

MELPARTICULARS

Volume 12, Number 4

E-Systems Melpar Division

June 1991

E-Systems Demonstrates Aircraft Integrated Security Sensor



Falcon 10 AISS demonstration aircraft.

E-Systems Melpar Division successfully demonstrated its lightweight Aircraft Integrated Security Sensor (AISS) on a Falcon 10 corporate aircraft and plans to install it on a widebody Boeing 747 by mid-year.

The sensor provides security for an unattended parked aircraft, eliminating the need for round-the-clock guards.

The Falcon 10 installation consisted of a monostatic radar and signal processing unit and a UHF blade placed under the aircraft. The AISS test involved over 130 attempts to penetrate the protection zone, which was electronically set just beyond the wingtips. All attempts were detected including crawling, walking and jinking maneuvers. Wind gusts which buffeted the

wings and aircraft, birds and other debris entering the protection zone did not introduce false alarms.

The AISS system provides an electronic fence around the aircraft and signals if an intruder is detected. Movement immediately outside the fence, such as fuel trucks and maintenance crews, do not falsely alarm the system. The alert signal may be transmitted via beeper or cellular radio or merely light an interior panel indicating intrusion and the need to carefully inspect the aircraft.

The Melpar Division exhibited a demonstration model of the AISS system in the E-Systems corporate booth at the Andrews AFB Open House in May and the Paris Air Show in June.

E-Systems Melpar Division Awarded Multi-Million Dollar Contract

E-Systems Melpar Division has been awarded a multi-million dollar contract by the Department of Defense for the design, development, production and integration of a ground processing system.

Work will be performed at E-Systems Falls Church operations and is expected to be completed in July 1993.

Communications Council Representatives Go to Corporate for Annual Stockholders Meeting



Melpar's Judy Martinowsky (left) and Andrew Tinney.

Communications Council members Judy Martinowsky and Andrew Tinney represented the Melpar Division in April at E-Systems annual stockholders meeting in Dallas, Texas.

Martinowsky, executive secretary for Intelligence Systems, and Tinney, test engineer in Manufacturing, were two of 17 representatives from E-Systems divisions and subsidiaries nationwide.

At the meeting, E-Systems Chairman and Chief Executive Officer E. Gene Keiffer said the Persian Gulf war will likely re-emphasize the importance of intelligence systems and favorably impact E-Systems future business.

Keiffer noted that E-Systems products played a vital, although largely unpublicized role in the war.

Keiffer also cited the spread of high technology weapons within countries outside of NATO and the Soviet Union.

"The world is still a dangerous place, and perhaps becoming more so," said Keiffer. "The security of our country and our vital interests abroad require that we keep track of these developments—another growing need for intelligence."

According to Tinney and Martinowsky, the trip to the annual stockholders meeting provided valuable insight as to E-Systems business philosophy and a rare chance to meet Keiffer.

"He seemed very much in command of any situation which is good when he's your total boss," said Martinowsky. "You can really respect someone like him because you know if he's running your company, he's going to run it well."

GW to Offer Master's Degree Programs at E-Systems

The George Washington University School of Engineering and Applied Sciences is offering three degree programs at E-Systems Falls Church facility this fall. Courses will be held during the evening for the Master of Science in Communications (EE), Computer Science and Telecommunications and Computers.

To be considered for admission to the program, individuals must first schedule an interview with the program advisor by calling 202-994-6538 or contacting GW's in-house advisor. For further information on the Master of Science degree programs or other programs offered off campus, call The George Washington University Division of Continuing Education at 202-994-7020.

Inside the Corporation...

HRB Systems, an E-Systems wholly owned subsidiary, expects to receive a subcontract for the development of part of the self-protection system for the advanced tactical fighter (ATF). The ATF should provide work for HRB Systems in advanced technological areas for the next 10 years.

The ATF contract, which was awarded in April to the Boeing, General Dynamics and Lockheed team, calls for the development of the successor to the Air Force's F-15 long-range fighter. The contract may be worth \$75 to \$100 billion in orders over the next 20 years.

Montesano Receives IR&D Award

Mark Montesano, engineering supervisor of Advanced Technology (center), received an award in April for the highest score among other Melpar IR&D projects in 1990.

Presenting the award was Dr. Sam Musa (left), corporate vice president of Research and Advanced Technology, and Talbot Huff (right), Melpar vice president and general manager.



The award, an electronic daily planner affixed with an engraved plaque, is given to the person whose IR&TD project receives the highest score from government technology experts. The projects are scored each year for how well they address Department of Defense needs and how well they perform within a specified budget. The level of scoring is significant in that it provides the government a measurement tool to determine what projects deserve federal funding.

Montesano's project deals with advanced airborne packaging. In an effort to produce smaller, lighter electronics, Montesano is investigating the use of various advanced packaging materials and electronic packaging techniques.

Vollert Recognized for Senior Year Contribution

arren Vollert, director of Security, received an award in April for outstanding contribution to the Senior Year Program in 1990 by Melpar's largest customer, the 2762nd Logistics Squadron of Robins AFB, Ga.

The award resulted from a security conference of last November where representatives from all the Senior Year contractors met to discuss security problems common to the program. After the conference, members of the Air Force selected the one person they felt contributed the most to the conference.

Vollert, who was surprised to be chosen, says he doesn't view it as a personal award.

"I look at it as recognition of a coordinated effort between the people in Security and all the support services and program people at Melpar who are responsible for carrying out the Senior Year contract," he said. "It takes a lot of teamwork and dedication to achieve that kind of fully cooperative effort.

"The award is significant," said Vollert, "because it enhances Melpar's relationship with its primary customer."

Vollert came to Melpar nearly seven years ago after serving 20 years in the Air Force. He became director of Security in 1988.



Warren Vollert

Home Free



Melpar's own Victor Mercado, USAF, Doc Godshall, USMC, Tim Earhart, USMC, and Brian Decker, USA (left to right), are four of the many thousands of troops responsible for America's victory in the Gulf.

E-Teamers Brian Decker, Tim Earhart, Doc Godshall and Victor Mercado are home now. All four had been called up to active military duty to help support the war in the Persian Gulf. (Another E-Teamer, Teri Mulrooney, is still on active duty.)

Of the four, only Doc Godshall went all the way to the Gulf. Victor Mercado, a program analyst in Special Programs, made it as far as Japan where he worked on signals processing. Fairfax's Brian Decker, a programmer in Software Technology, went through soldier training certification at Ft. Bragg, N.C. And stock clerk Tim Earhart jumped around various military stations in California in support of the war.

For each one of them, military activation made for some memorable experiences.

While in Japan, Victor, who serves in the Air Force Reserves, found himself working on E-Systems equipment.

"I'd never worked on that equipment before, and I was really impressed with it," he says. "It worked beautifully, and everybody I saw, I told 'My company builds this."

Victor, Brian and Tim all say they felt a sort of letdown at not having been deployed in the Gulf.

"My wife, Cynthia, was really happy that I was going to Japan," says Victor. "But for me, the mystique and the excitement of war weren't really there."

Brian, an Army National Guard reservist,

has mixed feelings. "You get a mindset that you're going to have to do your job eventually," he says. "But something good did come out of it. I got a good three months' training."

"You'd like to say that you didn't want to go," says Tim, who is in the Marine Corps Reserves. "But after you're called up and you leave your job, school, whatever, you feel like you've missed some experiences if you don't go all the way."

Doc, who can capture attention for hours with war stories, says he now appreciates the little things in life much more. As the liaison officer between a Marine artillery and infantry unit, Doc found himself in the heat of battle in southern Kuwait more than once.

"One thing I wanted to do [when I got home] was just sit in my big Lazy Boy chair for awhile," he says. "We take a lot of things for granted in this country. When you travel abroad, you see that we have pretty neat stuff here."

E-Systems military leave benefits policy also turned out to be pretty neat for these E-Teamers. That policy, which was expanded in February to include a salary differential, took a load off their minds, they say.

"Most of the other guys [in the squadron] didn't get the differential pay," says Victor. "It just shows that E-Systems is a leader in the forefront of benefits. They look out for their people."



Melpar's Best Friend

The hardest substance on earth just keeps getting better. While you may prize the diamonds on your fingers, Melpar researchers prize diamonds for their circuit cards. That's because diamonds are one of the most thermally conductive substances available.

And in today's defense electronics industry, getting the heat to escape from systems that continue to shrink in size is no small feat.

That's where IR&TD (Independent Research and Development) comes in and where projects like Melpar's 3-D diamond technology led by Signal Processing Systems Director Tim Harvey have an effect.

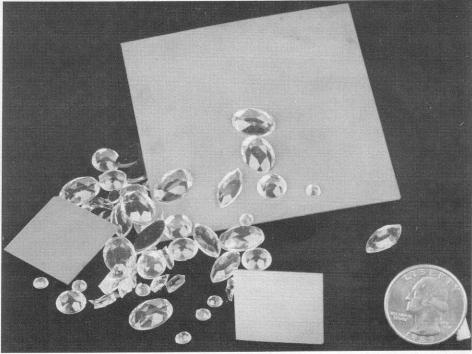
"Diamond technology is the technology of the future," says Harvey. "It will have a tremendous impact on improving our systems capabilities."

Researchers have known about the thermal advantages of diamonds for years. One of the problems, as everyone knows, is that diamonds don't come cheap.

Today, less expensive synthetic diamonds are making it easier to use the technology. These diamonds are ground into small particles and formed into substrates that you can mount chips on. Because a diamond substrate conducts heat five to eight times better than a copper one, chips can be mounted more densely on the board. In addition, diamond circuit cards can be placed closer together in a box, which decreases the wire distances between the cards. The result is a significant improvement in the processing speed.

In fact, says Harvey, a 4-inch box containing diamond circuit cards can approach the computing power of a Cray 3 computer—

Melpar engineers (*left to right*) Steve Gorman, Larry Conroy and Doug Farinelli established the technical architecture concepts for a 3-D diamond proposal recently submitted to the Defense Advanced Research Projects Agency for a 200 billion operations-per-second signal processor.



Diamond substrates like those pictured here will have a significant impact in reducing the size of electronic systems while boosting computing power.

about 8 billion instructions per second. This compares to about 10 million instructions per second for typical PCs.

The words "3-D diamond technology" come from the fact that a box or cube with diamond cards stacked together can communicate in each of the X, Y and Z directions. Holes can be laser drilled into diamond substrates to allow connections in the Z direction, the third dimension. This allows more chips to talk to each other throughout the cube, essentially making the processing more parallel.

Melpar's role in all of this has been to work on how diamond technology might be applied in the types of products and systems we sell. By analyzing architectural structures, Melpar engineers can determine what types of chips work best on the diamond substrates, how to connect them and what the functional performance would be.

To people like Tim Harvey, diamond technology makes for some exciting new possibilities.

"The implications are great," he says.
"Not only will we have a lot more functions, but the size and weight of our systems will be drastically reduced by several orders of magnitude."



Melpar Awards Savings Bonds to County Science Fair Students



1991 Melpar Science Fair award recipients. Front Row: (left to right) Talbot Huff, Geoff Guerdat, Katharine Schmiesing, Beth Belluzzo, Paul Saladino, Laurel Smith. Second Row: Rick Brooke, Jonathan Clarke, Lee Angelelli, Katrina Kernodle, Caroline Brown, Jonathan Ellis, Andrew Nashel. Third Row: Mark Lucianovic, Barnaby Felton, Neal Chaisson, Jason Arndt, Woody Dick, Dylan Rhoads and Dennis Krausman. Not pictured: Geoffrey Lowrey, Billy Kung.

Melpar recognized 19 Fairfax County intermediate and high school students in May for their outstanding science fair projects presented at the 36th annual Fairfax County Regional Science and Engineering Fair.

The students received their awards at a luncheon held at the Westwood Country Club in Vienna, Va. This year marked the sixth year that Melpar has honored local students.

Vice President and General Manager Talbot Huff congratulated each student with a certificate and either a \$200 or \$500 U.S. Savings Bond. Saying each of the students did a "superbjob," Huff encouraged them to keep up their hard work in the science fields, but to also focus on other equally important subjects like history and communication.

"It's also important to maintain strong social values," said Huff, "so that you can give back to the community the opportunities it has given you."

The students, whose project titles ranged from "Is There a Bias at the Track at Laurel?" to "Resistance Change to Temperature Variations," were accompanied by their parents and teachers. Also attending the luncheon were 15 Melpar E-Teamers who helped judge the students' projects this year.

One of the students, Woody Dick, was back again from last year to receive a second

award. Another student, Laurel Smith, is the sister of one of last year's winners, Shawn Smith. Yet another winner, Lee Angelelli, is the son of Melpar's own Ron Angelelli in Facilities.

Richard Brooke and Dr. Dennis Krausman, both previous organizers, are credited with putting together this year's ceremony. Their interest, said Brooke, was to encourage the students to build a career in the sciences and "hopefully, replace us in our fields."

Thanks to the following Melpar E-Teamers who helped judge this year's projects:

Tim Cooper Chris Roller David Bobick Nancy Lindsay Tom Zeltwanger **Bob Dineen** Gene Jacob **David Jones Brandt Springman** Elena Lawrence Kim Thomas Louise Borrelli Jim Sealock Mo Boudaoud Lynn Garland Hung Nguyen Rick Jacobson Jim Morritt

Graham Road School Choir Sings of Social Issues



Forty-two students from E-Systems partner in education, Graham Road Elementary School, visited Melpar in May for a choral performance that surpassed previous others.

The students, who were all dressed in black and white, sang songs ranging from boogie-woogie war tunes to themes advocating racial equality. The performance was a departure from earlier concerts where the melodies were essentially traditional.

"I think the music selection was particularly appropriate in light of current events," said one member of the audience.

Cynthia Carlson, Graham Road School's music teacher, was largely responsible for coordinating the music material.

"We purposefully put together a program that would be enjoyable but would also make people think," she said.

Marianna Dorsett has learned a little bit about the speed of moving up the career ladder. It doesn't always go as fast as you might think.

"When you're just out of college, you want everything right away," says Marianna.

Now seven years out of college herself, Marianna has finally jumped a step. In May, she was promoted to Cost Analysis Supervisor.

To her, seven years seemed like an eternity. Three years ago before coming to Melpar, she worked for Digital Signal doing graphics and various other tasks including cost analysis. And though she majored in Geography at Mary Washington College, Marianna soon discovered that she liked working with numbers best.

"I've always liked balancing my checkbook," says Marianna. "If it's even a penny off, I will look an hour for that penny!"

So when the job offer came from E-Systems for a cost analyst position, it seemed like a natural choice.

At first, she says, she was a little timid over the quality of her work. When she gave a report to a program manager, she worried over possible mistakes. Now, she feels much more confident.

"It's not hard to add, subtract, multiply, and divide. What's hard," she says with a laugh as she looks at the confusion of papers strewn across her desk, "is keeping everything organized!"

SCALING THE WALL TO SUCCESS



"It's fun to come to work," says Cost Analysis Supervisor Marianna Dorsett. "Everybody works hard, but they have a good time doing it."

It wasn't just Marianna's knack for numbers that got her to where she is, however. Almost anyone who knows her will tell you how easygoing she is—a quality that makes for a good leader.

"People like to work with her and tend to follow her," says Marianna's former supervisor, Roger Lohman. "She takes good care of her people and supports them when they need help."

Marianna says she's not so sure about her leading abilities.

"But I guess when I do something good, I lead others to do good things too," she says.

For Marianna, the transition from coworker to supervisor was a little bit scary.

To ease that transition, she sat down and had a heart-to-heart talk with her employees who told her they were happy about the change. Now she hopes she can help them solve problems the way her former boss, Roger Lohman, did for her.

"He frequently had people at his door asking questions," says Marianna. "I hope that's how it will be with me too. I think solving problems is fun."

Marianna says she's looking forward to her career at E-Systems. She hopes that after being a supervisor awhile, she can someday become an assistant program manager. Her prescription for that success?

"Work hard and be open-minded. Never say, 'That's not my job.' Learn as much as you can about how the Company works so that you can do better in your own job," she says. And most of all, "Be patient. It's not going to happen overnight."

Academic Applause



Roel Abacan
B.A. Business Management
National-Louis University



Paul Bock M.S. Management National–Louis University



William Donnelly A.A. Computer Science Montgomery College



Mark English B.S. Elec. Engr. Technology Capitol College



John Ferro M.E.S.E. Engr. & Sys Engr. Virginia Polytechnic Institute



Stephen Floyd M.S.E.E. Electrical Engineering Johns Hopkins University



Mark Freemantle M.E.M. Engineering Mgmt. George Washington University



Ted Hauffe M.B.A. Finance Virginia Polytechnic Institute



James Mihal M.S. Information Management George Washington University



Brennan Roy M.S. Engineering Management George Washington University

Movers and Shakers

Falls Church

S. J. Alexander G. T. Aschenbrenner G. A. Bazemore

A. S. Bigelow B. L. Coulson M. G. Dorsett

D V Edmonds D. C. Eggar R. A. Esser P. A. Ferguson

N. A. Ferrer M F Freemantle S. E. Gross

D. C. Harbour C. J. Hauser Jr V. F. Hervias J. B. Hopkins

L. L. Klepec R. S. Krassowsky E. E. Laky

J. D. Law K. M. Lewis

G. L. Masters J. F. Matus J. H. Mihal H. S. Mitchell B. W. Morris

J W Nannen H. M. Nguyen D. C. Orosz J. D. Palermo

K. J. Patel G. A. Pennington J. L. Peters

R. G. Phillips J. M. Raecke G. L. Rastelli P. J. Scott

D A Short R. G. Stuby Jr L. E. Thornton T. J. Trapp

B. D. Tufts G. E. Ward K. G. Williams

A. L. Zinicola Fairfax

C. B. Abbott Jr M. G. Ankner C. A. Barker

E. J. Chen

A. R. Eisenmann C. S. Flynn D. S. Garrett C. M. Garritty

J. L. Harris M. J. Kacmarcik B. A. Kight

N. P. Lindsay M. D. Long L. P. Midgley

S. M. Olson M. D. Plater R. D. Smith K. T. Tran

J. D. Tripp M. K. Truona D. J. Wilson

Promoted From:

Program Mgr Sr S/W Analyst Prog Mgr Sr Mech Eng Clerk A Cost Analysis Grp Ldr Sr Data Entry Opr Sr Fld Elec Eng Elec Eng Sr Personnel Clerk Payrol Clerk Elec Engineer Assembler Sr Elec Eng Matl Price Est Design Eng Software Analyst

Jr Test Eng Grp Ldr Sr Elec Eng Clerk Typist Assoc Logist Analyst Sr Logistics Eng Planner Assoc Prog Mgr Assoc Prog Mgr Jr Cost Analyst

Clerk Typist Asst Prog Mgr Data Entry Opr Test Eng Programmer Princ Fac Eng Plan Spec

CM Asst Stock Clerk Sr Clerk Typist Prog Analyst Warehouse Grp Ldr Driver

Elec Eng Asst Prog Mgr Sr Elec Engineer Contract Admin Clerk Typist

Prog Analyst S/W Analyst Eng Design Asst

Reliability Engineer Prin Program Analyst Met Eng Jr Met Ena Adm Asst Sr Elec Eng Report Secretary Planner Sr Eng Tech Assem 1/C Prin S/W Analyst Sr Test Tech Jr Eng Asst

S/W Analyst Fac Layout Tech Flec Eng Assembler Line Inspect 1/C Assembler 1/CL

Sr Test Tech

To: Sr Program Mgr

Eng Supv Sr Prog Mgr Eng Supv Sr Clerk A Cost Analysis Supv Lead Sr Data Entry Opr Prin Fld Elec Eng Sr Elec Eng Personnel Asst Jr Acct Spec Sr Elec Engineer Assem 1/C Assoc Prog Mgr Sr Matl Cost Est Lead Design Eng Sr Software Analyst Fld Eng Spec Princ Eng Sr Clerk Typist Program Mgt Princ Logistics Eng Planning Spec Asst Prog Mgr Asst Prog Mgr Cost Analyst Sr Clerk Typist Prog Mgr Sr Data Entry Opr Sr Test Eng Systems Analyst Fac Supv Prod Sched Coord

Prog Mgr Prin Engineer Sr Contract Admin Sr Clerk Typis Assoc Prog Mgr Sr S/W Analyst Eng Spec Sr Reliability Eng Cost Analysis Supv Sr Met Eng Assoc Met Eng **Business Analyst** Princ Fna

Sr CM Asst

Storekeeper Assoc Fin Syst Analyst

Stores Supv Driver 1/CL

Sr Elec Eng

Sr Prog Analyst

Jr Eng Assist Planning Spec Jr Elec Engineer Assem Tech S/W Devel Supv Jr Test Eng Prog Mgt Asst Sr S/W Analyst Eng Spec Sr Elec Eng

Assembler 1/CL EMI Assembly Tech Jr Test Eng

1991 Service Awards for May/June



Craddock Granger 35 Years

Ten Years

Roger W. Bernard Timothy C. Brannan OK J. Chong Michael A. Cianciosi Frank J. Clement Michael F. Clingempeel Carol A. D'Andrea Marshall R. Devine Harold R. Edwards Mark B. English Robert C. Fitch George D. Harinec Larry W. Holcomb David A. Jones

Herman L. Payne Byron H. Romine Alan R. Russell William H. Storey Mark A. Trbovich Monte C. Vanness Dale A. Whiteside Jeanette C. Woolfolk

Bradley C. Wright

Five Years

Samuel J. Alexander Diane L. Barbaris Timothy W. Blosser

Mary E. Butler Laurie T. Childress Harold W. Davis Gary H. Ellis Susan G. Heinbach Robert L. Hitchner Claudia M. Judge Van A. Keriakos James E. Kirth John F. Kody Donald F. Krintz Robert I. McNamee Todd D. Mitchell Darcy M. Nguyen Hung H. Nguyen Steven C. Ola Nancy J. Reynolds David S. Roberts Christopher D. Roller David J. Ross Teresa B. Stewart Rodrick A. Summers Barry A. Suskind James W. Thomas Jay M. Wheeler Stephen A. Winters William C. Wuttke Jr.

Retirees

Not pictured: John A. Cicotello, 33 years



Philip L. Bachman 36 Years



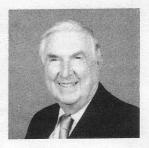
Janice J. Knies 11 Years



Rozelle H. Neely 25 Years



June C. Pollet 32 Years



Michael J. Zito

Robert M. Swift 11 Years

Sports Corner . . . First Annual Scramble Golf Tournament Held



The first annual Scramble Golf Tournament contestants included (front row, left to right) Joe Norton, Mike Lewis, Mike Krawczyk, Jeff Hunter, Dan Bindbeutel and Chuck Otzel. (Backrow, left to right) Brian Doerk, Jim Foster, Lou Konior, Don Berman, Jeff Sackett, Tom Tremblay, Tom Hoth, Al Hutson, Chris Howell, Fred Kaufman, Greg Channel and Randy Edmondson. Not Pictured: Penny Privitzer, Bill Kyker, Lou Orehek, Tony Zinicola, Allen Murphy and Jim McDaniel.

gly weather didn't stop 24 Melpar E-Teamers from participating in the first annual Melpar Early Bird Scramble Golf Tournament held April 20 at Goose Creek Golf Course in Leesburg, Va. Six 4-person teams competed for first place honors and best overall score. In addition, each player was eligible to compete for longest drive on hole #15 and closest-to-the-pin on hole #4.

Scramble golf begins when all players on a team hit a shot from the tee. The best shot is chosen, and all team players hit their next shot from that spot. This continues until the hole is completed.

The tournament offered plenty of excitement with scores ranging from four under par to three over par. One hole in particular which caused problems for most teams was a narrow, tree-lined 196-yard par three that seemed to be swallowing golf balls at will.

First place honors went to the team of Tom Hoth, Al Hutson, Fred Kaufman, and Mike "Big Cat" Krawczyk, who shot a blazing four under par 68. Krawczyk also won the longest drive contest with a drive of approximately 290 yards.

Closest-to-the-pin honors went to last-minute replacement Jim McDaniel who fired a nine-iron within 12 feet of the hole on #4.

"I didn't expect [the record] to hold up,"

said McDaniel who was in the first group to tee off. "Ithought someone behind us would beat it."

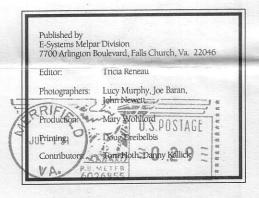
Tournament co-directors Randy Edmondson and Tom Hoth thank everyone for their participation and patience in making the competition enjoyable and successful.

Men's Softball Team Holding on Strong

Purple Haze, Melpar's Fairfax County Industrial League Men's softball team, has continued its winning ways from last year's team.

With an opening season tournament record of 5-1, the regular season began with a 7-1 record. Much of the team's success is due to its sparkling defense and pitching. Bill Kyker, Jeff Campbell, Dave Eliot, Chris Bilbie and Scott Davis anchor the infield. The outfield is manned by Doug Smith, Rich Radcliffe, Jim Palermo, Alex Heidt and Owen Stinnett. Danny Kallick and Kevin Martin have also provided excellent pitching.

Hitting highlights include an 8-man team win by 24-15 and four 20-run games. **M**



E-Systems, Inc. Melpar Division 7700 ArlingtonBoulevard Falls Church, Virginia 22046 Forwarding and Address Correction Requested