FALLS CHURCH FACILITY EXTENDS ITS WALLS

Expansion continues! The extension on the east side of the building is well along with anticipated occupancy later this fall. A badly needed 12,000 sq. ft. of space will be added when this construction project is completed. Current planning calls for E-6 organization to expand into the south section of the extension, with E-22 and E-9 completing the move to fill the new space. E-5 will then expand and consolidate into the adjacent space to the extension on the southeast section of the existing building. In addition to the aforementioned growth, the extended space will allow evacuation of rooms 1122, 1123 and 1124 for renovation and resettling by E-9 staff.

The portico enclosure will provide space for the new, enlarged Yorktown conference room, an air lock for entrance energy conservation, and a reception area in the outer section. The inner section will contain an urgently required training room, a video viewing room and an enlarged storage area to support the varied activities which will take place in this area of the building. Occupancy of this 1,484 sq. ft. space is scheduled for

later this fall.

The addition of these areas brings the total combined space of all Melpar facilities to 12.5 acres, up from 12.3 acres reported earlier.

FLEX COMES TO E-SYSTEMS

Starting January 1st, Melpar employees will benefit from E-Systems' new flexible benefits program. Under this program, each full-time employee will be provided with a certain number of Flex Dollars based on current benefits. These dollars can be used to buy back existing coverage, buy less coverage and spend extra money elsewhere or increase take-home pay.

An additional feature of the plan allows employees to set aside tax-free dollars to be spent for health care, child care, legal and financial planning expenses, or contributions to a retirement savings account similar to the present (GIC) Guaranteed Investment Contract. Money used for any of these provisions reduces taxable income, thereby resulting in tax savings to the individual.

During the next few weeks Industrial Relations will provide presentations and information necessary to understand the enrollment process. This excellent benefits package puts E-Systems in the forefront of corporations offering compensation packages.

MELPAR SEMINAR SPEAKERS

Recent and upcoming presentations by Melpar personnel at technical symposiums include the following:

RT-11 Extended Memory Gotchas and Workarounds—Ned Rhodes

At a 24 May 1983 symposium sponsored by the Digital Equipment Computer Users Society (DECUS), Ned presented a discussion of a technique to allow foreground jobs to be loaded and executed out of extended memory (lower 28K of memory). In order to control processor priority, Ned suggested use of the E-BUS™* interface unit as a trap handler to provide a work-around mechanism.

Spread Spectrum/LPI Communications—Bill Rakestraw

At a seminar sponsored by the Technical Marketing Society of America (TMSA) on *Command, Control and Communications* (C^3), 1-2 August and 18-19 August 1983, Dr. Rakestraw gave a presentation concerning the background and history of Spread Spectrum communications as well as current trends in communications, modulation techniques and jamming

*E-BUS is a trademark for the distributed processing system developed by the Melpar Division of E-Systems, Inc.

MELPAR INTRODUCES *MICROBOT* ROBOT

As part of its continuing effort to improve productivity, E-Systems Melpar Division has recently introduced a Microbot Robot. With this robot, the Industrial Engineering Department is undertaking introductory projects designed to demonstrate the feasibility of integrating industrial automation with other computer aided manufacturing techniques. The Microbot Robot was chosen for experimentation and education in the field because it is capable of simulating a full scale industrial robot. By using it to feed printed wiring boards in the Infra-Red Solder Reflow Machine, engineers are learning other applications of robotics.

Industrial automation is a dynamic field where applications at Melpar are limited only by the creativity of the people working to improve productivity. As well as applications, the Microbot project is raising and answering questions about software design and hardware implementation. Melpar will continue to investigate new uses for these computerized helpers in areas where their unique capabilities can aid in producing quality products more efficiently.
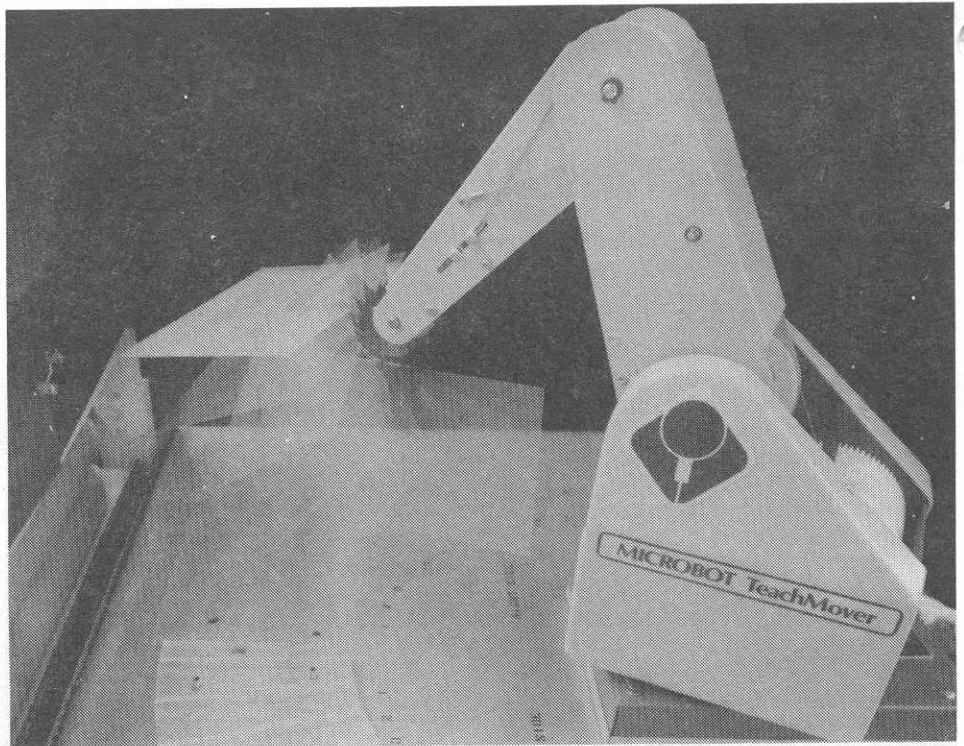
Credit Union News ... A QUICK 10 YEAR GLANCE

Melpar's Employee Federal Credit Union was chartered in June of 1973. During its first ten years of operation, nearly 3 million dollars in loans have been issued including $500,000 in 1983. Of these loans less than 0.2% have been declared uncollectable.

On the other side of the balance sheet, members now hold savings in excess of 1 million dollars. In addition, 1400 Melpar employees have established accounts with the Credit Union since its organization. The Credit Union is currently paying 8% quarterly dividends on these savings, and has done so for the last six consecutive quarters.

The Federal Credit Union Act specifies that the supervisory committee of each federally chartered Credit Union perform a verification of all accounts biannually. Keeping in compliance with the Act, Al Ross (Chairman) and his committee request that each member carefully review their September statement and report any discrepancies to them. Supervisory Committee: Al Ross, Carl Carnes, Quin Johnson, LeeAnn Cot, and Mark Sitko.

Melpar's United Way Campaign is scheduled for October 10 through October 29. As in the past, Melpar lends its support to this very worthy cause. In 1979, 1980, 1981, and 1982, we were presented the Silver Award for our outstanding participation in the campaign. We hope this will be another year in which E-Teamers demonstrate their concern for their fellow citizens through active participation in the 1983 United Way Campaign. This year's chairman, Al Tapper, will be assisted by Deputy Chairmen Sam Dellinger for Falls Church and Phil Dietz for Fairfax. More information about the United Way and your contributions through payroll deductions will be provided during campaign week.

Library Up-date ... INTER-LIBRARY LOAN

Since 1876, the American Library Association has supported and encouraged inter-library loans to better serve readers whose needs extended beyond the collection of their own library.

Reduced to its elements, the inter-library loan is quite similar to the usual loan from library to reader. All cooperating libraries form a single resource for the individual lender. A courtesy and a privilege, inter-library loans are indispensible to in-depth research and study.

At Melpar the technical library averages 20 inter-library transactions per week of books and periodicals. Melpar is able to access material from over 400 technical libraries in the area in addition to many local colleges and universities and the vast Fairfax County library system.

To "check out" hard-to-find resources give the librarians a call and let them put the system to work for you.

ARTIFICIAL INTELLIGENCE COURSE OFFERED TO EMPLOYEES

The world stands on the threshold of a second computer revolution. Artificial Intelligence techniques will dramatically change the way in which system problems are solved. Melpar's Introduction to Artificial Intelligence course is currently in its tenth week and will run fourteen more weeks. The main subject areas to be covered are Expert Systems and Computer Vision. The backbone of the course is a series of 24 video tapes from the MIT Center for Advanced Engineering Study. The tapes run about 35 minutes and are shown Friday noon and Monday nights from 5-6:30. The course is presented by the Industrial Relations Department in conjunction with the instructor, Norm White, Senior Member of the Technical Staff of Vice President of Engineering, Ed Isbell. For more information about the class call V. Woodbury or P. Stewart on x2052.

Security Spotlight

Design/Analysis using computers has been of value in reducing engineering time and expense. However, with this benefit comes increased security responsibilities.

A recent suspected compromise of classified information, currently under investigation by the Government, involves the use of such programs for classified defense procurement. The exact circumstances remain classified but the following excerpt highlights the Government's concern. A cleared contractor subcontracted a data processing center for the use of a structural design program on a time-sharing basis. The widespread, unclassified computer models were accessed via a commerical telephone hookup. The contractor, fully aware of his security responsibilities, attempted to "mask" classified parameters and data input by falsely labelling computer runs to disguise the program. However, classified graphs and data in the printouts were not labeled and consequently were handled as unclassified.

A good-faith attempt to protect classified information? No — not good enough! Attempts at "masking" classified information, regardless of whether the information will subsequently be processed in a controlled environment, does not provide adequate protection for classified information. Any "a" for "b" substitution system, is in violation of the established security requirements we must live by if we are to stay in the defense contractors' arena.
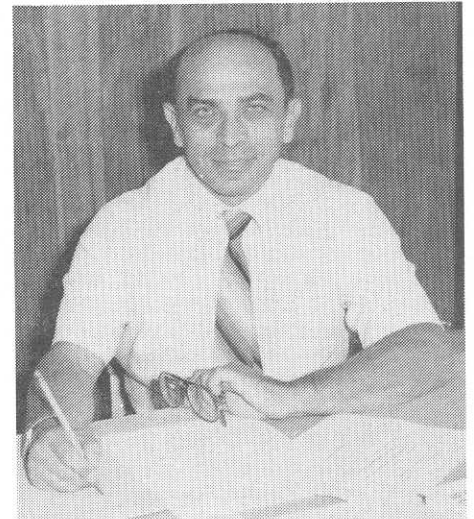
GEORGE WASHINGTON UNIVERSITY AT MELPAR

KNOW YOUR ADVISOR

Dr. Raymond Pickholtz is familiar to Melpar Employees as faculty advisor to our George Washington Graduate Program in Electrical Engineering and Computer Science, a position he has held for 4 years. Since 1972, he has been part of the Department of Electrical Engineering and Computer Science at George Washington University as Professor and former Chairman. He received his Ph.D. in Electrical Engineering from the Polytechnic Institute of Brooklyn (now New York) in 1966. He was a researcher at RCA Laboratories and at ITT Laboratories. Dr. Pickholtz was on the faculty of Polytechnic Institute of Brooklyn and Brooklyn College as well as a visiting professor at the Universite de Quebec. He has published scores of papers, was an editor of *IEEE Transactions of Communications* and holds six United States patents.

Dr. Pickholtz was recently elected fellow of the Institute of Electrical and Electronic Engineers (IEEE) for "outstanding contributions to the design of digital communication systems and to engineering education." This past year he was visiting professor and distinguished lecturer at the University of California, at Santa Barbara and at San Diego.

The off-campus program at Melpar was initiated by Dr. Pickholtz in 1979 working with our Vice-President and General Manager, Talbot Huff. He has been administering the program ever since then. By rotating GW professors on a regular basis, Dr. Pickholtz endeavors to get Melpar the best full-time faculty. Presently we have 2 full-time professors at Melpar, a computer room for our GW students and two recently refurbished classrooms to enhance the program. Just last year, seven students completed the Master's program at the Melpar Division, five of them Melpar employees. At the end of the current semester, there will be eight more graduates of the program with seven coming from the ranks of Melpar employees.

INDUSTRIAL LIAISON PROGRAM

One of the outgrowths of our program with GW's School of Electrical Engineering and Computer Science is a collaborative IR&D effort in the area of local area networks. Initially started by Joe Mitola, four Melpar employees are presently involved in the effort. They are: Hal Ammann, Bill Livingston, Dave Nicholson, and John Zett. Professor S. Chang and Professor T. Lee represent George Washington University. Professor Chang spends one day a week at Melpar and the combined group meets at Melpar on an ad hoc basis. They are working on some highly innovative ideas that will be applicable to local area networks, including coding, voice/data integration and simulation of transient behavior.

G.W. Professor James H. Scharenguivel addresses his class, C Sci 201 Introduction to Computer Systems, taught at Melpar this fall.

BONUS CHECK GIVEN RETIREES

For the second time in two years, E-Systems salaried retirees or their beneficiaries benefited from a bonus check from the E-Systems retirement fund.

In a letter to the retirees this past August, Chairman and Chief Executive Officer John Dixon expressed his pleasure at being able to forward another one-time bonus check. Although the salaried retirement plan does not provide for this type of payment, the company remembers the many years of fine service rendered by E-Teamers who have retired.

The size of the bonus payment is based on the retirement date and the annual amount received from the retirement trust.

FAIRFAX COUNTY OFFERS DAY-CARE DIRECTORY

The Fairfax County Office for Children has published a Directory of all licensed day-care centers and pre-schools in Fairfax County. It is intended for use by County and community service organizations which deal with the public.

The Directory gives a brief overview of what to look for when choosing child care, and lists, in alphabetical order, full-day care centers, part-day preschools and mother's day-out programs throughout the County. A copy of this Directory is on reserve in the Melpar library for easy reference.

Residents may call the Fairfax County Office at 691-3175 for a computer search of child care resources in their ZIP code community.

strategies relative to Spread Spectrum. In addition, strategies concerning LPI communications, including interception and exploitation, were addressed.

Battlefield 2000—The Logistics Challenge—Ed Kelley and Emery Hampton

Co-authored by Melpar's Ed Kelley and Garland's Bob Joiner, this paper was presented at a 13-14 September Armed Forces Communications and Electronics Association (AFCEA) Symposium by Melpar's Emery Hampton. The paper presented by Hampton focused on the need for DoD and industry cooperation in the development of flexible and responsive logistics to support the goal of optimum force readiness. Strong and active involvement of industry was recommended as an appropriate re-

Know Your Benefits... Second Surgical Opinion

A new addition to our Blue Cross/Blue Shield Health Plan is the *Second Surgical Opinion Program,* effective October 1, 1983. The *Second Opinion Program* is an optional program available to employees and their dependents covered under Blue Cross/Blue Shield. With *Second Opinion,* you can receive an additional medical examination at no cost when elective surgery is recommended by a doctor.

Here's how the plan works: Before surgery, you may request a second opinion at no cost by a Board Certified Specialist selected from names supplied by Group Hospitalization Inc. and Medical Service of D.C. If the second opinion does not confirm the medical advisability of the proposed surgery, you have the option of a third opinion at no cost to you or the dependent.

When elective surgery is proposed, it is up to the patient to decide whether or not to use the *Second Opinion Program* and, if it is used, the extent to which any advice is followed.

If the *Second Opinion Program* is followed, the health care benefit for covered surgeries will remain 100% for an elective surgery. But if the

surgery is performed without confirmation, the health plan benefit will be reduced to 80% of the costs incurred.

An elective surgery is defined as any non-emergency surgical procedure which may be scheduled at the patient's convenience without jeopardizing the patient's life or causing serious impairment to the patient's bodily functions. Some examples of more common elective surgical procedures include hysterectomy, total knee or hip joint replacement, tonsillectomy and adenoidectomy, prostatectomy, cataract removal and hemorrhoidectomy. Of course, any procedure (even those listed) will not be considered elective if the operation is of an emergency nature (that is, must be scheduled without delay), as determined by the patient's surgeon.

Consult your pamphlet for more detailed information concerning the *Second Surgical Opinion Program,* such as how and when to arrange for a second surgical opinion. If you have any questions regarding the program, please contact Shirley Kissinger R.N., extension 2206 at Falls Church or Michaela Narsiah, R.N. extension 3012 at Fairfax.

NEW MERRIFIELD FACILITY IN OPERATION

sponse to ongoing DoD initiatives to improve U.S. logistics support capabilties.

The Trend Towards Distributed Data Processing to Satisfy Real-Time Requirements—Bill Livingston

Bill gave a presentation of E-BUS at a TMSA seminar on *Battlefield Weapons Systems and Technology* in Brussels 3-4 October and in London 6-7 October 1983. His talk focused on the uniqueness of real-time military applications, local area network standardi-

zation, data communications protocols and distributed versus centralized network management.

Papers on Soviet Navy—Jim Westwood

Jim will give a presentation on Soviet naval power at the Conference on Soviet Military Personnel and Organization scheduled for 10-11 November 1983. The seminar is sponsored by the Center for Strategic Technology at Texas A&M University and the Office of Secretary of Defense (National Affairs).

1983 SERVICE AWARDS THIRD QUARTER

Thirty-Five Year Service
Earl J. Diehl
(Top, left)

Thirty Year Service
Kathryn L. Cooper
(Top, right)
Richard K. Sakamoto
(Bottom, right)

Twenty-Five Year Service:
Charles B. Abbott
Allen F. Haley
Robert E. Kent
Gardner W. Pierce
George W. Tuck
Albert J. Wavering

Twenty Year Service
Neal H. Ishman
Albert W. Starliper
Mary F. Townsend

Fifteen Year Service
Calvin L. Baker
Elaine W. Knight
William T. Mitchell
Elaine L. Shaffer

Ten Year Service
Dieter V. Billick

Five Year Service
Carol J. Chausse
Charles M. Cook
Michael P. Dutchak
Arthur R. Ehscheid
Nancy M. Henry
Linda S. Howells
Theodore J. Jackie
Douglas B. Jaynes
Martin W. Jenkel
Arthur L. Jordan
Shirley A. Kissinger
James R. Kowalik
Dennis Krausman
Donald R. Lavallee
Debra M. Moore
James W. Osmer
Leslie E. Sheppard
Norman E. White

RESEARCH AND TECHNOLOGY DEVELOPMENT HEADED BY NICHOLSON

David L. Nicholson has joined the Melpar Division of E-Systems as Director, Research and Technology Development. He will report to Alan W. Jackson, Vice President Advanced Programs.

Dr. Nicholson was previously with Technology Avantech Holding, Inc., a subsidiary of a multi-national mining conglomerate where he was responsible for orchestrating the acquisition and consolidation of companies to develop technology for all phases of mining operations. Prior to that he was with the Melpar Division for two years as a Technical Assistant to the Vice President and General Manager. He has extensive experience in the Division's principal business areas and holds BSEE, MSEE and Ph.D (EE) degrees from State University of New York and an MS in Administration of Science and Technology from George Washington University.

As Director of Research and Technology, Dr. Nicholson will be responsible for ensuring that the technologies needed to fulfill the division programs and business objectives are identified; and that means to obtain these technologies are determined and implemented.

Dr. Nicholson plans to reside in the Northern Virginia area with his wife Linda and their three children.

PROMOTIONS—JULY AND AUGUST

	From:	To:
W.L. Ahrens	Test Eng	Sr Test Eng
M.P. Antonucci	Elec Eng	Sr Elec Eng
M.J. Aylor	Stock Clerk	Storekeeper
R.D. Barlow	Prod Schedule Coord	Plan Supv
M.K. Bates	Assembler	Assem 1Cl
R.E. Butler	Elec Eng	Sr Elec Eng
N. Campbell	Assembler	Assem 1Cl
J.L. Gleason	Assembler	Assem 1Cl
K.E. Hamm	Cost Analyst	Sr Cost Analyst
D.A. Harris	Assembler	Assem 1Cl
J.I. Humphrey	Metrology Eng	Metrology Supv
D.J. Jennings	Assembler	Assem 1Cl
S.J. Johnson	Stock Clerk	Storekeeper
B.B. McCray	Assembler	Assem 1Cl
C.A. McRae	Assembler	Assem 1Cl
J.O. Morrell	Test Tech	Sr Test Tech
L.B. Naccarato	Sr Software Analyst	Prin Software Analyst
M.F. Newlond	Assembler	Assem 1Cl
S.J. Plaisance	Plan Asst	Planner
D.K. Precise	Line Inspec	Line Inspec 1Cl
K.A. Proffitt	DP Data Entry Oper	Sr DP Data Entry Oper
D.J. Quantrille	Purch Asst	Subcontract Spec
C.T. Robinson	Eng Aid	Jr Cost Analyst
A.L. Rodriquez	Test Tech	Sr Test Tech
K.V. Schwier	Rep Typist	Sr Rep Typist
K.M. Segner	Illus	Sr Illus
C.J. Smootz	Assembler	Assem 1Cl
T.C. Van	Jr Test Eng	Test Eng
R.I. Wells	Shop Helper	Machinist B
M.K. Whitehead	Assembler	Assem 1Cl
W.L. William	Eng Aid	Eng Tech 2Cl
H.P. Willis	Design Eng	Sr Design Eng
R.F. Willis	Assembler	Assem 1Cl

E-TEAMER AUTHORS BOOK ON FORECASTING

Daniel B. Nickell, Principal Advanced Programs Analyst in Advanced Programs Development, is author of *Forecasting On Your Microcomputer.* An "easy-to-use" sourcebook on forecasting techniques for all types of applications, the book was chosen as the main selection for The Computer Book Club.

Whether you're interested in projecting planetary positions, predicting solar and lunar eclipses, estimating and evaluating the outcome of complex games and contests, predicting the weather or building a complex financial model; this unique handbook can show you how to do it.

All major forecasting techniques and their specification applications are covered: correlation and regression analysis, time-series analysis, modeling and simulations, and numerical analysis. It includes a practical look at how-to's for choosing the right fore-casting method for the specific application as well as nearly 100 programs and sub-routines.
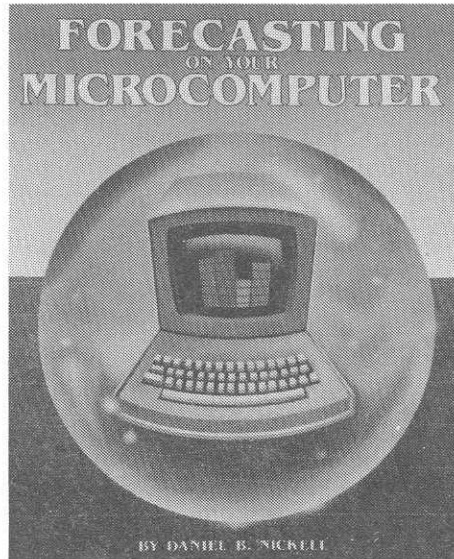
A copy of the book is on reserve in Melpar's Technical Library. If you want your own copy, check with Dan about ordering procedures. He might even autograph it for you...

FORECASTING ON YOUR MICROCOMPUTER

BY DANIEL B. NICKELL

Sports Corner

TENNIS TOURNAMENT

The Annual Melpar Tennis Tournament is in progress and all brackets are approaching the final rounds. Even though play was slow during the ladder season, tournament play has been active with a total participation of 33 persons. This is the first year in which a women's singles and doubles bracket has been included in the tournament.

At the conclusion of the tournament, there will be a luncheon for all participants. Trophies will be presented to the top finishers in each bracket.

MELPAR GOLF LEAGUE

The Melpar Golf League wrapped up the second half of regular season play with three players emerging as winners to move into the playoffs. First, second and third places were taken by Arlo Janssen, Al Hayes and Greg Taylor respectively.

The winner of the Taylor/Hayes/Janssen playoff will compete against Richard Tallman (first half of the season winner) to determine first and second place finishers for the year. Trophies will be awarded for a number of categories at a golf league banquet in November.

MELPAR HOSTS ANOTHER PICNIC . . . OFF SITE

Holiday Schedule For Remainder of 1983

THANKSGIVING	WINTER HOLIDAY WEEK
Thurs., Nov. 24 and Fri., Nov. 25	Mon., Dec. 26 thru Fri., Dec 30

1ST HOLIDAY OF 1984
Mon., Jan. 2