunteer opportunity in staff meeting and had a really good response, about 10 percent of our workforce,” Mercado said.

The group made two trips down to help the small church.

“It had about 5 feet of water; they lost all their sheetrock, insulation, pews, everything,” said Jeff McWilliams, Meridian F-22 production supervisor. “We did some demolition work, rebuilding walls, rebuilding bathrooms, hung a lot of sheetrock and did a lot of painting.”

Many of the volunteers were sent into homes, most of which were uninhabitable. Moved by the conditions, volunteers decided to focus on issues that prevented people from living in their homes.



Mitchell Dearman helps clear debris from what used to be living spaces for a Gulf Coast family.

“I took my wife and two of my sons with me and went into one of the church members’ homes,” McWilliams said. “We had a good day and made some real progress on the home. We were touched ... seeing all the devastation and being able to help out.”

Helping out the family

But, right before the holidays, the Meridian group learned more than 800 Lockheed Martin employees in the next state were still homeless as a result of the storm — four months after it hit.

“So, we started talking and thought this is great helping folks down in Ocean Springs, but wouldn’t it be even better if we went down and helped some Lockheed Martin families?” said McWilliams. “I got in touch with ... Michoud [LM Space Systems facility in Louisiana], and we organized another trip.”

It was in this trip that LM Aero volunteers began to reconstruct homes and lives of their “extended family,” as McWilliams put it.

About 25 Meridian employees split into three teams bound for Michoud employee homes. One team went to Slidell, La., another to New Orleans and the last to Bay St. Louis, Miss.

“We were in Bay St. Louis, and I saw a house that had 12 feet of water in it, and the ceilings were only 8 feet tall,” said Jack Johns, Meridian manufacturing manager. “And that’s not just one house that was like that; it was everyone’s house on the whole street.”

“When I first went down, I was overwhelmed by the devastation. Seems like each time I went down and went to different areas, it got even worse,” he said.

Although the group made their last trip earlier this year, they have no intention of making it their last.

“We’re still looking at doing it again; we don’t think this will be our last trip,” Mercado said. “People want to be able to help out.”★



Rayford takes a quick break with (l-r) Philyan, Lee Kennedy, Dearman and Glen Gilmore, a Michoud employee.

‘Saved’

LM Aero is new home for Katrina victim

By Steve Porter

As the world watched satellite images of Hurricane Katrina looming off the Gulf Coast, Audrey Scivicque saw them differently. Faced with urgent evacuation warnings, the long-term Lockheed Martin employee hastily packed her family and a few belongings before rushing east to Jacksonville, Fla.

This Lockheed Martin Technical Operations worker in New Orleans knew safety in the immediate future meant Florida. However, she had yet to discover she was destined for a new start, not in Florida, but on the opposite side of the Gulf — in Texas.

Presently, her thoughts turned to gratitude for escaping the storm, but Scivicque worried about what she would find on her return.

“We already heard we had about 10 feet of water in our home,” she said. “We also knew we had some oil. A nearby oil storage container had come off its foundation and leaked thousands of gallons of sour crude oil into the water that had pushed over the levee into our home.”



A white van landed in a precarious parking spot two houses down from Scivicque.

Yet, even anticipating the wreckage left by the monster storm, Scivicque was unprepared for the utter devastation.

“It was unimaginable. Every ceiling in our home was on the ground. Everything was either rusted from the salt water or full of mold. It was beyond recognition,” she said.

Refusing to surrender to total despair, Scivicque realized everyone in her home community of Chalmette shared the catastrophe. “The hurricane had basically wiped out the entire parish,” she said.

Few Americans have had the experience of seeing their home, let alone their entire town, reduced to rubble. To many, the loss seemed insurmountable. Yet Scivicque summoned the best optimism she could muster, given the circumstances.

“Yes, it was horrible,” Scivicque said. “But we were happy to be safe and sound — to be alive.”

With her three children in tow, she looked west and applied for a job with Property Accounting at LM Aero, reporting to Charla Bold, who “. . . gladly offered me the position. It was decided I would report to Fort Worth on Oct. 17!”

Her trials are not over. Her husband, Daven, continues to work in



A night stand, once part of a bedroom set, now stands exposed outside, overcome by mold. Photos courtesy of Audrey Scivicque.

Louisiana while she establishes the new home in Fort Worth — a task made easier by fellow employees.

“David Glidewell and Paula Matzen’s department [Finance] adopted my family for Christmas. The kindness and thoughtfulness of people who didn’t even know me until recently was overwhelming,” Scivicque said.

Her husband should be able to join the family in April or May. “We are all managing, but it’s difficult.” Her youngest child is facing eye surgery at Cook’s Children’s Hospital soon, yet Scivicque wrests optimism from her tough times.

She said, “I know how hard it was to endure Hurricane Katrina — and then to be saved by such wonderful people here in Fort Worth. It has been a blessing.”★



Debris and moldy walls greeted Scivicque in her return trip home. She had to break a window to get in.



Kitchen furniture spilled into the backyard, gathering into a gauntlet of wreckage.

Summing up Global Sustainment

Customer care doesn't stop when planes leave our factory

By Melissa Christensen

When an aircraft rolls out the door, most employees are already busy working on the next one. But for the Global Sustainment program, the work is just beginning.

"Global Sustainment is all about ensuring the customer is totally satisfied with our products from the first day they are delivered until the end of their service life," said Willy Moore, vice president of Global Sustainment.

Lockheed Martin has always supported its products primarily through spare parts, upgrades and modifications. For years, a customer's need for support stopped there.

Now, a new support paradigm is emerging, and customers are seeing tremendous cost savings as they integrate supportability into the design of their products.

Support is now shifting to performance-based logistics, a

concept that rewards contractors for keeping the aircraft mission-capable for a large percentage of the aircraft's lifetime.

LM Aero is leading the way in sustainment. In November 2005, the F-117 team Nighthawk was honored with the first Performance-Based Logistics Award from the Department of Defense. The award recognizes the efficiencies designed into the entire F-117 system — a design that cuts costs for the customers and increases the operational time of the aircraft.

To meet this new demand, Lockheed Martin has established four basic service levels for Global Sustainment:

- (1) Engineering, (2) Integration, (3) Collaboration and (4) Synchronization.

Synchronization, the highest level of sustainment, starts before a product even hits the

assembly line. Engineers must create strong, long-lasting designs. Suppliers need to produce reliable parts. And when the parts all come together, the aircraft must be ready to take on not just its first mission, but every mission it will face.

The F-35 Joint Strike Fighter is the first program to fully embrace supportability from the earliest stages. "The result," Moore said, "will be an aircraft with the highest levels of maintainability and reliability.

"Sustainment requires a laser-like focus on our customer's needs," Moore added. "Our customer's financial situation is incredibly challenging. Customers are responding to the changes in their world and, in turn, so are we."

The F-35 and the F-117 are just the tip of the iceberg. Though it will take time to bring all Lockheed Martin



aircraft into the new paradigm, Moore and his team are diligently exploring sustainment opportunities.

"We are strengthening the overall Lockheed Martin brand," Moore said. "I was a customer for more than 36 years, and I know Lockheed Martin products have an outstanding reputation. Without question, Global Sustainment will add tremendous value to the Lockheed Martin name." ★

Getting to know LM Aero subassembly sites: Johnstown, Pa.

By Rebecca Styles

Many employees know Johnstown, Pa., as a trusted subassembly site, but how many truly know the extent of its contribution? Many may find it surprising that its workers don't just support Marietta but many sites — and companies — from coast to coast even as far away as Nova Scotia.

Johnstown, or Lockheed Martin AeroParts, Inc. (LMAPI), is one of four subassembly sites within LM Aero reporting to Production Operations.

Established in 1987, the 72,000-square-foot facility is a profit center within LM Aero with separate financial responsibility and accountability. LMAPI, which has approximately 125 employees, is primarily a build-to-print shop with a wide range of capabilities in sheet metal fabrication, machining, assembly, finishing as well as engineering services.



Lockheed Martin photo

LMAPI has a wide breadth of business opportunity from as far off as Nova Scotia.

Supporting all

Johnstown's machine shop supports all Lockheed Martin airframes, including ground support equipment, for spares requirements and new production. It also provides direct support to numerous Department of Defense and commercial customers.

The base assembly operations include providing more than 300 C-130 subassemblies to Marietta, Clarksburg and Meridian. For the past decade, LMAPI has been the premier supplier of F-16 weapon pylons to Fort Worth. The site is also a long-term supplier of sheet metal products for the F-16, P-3, C-5 and C-130.

The facility has been the sole source provider of refurbished P-3 Quick Engine Change nacelle (QEC) and sub-components to the Navy since 1987 and now provides some of these refurbished items commercially. LMAPI is a certified FAA repair sta-

tion and has been designated as the P-3 QEC overhaul and repair depot for the Navy.

Diverse business base

The site embraces a diverse mix of Lockheed Martin, government and commercial requirements. Approximately 50 percent of sales are direct to non-Lockheed Martin customers, including the Department of Defense, commercial companies and international entities.

On the commercial side, the facility does P-3 overhaul and repair work for Blue Aerospace-Florida and IMP in Nova Scotia. The Australian government has been a steady customer of F-111 spares. Since 2005, LMAPI has been producing parts for the Northrop Grumman Hawkeye 2000 E2-C and E-2D Advanced Hawkeye Program. New opportunities are being pursued with several other companies, as well.

In June 2005, LMAPI received its sixth straight Defense System Supply Center Richmond Gold Award for performance. This award requires 100 percent on-time delivery and zero quality deficiencies. Business ethics and integrity are also factors in the scoring, and the facility obtained a score of 99.4 out of 100. ★

Palmdale Diversity Council sets direction

By Rosie Rodela

The Palmdale Diversity Council is off to a great start this year, welcoming 11 new members in February. Recently, the council participated in a daylong off-site meeting to discuss 2006 initiatives, approve officers and develop a Diversity Maturity Model action plan.

"We have a dedicated group," said Rick Baker, vice president and LM Aero-Palmdale general manager. "This is going to be an exciting year for the council."

New and returning members are looking forward to a productive year. The key focus areas for 2006 are education, awareness and recognition, management and employee engagement, mentoring and event coordination.

"I think it's important people know the Diversity Council is not only active within the Lockheed Martin community, we are also active within the local community, working with local schools and groups to



Photo by Denny Lombard

Palmdale Diversity Council members gathered on Feb. 8 for a full day offsite spread the understanding of diversity," said newly elected Diversity Council co-chair, Andy Adams.

"Recognizing diversity isn't about pointing out the fact that we are all different," said new Diversity Council member, Monica Walsh. "Instead, to me it is about appreciating these differences and learning about each other's diverse experiences and backgrounds. I am thrilled to be involved in

such an essential and commendable effort during this critical change in culture."

The Palmdale Diversity Council has a full calendar of events in the works. In past years, they have been responsible for the John London Memorial Car Show as well as Veterans Day activities.

"The Diversity Council is composed entirely of co-workers who make a difference," said Adams. "However, it is going to take more than just the council members; it is going to take the willingness of everyone to embrace diversity and make it a success."

Watch for upcoming Diversity Council events on the InSite home page and in the electronic newsletter, the Weekly InSite News. For more information about Palmdale's Diversity Council, e-mail palmdale.diversitycouncil@lmco.com or visit their newly updated Web site. ★

JSF honors Duff and Goodman with Wizard Awards

By Betsy Black

The F-35 Joint Strike Fighter Wizard Awards were recently presented to Andy Duff and Eric Goodman. Duff was presented the distinctive Wizard Award for Leadership, and Goodman was given the quarterly Wizard Award.

The Wizard Award continues to be the highest honor an F-35 JSF team member can receive. Wizard Award recipients are cited for best demonstrating the F-35 guiding principles: Inspire Excellence, Expect the Exceptional, Seek to Connect, Foster Trust and Respect, and Value the Individual.

Supervisor Doug Hayward nominated Duff, of the Weapon Integration team, for



Andy Duff



Eric Goodman

his determination and JSF-first focus.

"Andy's leadership and tenacity in the maturation of the internal weapon bay design for maintainer accessibility has resulted in significant improvements in operational suitability," Hayward said.

"Through his close personal coordination of the

Design trades, Andy has earned the team's trust and respect. He is truly working for the good of all parties and not trying to advance the needs and desires of one discipline over another," he said.

Co-worker Joe Ford nominated Goodman, of the Palmdale Control Surfaces and Edges (CS&E) integrated product team (IPT), for his commitment to Lockheed Martin, his positive attitude and his unsurpassed work ethic.

"Eric possesses unique abilities that lead to supe-

rior results for him and those around him," Ford said. "He is the CS&E IPT's most knowledgeable person in the complex JSF release process and concurrent engineering tools.

"He is never satisfied with the status quo; his focus is always on continuous process improvement. He makes no bones about his commitment to Lockheed Martin, and his positive attitude is contagious," Ford continued.

Both men received a check, F-35 model, Wizard plaque and a reserved parking spot.

For more information about the Wizard Awards or for a nomination form, visit:

★

Marietta AERO Club helps patients get to treatment

By Susan Bradford

With so much concern over rising insurance premiums, we seldom stop to think about shortages in the most basic types of medical needs. Don Burton, executive director of the WellStar Cancer Center in Marietta, contacted the LM AERO Club about such a need in October 2005.

According to Burton, the greatest need of cancer patients is transportation to and from their outpatient treatment appointments. "This is due to factors such as living alone and not being able to drive or having limited or no access to transportation due to income restraints," said Burton.

Thanks to the LM AERO Club, WellStar was able to purchase a new oncology van. In appreciation, the LM AERO Club logo was placed on the van. "The generous donation of the LM AERO Club will remove this barrier and make

transportation possible for many patients for years to come."

For children who have been abused, neglected or abandoned and have special medical requirements, a \$5,000 contribution was made to Dream House for Medically Fragile Children to provide basic medications and necessities such as food and bedding.

And for those with no medical insurance, a \$6,500 contribution was sent last November to the Good Samaritan Health Center of Cobb to provide medical equipment that will be used to provide healthcare to the working poor.

These and many other medical needs were met last year in metro-Atlanta through generous donations by the LM AERO Club in Marietta. ★



LM AERO Club board members and Executive Vice President and General Manager Lee Rhyant met with WellStar to donate an oncology van paid for by employee donations.

Fort Worth LM AERO Club helps when injury strikes far from home

By Melissa Christensen

You are miles from home, driving along an unfamiliar road, and suddenly you are surrounded by screeching tires and shattering glass. You're hurt — badly — and emergency personnel take you to the nearest hospital.

Unfortunately, that hospital is across the country from your loved ones, and your injuries prevent you from being transferred by ambulance. The only option to get home is by air ambulance.

Such a service carries a high price tag often up to \$35,000 and is not covered by typical health insurance. Fortunately, for nearly 400 patients, Mercy MedFlight has stepped in to provide free air ambulance service. The charity serves as a mobile intensive care unit for patients who are confined to a stretcher and need to be transferred long distances, usually not safely done by vehicle.

Mercy MedFlight was one of 12 chari-

ties selected to benefit from the Fort Worth LM AERO Club employee donations to the general fund. In December, the LM AERO Club board of directors approved a \$25,000 donation to help Mercy MedFlight fulfill its mission ... as well as an additional \$100,000 to a variety of community organizations.

Ken McAlear, president of Mercy MedFlight, said support from Lockheed Martin employees has been essential to his organization's success.

"Their money has bought medical equipment we still use and now helps to fly patients to their families and to life-saving surgeries," McAlear said. "We are very appreciative of their generous contributions."

The board selected Mercy MedFlight because its service is unique and available to anyone who has a true need for an air ambulance but just can't afford it. Since the pilots and medical staff are all volun-



Photo by Tom Arbogast

Ken McAlear's Mercy MedFlight transports hundreds of stricken patients each year, free of charge. Employee donations to the LM AERO Club helped 366 patients make it to their destinations last year.

teers, donations can be used directly for necessary costs like equipment, jet fuel and insurance.

"It's an expensive charity to run, and by the grace of God, we've been able to help people for more than 10 years," McAlear said. "We've received over 4,000 calls for help, and we've helped 366 patients. We would help them all if we had the money." ★

Palmdale LM AERO Club improves community life

By Rosie Rodela

Palmdale employees opened their hearts last year by donating a significant amount of money to the Lockheed Martin Employee Hurricane Relief Fund ... and the giving didn't stop there.

Through the same generosity shown by Palmdale employees, four new organizations received grants from the Palmdale LM AERO Club in 2005.

"The board of directors chose these organizations because they each provide to our community one or more of the fields of service which the LM AERO Club focuses on," said Terri Garcia, Palmdale LM AERO Club executive director. "They help stabilize fami-

lies, support our local communities, improve community health and serve people with special needs."

Here is a brief overview of the new organizations:

The Antelope Valley Partners for Health (AVPH), formed in 2000, addresses and improves community health concerns and services offered in the Antelope Valley. AVPH is comprised of local residents, organizations and the Los Angeles County Health Department.

The Foundation To Improve Renal Nutrition in the Antelope Valley (FIRN AV) helps people with kidney disease celebrate life by giving them the gift of time.

FIRN AV, a nonprofit public benefit foundation, works to eliminate malnutrition in kidney disease and help individuals with kidney failure in the Antelope Valley live longer and healthier lives.

LETMESAIL Inc. is a nonprofit organization that enriches the environments of individuals with special needs, developmental disabilities and cognitive delays. (LETMESAIL stands for Lifestyle Enrichment Through Meaningful Exercise, Social Activity and Independent Living.) LETMESAIL differently-abled persons are given the opportunity to live quality, productive lives, looking

beyond disabilities and stressing capabilities and individual potential.

The Painted Turtle Camp provides life-changing experiences to children with serious illnesses through educational, therapeutic, safe and just plain fun summer camp and year-round programs. The camp is like a traditional summer camp that just happens to be staffed by California's top medical specialty professionals who volunteer to live at the camp throughout each session. The Painted Turtle provides seriously ill children an empowering, renewing experience completely free of charge. ★

Palmdale debuts new and improved On-Boarding facility

By Kristin Fox

A new hire's first impression of LM Aero-Palmdale will now be formed in a high-tech center dedicated to On-Boarding.

"As part of our continuous facilities improvements, the new On-Boarding Center (OBC) is now complete," said Rick Baker, vice president and Palmdale general manager. "We have developed a

state-of-the-art facility to match our state-of-the-art capabilities."

With a quick snip of the huge scissors, the ribbon dropped to unveil Palmdale's new OBC to new hires and many curious onlookers. Behind the ribbon, a wealth of features was ready to see action.



Photos by Denny Lombard

Rick Baker, left, and Mark Hawthorne welcome employees to the new On-Boarding facility.

The high-tech OBC features laptop computers, kiosks equipped with computer and phone access and dining areas for hosting new hire luncheons. The OBC also includes two 12-person classrooms to allow for larger groups of new hires to enter each week.

"This center will not only benefit new hires," said Baker. "The new space in Bldg. 607 can double as classroom space for employee training."

The original OBC, located in Bldg. 660, served as the first stop for new employee orientations for more than three and a half years.

Although the paint had barely begun to dry, the OBC was available for its first On-Boarding class of the year on Jan. 9.

"We are so excited to be in this new location," said Rosie Alonzo, Palmdale's OBC site lead. "It was hectic, but well worth the wait."

All are invited to drop in and have a look at the new facility. Questions can be directed to Rosie Alonzo at 661-572-4170. ★



The new On-Boarding Center features a large new training space, plus two classrooms.



Greek REPEAT

Greece's new buy extends F-16 line

By Mark E. Lewis

The new year brought more than a billion dollars worth of business to the Fort Worth site, ensuring a longer lasting F-16 line and paving the way for a seamless transition as F-35 production ramps up.

Greece signed a \$99.7 million contract Dec. 27 as the initial payment for 30 new Advanced Block 52+ F-16 aircraft. The total program value for the 30 aircraft is approximately \$1.2 billion for Lockheed Martin.

Since the deliveries will extend through most of 2009, the order gives LM Aero more time to secure sales that will extend production into the next decade. Without the new Greek order, the line would have ended in late 2008 upon completion of F-16 deliveries to Israel.

"This contract is great news for the F-16 team because it extends the production line another year and opens the door wider for additional international sales in the future," said June Shrewsbury, F-16 programs vice president.

The company's goal is to keep the F-16 line active until at least 2012, when the F-35 will be ramping up to full production. This will help ensure stability and a solid factory business base, including preservation of critical employee skills.

The new F-16 aircraft will supplement the existing fleet of Hellenic Air Force (HAF) Fighting Falcons and continue the modernization of the HAF.

"Under this contract, we'll provide the latest in advanced technologies to ensure long-term mission success for our valued customer, the Hellenic Air Force," said Ralph D. Heath, LM Aero president.

"It's especially gratifying that this order marks

Our workforce builds an outstanding product, and the world knows it.

*June Shrewsbury,
F-16 programs vice president*

the 50th time an F-16 customer has come back to us for additional aircraft — establishing a record of customer satisfaction that may be unmatched in the military aircraft business," he said.

Shrewsbury agrees. "Our workforce builds an outstanding product, and the world knows it," she said.



Lockheed Martin Photo

Chile's pride in their new F-16 Advanced Block 50 fighters was on full display during the arrival ceremony.

Chile's president leads welcome for new Fighting Falcons

By Mark E. Lewis

A bold roar broke through the Santiago skies Jan. 31 — an eagerly anticipated unique sound — Chile's new F-16s had arrived amid military and civilian cheers. Chilean, U.S. and Lockheed Martin officials celebrated the arrival of Chile's new F-16s.

President Ricardo Lagos led the ceremonies as one of his concluding acts as Chile's chief of state. Jaime Ravinet, minister of defense, and Gen. Osvaldo Sarabia, commander-in-chief of the Fuerza Aérea de Chile (FACH), also helped welcome the Advanced Block 50 aircraft.

Chile will receive eight additional Advanced Block 50 F-16s throughout 2006.

"Both U.S. and Chile agree the aircraft sale is a momentous improvement in the long-term relationship between the two nations' air forces," said Bruce S. Lemkin, Air Force deputy undersecretary for international affairs.

Sarabia said the advanced F-16s are spearheading his country's efforts to modernize the air force. Lemkin agreed.

"These are state-of-the-art aircraft and will provide great capability for Chile and will also provide interoperability with us. These are the same airplanes the U.S. Air Force flies," Lemkin said.

The United States will conduct F-16 flying training with Chilean pilots. In addition, "train-the-trainer" instruction will enable the Chileans to train their own pilots. LM Aero and the U.S. Air Force will also provide maintenance training.

"These F-16s will become the centerpiece of a 30-year or more relationship between the U.S. Air Force and the [FACH]."

"The long-term relationship comes not only from operating common hardware, but also from the experiences of airmen working together throughout their careers," Lemkin said.

Lockheed Martin was represented by June Shrewsbury, F-16 program vice president; John Balderston,

F-16 program director for Chile; and Ron Covais, corporate vice president for international business development. ★



Lockheed Martin Photo

Ron Covais (left), corporate vice president for international business development, prepares for the Peace Puma F-16s to land with then Minister of Defense Jaime Ravinet at the Jan. 31 arrival ceremony.

Injured worker makes sure others' hands are covered

By Tavia Askew & Mark E. Lewis

Susan Harrell has 10 reasons to be thankful, and they are all on her hands.

Harrell, who works in F-22 assembly in Marietta, sliced part of a finger off last year when a knife slipped while she was cutting metal. Through quick action by a co-worker, her fingertip was preserved and eventually reattached.

Now Harrell is a proponent of personal protective equipment (PPE), and it is easy to understand why. The accident and injury could have been prevented if she had been wearing a cut-resistant glove when working with metal.

The gloves were unavailable in her area at the time of the accident. Now, she uses a glove every day when holding the metal in place.

"We have not had any cuts in the area since we got the gloves," she said. "I don't pick up a knife without them. They

have saved me many times." In the past, she frequently went home with nicks and



Photo by John Rossino

Marietta employee Susan Harrell shows executives Mac Stevenson (left) and Lee Rhyant the cut-resistant gloves that are saving people from injuries like hers, a severed fingertip.

scratches from close contact with jagged metal parts, she said. But those days are gone, and mostly because of the gloves.

Harrell demonstrated the safety gloves for two LM Aero leaders who visited her work area recently.

"It's apparent that gloves are taking the hits instead of people, and it's the people we care about," said Mac Stevenson, executive vice president and Aeronautics Operations general manager.

"Using hand protection is especially important because cuts and scrapes have been our number one injury across the

company. Injuries like Susan's can now be prevented, and those are the best stories to hear," said Lee Rhyant, executive vice president and Marietta general manager.

Harrell's experience is a good lesson in preventing injuries, according to Steve Hirtzel, Safety director.

"It doesn't hurt to be safe. We should all adopt Susan's attitude toward injury prevention based on the experience she's shared with us," Hirtzel said.

Harrell never takes her hands for granted. She said she's relieved and happy to have her hand intact and fully functional.

"You can hardly even tell it happened," she said. "I just have a little scar."

Once a victim of an on-the-job injury, Harrell now is an outspoken advocate for others to take precautions against similar dangers. ★

LM Aero, environmental group tailor education materials

By Kristin Fox

Michael Haro, Palmdale manager of Environmental Resources, became the newest executive committee member of the Mojave Environmental Education Consortium (MEEC) for 2006.

MEEC is a local organization that links teachers with high-quality environmental education resources to improve the environmental literacy of California's K-12 students. MEEC is essentially a one-stop-shop for environmental education that serves educators, students and the communities of the Mojave Desert.

"As a socially responsible company, we believe it is important to not only comply with environmental regulations, but to prevent pollution wherever possible and to promote environmental responsibility in our community," said Haro. "The process starts with education; we believe bringing the environmental conservation message to the youth in the Antelope Valley is the most sustainable way to make improvements."

On Dec. 6, LM Aero hosted MEEC's first Antelope Valley teacher workshop at the Palmdale facility. More than 30 teachers attended the "Earth Is in Our Hands: Preserving and Restoring Our High Desert Ecosystems" workshop.

Attendees toured LM Aero facilities and received curriculum information on Piute Ponds and the 400-acre "enhanced" wetlands located at Edwards Air Force Base. Laura Been, Palmdale environmental engineer, tailored the program for local teachers.

"Environmental education has a unique ability to cross over many subject areas, teach real-world lessons and allow students to improve their reading, writing, science and math skills," said Been. "We realized right away that working with MEEC would be the most effective way to do that here in the Antelope Valley."

Through its sponsors, MEEC is able to provide field trips, teacher workshops, standards-based environmental education lesson plans and kits, science fairs, speaker's bureau, essay contests and teacher and student recognition programs. ★



Photo by Denny Lombard

Teachers play an interactive "bird beak" game at an Antelope Valley teacher workshop hosted by LM Aero-Palmdale. The program was tailored for local teachers by Laura Been, environmental engineer.

In his own words...

F-22 test pilot values time in 'most phenomenal machine'

By Rosie Rodela

Jim "JB" Brown has proven himself to be one of Lockheed Martin's go-to test pilots. He was hired by the Lockheed Advanced Development Company in 1994 as an experimental test pilot for the F-117 Stealth Fighter. As a test pilot he helped develop and test improvements to the F-117 weapons system that proved to be instrumental in Operation Allied Force and Operation Iraqi Freedom. After flying the stealth for eight years, he was selected to test the F-22 Raptor. He is currently the lead test pilot for the Raptor program at Edwards Air Force Base where he conducts airborne testing for envelope expansion, structural loads, avionics, countermeasures and weapons.

What does it take to be an F-22 Lockheed Martin test pilot?

To be hired, one has to be an experienced aviator, a test pilot school graduate and have a proven track record as a test pilot in the military or other field. As for flying the F-22, the plane is extremely easy to fly because it is so well engineered. It has excellent handling qualities and is very instinctive. This allows the pilot to concentrate on the tactical situation rather than worry about flying the jet.

How long have you been a pilot? How long have you flown the F-22?

I soloed in February 1976 and have flown more than 7,300 hours in 109 different types of aircraft. I first flew the Raptor in August 2002 and now have about 450 hours in the F-22A.

What was your initial reaction the first time you flew the F-22?

During taxi, it felt like a big airplane, yet once airborne the aircraft was very agile, powerful and flew like a fighter should.

Describe your experience flying the F-22.

Of all the airplanes I've flown, it is the most phenomenal machine. The Pratt and Whitney engines provide all the power you need, and the handling qualities provide effortless and carefree maneuvering from Mach 2 down to...well, I've flown the jet backwards. Compared to other jets, the "honeymoon period" where one is getting used to how the aircraft flies was very short.

What do you see for the future of the Raptor?

As it comes onto the scene as a combat aircraft, the Raptor is a quantum leap above the state of the art. Our adversaries simply don't stand a chance. With spiral development improvements the aircraft is projected to receive, it's going to get better and better. The F-22 provides an unfair advantage for our pilots, which is exactly what we want.

What is your favorite thing about flying the Raptor?

I've been able to do just about everything the plane is allowed to do. I've flown at very high altitudes going two times the speed of sound. While other aircraft can get a bit uncomfortable in those conditions, the Raptor feels like you're riding in a Cadillac. One of the most unique experiences is when I am able to look out at the horizon and actually see the curvature of the Earth. I must also say that when I first started flying the aircraft, there were a lot of "issues" with the avionics, computers and sub-systems. I have been tremendously impressed with how our engineering team aggressively solved all those problems. The airplane has dramatically improved in a relatively short period of time, and it's been fantastic watching each individual problem get solved making this aircraft ready for war.

What planes are out there that you would like to pilot, that you have yet to pilot?

All planes are beautiful, and I want to fly each and every one. The most impressive plane? The F-22 of course! The most fun? My friend's 1946 Piper Cub, which basically operates at 60 mph! The one I want to fly, but never have ... the SR-71. ★



Photo provided by Edwards Air Force Base
Jim "JB" Brown, Lockheed Martin test pilot.

R A P T O R

Continued from page 5

The long road

Many at Lockheed Martin would say it was a long and hard road on the way to F-22 IOC, and many challenges were overcome. According to the program engineers, the F-22 was designed, manufactured and tested to more exacting standards than any other aircraft in military aviation. As the declaration of IOC was followed by the completion of the Engineering, Design and Development phase contract, it is easier to put the journey into perspective. The F-22 Raptors on the tarmac of Langley Air Force Base are the result of:

- Almost 3,500 separate EMD total flights with more than 7,600 EMD flight hours
- Over 21K hours of Dynamic Fatigue Testing
- 500 hours of successful Air-to-Air Test
- 26,000+ envelope expansion test points
- 3,500+ mission avionics test points
- Three system hardware configurations tested
- 70+ Operational Flight Profile versions
- And nearly 100 weapon launches

If you add the testing conducted by the Air Force in Initial and Follow-On Operational Testing to this, you begin to get an idea of the scope of the program and what it took to get where we are today.

It is only a matter of time before combatant commanders call for the capabilities only the F-22 can bring to bear. When this happens, it will be the result of the perseverance and dedication of the men and women of the F-22 team ... a very proud team. ★

First F-35 moves to flight line

Ramp-up begins for short takeoff/vertical landing variant

By Betsy Black

Assembly on the first F-35 Joint Strike Fighter (AA-1) is complete, capping an innovative design and production process that yielded unprecedented levels of assembly accuracy, fit and finish.

The team celebrated Feb. 17 with an internal event marking the significant milestone in which Ed Linhart, F-35 JSF Production Operations vice president, handed over the aircraft's "key" (its data cartridge) to Doug Pearson, F-35 Integrated Test Force vice president. Also on hand to address the crowd were Ralph Heath, LM Aero president; Brig. Gen. C. R. Davis, JSF deputy program executive officer; and other senior executives from JSF partner companies.

"I got a real sense of pride seeing the crowd's reaction to what we had achieved as a team in the eight months since the delivery of the major components to Fort Worth," said Steve Throup of BAE Systems. "To be involved in the first build of any aircraft is a great experience, and as we see the next few thousand JSFs roll down the line, we can always say we were there for the first."



Photo by Fred Clingerman

Aircraft AA-1 saw daylight for the first time as it rolled onto the flight line for its final prep work.

What's next

On Feb. 19, AA-1 was moved from the factory in preparation for an intensive period of ground testing. Mechanics transferred the F-35 to a nearby fueling facility where it underwent a thorough fuel system check-out. Structural coupling and ground-vibration testing will follow. Engine runs will begin in late spring and lead into taxi tests in advance of first flight, on schedule for this fall.

Though the first F-35 has left the factory, the fever pace of the Mate and Delivery team has not slowed. The group is ramping up to begin work on the first optimized F-35 short takeoff/vertical landing (STOVL) variant later this year. Production on the center fuselage began at Northrop Grumman in early September, and the section will be delivered to LM Aero-Fort Worth in the fourth quarter this year.

More to learn

"A lot of lessons learned from AA-1 will be applied for BF-1 [the first STOVL variant] and subsequent aircraft," said Joshua Oderberg, LM Aero Manufacturing Support team member. He said he looks forward to the continued analysis, making the process more efficient and better able to accomplish goals and meet customer expectations.

A total of eight F-35 aircraft will be in production by the end of 2006. ★



Photo by Tom Harvey

A brimming crowd of employees gathered to see the completed F-35 at the end of the production line.

RATTLRS kicks up cruise missile technology

By Colin Bab

When launched at a target at maximum range, today's Tomahawk cruise missile takes almost two hours to reach its target. This duration is okay when your target doesn't budge. But what happens when your target doesn't sit still for two hours? What happens when it is a vehicle? Or a specific person?

Over the past six decades — since being introduced by the Germans in World War II — cruise missiles have required mostly subsonic speeds to accomplish their missions. The world, however, is changing, and the Office of Naval Research, the Air Force and NASA are working with Lockheed Martin to increase the speed, flexibility and capabilities of U.S. cruise missiles. The Revolutionary Approach to Time-Critical Long Range Strike (RATTLRS) is a technology demonstration project to design and test a supersonic cruise missile that will reach speeds in excess of Mach 3.

Supporting future needs today

RATTLRS is a part of the National Aerospace Initiative, a joint Department of Defense/NASA program established in 2004 to "ensure America's aerospace leadership" by coordinating efforts to

See "RATTLRS technology" on page 29



Lockheed Martin illustration

The RATTLRS missile will strike targets at speeds greater than Mach 3.



Photo by Paul Weatherman

Keynote Speaker, Arthur E. Johnson displays his new jacket in Palmdale.

Black history honored

By Patrick Hogan and Mark E. Lewis

LM Aero's Black History Month celebrations featured the rich heritage and cultural experiences of African-Americans. Sites sought to educate and celebrate in their own notable ways.

"Black history belongs to all of us," said Rick Baker, vice president and Palmdale general manager. "It is not exclusive; it is inclusive."

More than 500 were at the Palmdale Black History Celebration Committee (BHCC) 10th Annual Black History Awards Banquet on Feb. 4. Keynote speaker, Arthur E. Johnson, senior vice president of Lockheed Martin Corporate Strategic Development, discussed the traits of a leader.

Among community leaders, the committee recognized employees like Atherton Carty, winner of a 2006 Black Engineer of the Year award, and Shirley Harbeson, LM Aero Equal Employment Opportunity senior manager, who won the BHCC award for her participation and the support of Palmdale affinity groups.

Fort Worth employees sang with the Voices of Diversity Choir at the site's Black History Month luncheon Feb. 23. The event featured respected community educators Gerald and Harlean Beal, gospel entertainer J. E. McKissic and interpretive dance from Aero employee Amanda Reeves.

Guest speakers Jim and Gloria Austin, National Cowboys of Color Museum and Hall of Fame co-founders, described how they were inspired to share the story of ethnic cowboys, whose significance is often overlooked in Southwest history. A Buffalo Soldier specialist, dressed in a period uniform, also spoke with employees and displayed artifacts. ★



Photo by Neal Chapman

Harlean Beal, a community leader in education, speaks to the Fort Worth crowd as photos of historical figures scroll on a screen behind her.



Photo by Paul Weatherman

Irven Mitchell and Mira Fitzpatrick enjoy Palmdale's festivities.



Photo by Neal Chapman

Fort Worth software engineer Amanda Reeves performs an interpretive dance.



Photo by Neal Chapman

A period soldier in Fort Worth displayed pieces of history from the old West.

"Black history belongs to all of us. It's not exclusive; it is inclusive."

— Rick Baker,

Vice president and Palmdale general manager



Photo by Paul Weatherman

From left to right: Gus and Cecilia Villanueva, Gracie and Larry Kibble.

Photo by Paul Weatherman

Keenan Haywood and Bertha Crayton dance the night away at the 10th Annual Black History Awards Banquet.

Facility improvements spruce up Marietta's South Campus

By Tavia Askew

A series of improvements is on the horizon in Marietta as the South Campus is being spruced up. One of the more noticeable improvements is the expansion of the F-22 parking lot.

"We expanded it by about 60 spaces to relieve some of the parking pressure down there," said Mike Malone, Facilities Engineering senior manager. "Some people were having to park over in the B-25 parking lot and had to walk back to L-22. We think this expansion will solve the majority of those problems."

L-11

The L-11 building is also receiving needed improvements. Among them are enhancements to the Raptor Integration Lab (RaIL) and the South Campus computing center. RaIL, a two-story, 20,000-square-foot complex inside L-11, supports the F-22 program and is designed for avionics development and aircraft integration.

"Next to the RaIL, the sensor tower is being expanded. The large tower now contains rooms that house a lot of testing and telemetry equipment used during F-22 flights. That sensor tower being adjacent to the RaIL, captures the data and uses it for development and processing purposes," Malone said.

In addition to RaIL improvements, the South Campus computing center has also received some needed improvements.

"The infrastructure was old, so we went in and basically gutted the electrical, fire protection and communications systems," Malone said. "It's probably one of the more challenging projects, because we did all of this while the computing center remained in operation. We had to duplicate electrical and communications lines while we took

out the old ones ... but we had no failures or outages."

Some of the other improvements also required updating the facility to meet current codes and standards. Malone said his team did a lot of work while in L-11 to bring the facility up to par as far as fire codes, restroom facilities and elevators. In



Photo by John Rossino

The expanded L-11 sensor tower has more room to carry out tests for the Raptor Integration Lab.

addition, a lot of work had to be done to improve the flow in L-11.

"The building was really compartmentalized and just evolved over the years, so it wasn't laid out very well," he said. "We fixed the flow problems, which helped

not only the RaIL people, but the other occupants as well."

Malone added that some office areas have been improved and more improvements will follow as money becomes available.

L-8

L-8 also saw some welcome changes. The building houses Advanced Development Programs and contains small individual compartments that can be used by customers.

"We do a lot of small programs for our customers, mostly government. They sometimes need classified compartments ... and we were turning way business because we didn't have the facilities to support their needs," said Malone. "By building out these classified compartments, we are now able to support our customers' needs."

Each compartment can be separated from all others and very tightly controlled with security measures and restricted access, a necessity for the customer.

"These are advanced research and development small contracts, but can lead to bigger and greater things in the future," said Malone.

L-65

L-65 is also seeing some significant changes. The facility has been used for F-22 Air Combat Simulation (ACS), but will now also house F-35 ACS operations.

Malone said a study determined L-65 would be the perfect fit for the F-35 ACS, as opposed to building new facilities in Marietta or at other sites.

"We are in the process of purchasing the capital assets for [F-35] air combat simulation operations in Marietta and making facility modifications to support that," Malone said. "The challenge there will be using one building and separating the programs for security reasons."

The project, which was recently started, is slated for completion this year. ★



Lancaster High School students participate in team-work exercises during E-Week.



Girl Scouts in Marietta bring to life their own aircraft designs, albeit made out of paper.



Students from all over the Fort Worth community descend on the local science museum, where Lockheed Martin volunteers facilitated interactive exhibits.



Girl Scouts in Marietta learn about structural stability through colorful building materials.

E-Week motivates current, future engineers alike

By Mark E. Lewis

Photos by Tom Harvey (Fort Worth), Kevin Robertson (Palmdale) and John Rossino (Marietta)

Engineers Week swept across LM Aero Feb. 19–25. Sites gathered science projects and lunch-and-learns to help promote engineering careers abroad and within.

LM Aero joined the Society of Women Engineers in the annual Antelope Valley Girl Scouts “Build a Better Future” Science Badge Workshop on Feb. 15 and 22 in Palmdale. Members of LMents, which includes employees with 1 to 5 years at Lockheed Martin, helped the Scouts with their projects.

The celebration for National Engineers Week continued in Fort Worth, where employees put their skills to the test when they designed battery-powered cars. Competitors raced to transport a full 12-ounce soda can down the 25-foot track. Employees also helped the Fort Worth Museum of Science and History to welcome and engage hundreds of little science explorers in dozens of science experiments.

In Marietta, more than 200 girls in grades 4 through 12 attended a Girl Scouts Badge Clinic at the site. Under the direction of 44 LM Aero volunteers, Junior Girl Scouts earned an Aerospace badge, and the Cadette Senior Girl Scouts worked on career-related Interest Project Patch requirements.

National Engineers Week was founded in the United States in 1951 by the National Society of Professional Engineers. With Lockheed Martin as one of its sponsors, it is a formal coalition of more than 70 engineering, education and cultural societies, and more than 50 corporations and government agencies. ★



Kids at the Fort Worth Museum of Science and History study how shape affects the behavior of objects in the wind.



A Fort Worth elementary student learns what makes an airplane fly in LM Aero's mini-wind tunnel. Fort Worth employees led this activity and more at the Fort Worth Museum of Science and History.



A volunteer in Marietta shows Girl Scouts how math and science apply to work on the production line.



Fort Worth children prepare to assemble gliders to measure aerodynamics and distance.



Ed Burnett acts as mission control for a young future pilot as she flies the simulator in Palmdale.



Palmdale engineer Tony Pilon gives Girl Scouts a demonstration on sonic boom technology.



Kids in Fort Worth try to float pennies on top of tin foil in a buoyancy and surface tension experiment.

Big honors for LM small business work

By Mark E. Lewis

Lockheed Martin's commitment to small, disadvantaged, woman- and veteran-owned businesses has garnered national attention and recognition, oftentimes from the special interest organizations that represent these businesses. Aeronautics, besides receiving individual accolades for the business unit, plays a noticeable role in the overall success of the corporation's small business efforts. We are the largest consumer of small business products in Lockheed Martin. ★

Here is a list of corporate and company awards bestowed in the past year:

- Once again named to Latin Business Magazine's second annual "Corporate Diversity Honor Roll" for its commitment to the nation's women and minority communities
- Voted No. 1 by readers of Woman Engineer Magazine as the place they would most like to work or they believe provides the best working environment for women
- Lockheed Martin was named as a member of the 2005 "Top 10 Corporate Supplier Diversity Programs for Veteran-Owned Businesses" by Veterans Business Journal
- Lockheed Martin was named "Corporation of the Year" by the Pan Asian American Chamber of Commerce-Southwest based on Aeronautics' training, mentoring and overall support of Asian-American-owned businesses
- Aeronautics was the recipient of the Minority Business News "2005 M-Company Award"
- Aeronautics received the "Corporate Advocate Award" by the National Center for American Indian Enterprise Development
- Terri Trevino, women-owned business advocate, Aeronautics, was nominated "Advocate of the Year" for the Women's Business Council of the Southwest for 2005



Photo by Neal Chapman

Effective partnership

Gary Bailey, left, Material Management vice president, hosts Hector Barreto, administrator for the U.S. Small Business Administration, during his visit to LM Aero-Fort Worth on Jan. 19. Barreto made a trip to thank the company for sponsoring the Small Business Administration Business Matchmaking program, an important component of the company's supplier diversity initiative.

Lockheed Martin offers the most minority business opportunities

Lockheed Martin was honored March 30 by *DiversityBusiness.com*, the nation's leading multicultural business-to-business online portal, as the top company for providing multicultural business opportunities to women- and minority-owned businesses in 2005.

Collectively called the Div50, Lockheed Martin and 49 major corporations comprise the list as determined through an online election by more than 500,000 diversity-owned businesses. Honorees were selected based on factors including the volume, consistency and quality of business opportunities granted to women- and minority-owned companies. This is Lockheed Martin's fifth consecutive year as one of the top three companies recognized for its commitment to diversity-owned business, and its first year in the top spot.

"We have made a sustained commitment to strengthening and growing our relationships with minority- and women-owned businesses in an effort to seek out expertise and skills from two of the fastest growing business segments, recognizing that our future success is dependent on our ability to build diverse supplier relationships today," said Mike Bush, Lockheed Martin director of Supplier Diversity. ★

Supplier issue transforms into joint success on C-130J

By Tavia Askew

LM Aero has a history of supporting suppliers through genuine collaboration. Achievements are recognized on both sides, but in the industry, when issues arise, relationships fray and doubt infiltrates.

In its commitment to serve customers through innovation and collaboration, LM Aero accepts challenges and works to surmount them, even when they are not internal.

One such relationship developed out of a Smiths Aerospace case in Marietta. Located in Cheltenham, England, and Whippany, N.J., this leading industry firm has created partnerships with a variety of programs, including the C-130J.

The company developed Enhanced Electronic Circuit Breaker Units (ECBU) for use on the Super Herc. The units are installed throughout the C-130J bodies during production. Trusted as they were, problems began to surface during routine testing. "Because it was a new product, it really hadn't seen any experience on the aircraft. But once we got it installed, this new problem developed that had not been seen during the development stage," said Steve Kays, C-130J Procurement director.

After analysis, investigators determined that ECBUs were not functioning properly during endurance testing. As the issue's breadth spread, LM Aero and Smiths acted quickly. There was no time to pull the units from the aircraft and return them for repair. Instead, Smiths Aerospace came to Lockheed Martin.

"Smiths recognized the issue, and they sent an entire team to Marietta so we could jointly fix these units," Kays said.

The Smiths team set up a "satellite" factory at the Marietta site to repair the units close to the production line. Many LM Aero employees showed up ready to help as well.

"It required super effort by the LM Aero people to get parts off the aircraft, get them moved to this satellite factory, get an inspector there to check the parts to make sure they were correct, get the parts moved back to the aircraft and get the repaired parts installed again," said Kays. "It was more than a little group of people; it was everybody coming together from the time the parts came off the aircraft to the time the parts went back on the aircraft."

A week and 102 parts later, with strong dedication and teamwork, they completed the task.

"Smiths and Lockheed Martin came together as a team — everyone forgot who they were. All they saw was the end objective — to deliver aircraft to the customer on time," Kays said. "[The issue] could have had a tremendous financial impact on us. But Smiths and LM Aero employees quickly became one team and worked toward a quick resolution to the problem."

Certainly the team dedication to the task and professional demeanor helped LM Aero meet a critical deadline vital to the success of the C-130J program and achieving 2005 contractual aircraft deliveries. ★



Photo by John Rossino

The supplier and LM Aero performed testing to make sure the product was up to par.



Photo by John Rossino

LM Aero and the supplier came together to jointly solve production issues with this Electronic Circuit Breaker Unit on the C-130J.



Off and away

Photo by Photographer's Mate 2nd Class Roger S. Duncan, U.S. Navy

U.S. Air Force personnel with 304th Expeditionary Rescue Squadron (ERQS) jump out of an HC-130P aircraft operated by the 71st ERQS over the Gulf of Tadjoura, Djibouti, March 28, 2006. The 304th ERQS is based in Portland, Ore., and the 71st ERQS is from Valdosta, Ga.

C-130J heads for Mississippi base

The incoming commander of the 22nd Air Force visited Marietta in March to take the left seat of a brand new C-130J and deliver it to Keesler Air Force Base, Miss. The aircraft is now assigned to the 403rd Wing's 815th Airlift Squadron, which is Air Force Reserve Command's (AFRC) only C-130J combat delivery squadron.

"I have been flying Lockheed Martin products for 25 years," said Maj. Gen. Martin M. Mazick, then director of operations for AFRC. "I flew C 141s for 19 years and C-5s for five. I am proud to be delivering this new C-130J to Keesler where it will provide increased combat delivery capability to the 403rd."

The 815th Airlift Squadron, known as the Flying Jennies, received its first C-130J, a short-fuselage aircraft in 1999, but is now being equipped with the longer-fuselage aircraft. The March delivery was the seventh of eight aircraft that will eventually be assigned to the squadron.

Keesler AFB is also home to the 53rd Weather Reconnaissance Squadron (WRS). Known as the Hurricane Hunters, this unit flies the WC-130J into hurricanes to record and send storm data to ground stations, which helps make predictions of direction and intensity more reliable. The 2005 hurricane season was the first full season the WC-130J was flown into the Atlantic storms. The 53rd WRS operates 10 WC-130Js. ★



Photo by John Rossino

Maj. Gen. Martin Mazick gives a thumbs-up for takeoff of a new C-130J to Keesler AFB, Miss.

USO Care Package Support

Employees can make Care Package donations again in 2006

Again this year, employees can show their appreciation of U.S. troops with the donation of a USO Care Package through the Lockheed Martin Employees Care web site at www.lockheedmartinemployeescare.com.

Since partnering with the USO in February 2004 to establish the Employees Care program, Lockheed Martin employees have raised nearly \$700,000.

"Through their actions, Lockheed Martin employees define the character of this Corporation," says Lockheed Martin Chairman, President and CEO Bob Stevens. "And their continued participation in the Employees Care program and overwhelming generosity in donating Care Packages reflects exceedingly well on our enterprise."

For each \$25 donation, employees sponsor a Care Package containing items requested by soldiers, including prepaid worldwide phone cards, disposable cameras, CDs, playing cards, toiletries and more.

Employees can include a personal note for a service member and may contribute a Care Package as a gift in the name of a family member or friend.

"Sending our deployed troops USO Care Packages is a fitting way to let them know they are in our thoughts," Stevens says.

In addition to donating Care Packages, a number of Lockheed Martin business units have held "stuffing parties" during the past two years to assemble and fill Care Packages for the troops. More than 1,000 employee and family member volunteers have given 15,900 hours of their time, stuffing nearly 72,000 Care Packages and more than 26,000 toiletry kits at these events. Stuffing parties are already planned for this year, as well.

Employees have also handed out Care Packages to deploying troops at major airports around the country. Several Lockheed Martin business units have conducted special local fundraising events.

For its efforts, Lockheed Martin has previously received the USO Four-Star Award. "One of the aspects of the character

of our company is this notion of generosity of spirit," Stevens said upon accepting the award. "That spirit is certainly a part of this, not just with financial contributions, but also with contributions of time."



Photo by John Mercado

A soldier is welcomed back to the U.S. Marietta volunteers Amy Dorman, Patricia Hein, Vicky Kell and Lucy Sharpe.

"In a way of providing service, I think Lockheed Martin and the USO are natural partners," Stevens says.

Originally scheduled to expire at the end of 2004, Lockheed Martin Employees Care was so successful that the Corporation renewed its commitment with \$50,000 employee match contributions each year for 2005 and for 2006.

"Through our donations, we can say 'thank you' to our troops both as a Corporation and as individuals," Stevens says. "It's an opportunity to show our recognition of their efforts and our gratitude."

To donate a USO Care Package, visit www.lockheedmartinemployeescare.com. For more information on the program, contact Barbara Reinike at (301) 897-6601 or e-mail barbara.reinike@lmco.com. ★

LMents engaging new hires

continued from page 6

developed the mission statement, objectives and the structure of LMents," Hughes said.

The group took charge and eagerly worked out the details, needing very little guidance from Hawthorne.

"We pretty much came together and got the backing of [leadership] at all three sites, and we made a presentation at [the company's executive staff meeting] to get management on board," said Hughes.

"[The team] worked everything out themselves and need very little coaching from me," Hawthorne said.

Upon returning to each of the respective sites, the task force members started implementing the agenda and changes discussed, and the first order of business was to select officers.

"We didn't really elect members or officials, but we tried to go with people who had been most involved in trying to revitalize the group and make it an official organization," said Tara Goldfarb, HR LDP and LMents Marietta officer.

In addition, the new officers fine-tuned the expanding the role of LMents as a resource for new hires.

"We go to On-Boarding every week now and get up there and talk about all the community service, professional development, socials and all the activities we've done. We have a Web site, and you can sign up online. It's been quite an evolution over the last year," said Goldfarb.

As chapters became more organized, they planned out their recruiting efforts.

"We have a rotation program where different members serve as the presenter and point of contact, so the leadership shares the responsibility of answering questions and acquainting potential new members with LMents," said Max Cohen, U-2 project manager and LMents Palmdale 2005 president.

LMents seems to be thriving under the new structure.

"There's something for everyone," said Goldfarb. "We know everyone isn't going to be interested in everything, so we try to touch on different aspects. Not everyone wants to socialize after work; some may want to volunteer or some other event."

"We try to be a well-rounded organization," said Beth Corley, subcontract administrator and LMents Fort Worth president. "Sometimes people think we focus on the social, but we are trying to broaden the types of activities we do as a group."

With all of the activities, meetings and other events, LMents members and leadership have learned invaluable life skills.

"It's been a very positive experience and made my time here more enjoyable. I feel we actually are making an impact on the workforce because we are allowed to have a voice," said Cohen.

Corley adds, "I've gotten to meet more of my peers that share the same interests as me, and I've gotten to make network connections that will last a lifetime."

"Just getting to know, not only high-level leadership in Marietta, but making connections with people on my peer level in Palmdale and Fort Worth that I never would have met before," has made a lasting impact on Hughes.

A new crop of members will have the opportunity to gain those leadership qualities and experiences, as many of the sites will select new leaders in 2006.

"We are changing officers in June, so that's exciting," said Goldfarb. "Hopefully we can keep this organization going strong and develop it even more," she said.

"I know LMents Palmdale will thrive under our new leadership, and I look forward to the continued expansion of the program under them," said Cohen. ★

RATTLRS technology

continued from page 21

develop and demonstrate technologies that enable:

- Responsive, safe, reliable and affordable access to and from space
- Air-breathing hypersonic flight
- Transformational and responsive in-space capabilities

As a component of the hypersonic "pillar," RATTLRS has an initial goal of testing a flight demonstration vehicle at Mach 3, and plans call for a second flight demonstration that will reach speeds greater than Mach 4 — or more than 3,000 m.p.h. at sea level. The propulsion technology for such a missile will have applications beyond weaponry. It could eventually lead to reusable hypersonic aircraft that can reach any location in the world in a matter of hours.

"RATTLRS was intended to enable two things: a high-speed expendable weapon for time-sensitive or time-critical strike, but also to demonstrate a class of technologies that would enable space access," said program manager Lawrence Ash.

Supersonic cruise missiles are not new; there are a number already in service around the world. The Russians have long had supersonic anti-ship cruise missiles, such as the SS-N-22 Sunburn and SS-N-26 Yakhont. The Chinese have the HY-3 Sawhorse. Also, a Russian-Indian cooperative project has produced the BrahMos, which recently was fitted on the Indian Navy destroyer Rajput. Such systems are even able to achieve a level of accuracy similar to Western missiles by taking advantage of GLONASS (the Russian equivalent of GPS).

What these missiles lack, however, is the versatility of RATTLRS' speed and range, largely because existing supersonic cruise missiles use boosters and ramjets to achieve their high speeds. RATTLRS, in contrast, will have only a turbine engine for propulsion.

Revolutionary propulsion

The difference is crucial. Ramjets — which have no moving parts — are less sophisticated mechanically than turbines and are capable of exceptional velocities, but they use more fuel, have shorter ranges and are very limited in ability to vary their speeds. RATTLRS will combine all the advances in accuracy and targeting that have been developed over the past several decades for conventional cruise missiles with high speed, the reliability of proven turbine technology (the project will use the Allison YJ102R non-afterburning turbojet engine, which has six times the specific thrust of the engine on the SR-71) and high fuel efficiency.

With the ability to vary its speed, a turbine-driven missile can loiter at subsonic speed, extend its range by going at low supersonic speed or dash to its target at maximum speed when range is short. These features will allow the missile to tailor its flight configuration according to its mission. In addition, another significant feature of RATTLRS will be its ability to be launched from air, surface or subsurface platforms.

High-speed advantage

A weapon system developed from RATTLRS would have a number of advantages allowing it to meet needs currently unfulfilled. A high-speed system would give combatant commanders the ability to strike targets existing conventional cruise missile are too slow to hit — for example, the mobile Iraqi SCUD launchers that proved elusive targets during the 1991 Gulf War. And because of its versatility, platforms that currently are unable to launch cruise missiles could have a new strike capacity.

"It brings a new level of capability to the warfighter's hands that is complementary to existing systems," said Lawrence. "Speed is one aspect of this. It's really the joint warfighter that is starting to talk about high-speed weapons, and it's a conglomerate of different capabilities. It needs to be useful, in the sense that it carries the right payload. It needs to be useful in the sense that it has the right range. It needs to be survivable, and speed adds to that. . . . This is really meant to be a prolific weapon, one that can be on as many platforms as the warfighter might want."

Recently, a full-size mock-up of the RATTLRS test vehicle was built for platform tests to see how it fits on various aircraft. Next ahead for RATTLRS is the vehicle Critical Des-ign Review set for November 2006. The first test flight of the missile is planned for late 2007. ★

Retirees: June through December 2005

LM Aero salutes its dedicated employees who, through their service, made our company stronger, year after year.

June

James L Agent	29 years
Derrell Milton Ball Jr	26 years
Ronald C Benson	23 years
Carl Eugene Brown	42 years
J R Buchanan	33 years
Paul G Cormier	39 years
Herlinda Salazar Cross	33 years
Christine Marie Daniels	37 years
R L Davis	28 years
Richard M Daymont	25 years
D W Dykes	29 years
E W Edwards	35 years
Margie E Emerson	25 years
Colleen Macias Erickson	19 years
Donald E Franks	16 years
Charles J Frazier	7 years
N T Freeman	25 years
J W Green	40 years
Ruby Lee Hause	27 years
Michael T Henderson	16 years
Steven L Hoffman	31 years
Charlotte F Holt	21 years
B R Ingram	33 years
Reuben L Irby Jr	37 years
Lewis A Johnson	37 years
Alfred L Joines	22 years
H Killingsworth	31 years
H S Lowery	21 years
George R Martin	34 years
S Matthews	21 years
Robert W Mcguffee	30 years
S T Miers	33 years
Patricia Ann Miller	35 years
Frank G Nevelle	22 years
Charles W Newsome	29 years
Gerald G Penrod	31 years
Edward W Pindar	34 years
Alfred Edward Ponce	35 years
Fredrick G Porter	3 years
Martha J Riherd	22 years
Raymond E Snedeker	38 years
Benjamin R Spotts	11 years
Marshall A Stewart	18 years
Sanford Tapley	33 years
Dennis J Thomas	22 years
William R Thomason	6 years
James W Vaughn	27 years
Michael James Williams	35 years
Marc A Wood	34 years
Susanne W Woods	21 years

July

J J Baldyga Jr	1 year
B Barber	21 years
Donna Jean Binnard	27 years
Donald Albert Blessing II	35 years
Lawrence David Brash	37 years
Carol A Brock	27 years
George Hiram Bunch	33 years
Charles L Buzze	14 years
Alvin C Campbell	26 years
William Lester Cannon	37 years
Helen C Carithers	32 years
Harris G Carter Jr	49 years
Raymond P Cedillo	28 years
Warren Arthur Cheney	34 years
Wayne E Clay	26 years
R A Cochran	25 years
Jack D. Coffman	31 years
M Cohen	24 years
Charles L Cowser	28 years
J Crowder Jr	25 years
Edward D Cykowski	17 years
Norman Daniel	37 years
E W Davenport	36 years
William C Davis	27 years
Jaswant S Dhillon	33 years
Linda F Donathan	36 years
R W Eberhardt	40 years
Larry B Ely	24 years
C B Espey	36 years
Curtiss A Farr	28 years
Charles William Fowler	21 years
T E George	20 years
Kenneth R Gipson	20 years
Jean Ann Harley	35 years
Jerry B Hendrix	21 years
Carol Ann Henry	7 years
Edward Armin Herman	8 years
Robert R Holmes	37 years
Terrell R Holsinger	2 years
D E Howard	37 years
Douglas M Ivey Sr	28 years
Larry D Jackson	34 years
R L Johnson	36 years
Douglas L Johnston	23 years
Charles D Jones	6 years
Glenn Michael Kersnick	12 years
Dallas Richard Kidd	22 years
Charles Richard Lambert	25 years
Billie F Lambert	28 years

Paula Jane Lawrence	25 years
James E Ledford	22 years
Robert G Ledford	26 years
S D Lovinggood	40 years
W B Lynch	20 years
Wanda F Massengale	39 years
Glenda J Massey	25 years
G W McClellan	30 years
L T McCollum	21 years
H F McGarity	40 years
Lowell R Meathrell	28 years
Kenneth R Menth	14 years
Roger Kent Merideth	26 years
Dale A Metcalf	26 years
Connor L Mobbs	25 years
Robert L Monsell	21 years
Sherrie E Mowdy	38 years
N L Myers Jr	22 years
James E O'Connell	21 years
Benny J Ortega	38 years
B M Parsons	21 years
Hubert L Patrick	42 years
Richard L Pedersen	33 years
Susan Lucille Pedersen	35 years
Evaristo Alfonso Perez	41 years
Gary G Phipps	36 years
G D Prewett	32 years
H D Putnam	42 years
J R Quinn	30 years
R L Ray	40 years
Wayne William Rhodes	39 years
Ronnie Lee Richards	21 years
Anthony Michael Rubone	36 years
Marley R Smith	8 years
Gene Souza	22 years
Sharon K Staggs	39 years
Russell Jack Starker	21 years
Betty J Stowers	24 years
Joseph E Sutton	26 years
H D Towery	22 years
Mitchell David Varner	9 years
Opie W White Jr	39 years
Scott C Woodruff	22 years

August

Nelson Lionel Acosta Sr	35 years
David Graham Anderson	19 years
Richard Mark Ayuso	41 years
Billy D Boyd Sr	22 years
J R Cagle	29 years
Don Calhoun	33 years

John F Cheatwood	2 years
Estle W Clayton	21 years
Judy S DeVedas	<1 year
Carlton Ray Evans	26 years
Jerry K Farr	5 years
J L Gole	26 years
Raymond D Gonzales	32 years
Elaine Gutierrez	32 years
Donald G Gwynne	37 years
Stephen C Havener	35 years
J W Holmes	29 years
Linda C Hooks	27 years
Bobby L Hornsby	44 years
Mervin W Hutchings	40 years
Floyd William Jones	16 years
Ronald J Kacsmayk	25 years
Bill Alex Kelly	27 years
D E Leenerts	23 years
Isiah Manick	27 years
George W Mars Jr	31 years
Joseph Philip Minichello	27 years
Michael J Nipper	29 years
J W Portier	42 years
James W Pugh	34 years
Randal D Pye	25 years
Margaret L Redfern	25 years
Harold Eugene Rinard	39 years
Gary A Schulte	25 years
Gary W Sowell	30 years
C P Stokes	43 years
Roland G Streling	3 years
Daisy Mae Sweatt	35 years
Cliff F Taylor	18 years
Martha Lynn Thomas	23 years
D L Thomason	40 years
Richard C Upston	26 years
Daniel Aaron Vancil	10 years
Rollin Michael Varanese	44 years
T M Whatley	22 years

September

Samuel E Allen	28 years
Carl Francis Barry	43 years
D Bates	39 years
C T Bishop	28 years
B M Blackstock	25 years
Janet Carol Bowlds	27 years
Robert Malcolm Brewer III	35 years
Michael Dean Burden	35 years
R Cloer	24 years
Barbara D Cox	1 year

Gerald E Cumby	38 years
R R Daviss	26 years
Robert T Elrod	27 years
William G Eoff Jr	27 years
Ronald C Foster	25 years
Annie Joyce Fox	26 years
Laura H. Foxworth	31 years
Albert Guerrero	43 years
L L Harrell	26 years
W Scott Hayden	16 years
John M Hodges	42 years
Lorenzo Hunter	22 years
John Paul Kasuba	34 years
Donna R Kelly	20 years
James Lee Lemmings	25 years
Marcelino Lira	31 years
Stephen C Mercer	42 years
Matthew D Ngo	20 years
Helmut L Oelgardt	36 years
Jimmie L Parker	28 years
L L Patterson	25 years
Homer Anthony Pittard	21 years
James Fredrick Riese	35 years
Patricia G Shafer	32 years
Willard Craig Sloney	35 years
William Leon Smith	28 years
Joan C Stafford	25 years
R M Starnes	1 year
Tony L Stephenson	33 years
Jeanna S Stewart	23 years
H O Stubblefield	24 years
Phillip T Summerour I	25 years
R E Ward	28 years
Elvin Earl Wright	24 years
Stan J Yackel	14 years
John Carpenter Yocom	35 years

October

Curtis J Addison	25 years
Kenneth H Barnes	48 years
Mary L Blanchard	25 years
Norbert L Budzinski	20 years
Danny Clifton Cole	18 years
C E Crane Jr	39 years
Barbara E Crouch	34 years
Joseph Garland Doster Sr	7 years
Franklin Fitzhugh Elliott	38 years
Loren Eugene Holloway	39 years
Laura D Johnson	20 years
Betty Jean Mathis	26 years
Garth T Melville	12 years

Geneva M Miller	21 years
Gary B Milligan	31 years
Ralph L Murdock	22 years
Byron G Payne	19 years
Elwin N Peairson	12 years
Charles A Puckett	40 years
Anne M Register	27 years
William H Reining	34 years
Robert P Rettinger	25 years
Richard Albert Sandoval	35 years
Per A Schrader	39 years
L L Smith	40 years
Gloria A Van-Zant	21 years
Samuel Walker	27 years
Donald Neal Williams	38 years

November

Gerald T Adams	9 years
Ronald Michael Bond	25 years
Henry Lee Burton	21 years
Robert E Cavender	36 years
Reginald Lamar Cook	23 years
Raphael Dean	6 years
Margaret R Fletcher	21 years
D R Goodman	25 years
Steven Thomas Hickler	39 years
Doris Gwen Hubbell	35 years
Clifford A Irvin	35 years
David C Kleindienst	29 years
John P Leake	20 years
Brenda F Lemley	27 years
Mary Ellen Lucas	9 years
Electa Merritt	39 years
C V Moore	37 years
William A Sargeant	28 years
John S Tumilowicz	8 years
Billie Daniel Welborn	24 years
David Lee Wells	21 years
J K Woods	31 years

December

Thomas M Alves	37 years
Charles P Denton	26 years
Bobby Ray Garrett	26 years
Glenn David Giardinelli	27 years
T E Holbrook	46 years
Phyllis Ann Huffmaster	21 years
Clyde Johnson	2 years
Mary Lou Mac Donald	36 years
Eugene J Magnuson Jr	27 years
Ralph Lujan Navarrette	41 years



One small step for man.
One giant leap for Mrs. Johnson's class.

Get ready for Space Day 2006: "Living and Working on the Moon!" Space Day takes students on a field trip into the Universe, without ever leaving the classroom. Exploring the galaxy has never been this easy. Space Day activities are an exciting way to teach math and science. As well as enhance problem solving and critical thinking skills. Lockheed Martin has developed a downloadable Space Day Tool Kit to help teachers plan activities. Visit www.spaceday.org today. And watch their wonder take off.