

MELPARTICULARS

Volume 11, Number 2

E-Systems Melpar Division

May 1990

TACIT RAINBOW Contract Awarded to Melpar



The award of TACIT RAINBOW can be attributed to a large number of people, including the E-Teamers pictured here.

In March, the team of Raytheon, E-Systems, and McDonnell-Douglas was awarded a \$105 million contract to develop the ground-launched version of the TACIT RAINBOW missile system.

TACIT RAINBOW, which will be used by the U.S. Army, consists of multiple missiles held in a launch pod container aboard a tracked vehicle. The missiles, when launched, are designed to seek and destroy points of enemy electronic emitters.

E-Systems Melpar Division will be subcontracted to Raytheon to produce the seeking device located in the missile's nose. McDonnell-Douglas, also subcontracted to Raytheon, will build the missile's airframe, engine, and the launch pod containers. Raytheon, the prime contractor, will act as the systems integrator and will build the mission computer that guides the missile to the target area.

In the first phase of the contract, Melpar will engineer the seeker and demonstrate its performance in a series of flight tests. The tests will involve 32 units.

At the same time the units are being

tested, Melpar will establish a pilot production line to demonstrate that the units can be produced in high quantities. If the Army is satisfied with the test results, Melpar will begin limited-rate production and will build several hundred of the units to show that all the manufacturing and control processes are correct. Should this occur, Melpar's future production options of the contract will be valued at approximately \$60 million.

Once the production line has been proved and the Army's requirements met, Melpar will be able to produce additional units, worth an estimated \$160 million.

Melpar began working with the Raytheon/McDonnell-Douglas team on the TACIT RAINBOW bid nearly five years ago when Director Hugh Shoemaker and Program Manager John McCullough visited the Army in Ft. Leavenworth, Kan.

"It's not typical for E-Systems to work such a long time on a contract bid," says Shoemaker. "But as the TACIT RAINBOW case has shown, sometimes you may have to invest a lot of time in a program to win it,

and in that sense we were successful."

Shoemaker added that a great deal of effort from a lot of Melpar E-Teamers can be credited for the contract win.

"There were some people who worked until midnight on numerous occasions," he says. "It was a team effort. We had a wide variety of organizations that helped—Engineering at Fairfax, the Contracts group, cost analysts, secretaries, Manufacturing and Test people, Quality Assurance, and Purchasing in Falls Church who helped find the various components we needed—all these groups were helpful."

Shoemaker says the three-company team's proposal delivered to Dayton, Ohio, weighed 9,500 pounds. "That gives you an idea of the amount of effort that went into the proposal alone," he says.

Continued on page 6

E-Systems Reports Record First Quarter Sales and Earnings

E-Systems sales and earnings continued an upward trend, with record highs being set for the first quarter of 1990.

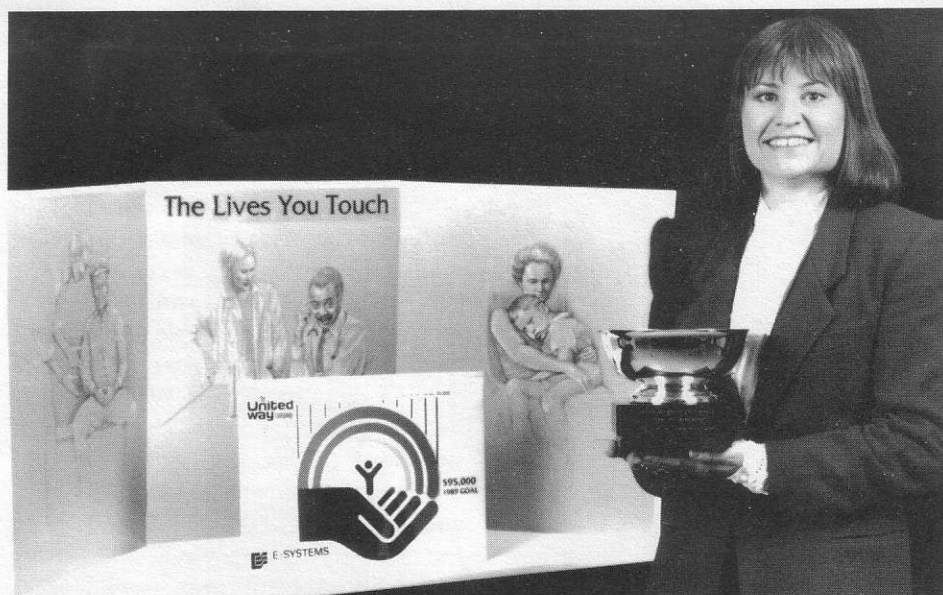
Sales at the close of the quarter were \$457.8 million, versus 1989 first quarter sales of \$394.9 million.

Net income for the first quarter rose to \$21.9 million, or 70 cents a share, compared to net income of \$19.1 million, or 61 cents a share for the same quarter last year.

Bookings of new orders during the first quarter amounted to \$325.6 million, compared to first quarter 1989 bookings of \$385.2 million. The backlog of unfilled orders at the end of March was \$2.373 billion, versus the 1989 first quarter ending backlog of \$2.235 billion.

"We are pleased with these results which are in accordance with our expectations," said Chairman and Chief Executive Officer E. Gene Keiffer. **M**

Melpar Wins First Place Award in the United Way Communications Contest



For the second year in a row, a Melpar E-Teamer has been awarded the honor of first place in the Most Effective Display category of the United Way Communications Contest.

Senior graphic artist Deanna Guyett was responsible for Melpar's first place win this year, which was tied with an entry from Amtrak. Her display was an unusual three-sided goal chart depicting three examples of how our United Way dollars go to work for the community. One sketch showed a homeless man being counseled; another showed two physicians at work in a lab; and the third sketch was of a social worker holding a child with Down's syndrome.

Guyett, who worked on the project for several weeks, is the second E-Teamer to win this award. Clarence Abercrombie, also a senior graphic artist, won first place last year and honorable mention the year before.

Guyett received her silver cup award and certificate at the annual United Way awards ceremony in April. The awards ceremony, held at the Sheraton Washington Hotel in downtown Washington, D.C., was attended by approximately 1,500 representatives from other companies and organizations which participated in the 1989 campaign. **M**

Congratulations Deanna!

Ada Users Group Formed at Melpar

Approximately 35 people attended the first Melpar Ada Users Group meeting on March 28, 1990.

Ada is a computer language used in DoD software development. The Melpar Ada Users Group was organized by senior software analyst Sandra Givan to increase Melpar employees' knowledge of the Ada language.

At the first meeting, a number of goals were discussed. These included monthly meetings with speakers, a newsletter, a software library of Ada routines and a library of Ada technical papers and course notes. The attendees were encouraged to contribute their talents to a shared effort in order to broaden the group's skills in the Ada language.

Guest speaker Ellie Budd, director of Systems Software, spoke on the projects at Melpar using Ada, both current and proposed. Potential methods of Ada training available at Melpar were also examined.

The group voted to hold meetings on the last Wednesday of each month, with occasional noontime meetings. Fairfax employees are invited to join with Falls Church in this effort. Future meetings may be held at the Fairfax facility.

The next Ada Users Group meeting will be Wednesday, May 30 at 11:30 in the Yorktown Room (FC). Software Engineering Supervisor Carolyn Andrukonis will be the guest speaker. All interested employees are welcome to attend. **M**


Corporate News . . .

C. R. Farmer to Retire

E-Systems has announced that Charles "Chuck" R. Farmer Jr., Senior Vice President and Group Executive, has notified the Company of his intent to retire, effective June 8.

A Dallas native, Farmer has been with E-Systems and its predecessor companies for 33 years.

Upon Farmer's retirement, Dr. Terry W. Heil will become Senior Vice President of the Company. At that time, all operating units of the Company will report to Heil and Lowell Lawson, President and Chief Operating Officer. **M**



**Check with
Brenda Schomburg,
FC (X2288) or
Maureen Valdex, FX
(X3275) in Security.
They may have what
you're looking for.
And if you found
something, let them
know.
Somebody may be
looking for it.**

Melpar's IR&D Program: Looking to the Future

In order to be competitively successful, every company needs to take risks. In the defense industry, however, procurement contracts can limit innovative tinkering that results in smaller, lighter, more durable, and less expensive products. With contract work, we stick to our orders and minimize risks.

Nevertheless, the ability to win contracts depends on our skill in new technologies that will work better and save the customer money in the future. Such work

"In today's political climate, you've got to do whatever you can to increase your competitiveness," says Emmett.

IR&D is part of the research and engineering program (R&E) which is funded by the government. Every year, Melpar negotiates with the government the amount of money that can be used on R&E. Last year, the government allocated \$4.25 million to Melpar's R&E program.

Typically, the IR&D portion of the R&E budget will be divided among some 15

that heat by looking at different packaging materials and how well they allow the heat to escape.

"The thermal performance is a big factor nowadays with this new packaging scheme," says Montesano. "It's the thermal performance, not the electrical performance, that limits you. If you can't get the heat out, it's not going to work."

Every year, Emmett and Sansotta prepare a report on what Melpar's IR&D projects, like Montesano's, are doing and submit the report for government review. This report is distributed to a number of government evaluators. Based on the evaluators' scores of our projects, the government will determine the amount of R&E funding Melpar will receive the following year.

Sometimes the government evaluation on certain projects may be low, as was the case of Montesano's project a few years ago.

"The government evaluators were saying, 'This is nothing new. It is just mechanical engineering,'" says Emmett. "Now that particular project is scoring very high. The government evaluators now realize that you can't put all those chips together without worrying about waste heat extraction. So now they're saying, 'You've got to worry about mechanical engineering.'"

In addition to monitoring the progress of each IR&D project and preparing an annual report for the government, Emmett and Sansotta organize monthly "technical breakfasts." At these breakfasts, the principal investigator of one project will present his or her project to interested employees throughout the division.

"The idea is to spread the word around Melpar about what's going on in the IR&D program," says Emmett. "It's a way to get some of the IR&D excitement infused throughout the division."

In this era of declining defense budgets, it is, indeed, important for us to get excited about what we're doing to be more competitive in the future. With IR&D, Melpar can look at potential problem areas, solve those problems, and be able to apply the results into a forthcoming program or contract.

"We do this," says Emmett, "because we've got to maintain our competitive edge in state-of-the-art technology. One very important way you do that is through research and development."

M



Part of Janel Sansotta's (center) and Steve Emmett's (right) jobs as IR&D administrator and coordinator is following up on the progress of projects like that being researched by Mark Montesano (left).

may not always be fruitful, but it's essential that we take the risk and find out. That's why we have IR&D.

IR&D, or Independent Research and Development, is a tool Melpar uses to investigate ways of making our products better. Sometimes our IR&D work leads to new business, and sometimes it doesn't. The point is, all IR&D work pays off because we learn what does and does not work.

Melpar's IR&D program is headed by Steve Emmett in Strategic Development. Working with Emmett is the IR&D administrator Janel Sansotta. Together, these two E-Teamers monitor the various projects being researched and help ensure that our IR&D work will strengthen Melpar's ability to acquire future contracts.

different projects. These projects arise out of problems our engineers see facing us in the future.

Take, for instance, Mark Montesano, principal investigator for one of Melpar's current IR&D projects. In his area, engineers are working on reducing the size and weight of the electronics in our systems through multi-chip packaging. In other words, rather than package each component on a circuit board separately, many components are put into one package, thus greatly reducing the size and the weight of the original circuit board.

The problem that arises, however, is that, because there are more components on a board in a lesser amount of space, the board generates more heat. Montesano's research involves finding ways to get rid of

Living the History of the Civil War

It's a brisk, clear day at the Lincoln Memorial in Washington, D.C. The monument area, usually bustling with tourist activity, is quiet except for the sound of the occasional wind-blowing and Abraham Lincoln's voice as the Civil War president delivers his second inaugural address.

A horse-drawn carriage awaits the president at the foot of the memorial steps. Union soldiers line up facing each other, forming a clear path from the carriage to the podium where Lincoln speaks. Behind the president stand uniformed "politicians." Their "wives" are dressed in bonnets and hoop skirts. Among the politicians' wives, clad in a light blue hooped dress and a black cape and hat, is Melpar's Donna Cafarella.

For Donna, a senior clerk typist at the Fairfax facility, Lincoln's second inaugural is just one of many Civil War reenactments to participate in this year. Most of the other events are battles reenacted almost every weekend from Memorial Day in May through Labor Day in September.

"The hobby is very popular right now," she says.

Cafarella first became interested in reenacting nine years ago when she dressed in period clothes and gave tours of an old field hospital at the Manassas Battlefield. Working at Manassas, she heard many people tell stories of battle reenactments in places like Gettysburg, Pa.

Cafarella, who says she was "born in the wrong century," began buying and sewing



Civil War reenactments require several types of dresses, including work dresses and ball gowns. Here, Donna Cafarella poses in a typical day dress.

her own period clothes for a pastime that would soon take up the greater part of her nonworking days. Most of the battles last an entire weekend, and participants set up camp on site on Friday night and stay through the end on Sunday.

Cafarella takes her reenacting seriously and admits that she sometimes almost believes she is actually reliving the times.

"I remember the Sunday morning of my first event in New Market, Va.," she says. "I got up early and walked out of my tent. You couldn't see any paved roads from there. A mist had settled upon the ground, and the sun was just coming up. Some of the fires were still going, and for a minute I thought, 'Where am I? Am I here or am I there?'"

At battle reenactments, Cafarella spends her time in the camp doing living history impressions such as knitting, sewing, or cooking beef stew for the soldiers who practice their drills during the day. Spectators frequently walk through the camps and ask questions.

"You're asked a hundred times in a

weekend, 'Gee, aren't you hot in all those clothes?' I never get tired of it. I just explain that yes, I'm hot, but this was the way it was, and people were used to it," she says. "I enjoy teaching people about the Civil War and what people went through."

Although Cafarella's family comes from New Jersey and New York, she says she typically plays the southern lady and feels a certain kinship to the South. At an event in Occoquan, Va., for example, the scene was one where the Yankee army had taken over the town. Guards were set up around town, and all the town residents were required to have passes when walking around. Cafarella and a Confederate girlfriend, however, kept avoiding the guards and refused to apply for passes until a Yankee soldier noticed them.

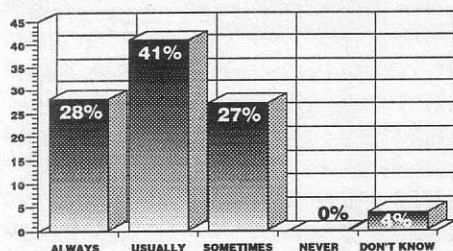
"He started screaming, 'Soldiers! Stop those two women!'" she says, laughing at the memory. "So we took off running down the middle of the street in Occoquan with

Continued on page 6

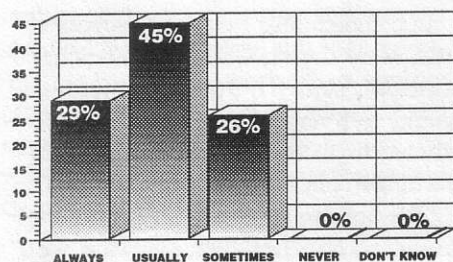
1990 Readership Survey Results

Melparticulars is . . .

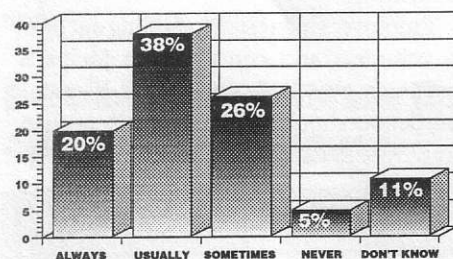
INTERESTING



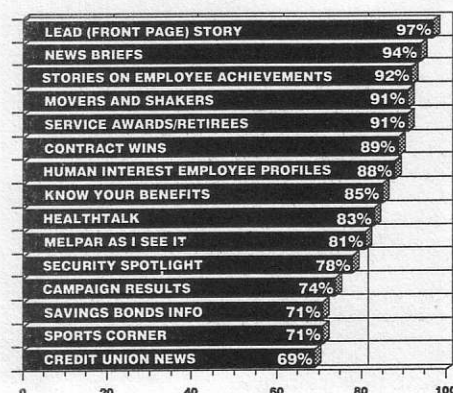
INFORMATIVE



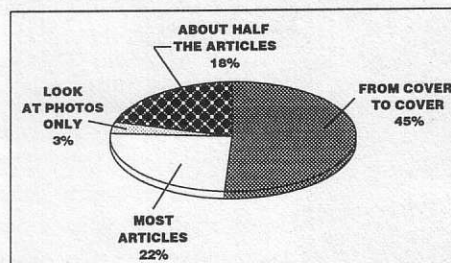
TIMELY



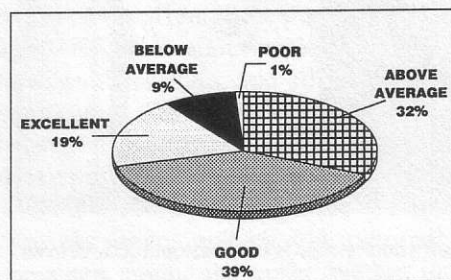
Respondents who always or usually read the following Melparticulars features.



How thoroughly do you read Melparticulars?



How well does Melparticulars communicate information about the company and its activities?



COMMENTS

"Write more on Melpar volunteers. E-Teamers do more than Graham Road and Children's Hospital."

"A good 'rag'. I enjoy it very much."

"It would be advantageous to know more about our contracts. I learn more from the *Washington Post* about our contracts than from E-System's internal publication."

"Continue on present course. *Melparticulars* personalizes the Company."

"More, but shorter, human interest stories/profiles, especially on lower salaried people."

"Excellent job. Keep them coming!"

"Write articles about some of the products Melpar manufactures and how and where they are used. Most of us have no idea (what Melpar produces)."

"*Melparticulars* is for Melpar employees. Great!"

"How about a splash of color?"

"Let's talk more about the company and its goals."

From the Editor

When we conducted the 1990 Readership Survey, more information on company business and divisional activities was suggested.

We now publish 2800 copies of *Melparticulars* each issue and distribute them to approximately 2400 Melpar employees, 200 retirees, other E-Systems divisions and offices, and several local government and community organizations. Sixty-five responses came in, which represents 2 percent of current employees. While the number responding to the survey was small, the figures on this page reflect the responses.

I read each return and came away realizing the general consensus was that *Melparticulars* needs to focus more on company business and activities. Quite a few people said they liked the employee profiles, but several suggested they be shorter. In this issue and in future issues, I hope you'll find that changes have been made on both points. In addition, the staff of *Melparticulars* is planning other changes—some obvious, some subtle—that you may notice further on.

A lot of what we do in *Melparticulars* comes out of your ideas and, in that sense, the survey helped us a lot. Your comments are always appreciated, and I hope that you will continue to notify me of story ideas and what you do and don't like. I want to hear from you, so please send me a note or drop me a line (x2717).

Thank you.

Tricia Reneau

Tricia Reneau
Editor, *Melparticulars*

E-Teamer's Daughter Goes to the White House



Mandy Tate (right) presents Mrs. Bush with a few children's books while R.I.F. President Judy Graves (left) and Millie, the White House spaniel, look on.

Mandy Tate, the 9-year-old daughter of Melpar accounting secretary Sharon Tate, was one of four children selected at random to go to the White House in January and meet First Lady Barbara Bush as part of the Reading Is Fundamental (R.I.F.) program.

At the time, R.I.F. was celebrating National Book Week and the presentation of its 100-millionth book to children across the country.

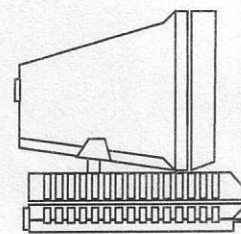
Mandy, a fourth grade student at Freedom Hill Elementary School in Vienna, Va., went to the White House with Judy Weiss, the R.I.F. liaison and librarian at the school.

At the White House, Mandy and the other three selected children presented books to Mrs. Bush that were voted favorites in a poll of 300,000 of their U.S. peers. Before their meeting with Mrs. Bush, the group was treated to a private tour of the White House.

Sharon Tate, Mandy's mother, says she was "shocked" when her daughter was selected. "It was literally a pick-of-the-hat sort of deal," she says, "and we never have luck like that.

"I was just thrilled for her to be able to go to the White House and meet the First Lady. It was such an honor."

Computers for Graham Road School - How Well Did We Do?



Since Melpar E-Teamers began participating in the Computers-for-Graham Road School Program, over

\$82,000 in cash register receipts from Giant and Safeway have been donated to the school. Sixty thousand dollars in Giant receipts were collected to help purchase several Apple computers for use in the classrooms. Safeway receipts totaled over \$22,000 and will be used to purchase an IBM computer system for school and teacher use.

In commending Melpar employees' efforts, Mary Carter, Graham Road School principal, said: "E-Systems employees should feel very pleased that they contributed to an activity that will have far-reaching implications for our students.

"We hope to continue our partnership in other ways in the future. As always, we'd like to get more employees involved in sharing their time with students and acting as mentors."

Employees interested in finding out how to volunteer and contribute to Melpar's partnership with Graham Road Elementary School should contact Tricia Reneau in Employee Relations, x2717. **M**

CIVIL WAR Cont. from pg 4

half the Union army chasing us at bayonet point! They finally caught up with us and marched us back to town where we were arrested."

Although she has a lot of fun with Civil War reenactments, Cafarella says such living histories are useful because they emphasize the importance of our American heritage.

"I think the Civil War did a lot to shape our nation," she says. "During the war, it was brother against brother. Families were split apart, and the nation was split apart.

"The Civil War taught us that we really have to unite. To really be a country, we have to be a team first."

MELPARTICULARS

Published by
E-Systems Melpar Division
7700 Arlington Boulevard, Falls Church, VA 22046
Editor: Tricia Reneau
Photographers: Lucy Murphy, Joe Baran,
John Newett
Production: Mary Wohlford
Printing: Doug Dreibelbis
Contributors: Sandra Givan, Shirley Matisans,
Mac Mercer

TACIT RAINBOW Cont. from pg 1

The TACIT RAINBOW contract is the first weapons system contract that Melpar has worked with in recent years. People such as Hugh Shoemaker feel this contract opens new doors for Melpar work in missile production and technology.

Says Shoemaker, "It's a whole new business opportunity for us."

Security Spotlight . . .

Computer Espionage: Tracking a Spy

By Clifford Stoll

I'm now a convert and a believer in the need for computer security. My experience began in 1986. I had just begun a new job at the Lawrence Berkeley Laboratory in California. Like most major mainframe operations, users are "charged" for the time spent using the computer system, and these charges are billed back to the user's department to keep track of internal costs.

On my second day of work, I discovered a 75-cent discrepancy in my tab representing a few seconds of computer time that I had not used. It turned out to be a hacker's first attempt to penetrate the Lawrence Lab's files.

It also turned out to be a case of international computer espionage involved with military and research secrets and national security. Before too long, and after reporting this incident to the facility's security office, a half dozen U.S. intelligence and counterintelligence agencies became involved, along with police security agents in Germany.

What we did was set up a "sting" to entice the hacker into logging on for longer periods so that we could track him—or them—down. The hacker had used the name Mr. Hunter, against whom to charge

the access time, but without any address or other location at the Lawrence Lab that might help identify this user.

Our options were to shut out the hacker or give him access so that other counterintelligence specialists could learn what he was after and, from this, deduce who he might be working for. In this instance, the Lawrence Lab's computer system that had been penetrated was the gateway to Internet, a U.S. government-owned network that connects some 20,000 computers handling scientific research and unclassified military work.

Once he was permitted to access the system, we tracked him all the way. He had an appetite for data about nuclear weapons, intelligence satellites, and other national security data. Our counterintelligence team believed that there was some potential for dangerously compromising U.S. security.

It was almost a year-long chase through networks joining military and industrial computers around the world. We had to give him something for our "sting" to work. We created files of phony information laced

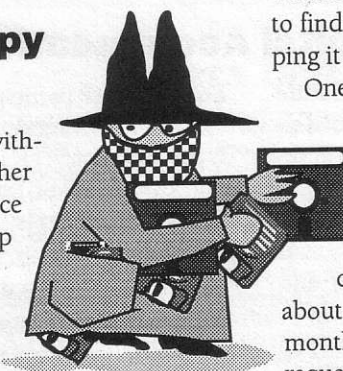
with bogus secret documents for the hacker to find and then let him spend hours lapping it up and copying it all.

One irresistible lure was a phony file on Star Wars, which we called the SDI Network Project. We even booby-trapped this information by inserting a fictitious address in Berkeley to which people could write for more information about the SDI Network Project. Three months later, the Lawrence Lab received a request for more information on the bogus project. It was postmarked from Pittsburgh and written on the letterhead of a reputed arms dealer with ties to Saudi Arabia. The counterintelligence people now had another mystery to solve. How did this arms dealer obtain the Berkeley address? Was he in cahoots with the overseas hacker?

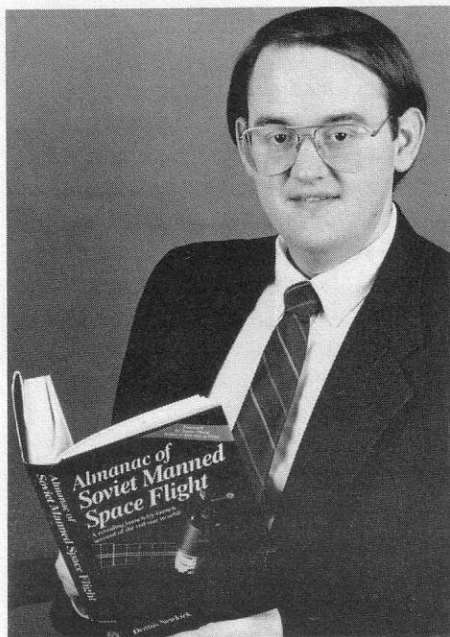
This hacker used fairly standard techniques for cracking passwords. Displaying uncommon persistence, he attacked approximately 450 different computers and gained access to more than 30. He even managed to penetrate computers used for nuclear weapons and energy research. This busy hacker also accessed European defense contractor computers.

Our hacker, a West German citizen of Hannover, was finally arrested by West German police. His name is Marcus Hess,

Continued on page 8



E-Teamer Publishes Book on Soviets in Space



Almanac of Soviet Manned Space Flight is the title of Dennis Newkirk's book which he had published in February.

Newkirk, an electrical engineer in Future Systems, began researching information on the Soviet manned space flight program in 1985 after picking up on rumors that there was more to the space flight program than the Soviets had officially acknowledged. Two years later, he decided to compile his work into a book. The final manuscript was completed last fall.

"Most books tend to ignore a lot of Soviet test flights, which were of secret nature and may have not been successful," says Newkirk. "*Almanac of Soviet Manned Space Flight* is the first book on the Soviet manned space program that mentions lunar landing program test flights that were done in the sixties and seventies."

Newkirk says his book will be used mainly as reference material for anyone interested in the history of Soviet space flight, which is information hard to find in the United States.

"Even U.S. space magazines are almost all on U.S. material," he says. "There's almost no information on the Soviets, even though the Soviets have about twice as many man-hours in space as the United States."

Newkirk's book, which comprises 390 pages and is published by Gulf Publishing Company, has not yet been reviewed by major newspapers and, therefore, is not for sale in bookstores. Once it is reviewed, the author says he will begin giving promotional lectures. But you don't have to wait until the book hits the bookstore shelves. "Anybody can order it," says Newkirk.

Know Your Benefits . . .

Tax-Advantage Capital Accumulation Plan (T-CAP)

T-CAP helps you save for the future while using the benefit of pretax dollars. When the money is withdrawn at retirement, you may pay less taxes by being in a lower tax bracket or by rolling over your distribution to an Individual Retirement Account (IRA). Your contributions and earnings are not taxed until withdrawn.

Investment Options. The Vanguard Group of Investment Companies administers six different investment options in which you can invest your money.

The investment options are:

- E-Systems Company Stock Fund
- W. M. Morgan Growth Fund
- Windsor Fund
- Guaranteed Investment Contract (GIC)
- Money Market Prime Reserve
- Short-term Bond Fund

You may enroll, change the amount you are contributing, change investment options, or stop participation at any time.

Loans. T-CAP participants are able to borrow their own funds. There are two basic types of loans: (1) 1 to 5 years for any purpose, and (2) 10 years for the purchase of your primary residence only.

You may borrow 50 percent of the market value of your T-CAP balance at the time your loan application is processed. The maximum loan amount is \$50,000. There is no minimum loan amount. The interest rate, paid back to your account, is based on the prime rate, plus one percentage point, and is evaluated quarterly.

Withdrawals. You may only withdraw money from your T-CAP account after you have reached age 59 and 1/2, or if you qualify for a Hardship Withdrawal. If you need to make a Hardship Withdrawal, contact the Benefits office to see if you qualify.

Termination. Your T-CAP funds will be distributed to you upon termination of employment. You may roll over your dis-

tribution to an Individual Retirement Account, including a Vanguard IRA.

If you would like to enroll in T-CAP, change your contribution amount, or apply for a loan or Hardship Withdrawal, contact the Benefits office. **M**

COMPUTER ESPIONAGE Cont. from pg 7

25, a.k.a. Mathias Speer, who also had four other associates who were arrested, two of whom reportedly traveled to East Berlin in 1986 where they met with a Soviet agent.

I lived this espionage case for a year. This is why I'm now a computer security believer.

Clifford Stoll, an astronomer at the Harvard-Smithsonian Astrophysical Laboratory, Cambridge, Mass., is the author of "The Cuckoo's Egg: Tracking a Spy through the Maze of Computer Espionage." **M**

REPRINTED WITH PERMISSION FROM THE NATIONAL SECURITY INSTITUTE'S ADVISORY, FEBRUARY 1990.

HealthTalk . . .

t-PA A New Treatment for Heart Attacks

Although heart transplants make headlines, a quieter but equally dramatic coronary care story is the use of tissue plasminogen activator (t-PA), a blood clot dissolver that helps prevent much of the heart muscle damage heart attacks inflict.

Only recently approved for general use, t-PA is the drug of choice for patients brought to an emergency room within six hours of a documented heart attack.

"The main advantage of t-PA is that it saves heart muscle," said Thom A. Mayer, M.D., chairman of the Fairfax Hospital Department of Emergency Medicine. "In the past, it was often all we could do to save the patient's life. Now we not only focus on saving the life, but also on preventing the heart muscle from dying or being damaged."

A heart attack—or myocardial infarction—happens when a clot forms in a narrowed coronary artery, blocking the flow of blood and oxygen to the heart muscle and causing complete or partial destruction of that muscle. The pain associated with the heart attack occurs as the heart muscle is deprived of oxygen.

In the past, heart attack patients were put on bed rest, given pain relief, and protected from further damage with blood thinners, such as heparin. As technology improved, diagnostic studies pinpointed damage, and surgical procedures repaired or replaced some of those damaged areas.

With t-PA, much of the heart damage can be avoided if given soon enough after the onset of pain to appropriate patients. Even with t-PA, however, some patients still require diagnostic studies or procedures to determine if other arteries are in danger of being closed off or if further intervention is needed.

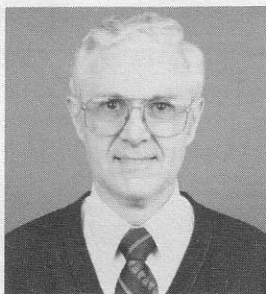
Our bodies produce t-PA, which is a protein that prevents blood clots. The amount of t-PA in our blood streams is too small to dissolve a clot during a heart attack, however. Now, thanks to biotechnology, t-PA can be manufactured in large quantities and is available in most emergency departments, where it is administered intravenously. It also can be started by physicians or nurses in ambulances or helicopters specially equipped with advanced life support supplies.

t-PA is not a cure for atherosclerosis, the underlying heart disease. Atherosclerosis is caused by a buildup of fatty substances in the coronary arteries or blood vessels in the heart. Gradually, these fatty deposits form plaque, a hard substance that narrows the arteries and reduces the amount of blood that can flow to the heart. If a piece of this plaque breaks off, it can form or provoke a clot that partially or completely obstructs the arteries, causing the heart attack.

"If you have any chest pain," cautioned Dr. Mayer, "contact your physician, get to an emergency department, or have someone call an ambulance. The sooner you are evaluated, the quicker you can be matched with the criteria for using t-PA, and the better the chance not only for saving your life but also for preventing damage to your heart." **M**

HealthTalk is a community service of Fairfax Hospital, Falls Church, VA.

1990 Service Awards for March and April



Wilfred E. Barber
Thirty-Five Years

Twenty-five Year Service:

Robert R. Beck
Richard D. Taylor

Fifteen Year Service:

Mary L. Simmons

Ten Year Service:

Larry A. Barbe
Barry D. Fitzpatrick
Richard O. Funke, Sr.
James E. Minter

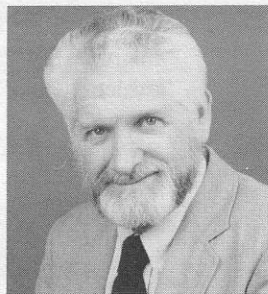
Five Year Service:

Linda B. Altizer
Joan M. Appelhaus
Timothy L. Bonnefond
Milo I. Carr
Timothy R. Cooper
Stanley W. Doran
Wayne A. Fuller
William J. Galbraith
Carol M. Garrity
Douglas Hawley
Sidney D. Honaker
Sonya A. Howard

Retirees

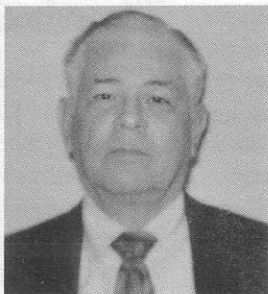


Robert O. Braun
18 Years

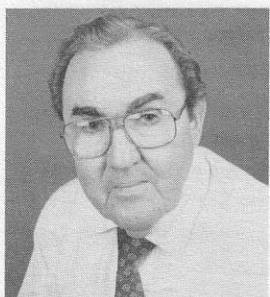


Robert L. Payne
Thirty-Five Years

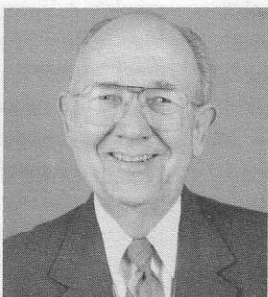
Naomi Hunter
Terry C. Ivory
Edith M. Johnson
Joseph P. Jones
Daniel M. Kallick
Valencia Y. King
Margaret A. Kokoszka
Beth A. Kohlhaas
(nee Calabrese)
Frank G. Lambdin
Steven C. Littlefield
Wayne M. Lummis
Gloria J. Mudd
Charles L. Otzel
Gail A. Pennington
Pamela G. Reedy
Delores Spriggs
Ernest G. Steever
Okey Warden, Jr.
Loretta B. Warner
Barbara A. Weaver
Myra J. Weisner
Jessie L. Wetzel
James Williams
Marlene F. Wysocki
Victoria L. Yoder



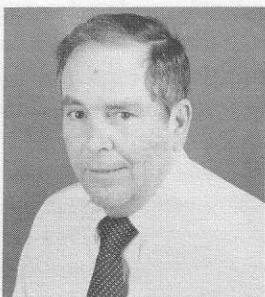
Ivan N. Dietrich
15 Years



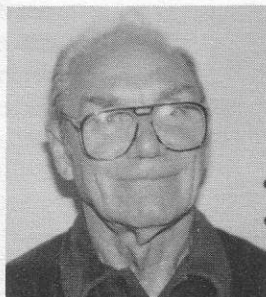
Hugh J. Gillespie
11 Years



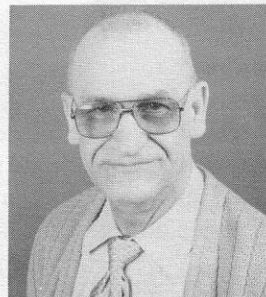
William A. Huffman
36 Years



Wilbur J. James
33 Years



Augustine S. Kozak
35 Years



George A. Marchaza
32 Years

Movers and Shakers

Falls Church

R. Adams
S. M. Avey
J. W. Bickford
C. A. Burns
K. S. Byrne
M. Calloway
K. L. Downs
E. A. Fernandez
M. D. Figueroa
C. A. Frost
F. W. Fulton
B. A. Gamrat
J. Gray, Jr.
B. M. Harmon
L. N. Jenkins
R. E. Mason
M. A. Oncale
G. A. Pasierb
W. M. Peck
C. R. Price
B. K. Pudleiner
K. M. Riddle
D. F. Rubach
D. L. Schmitt
S. S. Schultz
C. R. Scott
J. C. Sessler
J. L. Schwier, Sr.
L. S. Swasy
M. A. Thoma
L. S. Walker
J. E. White
M. J. Weisner
R. C. Wills III
C. E. Worrell

Fairfax

C. T. Abshire, Jr.
C. D. Barker, Jr.
M. T. Bell
A. L. Brewer
V. R. Bussie
D. S. Chang
R. V. Folea, Jr.
G. A. Heitz, Jr.
D. C. Johnson
Y. T. Lemkuhl
J. T. McCullough
L. P. Midgley
D. W. Mumma
J. P. Porter
A. P. Schifflin
A. R. Schmidt
M. K. Skoog
K. M. Spriggs
R. E. Sutphin
R. K. Uhler, Jr.
T. S. Voytko
M. J. Zuza

Promoted From:

Programmer
Report Typist A
Sr Drafter
Systems Eng
Assem
Assem I/C Gr Ldr
Assoc Elec Eng
Princ Budget Analyst
Sr Elec Eng
Assoc Elec Eng
Sr Qual Eng
S/W Analyst
Design Eng
Data Entry Opr
Progr Asst
Porter
S/W Analyst
Fld Elec Eng
Sr Mech Eng
Elec Eng
Sr Elec Eng
Assoc Elec Engr
Prin Prog
Eng Spec
Eng Asst
Sr Test Tech
S/W Analyst
Sr Indust Eng
Progr
Plan Asst
Grp Ldr Doc Release
Security Asst
Clerical Gr Ldr
Sr Elec Eng
Sr Clerk A

To:

S/W Analyst
Report Secretary
Design Eng
Sr Systems Eng
Assem I/C
Assem Tech Gr Ldr
Elec Eng
S/A to VP
Princ Eng
Elec Eng
Princ Qual Eng
Sr S/W Analyst
Fld Elec Eng
Sr Data Entry Opr
Programmer
Maint Asst
Sr S/W Analyst
Sr Fld Elec Eng
Eng Supv
Sr Elec Eng
Princ Eng
Elec Eng
Prin S/W Analyst
Fld Elec Eng
Cost Analyst
Jr Test Eng
Sr S/W Analyst
Assem Mgr
S/W Analyst
Planner
Supv Document Rel
Security Specialist
Supv Mlt Admin
Eng Supv
Admin Supt/Coord

Sr Design Eng
Elec Eng
Eng Spec
Elec Eng
Porter
Assoc Elec Eng
Sr Elec Eng
Eng Mgr
Sr Elec Eng
Assoc Elec Eng
Prog Mgr
Report Sec
Princ Eng
Assoc Elec Eng
Eng Tech
S/W Analyst
Eng Spec
Assem
Assem Tr
Systems Eng
Eng Tech
Eng Tech

Princ Design Eng
Sr Elec Eng
Fld Design Eng
Sr Elec Eng
Maint Asst
Elec Eng
Princ Eng
Sr Mbr Tech Staff
Princ Eng
Elec Eng
Sr Prog Mgr
Jr Eng Asst
Eng Supv
Elec Eng
Sr Eng Tech
Sr S/W Analyst
Fld Design Eng
Assem I/C
Assembler
Eng Supv
Sr Eng Tech
Sr Eng Tech

News from the Melpar Amateur Radio Club



Melpar's Henry Hastings (*far left*) and Rick Slater (*center left*) joined other amateur radio enthusiasts during a weekend event at George Washington National Forest.

Now that spring has arrived, many amateur radio buffs are thinking of installing those outside antennas they wished for all winter. Spring also brings with it the anticipation of another field day event.

At these events, amateurs either independently or in groups join in the fun of communicating with one another. Last year, the members of the Melpar Amateur Radio Club traveled to George Washington National Forest for a weekend event.

After unpacking, the group set up eight antennas to cover the frequency range from 2 meters to 160 meters. The antennas included a 10-meter beam and vertical and some home brew dipoles to cover the lower frequencies. The station setup had three transmitters and receivers powered by a gas-driven generator, which the group had hauled with them.

The field day is a contest among similar categories to acquire the most contacts within a designated 24-hour window of operation. All contacts made are logged in, and the total number is reported to the ARRL, Amateur Radio Relay League. While the group did not take first place, they all enjoyed the experience and fellowship of the event and are looking forward to participating again this June.

The Club maintains a 440-MHz repeater at the Fairfax facility. This repeater is open to other amateurs and is ready to handle emergency traffic in time of need. The repeater is connected to the emergency power system to allow communications in the event of a power outage.

The Club usually has tables set up at local ham fests. A ham/computer fest is akin to a flea market where people gather to swap stories and equipment. There, one can find many good buys of both old and used electronic equipment. Ham fests usually take place each month. The next ham fest the Club plans to attend will be in Manassas.

If you are already a licensed amateur or one just interested in learning about "hamming," the Melpar Amateur Radio Club meets the first Wednesday of each month at 12:30 p.m. in the Port Royal Room in Falls Church or in John Humphrey's office in Fairfax. Come and enjoy the fun of amateur radio! **M**



Commit to Get Fit

Melpar E-Teamers who want to "commit to get fit" can now pick up free 2-week trial membership cards in the Fairview Park Athletic Club. The Fairview Park Athletic Club is located just minutes from Melpar's Falls Church facility at the Marriott Hotel. Trial membership cards are available through the Falls Church credit union office.

For Fairfax E-Teamers, Centrum Fitness Resort has made available free 1-week trial membership passes to its facility, which is located across the street on Waples Mill Road. Centrum passes may be picked up at the Fairfax credit union office.

Employees interested in joining either fitness center should inquire about the center's rates, as Melpar employees may be eligible for membership discounts. **M**



When It's Hot Outside, Think Snow

Planning has already begun for Melpar's 1991 Ski Bash. This year, a group of the Melpar skiers spent a fun-filled weekend at Seven Springs in the mountains of Pennsylvania. As an alternative for next year, a weekend trip to the bigger mountains of Vermont is now being considered.

Skiers paid about \$200 for a 2 and 1/2 day trip to Seven Springs (which included bus transportation, lodging, lift tickets, and meals). A Vermont trip would run over a four or five day weekend and would cost approximately \$439 (including air fare, transfer to resort, lodging, and lift tickets). Thus the two trips would cost approximately the same considering the trip time.

If you went on the Ski Bash this year, or if you are interested in going next year, your comments regarding which trip is preferable are appreciated. Please call Tricia Reneau, X2717. **M**