

July 3, 1986 Number 13



ALV sets new records

About 80 government, industry and university representatives witnessed the second major technology demonstration of the Autonomous Land Vehicle (ALV) on June 19. The

ALV successfully ran without human control over a 2.5-mile test track at Denver Aerospace, negotiating a sharp curve and reaching speeds of 6 mph. This was more than twice as

fast and as far as the first demonstration in 1985. No other vehicle of its kind has been able to run so far and so fast. ■

Corporation's Jefferson Cups awarded to Denver employees

Two Denver Aerospace employees won top honors at the corporation's 1986 Honors Night for outstanding contributions in their fields.

Lyle E. Bergquist, a senior staff engineer in Technical Operations, was named inventor of the year at the 25th annual awards gala June 27 in Washington. Thomas A. Milligan, supervisor of the Denver Aerospace antenna laboratory, won the author-of-the-year award.

Bergquist was honored for "sustained creativity as evidenced by 18 invention disclosures, five of them in 1985 alone, including a series of inventions related to gas leak detection which have wide-ranging applications." Milligan was cited for "a major technical contribution as the author of "Modern Antenna Design," published by the McGraw-Hill Book Company in February 1985."

Bergquist and Milligan each received a sterling silver Jefferson Cup, the highest honor accorded by the corporation to an employee in recognition of outstanding performance, and a check for \$3,000.

A Denver Information & Communications Systems (I&CS) employee, Terry J. Dahlquist, was named I&CS manager of the year, while Paul R. Donohue, Michoud Aerospace, took honors as aerospace manager of the year, and Steve A. Polston was chosen Energy Systems manager of the year. The engineer-of-the-year award went to Dr. Harold T. Cates of Orlando Aerospace.

Other 1986 Denver Aerospace honorees, who were awarded Jefferson Cups and \$1,000 checks, included:

- James B. Griffin, for superior proposal management that resulted in winning a significant new contract in the Strategic Defense Initiative program.
- Craig M. Hansen, for highly valuable contributions leading to the successful results of the contractual operational review audit.
- Dr. David G. Morgenthaler, for developing a unique solution in vision data processing,

a major factor in the success of the first demonstration of the Autonomous Land Vehicle artificial intelligence test bed.

- Arthur C. Morrissey, for contributing significantly to the Titan 34D7 program and to conversion of the Titan II in the area of new business development.

- John P. Murphy, for outstanding management of the Peacekeeper flight test program, which resulted in four successful launches in 1985, including the first two launches from silos.

- Ned I. Stephenson, for sustained professional achievement in industrial photography, motion pictures and video, including recognition by an International Film Award and two National Chris Awards, and for outstanding graphic support of aerospace proposals.

- Robert D. Vaage, for significant technical contributions to winning contracts for assembly, test and system support and development of a postboost vehicle in the Small ICBM program.

- Neil D. Velie, for superior performance in developing innovative methods of cost proposal management and for leadership of important new business proposal efforts. ■



Support for arts

Donald Seawell, chairman of the board, Denver Center for the Performing Arts, (left) recently accepted a contribution from Arthur E. Koski, director, public relations. Denver Aerospace contributed \$10,000 to support the Denver Center.

Technical Operations wins pacts for SDI, rapid prototyping

Technical Operations has been awarded two contracts from the Air Force's Rome Air Development Center (RADC).

A \$2.4 million contract will help develop the requirements phase of command, control, communications and intelligence systems (C³I). The other is a \$440,000 study contract entitled Threat Characterization and Knowledge Engineering for Strategic Defense Initiatives (SDI) Security.

The C³I contract calls for the computer sciences department to build a rapid prototyping system (RPS). Rapid prototyping is a system where requirements are quickly translated into a graphic display, rather than relying on a description. The system will incorporate software packages developed by Technical Operations and will implement a design developed under the previous contract.

The rapid prototyping system will be a component of RADC's requirements engineering test bed that helps define future C³I systems for tactical, strategic and SDI applications. The tool's objective is to help government requirements engineers answer questions about key facets of embedded computer systems in conceptual development. These questions concern aspects of the system's operator or analyst interface, subsystem communications, system data flow, operator work flow, database management strategy and system performance.

Denver Aerospace will use RPS technology with the advanced command, control, communications and intelligence (AC³I) lab for proof-of-concept work for future SDI contracts for space systems. This technology, recognized as key to software productivity, could benefit all of Martin Marietta by providing a method to examine the completeness and consistency of design requirements.

In the contract for SDI security, Denver Aerospace will study threats to SDI spacecraft and onboard data management systems, and will identify proper design issues. The study will consider surveillance, battle management and weapon control applications.

Threats to SDI platforms from hostile environments, communications or design subversion and the general space environment will be analyzed. The ability of knowledge-based systems used for onboard data management systems to survive and meet SDI security and performance criteria will be determined from this analysis. The computing problems involved in SDI are so difficult that software and hardware conventional techniques are estimated as unable to meet the requirements.

The program will be managed by Phil Daley, computer sciences. It will focus on advanced hardware and software architectures. Daley was proposal manager and manager of the previous contract defining the rapid prototyping system. ■

Mars conference set for July 21-23

A comprehensive conference about Mars will be held at the National Academy of Sciences, in Washington, D.C., on July 21-23. The conference, sponsored by the NASA Headquarters Office of Space Science and Applications, will take a comprehensive look at:

- Current knowledge and understanding of Mars;
- Current and future unmanned exploration of Mars;
- Issues and options for manned exploration of Mars.

Open house scheduled for Saturday, July 19

The Family Day Open House for all Martin Marietta employees, retirees, AFPRO employees and their families will be 8:00 a.m. to 3:00 p.m., Saturday, July 19. Tickets are not needed for the open house.

Admittance to the open house will be by employee badge. At least one employee must accompany each vehicle entering the main gate to the Waterton facility. Special access passes are available for retirees and for families of employees required to work the day of the open house. Shuttle buses will be available to transport visitors along the tour route.

Special parking arrangements will be available for visitors using wheelchairs. Vehicles carrying wheelchair users should go directly to the special parking area at the south end of the factory. Security guards will direct them to the factory's entrance. An elevator is available to reach the second floor.

Tour officials recommend that individuals in wheelchairs check in with the dispatcher when they are done touring the factory. Special vans will be available to take them to accessible areas, such as the Gallery, SSB south, Reverberant and Acoustic Lab and the Space Simulation Lab.

Free food and cold drinks and special giveaway souvenirs will be available during the day.

Entertainment will take place between 10 a.m. and 6 p.m. on three stages. The groups are Rare Moment, featuring singers, dancers and music; Quarter Moon, a country band; Red Beans and Rice Jazz Band; Hot Lunch, a rock band; and Ballet Folklorico de Denver.

Other entertainers include the mime team Tom Foolery, Elroy Bondo's Comedy Juggling Review, Keystone Kops and El Jebel Clowns.

Drivers and pedestrians are urged to use caution on company property and to comply with the instructions from plant protection personnel. Tour officials suggest that visitors wear comfortable clothing and shoes.

Ground rules set for open house

1. Permanently assigned non-employees issued a striped non-employee picture badge are invited to participate in the Family Open House.
2. All visitors must be escorted by an employee or a permanently assigned non-employee.
3. All non-employee visitors and guests must be U.S. citizens or permanent residents.
4. All vehicles entering the main plant must have at least one employee or permanently assigned non-employee who must display company identification (picture badge).
5. Employees and permanently assigned non-employee hosts must display company identification (picture badge) while on company premises.
6. Cameras and tape recorders are not permitted.
7. Some areas will not be open to visitors. Hosts and visitors should adhere to approved tour routes and areas.
8. Vehicle decals will be provided for guests of employees who must work the day of the open house. ■

Cook to head space station team

J. Richard Cook, a company vice president and senior manager of major space development programs, has been named to head the company's space station proposal team.



Cook

The industrial team is competing for the contract to design, develop and build the laboratory, living quarters and logistics modules for NASA's space station.

In 20 years with Martin Marietta, Cook has had major management positions in a succession of space programs, including the Gemini-Titan launch vehicle in the 1960s, development and operation of the historic Viking landers that explored the surface of Mars 10 years ago next month, and the space shuttle ground support systems program at Vandenberg Air Force Base, Calif.

In his most recent assignment, Cook has been vice president in charge of the helicopter navigation and targeting system called TADS/PNVS at Orlando Aerospace.

In announcing Cook's new assignment, Denver Aerospace President Peter B. Teets said: "Mr. Cook effectively managed several of the country's most important space projects, and his many years of experience will be a real asset to our space station efforts."

Teets also announced that James W. McCown has been named deputy director of the space station program. McCown has been responsible for Martin Marietta's 21-month NASA contract to define and perform preliminary design of the common modules for the space station. ■

Suggested open house tour schedule

Work area	Start tour hours
— Factory — Cafeterias	8 a.m.
— Inventory Building — General Purpose Lab — Space Simulation Lab — Vibration and Reverberant Labs	9 a.m.
— Engineering Building — Electronics and Manufacturing Building — Research and Development Building	10 a.m.
— Administration Building — Space Support Buildings	11 a.m.
— West Point Facility — Denver Systems Center — South Lincoln Facility	noon
— Littleton Systems Center — Greenwood Commons	1 p.m.
— Inverness Park — Linpro I and II	2 p.m.
— Others	3 p.m.

Employees may bring their families to visit their work sites unless their areas must remain closed for safety or security considerations. Check with a supervisor for the best time to visit.

VAFB employee named to county fair board

Gordon L. McAhren, a senior material specialist in the Peacekeeper program, has been appointed to a 4-year term on the Santa Barbara County Fair Board by California Gov. George Deukmejian.



McAhren

The board sets policy for operation of the annual county fair in Santa Maria and oversees the fairground's use throughout the rest of the year.

A resident of Lompoc, Calif., McAhren is commissioner of Lompoc's Parks and Recreation Department and served for 11 years as a member of the Lompoc Valley Festival Association. ■



Quality circle cited for suggestion program

The Success Through Suggestions Program presented Susan O'Connell, seated, left, and the Strategic Launch System Quality Circle special awards for proposing and helping to develop a suggestion program for Denver Aerospace. The existing program is based on their concept. The program provides employees with a share in tangible benefits derived from their ingenuity. Members of the quality circle include, left to right, Richard L. Hoffman, Arlene Watts and Tim McEwen (support members), and George Podrasky, Jonny Ferguson and Leonard Horner (retired). Not shown are members Stan Sawicki and Fred Hawley. Carol Romero, seated, right, is program administrator.

Small ICBM work at VAFB increases

The core of Martin Marietta's small intercontinental ballistic missile (Small ICBM) group at Vandenberg Air Force Base, Calif., is busy preparing for assembly, testing, system support and launch of the country's next deterrent missile.

The Small ICBM looks like a scaled-down model of the Peacekeeper. It will be half the length, half the diameter and one-sixth the weight of a Peacekeeper and will carry only one re-entry vehicle instead of 10.

About a dozen Vandenberg Small ICBM employees are planning and coordinating with Denver Aerospace for facility and support equipment required for assembly and check out at Vandenberg. An estimated 850 employees at Denver Aerospace's Small ICBM facilities are in the designing and development phase.

Denver Aerospace will develop the missile's fourth stage, its shroud, the test launcher, and mechanical support, support and airborne vehicle equipment for the instrumentation range safety system.

After missile stages are received at Vandenberg from the associate contractors, they will be processed at the Missile Assembly Building (MAB). Peacekeeper missiles were assembled vertically in the MAB; Small ICBMs will be assembled horizontally on carriages and rolled on rails into the test launcher.

The first five small missiles, like the first eight Peacekeepers, will be launched from an above-ground cannister. The remaining 17 flights are planned for launch from a hard mobile launcher. Martin Marietta is competing to build the hard mobile launcher.

Facility modifications are scheduled for April 1987 and a development test of the test launcher system is set for the last quarter of 1987. The first ground test missile is planned to be processed in mid-1988.

Security emphasizes badge rules



The security department reminds employees and their visitors to wear their identification badges on the upper left portion of their outermost garment or on a plastic neck strap.

The badge must be displayed at all times while on Martin Marietta property or within Martin Marietta-leased

or -owned structures. The identification portion of these badges, including the individual's name, company logo, photograph, etc., must not be obscured by pins, stickers or other attachments.

The visitor escort-required badge has changed. The new badge is orange with black lettering. Please challenge anyone with an escort-required badge who is not accompanied by a picture-badged individual.

Subcontractors, vendors and job shoppers are issued badges for a specific period of time, not to exceed 1 year. Employees directing such personnel should check that their badges are current. Expired badges must be returned to the government security office.

If a subcontractor's, vendor's or job shopper's contract needs to be extended or renewed, justification for a new badge must be submitted to government security. For assistance, contact the government security badging office, Ext. 7-3249.

Safety group offers tips for July 4

While most Americans will enjoy the Fourth of July weekend outdoors, many persons suffer serious injuries from improper use of fireworks.

Each year, thousands of people require emergency room treatment for injuries associated with fireworks, warned the Colorado Safety Association.

The association offers the following

suggestions:

- Read directions on fireworks,
- Store fireworks in a dry, cool place,
- Light one device at a time,
- Ignite fireworks outdoors in a clear area.

Although sparklers are not considered "dangerous fireworks," their estimated burning temperature is more than 1,000 degrees Fahrenheit.

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Call Ext. 5364 with information or suggestions for articles, or call one of the following coordinators.

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Company-sponsored concert draws 10,000

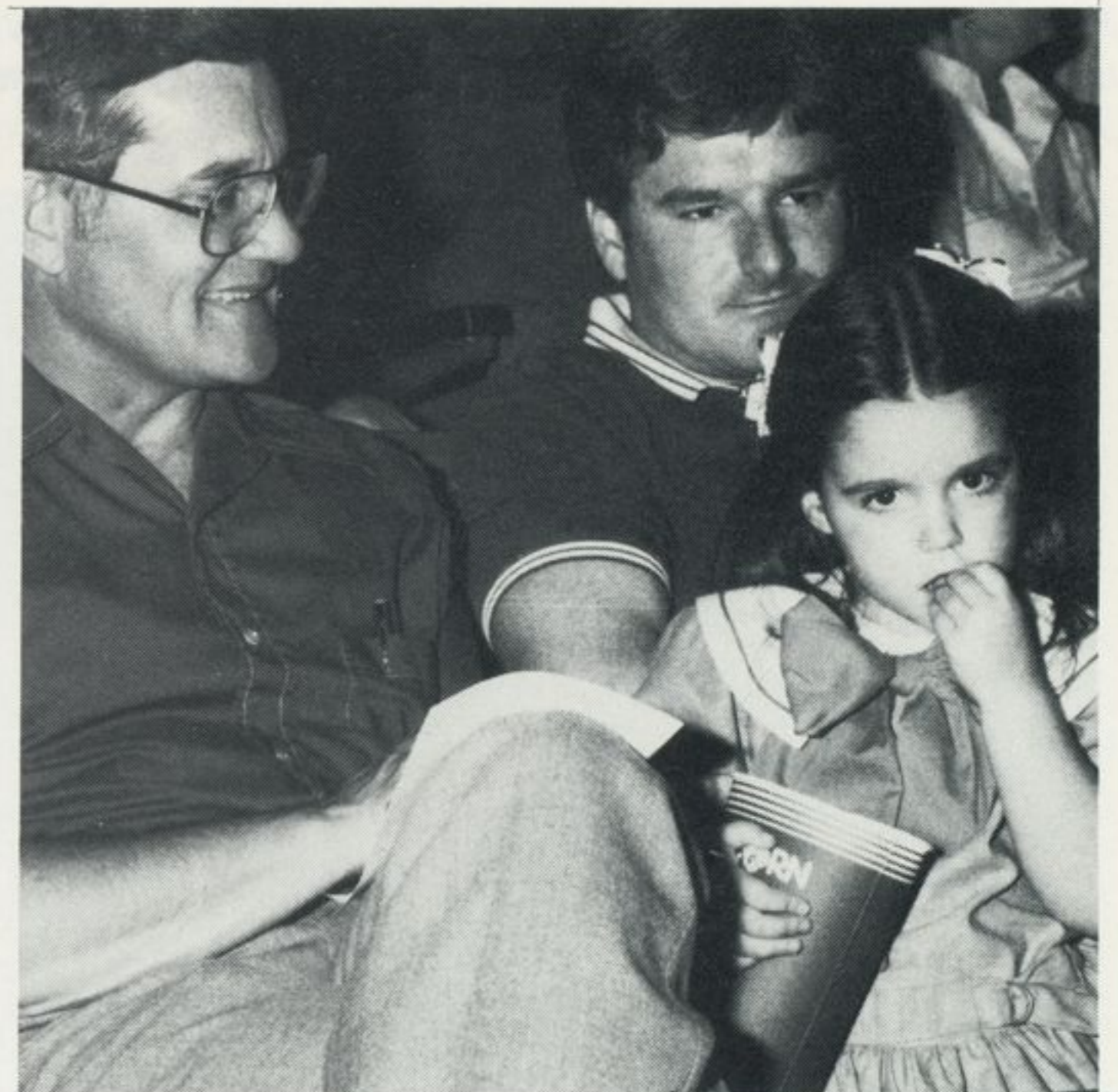
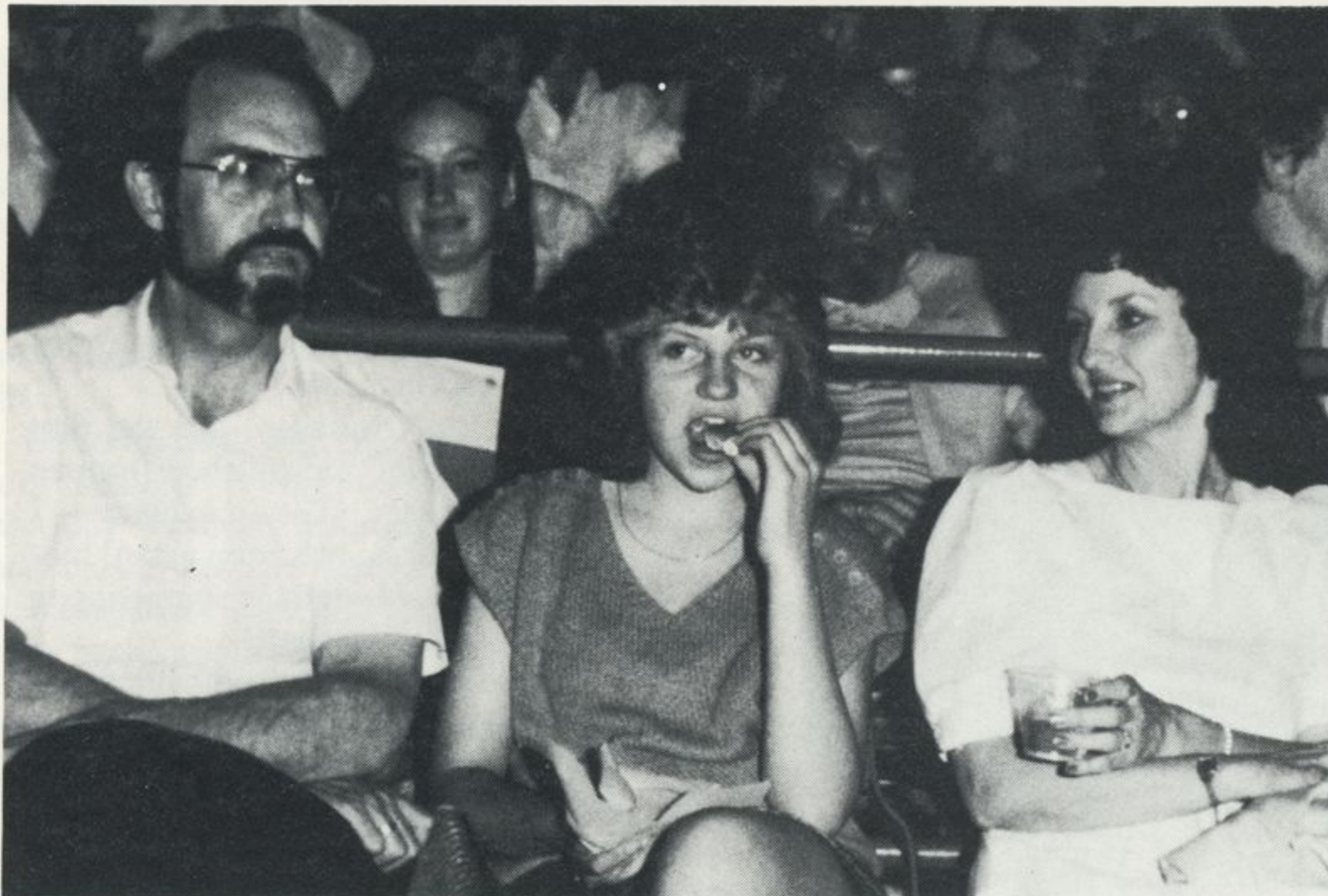


A company-sponsored pops concert featuring the Denver Symphony Orchestra and Broadway star Tommy Tune drew approximately 10,000 employees and their families to McNichols Sports Arena.

Attendees at the June 15 concert were treated to the Big Band sound of the Denver Symphony, conducted by Newton Wayland. Tune, who won a Tony Award for outstanding performance by an actor in a musical, and the Manhattan Rhythm Kings joined the symphony after intermission and entertained with Fred Astaire song-and-dance tunes.

The concert is the second of five 1986 family events sponsored by Denver Aerospace. The next event is the family open house, scheduled July 19.

Tommy Tune signs autographs.



Ethics Office handles concerns

During its first six months, the Martin Marietta Corporate Ethics Office has handled almost 300 telephone calls and letters. The majority of them seek interpretations or confirmation of interpretations of Martin Marietta's "Code of Ethics and Standards of Conduct."

"This volume of business clearly indicates that our employees are taking the code seriously," Winant (Si) Sidle, director of Corporate Ethics, said.

There also have been some allegations of unethical conduct, according to Sidle. "However, the number is relatively small, especially considering that we have about 65,000 employees." He said that each allegation is thoroughly investigated, including coordination with outside agencies when necessary.

The Ethics Office preserves the anonymity of employees who desire it and carefully monitors whether employees who express concerns and do not wish to remain anonymous suffer any indignities or retaliation, because that is forbidden by the code, Sidle said.

The code urges all employees to report any violation or apparent violation of its provisions and encourages employees to work with their supervisors in making such reports. However, employees also have the right to report violations directly to the Corporate Ethics Office.

Sidle was at Denver Aerospace in May and June to establish the Ethics Office. The Denver number is Ext. 7-4530. Sidle can be reached by telephone at MARCALL 356-9400 or (800) 338-4427 (3ETHICS). ■

Atzmiller wins award for project referral

Paul Atzmiller is the project referral winner for May.

Atzmiller, an employee of Martin Marietta since July 1980, is a systems engineer/mission operations for Defense Systems. Atzmiller referred Horace Silas, who also works in Defense Systems.

For his referral, Atzmiller receives \$2,000, and a trip to Cape Canaveral to view a space shuttle launch. ■



Atzmiller

Denver Aerospace athletes win corporate games

Martin Marietta athletes won first place in the recent sixth annual Denver Corporate Games.

Athletes from Denver Aerospace, Information & Communications Systems, and Data Systems competed in track and field, a 5-k road race, swimming, golf, bowling, tennis, volleyball, cycling and racquetball. Martin Marietta athletes scored 266 points to become the overall winner in Division A for companies with 2,500 or more employees.

Team results are as follows:

- Track team—accumulated 58 points, 4th-place overall.
- 5-k race—50 points, 1st place overall.
- Tennis—28 points, 1st place overall.
- Swimming—66 points, 2nd-place overall.
- Racquetball—20 points, 1st-place overall; Mark Helton won in the men's category and Donna Casady won in the women's.
- Volleyball—6 points, 3rd place.
- Golf—10 points, 2nd place overall. The women's division took first place, with 10 points scored by Cindy Scholz, with a score of 86.
- Bowling—5th place.
- Bicycle—28 points, 1st place overall, A Division.
- Martin Marietta cyclists—1st place, 266 points; Public Service Co.—2nd place, 260 points; Mountain Bell—3rd place, 199 points; and Adolph Coors Co.—4th place, 166 points.
- Track—4th overall; scored points in the following areas:
1st place:
 - 200-meter run/men's—Orlando Hooks
 - 1,500-meter run/men's—Bill Irvine
 - 1,600-meter relay—James Dillinger3rd place:

- 800-meter coed relay—Marlene Gunther, Orlando Hooks, Bobbie McCown and Todd Myers
- Long jump/men's—Victor Bandy
- 4th place:
 - 200-meter run/women's—Susan Howard
 - Long jump/women's—Marlene Gunther
 - 1,500-meter masters (older than 35 years)—Bo Rodriguez
 - 1,500-meter/women's—Bobbie McCown
- 5-k race—1st place overall
Men 18-29 years (min.:sec.)
1st place—Keith Golding (15:43)
Women 18-29 years:
2nd place—Clare Beña (20:05)
Men 30-35 years:
3rd place—Doug Haas (17:13)
Women 30-35 years:
2nd place—Sally Cuffin (19:46)
Men 36-40 years:
2nd place—Dan Trujillo (16:13)
Women 36-40 years (no entry):
Men 41 years and older:
3rd place—Dick Croteau (17:19)
Women 41 years and older:
4th place—Susan Douglass (24:18)
- Tennis
1st place—men's A doubles:
Brian Gallagher and Dave Jackson
1st place—women's A doubles:
Carolyn Aldorfer and Brenda Kellam
2nd place—men's A singles:
Terry Tyrrell (Data Systems)
1st place, VIP tournament, Friday night:
Arnold Roane
- Swimming—66 points scored in these events:
1st place, men's, 50-meter freestyle—Derek Hansen

- 1st place, men's, 50-meter butterfly—Dennis Casey
- 1st place, men's, 100-meter freestyle—Mark Rodenbaugh
- 1st place, women's, 100-meter freestyle—Lois Adamson
- 1st place, coed, 200-meter freestyle relay—Phyllis Halvorson, Derek Hansen, Lois Adamson and Mark Rodenbaugh
- 2nd place, coed, 100-meter master relay (35 years and older)—Dianne Mertz, Tom Acree, Tish Korbly and Grady Romine
- 4th place, men's, 50-meter backstroke—Jim Buzbee
- 4th place, coed, 200-meter medley relay—Jim Buzbee, Doug Yager, Kris Barker and Rhonda Weekly
- Bicycle—1st place overall, A division, 13-mile criterium at Washington Park
1st place—men's, Bart Sheldrake
2nd place—women's, Erlinda Kiefel
1st place—master's (35 years and up), Tilo Reber
- Golf—Results for Partner Best Ball Tournament:
Partner Best Ball Winners: Donald Williams and Paul Nolan
Low Scratch: Mark Novitsky, Harold James and Cindy Scholz
Low Net: John Greenwood
Longest Drive: Men: Chris Lain and Frank Silva; Women: Connie Clark and Marie Denton
Closest to Pin: Men: John Griffin and Chuck Roberts; Women: Debbie Godonary and Mary Jo Malinzak
Peoria Winners: Bill Stewart and Joe Delp
Door Prize Winners: Sonny Croom, Justin Corbitt, Jim Burke, Ralph Stegman, Don Gallentine and Vurlyn Doolittle. ■

Employee services/recreation

Archery—The next meeting of the Red Rock Bowmen will be at 4:45 p.m. Tuesday, July 8, in the club meeting room at the recreation area.

Motorcyclists—The Aeroriders Motorcycle Club will have an organizational meeting at 5 p.m. Monday, July 7, in the club meeting room at the recreation area. For information, contact Walt Cooper, Ext. 7-5846.

Hunting—The Skyline Hunting & Fishing Club will meet at 5 p.m. Monday, July 14, at the club meeting room in the recreation area.

Computers—The next meeting of the Commodore Users Group will be at 5 p.m. Tuesday, July 15, in the club meeting room at the recreation area. For information, contact Chuck Barton, Ext. 7-7433, or Joe Presta, Ext. 7-4220.

Public speaking—The LSC Toastmasters meet at noon every Thursday in Room 103 at the Littleton Systems Center.

Red, Hot & Blue—The Ragtime and Traditional Jazz Festival will be July 1-

6 at Heritage Square in Golden. Martin Marietta employees and families may get \$1 off daily ticket prices, \$10 off week-long passes. Discount prices will be honored on advance or at-the-door purchases. Brochures are available from recreation racks. Present a brochure to obtain a discount.

Vehicles—Auto emission testing at work locations will be July 7-9. Detailed schedules are in all recreation racks.

—Monday, July 7, Waterton facility;—Tuesday, July 8, Greenwood Commons and LSC;—Wednesday, July 9, DSC. Consult schedules for designated key drop points. Car keys must be left at drop points by 8:30 a.m.

Blood drive—The Belle Bonfils Blood Drive for employees at DSC, West Point, Tishman and Linpro I & II will be 9-11:45 a.m. and 1-2:45 p.m. Wednesday, July 9, and Thursday, July 10, at DSC in Mic Conference Room 200K. Donors are encouraged to schedule an appointment with the contact for their department:

- Dept. 98XX Barb Riney, Ext. 1-5308
- Dept. 25XX Donna Peterson, Ext. 1-5178
- Dept. 28XX Chris Cook, Ext. 1-5160
- Dept. 6XXX Mary Ellen Nolan, Ext. 7-9668

Those in other departments: Mardi Emerson, Ext. 7-6605 or 7-6750.

Because of the company's participation in Belle Bonfils Blood Bank, all Martin Marietta employees and their immediate family members who use blood may request Bonfils to replace the blood to the hospital. Requests can be made by calling Lori Sharp, employee services coordinator, Ext. 7-6605.

Computers—Sun Microsystems will demonstrate the SOS Lab's Teleoperator Control Console simulating a docking with space station on July 8. Reserve time at 10 a.m. or 2 p.m. by calling Ext. 7-6666. Open demonstrations will be 10 a.m. to 4 p.m. in the SSB second-floor presentation room. A presentation will be at 1:30 p.m. July 9 on "Symbolic Computing, AI & Lisp" at the Software Center of Excellence at LSC.