

MELPARTICULARS

Volume 3, Number 4

E-Systems, Melpar Division

August 1982

ANNUAL DRIVE INCREASES SAVINGS BOND PARTICIPATION



Larry Terry receives congrats from Talbot Huff.

Everyone is a winner with the U.S. Savings Bond Program. As part of the 1982 Savings Bond Drive, E-Teamers had a chance to gain more than the satisfaction of making a good investment and helping their country. In order to encourage new and increased participation among E-Teamers, both Corporate and the Division awarded prizes in several categories.

Melpar carried on an enthusiastic week-long campaign this June which resulted in 97% of our employees participating in the Savings Bond Program and 38% of the current participants increasing their contributions. We topped the Corporate goal of a 25% increase.

The success of our drive was due primarily to the hard work and enthusiasm of the representatives. They were: Mary Albertson, Karen Backley, Marianne Brown, Frank Clement, Ann Donnelly, Marilyn Dudley, Barbara Gobel, Alan Haley, Norma Hayden, Bill Horton, Linda Howells, Charlotte Maltby, Patte Martin, Nancy Miluszewski, Rozelle Neely, Betty Owens, Bob Quadt, Marilyn Robertson, Dave Schombert, Larry Terry, and Marie Yawornicky.

A "kickoff" breakfast hosted by Talbot Huff on June 18 began Melpar's 1982 Bond Drive. There was a great deal of enthusiasm and good natured competition among the representatives as they vied to have their groups come out ahead in increased and new participation. Their

BOND DRIVE Cont. on page 7

E-TEAMERS TEACH ARTIFICIAL INTELLIGENCE COURSE

What do robots, oil exploration, diagnosis of bacterial infections of the blood, analysis of mass spectrograms, VLSI design, configuring a VAX and reported \$100,000 per year salaries all have in common? They are all part of a renaissance in the field of Artificial Intelligence (AI) software currently attracting attention in technical and financial circles. Not to be caught napping, some of us at Melpar have decided to take a closer look into the growing AI subculture.

Sixty to eighty Melpar E-Teamers attended the first of several classes on AI taught by the team of Norm White and Joe Mitola. With Zen proverbs to help with the philosophical

perspective, the course is surveying the software techniques and applications of AI.

As one definition has it, Artificial Intelligence is getting a machine to do something which, if done by a human being, would be said to require intelligence. This is the definition which avoids the metaphysical implications of trying to define intelligence in the absolute sense.

The field of AI is not new. It got off to a rather poor start in the late 50's and early 60's. Emphasis in those days was on the use of very generalized problem solving approaches, with little task-specific knowledge.

The early results were laboratory

AI Cont. on page 6

EMPLOYEE CREDIT UNION DIVIDEND NOW 8%



Credit Union employee Pete Ferrante transacts business with Tom Neff.

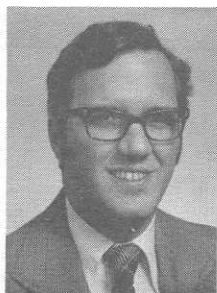
A significant milestone has been recorded in the history of the Melpar Employees Federal Credit Union. At the regular monthly meeting of the Board of Directors in June 1982, an increase in dividends to be paid on shares on deposit was voted by the Board. For the quarterly dividend period ending June 30, 1982, the dividend was declared to be 7% plus a bonus of 1%, making the total 8%. This action marks the second consecutive quarterly increase in dividends. For the quarter ending March 31, 1982, a dividend of 6½% plus a

1% bonus was declared by the Board. These increases have been made possible by the continued growth of the Credit Union.

CREDIT UNION MOVES UP

We are no longer "in business" at the same old stand. We moved up. That's right — moved up — upstairs, that is. The Credit Union Office is now located on the Cafeteria Level of the building. We are on your way to lunch — so stop by and see our new facilities!

Melpar as I see it...



1982 looks like a banner year. We have been awarded significant bookings at both the Fairfax and Falls Church facilities. These bookings will provide us a good long-term base for the future.

Our sales will be over 50% larger than those we had last year. Personnel is at an all-time high—slightly over 1350. We are looking forward not only to occupying a second increment of the Fairfax facility but have received approval for the construction of an additional 100,000 square feet.

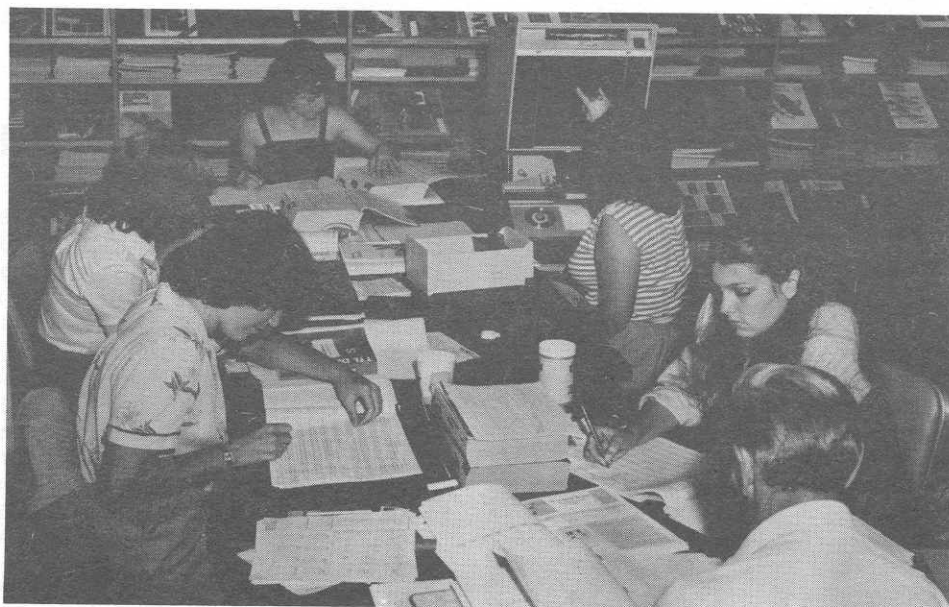
With all of this new business it is important that we pay close attention to our productivity. On-time delivery and control of program expenditures will determine how well we do in the future. I realize that it is particularly difficult for everyone in a period of rapid growth such as we are experiencing. However, I want to call on every Melpar employee to make sure that we keep our performance high and our reputation for performance intact.

Talbot S. Huff

Security Spotlight

During the course of the Government's background investigations to determine suitability for clearances, your immediate family, friends and neighbors may, through the investigator's contact, gain some knowledge that you are or may become engaged in classified work for the Government. With this knowledge comes "guesses or assumptions" on the part of the uninformed. Your access to Melpar's business endeavors may have provided you with some "factual" information and your casual affirmative or negative remarks or comments in response to questions concerning the Division's contacts with the Government will inadvertently tend to lend credence to rumors or assumptions. Remember, the custodian of sensitive or classified information is responsible for its safekeeping.

MANUFACTURING MANAGEMENT SYSTEM GETS UNDER WAY



Five college students are busy working on special projects for Drafting Manager, Bill Breads. Located in the technical library, our "summer helpers" have recorded the latest revisions, dates and approvals for over 70,000 drawings stored at Melpar. This information will soon become part of the computerized Manufacturing Management System (MMS) formerly known as Arista. According to Bob Pletcher, System Design Specialist, elements of the system will be put in operation within the next month.

The first phase of the MMS will greatly ease the overall record-keeping systems for Engineering Change Notices (ECNs). Here is how it works. The user will punch a drawing into the system, and a screen will be presented with a variety of information about that drawing. One screen function will indicate the most recent ECN for a particular drawing, who authorized it, the latest revision level, and the date it was incorporated. If the ECN is still outstanding, this function will show when it was assigned its current status and what the drawing revision will change. This same screen will also show other related documents with similar information such as their parts list.

The user will have the option at this point of switching to a more detailed screen for a particular ECN. This will include the date the ECN should be incorporated, its effective date and when it was posted. Other functions that will be available relating to the documents and the ECNs include a complete listing of all ECNs

that have been released, and a listing of all outstanding ECNs on file. This system will not only ease the record keeping process for ECNs but will make the information available company wide.

Additional portions of the computerized system are being developed by Bob Earnshaw's Manufacturing Management Systems group and will be instituted in the coming months. *Melparticulars* will feature these as they are ready for production.

MELPARTICULARS Published by

E-Systems, Melpar Division

7700 Arlington Boulevard, Falls Church, VA 22046
11225 Waples Mill Road, Fairfax, VA 22030

Editor: Jane Kinzler

Photographers: Sandra Dimond
Pete Piraneo, Richard Sakamoto

Production: Estelle Fellman
Elaine Shaffer (typesetter)

Contributors: Hal Ammann, Bill Ashby, Sharon Brill,
Joe Bullman, Jim Clatterbuck, Bill Cradlin, Mike
Dutchak, Tim Garney, Debby Hillmer, Bob Hood,
Evy Lowenstern, Marion Lugar, Hal Marine, Joe
Mitola, Bill Moeller, Anne Simmons, Dana Smillie

MELPARTICULARS CHANGES

Our name is the same, but our masthead has changed. Corporate has redesigned the mastheads of E-Systems' division newspapers to give a more unified appearance.

Our previous masthead had been designed in 1979 by Frank Brown, Supervisor of Graphics. From 1955 to 1979, our newspaper was known as the *Melpagraph*.

PUBLICATIONS DEPARTMENT HAS NEW CAPABILITIES

COMP/EDIT TYPESETTER INCREASES VERSATILITY

The Publications Department has recently acquired a new typesetting system, a Comp/Edit 5900 (product of AM International) and a LogE PC-13WM RC Processor. The acquisition of this new equipment results in a more efficient and cost-effective method of preparing narrative vu-graphs.

The Comp/Edit provides a better utilization of manpower, a better quality end product, and is versatile enough to accommodate a wide variety of applications to meet current and future needs.

Prior to the acquisition of the Comp/Edit, Graphics personnel were using a Compugraphic IV/TG Phototypesetter, an IBM Selectric Composer, manual cut-and-paste, and a positive-to-positive photo process. Mechanical limitations that could not be compensated for by additional staff were presented by this typesetting system. Some of the limitations of the old system were:

- No memory or editing capability.
- Only 12 type sizes on-line
- Paper or film output width was a maximum of 45 picas. Therefore,

65% of the type had to be camera adjusted to fill the vu-graph frame.

- Revisions/changes could only be made through manual cut-and-paste.

The new system has the following enhancements:

- Full electronic editing, 80K all-RAM memory with diskette storage/retrieval
- 138 type sizes on-line from 5½ to 74 point in whole and half point increments. This eliminates the need to camera adjust the type
- Paper or film output width is a maximum of 70 picas, therefore, transparencies can be output 1-to-1 eliminating the photo lab step in the old process
- Revisions/changes are made electronically instead of through cut-and-paste
- Foreground/background mode permits the operator to simultaneously input and output copy

All of these advantages and more explain the improvements over the old system. Publications expects a substantial increase in its proficiency



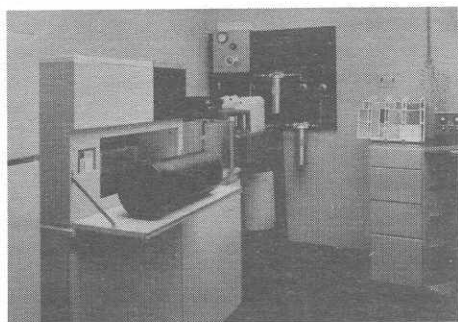
Elaine Shaffer sets *Melparticulars* on the new Comp/Edit typesetter.

in the preparation of narrative vu-graphs.

The primary function of this new typesetting system will be the preparation of narrative vu-graphs. However, there are some additional benefits and uses of the typesetter. Among these are: advertising literature, divisional flyers/announcements, divisional tabloid newspaper (*Melparticulars*), marketing/capabilities documents, and certificates.

PHOTOGRAPHIC FACILITY ADDS NEW COLOR LAB

The Publications Department recently acquired and installed a fully-automated color photographic processing facility to augment current photographic capabilities. This additional facility is fully operational and provides the ability to satisfy all color photographic requirements in house at substantial savings.



Products of the new color facility include:

- Color negative processing
- Color prints up to 16" x 20"
- Color film positives up to 16" x 20"
- Vu-graph color transparencies
- 35 mm color transparencies

The major components of the facility include a photo enlarger, color analyzer, and color processor. The color analyzer is the heart of the system, providing precise color analysis. The color analyzer determines the required filter combination for negative exposure to produce the desired color reproduction. This is the single most critical step in the color reproduction process.

The color processor is microprocessor controlled and is fully automatic. Process uniformity is achieved through precision control of temperature, chemistry, agitation, and timing. The microprocessor is controlled by program cards specifically written for each photographic process. Uniform quality results are assured by a unique metering system that delivers chemistry sequentially through a series of filters to a canister containing the film or paper to be developed. At the conclusion of the development process, the automatic refill module replenishes the processor with fresh chemistry so that it can be tempered in preparation for the next run.

NEW EXHIBITS ENHANCE HALLWAYS

For over a year now, the Melpar Art Committee has been responsible for making the halls of the Company an eye-pleasing experience for employees and visitors. Thanks to the efforts of the Committee and the enthusiastic support of Melpar's employees, who have loaned art work, our working environment has been greatly enhanced.

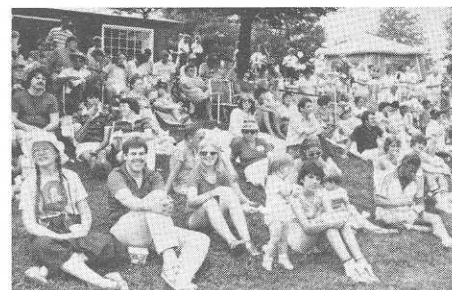
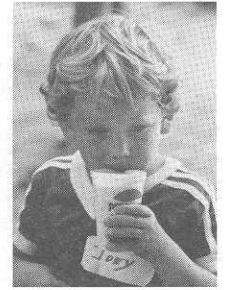
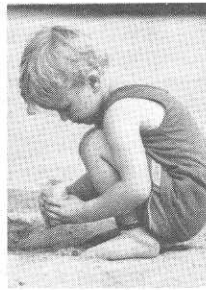
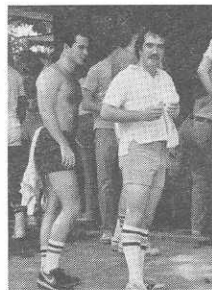
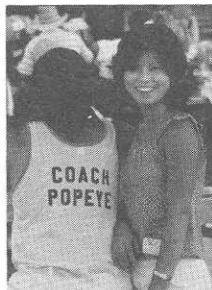
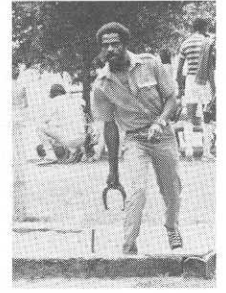
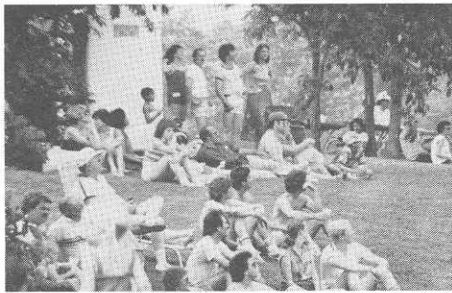
New exhibits featuring art work in several media, including needlework, have recently been hung in the halls on the main floor and lower levels of the Falls Church facility. These exhibits will be on display until October. It is quite clear that we have a number of very talented E-Teamers in our midst.

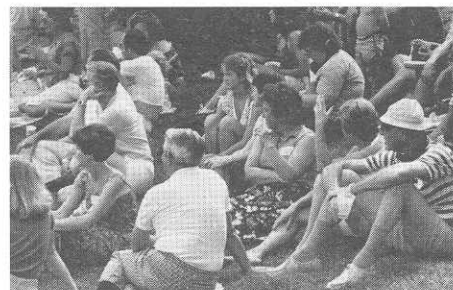
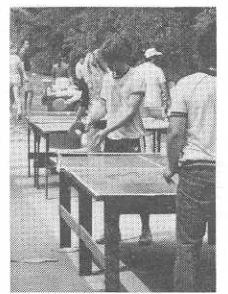
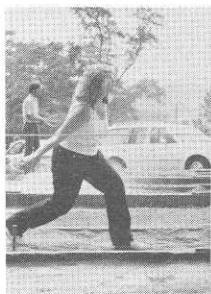
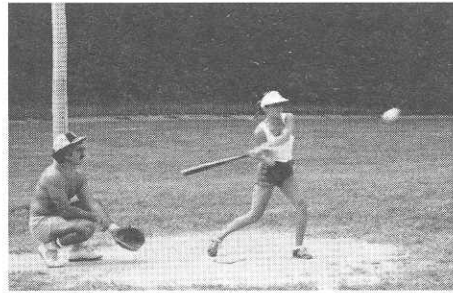
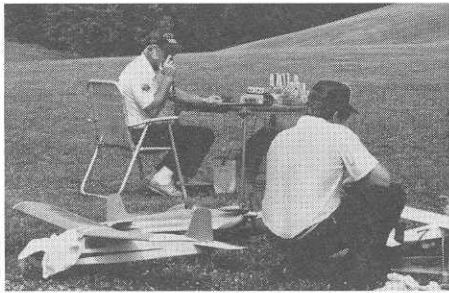
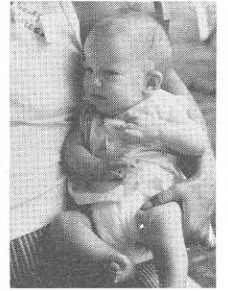
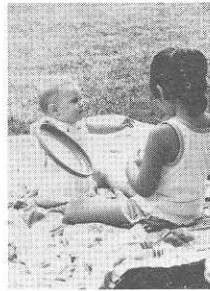
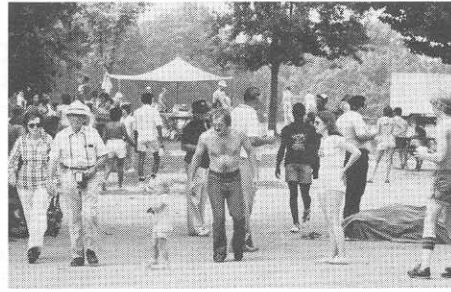
The Art Committee, which is responsible for coordinating and setting up the art exhibits at Melpar, consists of: Bob Angel, Frank Brown, Merle Burke, Estelle Fellman, Mary Hanson, Betty Owens, and Anne Simmons. Plans are in the works for forming a Fairfax Facility subcommittee.

PICNIC CLOSEUPS

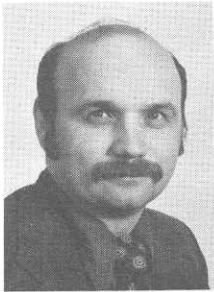
Melpar's 7th Annual Picnic was held on Sunday, July 18th at Smokey Glen Farm in Gaithersburg, Maryland. Despite the sweltering heat, a good time was had by all the many Melpar employees and their families who attended.

Photographers for this year's winning pictures are: Rick Dickerson, Pete Piraneo, Bill Ramsey, and Kevin Stilwell. Special thanks to all those who so generously gave of their time and help in making the picnic a success.





HAL AMMANN REELECTED PRESIDENT OF LAUREL CITY COUNCIL



Hal Ammann, technical assistant to the director of Advanced Programs Development at Melpar and president of the Laurel, Maryland, City Council, is an avid believer in the benefits of local government. Hal

has served on the Laurel City Council since September of 1979 when he was chosen by existing council members to fill an open position. He has been reelected twice by the citizens of Laurel, with the most recent election being this past March.

Laurel, located midway between Washington, D.C. and Baltimore, Maryland, has enjoyed increased building activity over the past five years.

The City Council of Laurel serves as the legislative branch of the city government passing laws which cover everything from setting the property tax rate and the preparation of the operating budget (which presently exceeds \$4 million) to dealing with dog control and garbage collection.

As president of the council, Hal presides over all public meetings and work sessions and serves as mayor of the city in the mayor's absence. He also serves as the City Council Representative on the Planning Commission, a citizen group which must approve all construction within the city and any land annexations the city plans to undertake. In the course of his work, he has testified a number of times before county and state legislatures on legislation affecting Laurel, as well as represented the City in meetings with Maryland Governor Hughes.

Hal feels local government is without a doubt the most responsive form of government. If a citizen does not like something about where they live, they should get involved and help get it changed. He has seen it done and believes the experience is most gratifying.

His wife, Kathy, and son, Christopher, share his commitment to local politics.

MELPARTICULARS

needs your input. Submit material to Jane Kinzler, Editor, ext. 2717.

WIFE OF E-TEAMER RECEIVES SCOUTING'S SILVER BUFFALO AWARD

Ann W. Nally, wife of James Nally, assistant program manager in Program Management at Melpar, was honored by the Boy Scouts of America at the National Council Meeting this past May. She was awarded the Silver Buffalo for her outstanding volunteer service to youth on a nationwide basis. Vice Chairperson of the National Cub Scout Committee, Ann Nally has been an active volunteer leader in many aspects of Boy Scouting since she became a den leader in 1956.

There were fifteen recipients of this year's Silver Buffalo award, including President Ronald Reagan and other notables.

ROADSIDE DELIVERY

On the night of June 13, Bill Ashby, a driver in Melpar's Traffic Control Department, became the proud father of Heather Ashby, a healthy, 7 lb., 1 oz. baby girl. Bill and his wife, Shelley, were on the way to Fairfax Hospital when it became clear the stork would not wait. A passer-by called the rescue squad while Bill helped Shelley deliver the baby. About five minutes after Heather's arrival, the rescue squad came and took mother and baby to the hospital. Mom, baby, Dad, and siblings are doing fine, and the family is delighted with their new addition.

GW GEARS UP FOR FALL CLASSES AT MELPAR

Summer is almost over and it's time to think of school. Registration for fall classes in Electrical Engineering and Computer Science will take place in the Melpar cafeteria on August 31 from 5:00 - 7:30 p.m. Classes will start Tuesday, September 7, and end December 16. Classes meet from 6:30 to 9:30 p.m.

Fall 1982 course offerings in this Graduate Engineering Program offered at Melpar, in cooperation with participating members of GWU's Industrial Liaison Program, are:

- EE 204 Stochastic Signals and Noises — Tues.
- EE 208 Digital Image Processing — M
- EE 244 Communication Theory II — Thurs.
- EE 277 Satellite Communication Systems — W
- CSci 159 Programming and Data Structures — W

AI Cont. from page 1

curiosities, not applicable to interesting real-world problems.

In the mid-70's researchers began to suspect that more emphasis should be placed on capturing and using the vast amount of information in real-world problems. The specially structured data bases to do this are called knowledge-bases. Instead of programs, knowledge-bases contain *if-then* rules represented in a highly formatted, recursively defined style. This permits procedures to be automatically created, manipulated and explained to the user who has little programming experience. Instead of "data," the knowledge-base contains "facts" which encompass both the basic data and the relationships among data elements such as why certain facts may be true, what created a fact, and how a complex fact relates to more primitive facts in the knowledge-base. From this new perspective, some remarkable "practical" results have been demonstrated, primarily under DARPA-sponsored research in the academic community.

Business Week and *Fortune*, among others, are announcing an explosion in AI software and related specialized hardware such as LISP Processing (LISP) Machines. Virtually all successful AI software is written in LISP.

Of the hundreds of AI applications, a few may have practical applications to Melpar's business areas. Tasks of our SIGINT Software Technology IR&D Project are examining AI techniques for application to signal correlation and for automation of high-level maintenance activities.

The AI course now in progress surveys the major results in the field and includes in-depth treatment of LISP as an AI language. The course, taught from 4:45 to 5:45 p.m. on Tuesdays in the Yorktown Room is open to anyone with an interest in the subject. Contact Norm White or Joe Mitola for further details.

- CSci 213 Discrete Structures in Computing — M
- CSci 216 Information Retrieval System — Thurs.

If you have questions or are in need of academic counseling, contact Professor Raymond L. Pickholtz, faculty advisor, at 676-6538, or at his Melpar office at extension 2478. For general assistance and information, contact Ed Wright, program coordinator at 676-7024.



JOHN MARCEV NAMED TECHNICAL DIRECTOR OF SPECIAL PROJECTS

The promotion of John Marcev to director of Technical Services was announced by Neal H. Ishman, vice president, Advanced Development. Mr. Marcev joined Melpar in 1957 as an engineer and progressed to manager of Special Projects prior to his promotion to director. He received his B.S. degrees in mechanical and electrical engineering from Tulane University; attended the University of Virginia and the George Washington University as a graduate student in engineering; and completed graduate work in statistics at American University.

As Technical Director, John will provide and stimulate additional growth in his business area. He brings many years of experience and considerable technical depth in communications, intelligence and electronic warfare disciplines to his position. The work performed within his group involves system concept studies, system and detailed design, and system installation and integration for secure telecommunication systems and special communications electronics systems and equipment.

(NOTE: THIS WAS A LIMITED EDITION DONE BY THE MELPAR PUBLICATIONS DEPARTMENT FOR JOHN MARCEV WITH THIS "GAG" PICTURE FOR DISTRIBUTION TO HIS CO-WORKERS.)

BOND DRIVE Cont. from page 1

efforts were assisted by artistic progress charts designed by our Publications Department and posters based on the Advertising Council's advertisement which featured our employees.

At the end of the campaign week, Talbot Huff drew the names of the lucky prize recipients. Drawings were held in the Main Lobby in several prize categories. Mike Dutchak won a dinner for two aboard the U.S.S. Dandy for being among those increasing their savings amount. Among all employees participating in the Savings Bond Program, three prizes were awarded. Mark Fowler received a front row reserved parking spot for three months. Elsa Murphy won an E-Systems digital clock and Dick Lenert won dinner for two on the U.S.S. Dandy. The group that had the highest percentage of increases or new enrollees was the Executive Offices and Reliability and Quality Assurance. Larry Terry, the representative for this group, was awarded a pen and pencil set. His group achieved 73% in increased or new enrollments. John Humphrey's name was chosen within this group to receive the \$100 Savings Bond prize. Karen Backley was commended for her outstanding efforts

as the Bond Drive Statistician.

Thirteen employee's names were drawn and sent to Corporate for a chance among all divisions to win a weekend trip for two. The winner of this award came from the Greenville Division. Corporate also awarded the Garland Division, the "Most Innovative Bond Drive Program" and the Commercial Division for the "Increased Saver Award." Special recognition was given to Memcor, Montek, Commercial and Serv Air for achieving 100% participation.

The success of the bond drive at Melpar and throughout the E-Systems' Divisions was inspirational and will certainly offer a challenge to us for next year's drive.



Mark Fowler and carpool (Dick Whynall and Karen Jones) enjoy VIP parking.

FAIRFAX HOSTS ITS 1ST CAREER OPEN HOUSE

A Career Open House was held at the Fairfax facility on Saturday, July 24. This was the first full-day Open House at Fairfax and was geared towards filling the recruitment needs of the new facility. Applicants from several disciplines had the opportunity to view the new building and talk with technical managers. According to Tony DePasquale, director of Industrial Relations, our continued growth has increased our need for Receiver Design Engineers, Digital Design Engineers, applicants with software background, Mechanical Engineers, Test Engineers and Program Managers. If you know of qualified applicants in these areas, contact the employment office. Details of our newly improved bonus program will be coming out shortly. In the meantime, plan to recruit a "super engineer" and make some \$\$\$\$.

Sports Corner

OUR TOURING PROS

Nine weeks have passed and the first half of the 1982 Melpar Golf League is history. With birdies and pars abounding, three Melpar "touring pros" have risen from the trees, water and ground under repair at Penderbrook Golf Course to take the top 3 places in the first half of competition. Chuck "Hit It From The Wrong Side" Sisk dominated play to finish in first place. Rumor has it that this fine performance has assured Chuck of an invitation to play in the 1983 U.S. Open. Bill "Roadrunner" Breads finished with a flourish to capture second place and a pole at the Indy 500. Greg "Sandbags" Taylor held on to edge out Don Gibbs for third place. The U.S.G.A. has initiated an investigation into alleged improprieties in Greg's handicap. The low gross round for the first half was shot by Bill "Three Putt" Augustine with a two under par 34. Mike "Mr. Waggle" Christofferson shot a net 29 to have the low net round to date. All in all, the first half of the 1982 Melpar golf league was successful and we look forward to an even better second half of the season.

Congratulations to our Director of Industrial Relations, Tony DePasquale, for an eagle at Penderbrook's par 4, 15th hole on July 28th. According to Tony, this was absolute perfection!

UPS AND DOWNS OF THE EAVESDROPPERS AT .500

Just past the midway point of the summer basketball season, the Melpar Eavesdroppers were the holders of a 3-3 record and had faint hopes of making the playoffs.

They opened the season in good form with a 69-40 rout of Thomas Construction. Melpar played one of their finest games of the last two seasons before falling to a last minute bucket by Quincy's, the winter league champs, 41-40. Still deflated from the Quincy's loss, the Eavesdroppers fell to Bob Tedd Datsun 64-44. Melpar then rebounded with an 87-70 victory over the Wild O's. In game five, Melpar lost to a hot-shooting Blamer's team, 63-48. In game six, our team continued their roller coaster season with a repeat 71-59 victory over Thomas Construction. The team members are anxious to make up for their earlier losses in the upcoming rematches.

SOFTBALL TEAM HAS BEST SEASON YET

This is the best season the Melpar softball team has had since it started playing over six years ago. With 18 wins and 5 losses, the team tied for the division championship. Special thanks to all the fans who have helped root the team to victory.

The league tournament began on July 19th. They have been invited to go to the State Softball Tournament in Covington, Virginia this August and will also be playing in the D.C. Metro Industrial Tournament this summer.

Earlier in the season, Melpar's softball team did an outstanding job of assisting the Fairfax County Adult Softball Council by raising money for Braddock Park to be built in 1983-84. Plans for the park include six lighted softball fields which are sorely needed throughout the county. Out of 356 teams, the Melpar team came in 8th by raising \$1,680 for the construction of the future park.

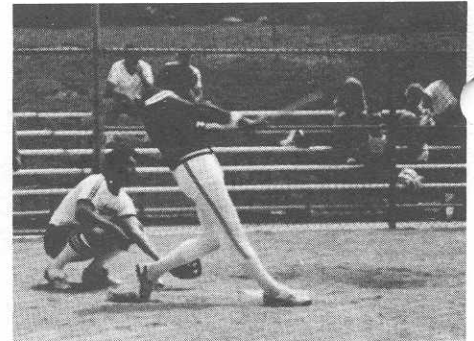


Photo USSPSA (United States Slow Pitcher Softball Assoc.) Metro C Tournament held in July.

TENNIS LADDER FORMING

Sign-up is now under way for Melpar's annual tennis tournament. Play will begin the end of August and will consist of two flights corresponding more or less to the A and B ladder standings in both singles and doubles. For more information, see the Sports Bulletin Board or contact Tim Garney. Come on out and enjoy the fun. Trophies will be awarded.

E-TEAMERS RIDE THE RAPIDS



Twenty E-Teamers and friends took part in a two day rafting/camping trip down the New River in Thurmond, West Virginia over Memorial Day weekend. According to the coordinator of this trip, Debby Hillmer, "it was certainly an adventure which gets you in touch with nature. There is nothing like feeling your raft emerge from eight foot waves surrounded by rushing white water and swiftly moving currents." Debby suggests "everyone should try it...once."

The area around the New River Gorge is beautiful countryside where the remains of mining history are quite apparent. The group had a marvelous time and hopes to take future trips. Several other Company

groups are coordinating rafting trips this summer. Check the Sports Bulletin Board for other adventuresome activities.



Rafting crew from left to right are Randy Raybon, Bill Cradlin, Debbie Hillmer, Kevin Segner, Kathy Lewallen, Jean Segner, Phil Kless, Vicki Vaughn, Art Bishop and Tony Little.