Seasons Greetings

Melpar as I See It . . .

Traditionally, the end of the year is a time for taking stock in our accomplishments and looking forward to the new year. As I look back on our experiences in 1991, I am encouraged by the successful progress and expansion of Melpar.

We have expanded our customer base this year by capturing the DARPA/USAF High Temperature Superconductivity contract and the DARPA/USN Cooperative Angle Jammer concept demonstration program. We now have new versions of CTT under development and the BGPHES downsizing is well underway.

The Intelligence Systems organization and the many programs we actively pursue for our primary USAF customer have also enjoyed a good year. Our sustaining USAF business base has grown and continues to be very important to Melpar's future. Progress which is being achieved on a major upgrade program for this customer has provided challenging technical work and promises to keep these systems abreast of the threat environment.

In addition to contract research and development, our Independent Research and Development program achieved very high scores this year. Together, these activities will yield a strong base of new technologies for the years ahead.

Melpar's expansion program is also surging forward. We have made good progress this year on the construction of our new facility at University Center. We are looking forward to the total relocation of our Fairfax facility by this time next year.

1991 has also seen a significant expansion of our employee recognition programs and the contribution of several major TQM team projects which enable Melpar to be more cost effective and energy efficient.

Our strong business success this year has prepared us to be survivors and winners in the new world order that is emerging. We have new programs, new customers and new technologies. We are constantly improving our processes and renewing our spirit as we plan ahead for more winning years at Melpar.
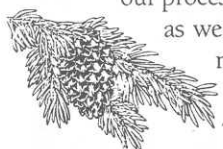
Talbot S. Huff

Superior Performance Awards Given to Eleven E-Teamers

Eleven E-Teamers received Superior Performance Awards at the semiannual management dinner in December.

The awards, which were established this year, stemmed out of the work done earlier this year by a task force which sought to expand employee recognition.

Eighty-seven employees were nominated for the new awards. Committee members Joe Myers, Kerry Rowe, Jill Swedenburg, Dave Ross, Kathy Reeder and Carol D'Andrea had the difficult task of narrowing those nominations down to 11 recipients.

Winners of the Superior Performance Awards were:

• Dan Quantrille, senior subcontract administrator with over nine years of service to Melpar. Dan is assigned to those subcontracts which are the highest in dollar value as well as some of the most difficult to negotiate and manage. His work has saved Melpar hundreds of thousands of dollars.

• Jim McArthur, principal engineer, whose inventiveness has resulted in several patents. Jim has been with Melpar for 26 years and has become a respected consultant and mentor on most signal processing and communications research and design activities.

• Nancy Dubiell, senior personnel representative with three years service. Nancy has tripled the amount of training at Melpar while improving the quality of the courses offered.

• Shirley Gallagher, Information Services secretary who received two nominations for the award. Shirley, who has over 10 years experience, has an outstanding performance record and is known for being positive, friendly, helpful and a real team player.

• Kenton Pham, machinist in the Fabrication area. Kenton is one of the strongest performers in the Machine Shop and hasn't had a defect in nearly two years.

• Marianne Brown, proposal coordinator with 10 years of service. Marianne is responsible for document publication flow and has coordinated virtually every major competitive proposal prepared by Electronic Systems since 1988.

• Jim McDaniel, senior systems engineer who has been a key Army program player. Jim has worked in many significant programs and is the technical task leader in the digital signal processing efforts while providing expertise in both software and system engineering disciplines.

• Dan Compton, principal engineer with 22 years of service who is known as one of the airborne system gurus at Falls Church. Dan's QRC efforts and electrical design of LRUs and system cables have made him a valuable resource. He's also a real team player who is always willing to help others.

• Tom Nape, principal operations analyst who is a recognized expert in his area. Tom is the lead analyst for the Advanced Workstation design which is used on several programs.

Winners of the 1991 Superior Performance Awards were *(left to right)* Jim McArthur, Jim Egan, Marianne Brown, Dan Compton, Jim McDaniel, Dan Quantrille, Tom Nape, Kenton Pham, Stephen Winters, Nancy Dubiell. *Not pictured:* Shirley Gallagher.

Melpar Hosts GWU Presentation

Fred Hill *(left)* and Professor Ray Pickholtz of GWU offered solutions to reduce communications interference levels.

Melpar hosted a technical presentation in November on Signal Processing/ Adaptive Beam Forming for Interference Cancellation by Professor Ray Pickholtz and Fred Hill of the George Washington University. Third in a series of seminars on direction finding and signal processing, the seminar complemented the joint efforts of GWU and Melpar on the Adaptive Beam Forming IR&D project.

The presentation focused on solutions for reducing the interference levels resulting from a multitude of communication users packed into small geographic areas and limited spectrum space. High resolution direction finding, which automatically drives beam forming arrays and null steering arrays, is one such scheme posed by Pickholtz and Hill that can reduce interference to other users in the spectrum.

Dr. Pickholtz is a professor in Electrical Engineering and Computer Science at GWU. He is currently also president of the IEEE Communications Society. Fred Hill is a doctoral student working for Dr. Pickholtz. **M**

Suggestion Awards for December

Talbot Huff *(center right)* recognizes Alan Hupke *(left)*, Bob Leidig *(center left)* and Jeff Peterson for their suggestion to automate the generation of CableScan data files.

Two awards were given in December to employees for their cost-saving suggestions.

Alan Hupke, Jeff Peterson and Bob Leidig were each awarded $333 for their suggestion to develop a program that automatically generates CableScan data files. Previously, wire connection information had to be manually entered onto a wirelist. Some wirelists typically contain 100 to 1,000 connections which required six to ten hours of entry and verification.

Using the output of the Valid "WIRECABLE" program, the new program reduces the production test development costs for cables and harnesses while increasing test quality and virtually eliminating manual data entry errors.

Senior Quality Engineer Kamran Givpoor suggested a database program would also be useful when reporting Engineering Change Notice (ECN) review findings. The old method was to manually enter the data on a daily basis. His suggestion cut down the time for reporting ECN review findings from 90 minutes to about 20 minutes a day, saving the company over $13,000 annually and earning Givpoor a $400 award. **M**
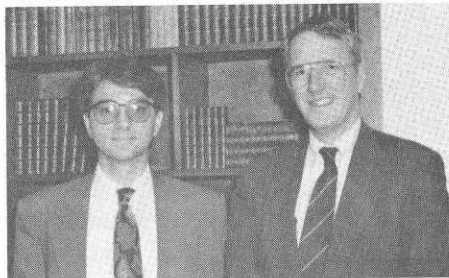
Kamran Givpoor *(left)* helped cut back ECN review findings by 78 percent.

Inside the Corporation. . .

Serv-Air has been awarded two new U.S. Army contracts in support of the Rock Island Arsenal, located 150 miles southwest of Chicago. The initial value of the contracts is $10.7 million. If all options are exercised over a five-year period, the contracts have a potential value of $55 million.

Serv-Air will provide installation, maintenance, and logistic services, along with administrative support for this major arsenal component of the U.S. Army's Materiael Command.

The Greenville Division has been awarded a $12 million contract by the U.S. Air Force for kits to modify Boeing 767 commercial aircraft to aeromedical (hospital) platforms in the event of military or civilian emergencies such as natural disasters. The kits will allow Air Force personnel to perform aircraft conversion in 12 hours.

The contract, which calls for 34 kits to be delivered to the Military Airlift Command in the second quarter of 1992, also includes an option for 60 additional kits. The E-Systems Greenville Division is near completion on a kit design to allow similar conversion of the McDonnell-Douglas MD-80 commercial aircraft. **M**

• Stephen Winters, program analyst with five year's service. Stephen's efforts in the DCAA audits and customer negotiation contributed to increased profits of $6 million and $3 million in the last two years.

• Jim Egan, software engineer who developed the Receiver ATE Test Software for both the Nanomin and SHF receivers. Jim's "can do" attitude has been part of his success in developing test software for the CTT program while being assigned the lead in developing new test software for another major Melpar program.

Nominees had to meet several criteria including being in a non-supervisory position, having at least one year's experience, and demonstrating a consistent, exemplary performance through enthusiasm, resourcefulness, dedication, initiative to institute improvements and by being a team player with an ability to inspire others.

The Superior Performance Awards are slated to be given out annually at the winter management meetings. **M**

The Not-So-Cushy Job of a Program Manager

John Nannen *(left)* and Paula Franks constantly review piles of reports to stay on top of their programs.

I n the paper-stacked office of John Nannen in Falls Church, a small clipping that reads "Don't let emotions affect judgment" advises quietly from the bottom right corner of a bulletin board. In Fairfax, Paula Franks' steady composure belies the nervousness she admits she feels as she waits her turn to report her program's progress at Major Program Review.

Both Nannen and Franks have tough jobs. They sometimes work long hours, must organize a tremendous number of different tasks and are generally always faced with solving innumerable problems. It is not an easy thing to do, but it is the job of a program manager.

According to Nannen's definition, program management is "the coordination of efforts among all organizations in such a way that everybody's piece of the puzzle comes together at the right time and the right place."

Of course, all the pieces do not always fall where and when they should. Therein lie the inherent hassles of being a program manager.

Ask either one of these two individuals, however, and they will tell you they enjoy their jobs.

Franks, who heads up the Navy's BGPHES Surface Terminal program, says she likes working with all the different people, from the customer to the engineers to the employees in Manufacturing and Assembly.

"It's a job where you get to see so much and so many different things," she says.

Her work has added complexity in that E-Systems Engineering Research Associates subsidiary also has a major part of the BGPHES effort. Although Franks technically manages their work as it fits into the larger scheme, to keep the interface running smoothly, she tries to let the ERA program manager handle what goes on at his end.

Franks' job is not made any easier by the fact that she must schedule time to work on her degree at the University of Virginia.

Long hours are not strange to Franks. She tells a story of working multiple nights in a row preparing the division BSC (Business Strategy Committee) report to present to Corporate. The night before she was to fly out to Dallas, she stayed at the office until 2:00 a.m. getting the report ready.

"I had a 6:55 [a.m.] flight," she says, "and after the BSC was over, I did exactly what anyone would think I would do at that point: I fell asleep in a nice big leather chair right there in the conference room—in front of God and country!"

Between work and school, she now manages to pull down only about five hours of sleep each night.

"I'm not handling it very well right now!" she says with a laugh.

As the youngest program manager at Melpar, Nannen, 31, says he also experiences grueling weeks every now and then. His first week in Program Management was topped off with Saturday and Sunday shifts.

Nannen, who handles the support equipment for the airborne portion of Melpar's Prime Mission Equipment program, is one of the few home-grown program managers (Franks also rose from the inside) as opposed to many of Melpar's program managers who got their training in the government. He came to Melpar 10 years ago as an intern in Manufacturing Planning while attending Texas A&M. After graduating, he returned to Melpar as an industrial engineer before transferring to Program Management.

Nannen says coming up through the ranks of Melpar has given him a certain advantage as a program manager.

"I have a keener understanding of the smallest, most intimate details of how Melpar works because I used to do those things," he says. On the other side of the coin, not having seen how other companies manage their programs may not give him the broader perspective he would like to have.

Future plans for both Nannen and Franks are to expand their business areas and to go as far as they can professionally. In the meantime, they will continue to mediate differences between organizations, try to keep their programs running within cost and on schedule, and take some breathers whenever they can.

"It's funny," says Franks. "I don't dream about Melpar or have a hard time going to sleep. Of course, it may be because I'm so tired. But when I go home, I know that no matter how bad it is, I'm doing the best that I can do, and that's why it's still easy to sleep." **M**

TQM Update . . .
Critical Performance Indicators: Measures for Improvement

What are CPIs?

CPIs are identifiable measures which quantify performance (i.e., cycle time, rejection rate). They help answer the question "How do you know when you're doing a good job?" CPIs provide a means for measuring and motivating improvement and focusing attention on areas needing it most.

Sometimes just measuring a process from the customer's point of view can lead to great improvements. For instance, Terry Ivory of Security points out that "before CPIs, there was no information available on the length of time it took for the internal processing of security forms." Now that Security tracks the processing time as a CPI, they have focused on improving the process and put a finger on some of the problems. After identifying these problems, Security made improvements which reduced the cycle time.

Security Clearance Cycle Time
Days to Process Initial Top Secret Clearances
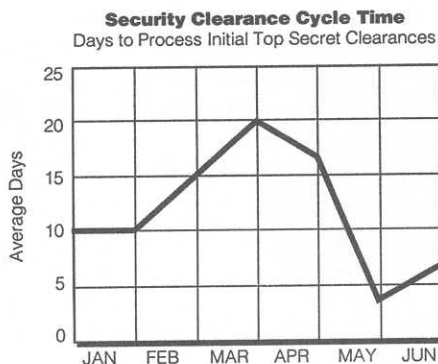
CPIs involve all aspects of our business. All departments have inputs, processes and outputs and need to ensure that their outputs satisfy their customers.

CPIs are not a new idea. In fact, many companies were developing them in the 1980's. At Melpar, all organization heads report on a rotating basis the status of their CPIs. According to Al Ross of Accounting, CPIs provide "more visibility to higher management to get issues resolved." Since initiating CPIs, Accounting has had a dramatic decrease in outstanding Accounts Receivables over 90 days and has cut in half the time it takes to resolve erroneous time charges. Both results have improved Melpar's cash flow.

How do CPIs work?

CPIs are developed using the following steps:

1. Define the process. (What is it?)
2. Who are your customers?
3. What do they receive from you?
4. How do they measure what they receive from you?
5. How can you measure your processes to ensure or increase their satisfaction?

What CPIs exist at Melpar?

Currently, 60 CPIs are being monitored. A few examples are:

• *Security Clearance Cycle Time:* Average days to process initial Top Secret clearances.

• *Accounts Receivable:* Accounts receivables over 60 days divided by total number of accounts receivables.

• *Printed Wiring Board Layout Cycle Time:* Average number of weeks from start of layout to release of finished product.

• *Assembly Quality:* Number of rejects divided by the number of assembly hours expended.

• *Proposal Effectiveness:* Number of proposals won divided by the number of proposals submitted.

• *Turnover:* Number of employee terminations for the month divided by the number of employees at the end of the month.

• *Time Card Compliance:* Number of employees not in compliance divided by the number of employees checked over a given time frame.

CPIs provide departments with guidance, and allow process improvements through management emphasis on problem areas. Identifying the appropriate CPIs is the key factor. Too many CPIs can neither be practically measured nor effectively acted upon. Once developed, they need to be communicated to all affected employees who can help make the process better and improve the satisfaction of their customers. Such actions translate into TQM working to promote efficiency, allow responsiveness and lead to a better product. **M**

Process Model

INPUT	PROCESS	OUTPUT
CPIs Measuring Inputs to the Process	CPIs Measuring Process Control	CPIs Measuring Customer Satisfaction

Keegan Promoted to Program Manager

Jay Keegan

Jay Keegan has been promoted to CTT Program Manager reporting to Senior Program Manager for CTT, Harl Romine.

In his new position, Keegan will be responsible for CTT Hybrid and CTT Hybrid Receive only design, development, prototype build and test efforts. He will also work the CTT Low Rate Initial Production, which is the production effort for the basic CTT system.

Before coming to Melpar in 1985, Keegan worked as a career officer in the Air Force for 20 years where he gained experience as a communications electronics engineer for communication systems in the Pacific Command.

Keegan holds a B.S. degree in Electrical Engineering from the Catholic University in Washington, D.C., and is a member of the Armed Forces Communications and Electronics Association. **M**

E-Systems Personnel Manager Learns from Being Principal for a Day

Melpar Personnel Manager Larry Edwards *(left)* receives a report from Graham Road's student council president Crystal Chambliss *(center)* while Principal Mary Carter listens from behind.

E-Systems partner in education, Graham Road Elementary School, got a new principal in November when Personnel Manager Larry Edwards became the school's "principal for a day."

Edwards' participation was part of a Fairfax County promotion to foster better understanding by industry of the needs of their adopted schools.

Edwards' first major perk was getting the principal's parking spot. After a short meeting with the office personnel, he addressed the students on the P.A. system, letting them know he was their principal for the day. Later, he visited several classrooms as well as the music class and the physical education class, where he said the teachers were very proud to show off their students.

At one point, some of the older students reported that they smelled smoke coming out of the boys bathroom, and Edwards was called into action to find the evidence.

"It turned out to be just the heating system building up a little bit, so we didn't have to use any disciplinary measures," he says.

At a meeting with the school staff, he gave the Company's perspective on how to deal with problems such as fighting between students.

Edwards says he gained a better understanding of the multitude of problems facing the school where so many cultures and languages abound.

"I was impressed with the good spirit at Graham Road School and the enthusiasm of the students," he says. "I would certainly encourage anybody to participate as a volunteer, as I think they would find it very rewarding."   **M**

For more information on how you can volunteer your talents to benefit Graham Road School, please contact Employee Relations on ext. 2717.

"Principal" Larry Edwards reviews a student's work.

Record Contributions Collected for United Way

Winners of this year's United Way Campaign prizes were *(left to right)* Tom Tremblay, Cindy Campbell and Willis Allen. *Not pictured:* Alida Skogsholm.

Melpar wound up its 1991 United Way Campaign with a record total employee contribution of $107,040—a healthy 7 percent increase over last year's total.

This year's sum represented an especially respectful success in light of the fact that employment was down nearly 100 from 1990. The average contribution per employee jumped from $59.89 to $66.36, with over 72 percent of all 2,235 employees participating. Chairpersons Ellie Budd and Jack Jeanes, along with 110 solicitors, were directly instrumental in the success of the campaign.

"I want to thank every E-Teamer who made this number possible," said Budd. "Contribution dollar amounts really went up this year, and I think it's just great."

Jeanes seconded her statement and added, "Considering the current economic state we're now in, I was truly pleased at the amount of generosity our employees continue to show even in tough times."

The campaign was capped off by the drawings for four incentive prizes. Tom Tremblay, software analyst in Airborne Control Systems, won the first grand prize of a weekend at Mountain Lake, Va. The second grand prize—a weekend for two in historic Lexington, Va.—went to Willis Allen, senior logistics analyst in Technical Writing. Other prizes included a gold Cross pen and pencil set awarded to programmer Alida Skogsholm of Systems Software, and a black Cross pen and pencil set won by senior CM coordinator Cindy Campbell of Configuration Management.   **M**

1991 Service Awards
November/December

Mary P. Hanson
Forty Years

Joseph D. Lewis
Forty Years

Tony DePasquale
Thirty-five Years

Twenty Years
Gary A. Marcantoni

Fifteen Years
Ethel K. Bebber
Barbara L. Deskins
Lawrence D. Wozny

Ten Years
Arthur W. Beverly
Marilyn J. Dudley
William L. Fleagle
Terry L. Fulcher
Gary L. Fuller
Lisa A. Gegick
James D. Houser
Terry R. Hunter
Paul S. Johnson
Kristen L. Kissinger
Michael E. Krawczyk
Alfred K. Leeds
Merle S. Machen
Valeria L. Montague
Steven D. Oge
Betty A. Owens
Eric D. Pittelkau
Belinda S. Roberts
Sonya E. Shooshan
Charles W. Swanick
Sharon L. Tate
Joseph C. Thomas III
Donald W. Vernon
Robert E. Weaver
John H. Webber

Five Years
Sheila M. Avey
Millie L. Baymon
John L. Cerio
Arlene M. Collier
Mark W. Greenawalt
Rhea Ann A. Jaskowiak
Sharon A. Jones
Ellis V. Scarlett
James S. Skinner
Deirdre L. Vaught
Jodi Watts

Retirees

Betty Ann Owens
10 Years

Movers and Shakers

Falls Church	Promoted From:	To:
M. D. Amato	Sr Elec Eng	Prin Eng
C. S. Ambrose	Assoc Cost Analyst	Cost Analyst
M. Batra	Sr Programmer	Sr S/W Analyst
G. M. Bielen	Sr Budget Analyst	Prin Business Analyst
L. M. Brown	Assoc Elec Eng	Elec Eng
R. H. Brown	Storekeeper	Storekeeper Grp Ldr
H. A. Campbell	Supv Cont Admin	Mgr Cont Admin
G. C. Channel	S/W Analyst	Sr S/W Analyst
D. E. Chatham	Programmer	S/W Analyst
B. W. Christopher	Warehouse Grp Ldr	Material Asst
J. W. Cohill Jr.	Sr Programmer	Sr S/W Analyst
T. R. Cooper	Prin S/W Analyst	S/W Eng Supv
D. M. Cunningham	CAD/CAM Mach Spec	CAD/CAM Mach Spec Grp Ldr
R. B. Daves	Eng Spec	Lead Design Eng
P. J. Diskin	Jr Programmer	Programmer Asst
R. D. Edmondson	S/W Analyst	Sr S/W Analyst
S. T. Francis	S/W Qual Eng	Sr S/W Qual Eng
J. C. Frank	Sr Test Tech	Jr Test Eng
T. W. Halligan	Mech Eng	Sr Mech Eng
E. R. Henry	Design Eng	Sr Design Eng
D. P. Jones	Data Control Coord	Systems Admin
J. J. Keegan Jr.	Asst Prog Mgr	Prog Mgr
G. Kugler	Assoc Elec Eng	Elec Eng
J. D. Law	Logistics Analyst	Program Analyst
C. S. McConnell	S/W Supv	S/W Devel Mgr
N. D. McDaniel	Programmer	S/W Analyst
V. L. Montague	Clerical Grp Ldr	Mgmt Asst
C. S. Moran	Assoc Cost Analyst	Cost Analyst
A. L. Noble	S/W Analyst	Sr IS S/W Analyst
K. R. Parikh	Elec Eng	S/W Analyst
J. G. Platts	Program Analyst	Sr Program Analyst
E. P. Poole	Prog Mgmt Asst	Program Analyst
P. F. Price	Assoc Prog Mgr	Asst Prog Mgr
B. E. Proffitt	Machinist B	Machinist 1/CL
C. L. Rand	Systems Programmer	Network Analyst
N. J. Reynolds	Lead Design Eng	Sr Design Eng
G. B. Robinson	Training Spec	Sr Fld Design Eng
C. S. Sandt	Assoc Cost Analyst	Cost Analyst
E. T. Schoen	Bus Analyst	Sr Bus Analyst
T. D. Seger	Jr Eng Asst	Jr Prog Mgmt Asst
J. M. Torma	Sr Logistics Analyst	Sr Program Analyst
J. T. Wigand	Mech Eng	Sr Mech Eng
J. C. Winklareth	Jr Fld Mgmt Asst	Prog Mgmt Asst
Fairfax		
K. E. Burke	Assoc Cost Analyst	Cost Analyst
D. G. Cafarella	Sr Clerk Typist	Secretary
D. M. Daryanani	Elec Eng	Fld Design Eng
W. H. Nebiker	Eng Spec	Fld Design Eng
H. L. Payne	Planning Spec	Sr Planning Spec
T. G. Tignor	Jr Eng Asst	CAE/CAD Spec
H. Vuong	Sr Test Eng	Prin Test Eng
T. C. Westley	Maint Mech	Maint Mech 1/CL
C. S. Yang	Assembler	Assembler 1/CL
V. L. Yoder	Cost Analyst	Sr Prog Analyst

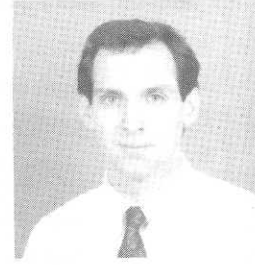## Academic Applause

Roy Daves
36 Years

Jack W. Cohill Jr.
B.S. Computer Science
Univ. of Maryland

William E. Exum
B.S. Industrial Technology
Southern Illinois Univ.

Janice G. Robinson
M.S. Accounting
Strayer College

Jonathan M. Sleeper
B.S. Computer Science
Park College

Sports Corner . . .
E-Teamers Race in Marine Corps Marathon

Senior Electrical Engineer Larry Dicerbo and Engineering Supervisor Wiley Peck trained for weeks before entering and successfully completing the grueling 26-mile Marine Corps Marathon held in November in Washington, D.C.

Dicerbo, whose time was 3:08:09, finished with a good enough time to qualify for the upcoming Boston Marathon in April. This year marked the second time he competed in the local marathon.

Peck also entered the race for the second time this year. His finishing time was 3:48:15, beating last year's time by nearly 10 minutes. Although he has run in many shorter races including the recent United Way 10K, Peck said training for the marathon required the ultimate determination and a "will to survive."

As with some other marathon runners, Dicerbo says the appeal of the marathon is the challenge it presents besides being purely enjoyable.

"Distance is fun because you don't really think about anything," he says. "Once you break into a stride, it becomes a fun time to run."   **M**

Swinging for the Win

Talbot Huff *(far right)* congratulates the winners of this year's tennis tournament *(left to right)* Barry Denicola, Kevin Martin, John Cole, Mark Barbato, Kane Insomphou, John Ryan, Tho Ly and Mike Green.

A record number of E-Teamers signed up for the tennis ladder tournament this year, which culminated in the annual awards luncheon in November.

Nearly 60 people, including Melpar retiree Bob Braun, competed for 10 trophies. Some of the newer members challenged the old guard with tough competition and swept away the veterans' champion titles.

John Cole, long-time tennis ladder organizer, was awarded a special plaque in appreciation for being the best in tennis. Said Cole: "It is a surprise to receive this award because I didn't get to play this year due to a knee problem."

Going by tradition, Vice President and General Manager Talbot Huff announced this year's trophy winners and encouraged more employees to get involved in the tennis league.   **M**

Results of the tennis tournament were:

A SINGLES
First Place: Barry Denicola
Second Place: Kane Insomphou
Third Place: Mark Barbato

A DOUBLES
Barry Denicola/Kevin Martin

WOMEN
Lynn Garland

B SINGLES
First Place: Mike Greene
Second Place: John Ryan
Third Place: Lynn Garland

B DOUBLES
Mike Greene/Ray Nelson

OVER 50
Tho Ly

FIRST CLASS