

MELPARTICULARS

Volume 16, Number 2

E-Systems Melpar Division

April 1995

Recycling Success Story



Bill Moyer, shown here, recently diverted a 430-pound load of recyclable white paper—the equivalent of 3.65 trees — from the county landfill to the recycling bin.

When the Operational Software Systems group at Falls Church was ready to discard some obsolete manuals, Design Engineer Bill Moyer decided that it made sense to recycle the white paper contents rather than discard the intact manuals in the regular trash.

Bill contacted Facilities Administrator Frank Harris to discuss the feasibility of recycling the material, the bulk of which was in glueback book form, and was told that the white paper would need to be stripped from the book binding. No problem, Bill decided. He simply sliced the binders off with a large paper cutter.

Another source of white paper in Bill's group was continuous-feed reports and materials in three-ring binders. Bill reports that he salvaged about 30 binders which were in good condition and could be reused. "In fact, about a third of those binders have already been put to use," he says, "and the remaining binders are stored in Area 18, available for reuse." Security was also a consideration during the group's

paper chase. "We had to determine what was classified and pull that material out before collecting the white paper for recycling," says Bill.

As a result of Bill's initiative and his group's participation, six boxes of white paper were collected, weighing in at 430 pounds. Material that would have ended up in the landfill was instead deposited in Melpar's recycling bins.

Frank Harris applauds efforts such as those of Bill's group, citing the need for increased awareness of the benefits of recycling from both an economic standpoint as well as an environmental one. Fairfax County charges \$48 per ton for landfill-bound trash, according to Frank. In the past five years, Melpar has actually reduced its annual output of landfill trash. "In 1990, we sent 840 tons of trash to the landfill," says Frank. "By 1994 we were down to 628 tons for the year." Cost savings have grown accordingly. Melpar

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E-Systems Set to Merge with Raytheon

The boards of directors of Raytheon Company and E-Systems, Inc., announced on April 3 that they have entered into a definitive agreement to combine the two companies and have unanimously approved a fully financed \$64 per share cash offer by Raytheon for E-Systems outstanding shares.

Dennis Picard, Raytheon Chairman and Chief Executive Officer, said, "We are very fortunate to be combining with such a successful growing company in the defense and government electronics business. The merger of E-Systems and Raytheon is consistent with our strategy to remain a strong diversified commercial company and a top tier player in defense."

Lowell Lawson, who will remain Chairman and Chief Executive Officer of E-Systems and will join Raytheon as an Executive Vice President and a member of its board of directors, said, "Our board and management team have endorsed the combination of E-Systems and Raytheon in order to provide our stockholders, employees, communities, customers and programs with the support necessary to continue to grow and prosper within the global defense electronics industry."

"Raytheon will help support our efforts to effectively serve our unique customers, guarantee our position as a leader in the defense and government electronics business and continue our long-standing strategy of expanding our defense technologies into commercial markets. E-Systems businesses continue to find a strong customer base both within and beyond the defense electronics industry. Raytheon gives us an enhanced position for accomplishing our business objectives," Lawson concluded.

Raytheon, headquartered in Lexington, Massachusetts, had 1994 sales of approximately \$10 billion with a total backlog of approximately \$8 billion. The Company has approximately 60,000 employees in four major businesses including defense and commercial electronics, engineering and construction, aircraft and major appliances. **M**

Artist Places First in Communications Competition



Sue Tien (left), pictured with Ken Yancey, Vice President of Human Resources, placed first in the United Way of the National Capital Area campaign display competition.

Senior Graphic Artist Sue Tien, of Melpar's Publications group, received a first-place trophy during the annual United Way regional awards luncheon on April 10 in Washington, DC.

Sue's winning entry, a pencil crayon work depicting a Potomac River crew team against a backdrop of famous Washington landmarks, served as Melpar's contribution goal poster during last fall's United Way campaign. A repeat winner, Sue also placed first in the 1990 United Way display competition.

This latest award marks the eighth consecutive year that a Melpar artist has placed in the United Way of the National Capital Area communications contest. Melpar also was recognized with a Silver Award, signifying a 60-percent participation rate and donations of \$25 per capita during the 1994 United Way campaign. **M**

CIWG Suggestion-of-the-Month Winners Chosen

Melpar's Continuous Improvement Working Group (CIWG) has announced the latest winners of its Suggestion-of-the-Month competition. Tom Sterling and Dave Macko have been awarded special parking spaces for the month of May.

Tom, a Senior Design Engineer at University Center, submitted a proposal entitled "Network Printing Paper Waste" which seeks to conserve paper by eliminating, where possible, the headers and title pages from network printing utilities. Tom works in the Antenna Group within Technology Development.

Dave's suggestion, "Reduced Labor Cost

for Wirewrap CCAs," recommends using a TAKYA manufacturing defects analyzer to check for faults on wirewrap boards prior to parts insertion and delivery to engineering in order to decrease debugging time. Dave, a Principal Test Engineer within the Ground Systems Group at Falls Church, is part of the Single-LAN team working DGIF-II hardware.

CIWG encourages employees to submit Cost Avoidance/Reduction (CAR) suggestions as well as general improvement ideas via e-mail (sugbox@fc) or by contacting any CIWG member. For additional information, call Wiley Peck at extension 2372. **M**

RECYCLING

Continued from page 1

was charged \$81,359 last year for trash disposal. However, the net cost to the Division, after factoring in recycling savings as well as rebates, was \$26,734. Frank notes that some of 1994's trash disposal cost savings can be attributed to the reconfiguration of several work areas. Some materials and equipment were scrapped while others were sold or donated to charitable organizations.

Frank encourages everyone to become more active in the Division's recycling efforts and welcomes all waste reduction suggestions. For more information on Melpar's recycling program, contact Frank at extension 4265. **M**

Dear Employees at E-Systems,

On behalf of the students, staff and PTA at Graham Road Elementary School, I'd like to thank you for remembering us with your Giant and Safeway receipts. You really came through for us. Many of our families cannot afford the "extras" that can run up a grocery bill, and you helped us collect a total of over \$300,000 in receipts.

We will be able to get some much-needed computer equipment and software for our school.

Thank you so much for your effort (and keep thinking of us).

Yours truly,

Gail Vanderheyden

**Gail Vanderheyden,
Receipt Coordinator**

STOCK OPTION DETAILS PENDING

In the wake of the announced E-Systems/Raytheon merger, employees have been advised to wait until details are finalized before taking any action with stocks purchased through the Employee Stock Ownership Plan (ESOP).

T-CAP investors should have received instructions on how to tender Company shares purchased through Vanguard. For more information about T-CAP accounts, contact Vanguard at 1-800-523-1188.

Employees who own stocks other than those offered through ESOP and T-CAP should have received a form regarding the tendering of shares from D. F. King, a financial services company. If additional information is needed before completing the form, contact D. F. King at 1-800-697-6975. **M**

Raytheon Deal's Impact on Melpar

Dr. Larrie Judd recently spoke about how Melpar may be affected by the Raytheon/E-Systems merger.

Q: More than half of Raytheon's business is in commercial areas. Do you expect this to benefit Melpar in any way?

A: Not directly. We have taken a different approach in playing in the commercial arena in that we, Melpar, are not going to get into the commercial business. Our culture is not set up to operate commercially; it's set up for federal and defense programs. But we are exploring arrangements with commercial firms that would leverage our technology by partnering with or selling directly to commercial companies, while retaining the ability to tap into our partners' technological expertise so that our programs may benefit. We have ongoing discussions relative to such an arrangement with our ATM product line, and we're looking at doing the same with optical interconnect and mobile cellular radio.

If any of Raytheon's commercial businesses fit this model, then they will need to be explored. However, a lot of their commercial business is in appliances and construction companies—areas in which our technology would not necessarily make sense.

Q: Raytheon has a strong international presence, with 50-some offices worldwide. Are we hoping to leverage off that presence?

A: I think that's a big plus. I also think Melpar is well-positioned to take advantage of Raytheon's international reach. We have a good track record of several competitive international program wins. So I think we know how to work the international marketplace, and having an in-country presence, as Raytheon has, can be of great benefit. Our plan is to continue focusing on European markets, while also targeting customers in the Pacific Rim. While E-Systems does not have a large presence in the Far East, Raytheon does. So, again, that's a big plus for Melpar because there are funded programs there.

Q: Are there any areas where Raytheon's business overlaps ours at Melpar?

A: No, but they have business that complements ours. For instance, we worked with Raytheon in the missile arena building sensors for them. But there are very few conflicts, even with their Goleta, California, office which is in the electronic warfare business, specifically, EW sensors. While Goleta is interested in pursuing the EXTRACT program, they are not in the reconnaissance business. EXTRACT is the next upgrade to the Star Window platform. After the Raytheon deal is consummated and the RFP is issued, we may want to look at how we might team or partner. Those issues will have to be addressed. Raytheon is also on one of the teams competing for the Tier II+ program. Still, that won't make much difference since the proposals are now all in, and one or the other is going to win.

Q: Will becoming a Raytheon company give us any added strength?

A: Despite the acquisition by Raytheon, we at Melpar are still exploring making additional acquisitions of our own to boost our competitiveness. Regarding Raytheon's business, we may find new opportunities where we can work with them. One area certain to benefit is Navy business. They are very strong within the U.S. Navy, and that's an area we'd like to move into with our C⁴ expertise.

Q: Will Melpar remain a division of E-Systems and, therefore, a division of a subsidiary of Raytheon?

A: In the near-term, at least, we will operate pretty much the same way we do now. If you use HRB and ERA as examples of E-Systems wholly owned subsidiaries, Corporate did not change them much. However, the Raytheon deal clearly means that by being owned by another company, there will be some issues to address. Most of the people within E-Systems will not notice the change, with the possible exception of getting the support to find new business.

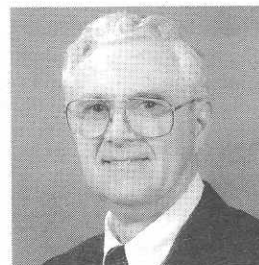
Q: Will the merger mean more layoffs at Melpar?

A: I don't see any layoffs due to the merger. Right now, we are meeting our overhead. However, our program bookings are still slipping. But right now, I don't foresee a layoff. Melpar will succeed largely by our own efforts, just as in the past.

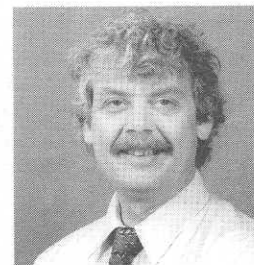
Q: What was your personal reaction to the Raytheon deal?

A: I understand the pressures that Corporate was under regarding other companies trying to buy E-Systems. I liked E-Systems being independent. But given the pressures, I think it was a very positive move, especially from a financial standpoint of a \$20 increase in our share value. Of the various companies that had been tossed around as possible suitors—Lockheed Martin, Northrop Grumman, Hughes—I think the Raytheon match compares as being very positive.

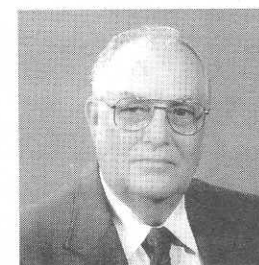
1995 Service Awards March/April



Wilfred E. Barber
40 Years



Thomas E. Barclay
30 Years



Robert R. Beck
30 Years

Twenty Years
Mary L. Simmons

Fifteen Years
Barry D. Fitzpatrick

Ten Years
Milo I. Carr
Timothy R. Cooper
Stanley W. Doran
Carol M. Garritty
Douglas Hawley
Sidney D. Honaker
Naomi Hunter
Daniel M. Kallick
Frank G. Lambdin
Charles L. Otzel
Gail A. Pennington
Ernest G. Steever
Okey Warden, Jr.
Loretta B. Warner
Barbara A. Weaver
Myra J. Weisner
Marlene F. Wysocki

Five Years
Steven C. Aitken
Ralph H. Brown
Kevin M. Droney
Allen R. Eisenmann
Mark A. Flickinger
Jerry Harper
Jesse L. Harris
Christopher C. Johnson
Lynette A. Kemp
Scott H. Kunkel
Karen M. Lewis
Neema J. Nene
James P. Redel
Quang V. Tang
Danny J. Wilson
James R. Wilson
Chung S. Yang

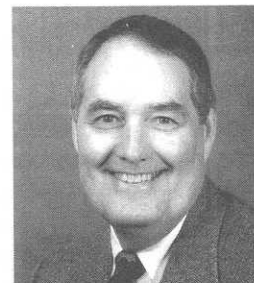
Retirees



Steven Y. Lim
37 Years

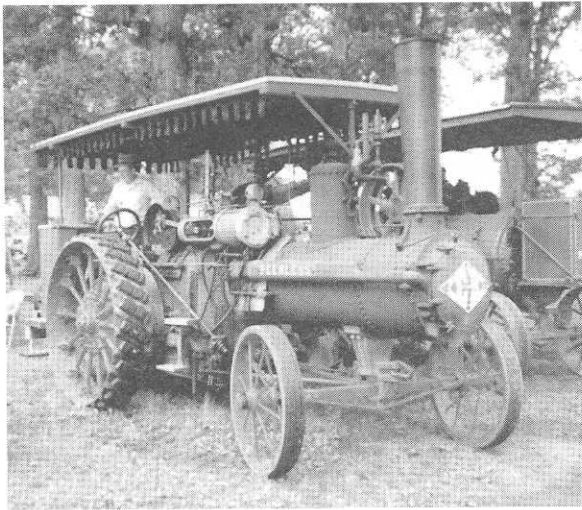


Judy Martinowsky
8 Years



Jennings R. Ross
40 Years

Engineering a Peerless Comeback



Jack Hottel demonstrates his refurbished 1918 Peerless steam engine at last summer's Steam and Gas Engine Show in Berryville, Va.

A quarter of a century ago, Engineering Supervisor Jack Hottel was recruited for a daunting task—refurbishment of a 1918 Peerless steam traction engine purchased by his father at an estate sale. A professional engineer since 1968, Jack soon experienced engineering in a whole new way.

"Pop had always wanted a steam engine," recalls Jack. "He had worked on one after his discharge from the army following World War I." The Hottels began overhauling and restoring the single-cylinder, wood-fired beast on the family's Haymarket, Virginia, farm in 1970.

"I didn't know anything about steam engines then," admits Jack, "but I learned fast. The challenge appealed to me. The same principles of scientific curiosity that apply to most engineering jobs applied to this project."

Self-propelled steam traction engines first appeared on the scene in the 1880s,

according to Jack. Farmers and sawmill operators used them as a mobile means of power in the days before gas-powered tractors. "In a typical setup," explains Jack, "the engineer belted the flywheel to another machine such as a grain thresher or a silo filler." While the steam engine revolutionized agricultural output, operation was rather labor-intensive. Besides the engineer, who was in charge of operation, a steam engine crew required a minimum of one person to bring fuel (wood or coal) and another to bring water.

A year after launching the massive restoration effort, the Hottels pronounced the steam

engine operational and ready for exhibition. For 24 consecutive years, Jack has displayed and operated the Peerless at the Shenandoah Valley Steam and Gas Engine Show held each July in Berryville, Virginia. Demonstrating that the engine is more than a museum piece, Jack has used it to power both a sawmill and a threshing machine.

Since inheriting the Peerless, Jack has continued to maintain and upgrade it. By outfitting the rear traction wheels with rubber blocks and recapping the front wheels, Jack can navigate the 10-ton behemoth along hard-surface roads without chewing up the asphalt. Other modifications include a temperature gauge for the boiler, a steam-turbine fan and a replacement canopy.

Because the steam traction engine is considered farm equipment, Jack does not need a special operator's license when cru-

ing along state roads at a stately speed of 3 mph. However, he is required to display a safety inspection sticker issued annually by the Virginia Department of Labor and Industry. The state inspector occasionally relies on state-of-the-art technology to examine the 77-year-old engine, taking ultrasound readings, for example, to check out the integrity of the 250-gallon boiler.

Engine maintenance can be complicated by the scarcity of parts. (Geiser Manufacturing, of Waynesboro, Pennsylvania, ceased production of Peerless engines in 1928.) Instead of replacing parts, Jack often makes alternate modifications or actually fabricate the necessary parts. Rust, of course, is a perennial problem. "It's getting more difficult to find paint that will withstand both the boiler's high temperatures and the weather," Jack says.

"There's always something to fix," Jack notes. "And, of course, mishaps can occur at inopportune times." When the engine blew a hand-hole gasket at last year's Berryville show, a flu-stricken Jack hastened to make the necessary repairs in the sweltering summer heat.

What further engineering challenges are in store for Jack? At least one major repair awaits his attention—rebabbiting the engine's massive bull gear bearing. "That will be difficult," predicts Jack, "because it requires a lot of setup."

M

Use the Melpar Division

ETHICS HOTLINE

CALL 849-1577 (or ext. 1577)

You can call the Corporate

Hotline COLLECT 214-661-1000 ext. 255

IDENTITIES OF CALLERS WILL BE HELD IN
STRICTEST CONFIDENCE
(Anonymous Calls Will Be Accepted)

Melparticulars

Published by
E-Systems, Inc. Melpar Division

Editor: Alice Ross

Photographers: Lucy Murphy, Joe Baran

Production: Mary Wohlford

Printing: Doug Dreibelbis, Kevin Droney

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