MELPAR-A-GRAPH

Volume 9, Number 9 MELPAR, INC. • A SUBSIDIARY OF WESTINGHOUSE AIR BRAKE CO. November 1964

Melpar Awarded $2,168,100 Contract

Melpar has been awarded a $2,168,100 cost-plus-fixed-fee contract for warning and detection instrumentation of chemical agents. The contract was awarded by the Edgewood Arsenal, Maryland.

Hear Ye! Hear Ye! Christmas Party December 20

Mark it on your holiday calendar: **December 20, 2 to 4 p.m.** That's the time of the third annual Christmas party for Melpar employees and their families.

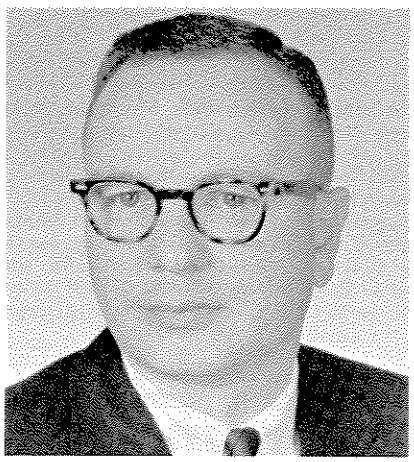
A committee has been at work several weeks now, planning entertainment, treats, and toys that will light up the eyes of the small fry like so many Christmas stars.

This year's committee chairman is Margaret Kiley. Heading the various subcommittees are Bert Lane, Traffic Control; Brandon Marsh, Refreshments; Frank Carau, PA System; Eugene Paine, Facilities; Arthur Lamb, Entertainment and Favors; Michael Ingrisano, Publicity and Photography; Frank Brown, Decorations; Lee Delaney, Hostesses; and Lawrence Barnes and Virgil VanCleef, Santa Clauses.

More details on the party will appear in the December *Melpar-a-graph.*

Fivel and Streeter Get New Assignments

Melpar management has announced the appointment of Milton J. Fivel as Product Director for Communications, Engineering Services, and of Kenneth C. Streeter as Manager of the Technical Staff, Engineering. Mr. Streeter, who was Manager of the Computer Department, moves into the position previously held by Mr. Fivel.



M. J. Fivel

K. C. Streeter

In his new assignment Mr. Fivel is responsible for Melpar product line planning in the communications field. The company has an impressive record of accomplishment in the design and fabrication of advanced communications systems, and in applied research that has opened the way to even more sophisticated systems. The desire to utilize fully the company's expertise in this field led to the creation of the post to which Mr. Fivel was named.

Mr. Fivel came to Melpar in 1949, shortly after receiving the BSEE from Georgia Institute of Technology. His design experience includes work on time and frequency multiplexers, a magnetic mine detector, and test equipment for a telemetering system. He has had both technical and administrative responsibilities for an antijam radio teletype system, an analog-to-digital PCM code converter, and time and frequency multiplexing, demultiplexing, modulating, and demodulating equipments, among others. He is a member of IEEE and its Professional Group on Electronic Computers and Communication Systems.

Mr. Streeter's service with Melpar dates from 1953. First as senior and project engineer, and later as section head and department manager, he contributed to many of Melpar's successful programs in the design and development of aircraft simulators, including the F-100 and F-101 series, the A4D series, the HSS-2, and the GAM-83 trainers. He has also managed programs relating to bionics and to special-purpose analog and digital computers.

Mr. Streeter holds the BSEE from Mississippi State College. He has done graduate work in astrodynamics and advanced mathematics at George Washington University, the University of Virginia, and the University of California.

Gas-Chromatographic Instrument Developed for NASA

A highly sensitive gas-chromatographic instrument has been developed by Melpar for monitoring space simulator chamber contaminants at NASA's Langley Research Center in Hampton, Va.

The instrument employs four columns and four cross-section ionization detectors to measure the concentration of a number of possible contaminants to be found in closed environments. Drift-compensating solid-state amplifiers maintain the baseline constant in spite of great changes in environmental conditions.

The Melpar unit has been in operation for four months at the Langley Research Center. It has been used to monitor simultaneously vapor concentrations as low as 10 parts per million of contaminants contained in breathable atmosphere.

The instrument, developed under the direction of Julian H. Chaudet, Manager of Melpar's Physical and Analytical Chemistry Laboratory, may be used in any application requiring highly sensitive, reliable measurements of a large number of gaseous vapors.

Cost Shavings

Odds Are Even

Chances are about 1 to 1 that your value improvement suggestion will be accepted. That's the word from C. Eugene Perry, the VIP coordinator who keeps tabs on such things. Of all suggestions acted on to date, 48 percent have been or will be implemented. Nearly all of the remaining 52 percent had merit but were not adaptable to the Melpar situation for one reason or another.

New Names on Board

Twenty-five new names appeared in September on the VIP boards displayed in Melpar's corridors. They belong to the following employees, who had their first VIP suggestion accepted: Cosimo M. Alessi, Eleanor S. Bergamyer, Robert A. Bernay, William H. Boswell, Robert L. Burke, Frank L. Carau, Jack L. Dodd, David J. Fromme, Sherman L. Hall, and Dorothea R. Johnson.

Also, Roger W. Jones, Dorothy F. Miller, James F. Mullen, Ruth Moses, Juanita R. Musser, William L. Mahood, Tommy G. Neel, Robert V. Overton, Anthony C. Panolias, Fred L. Rogusky, H. Fenn Sykes, Oscar Stiegler, Gerald G. Thorne, Lloyd B. Wickersham, and Almeda P. Woods.

Repeaters

Special recognition is due the following employees, who have had two or more suggestions accepted, the most recent in September: John J. Adams, Frank L. Hickisch, Virginia MacMinn, Herman L. Michael, Alan Plait, C. Eugene Perry, William J. Watson, and Joseph L. Zobay.

DOD Publication Spotlights Our VIP

The September issue of *Conservation–Cost Reduction Digest*, a publication of the Defense Contract Administration Services Region, devotes one of its 16 pages to descriptions of some savings effected through Melpar's VIP. Discussed were (a) a more efficient inventory procedure for test equipment; (b) discontinuance of a redundant inspection operation; (c) consolidation of Personnel files at a central location; (d) elimination of the Expediter Follower Sheet as unnecessary to record movement of material in the shops; and (e) cost avoidance in the purchase of materials, realized through analyzing prices, negotiating prices with vendors, and procuring satisfactory substitute items at a lower cost.

SERVICE-PIN LUNCHEON. Thirteen employees marked service milestones in the September-October period. Vice President Lincoln Brown completed 15 years with Melpar, and the following completed 10 years' service: Sidney M. Benford, Elizabeth R. Brothers, Carl F. Bullard, Lee A. Denson, Joseph G. Garcia, Howard B. Hodges, Mary L. Noeman, Gordon E. Sessions, William M. Verbeck, Johnny A. Walton, Willie J. Wilson, and Stanley W. Yeakel.

Pins were presented October 21 at a luncheon held in the cafeteria of the Falls Church plant. In attendance, besides employees observing service anniversaries, were heads of operating units or their representatives. Seated around the table, clockwise from the left, are Ivan Johnson, Mrs. Brothers, Norman Langford, Mr. Walton, Walter Myers, Mr. Hodges, Mr. Brown, Vice President and General Manager William C. Purple, William T. Cradlin, Mr. Denson, Mr. Wilson, James Hilfiker, Mr. Garcia, and Mr. Sessions.

SUPERVISORS' FORUM

Although life insurance and accidental death/dismemberment insurance benefits are important provisions of the Melpar Group Insurance Policy, employees are sometimes hazy about them. This month's article by Lawrence E. Shaw, Assistant to the Personnel Manager, discusses these features of the plan.

Q. Are there any limitations or exclusions regarding the payment of the life insurance benefit?

A. No. The benefit is payable upon death from *any* cause and wherever death may occur. For example, the benefit is not voided, as may be true in some policies, because the employee regularly engages in aerial flights either as a part of his employment or as a hobby. Nor is the policy voided should the employee die in a foreign country.

Q. Are there any limitations or exclusions regarding the accidental death/dismemberment benefit?

A. Yes. The accidental death/dismemberment provision does not cover the following:

1. Any loss caused by an injury sustained while engaged in any occupation for remuneration or profit.
2. Any loss caused or contributed to by bodily or mental infirmity, sickness or infection.
3. Suicide or any attempt thereat (sane or insane).
4. Any loss by war or any act of war.
5. Any loss resulting directly or indirectly from medical or surgical treatment for any kind of disease.

Q. In the event of my accidental death will my beneficiary collect both the life insurance and the accidental death benefits as shown in the group insurance pamphlet or only the accidental death benefit?

A. Both will be paid.

Q. I know the group medical policy terminates with termination of employment. Is this also true of the life insurance and accidental death/dismemberment features?

A. The life insurance benefit is payable if the former employee dies within 31 days after terminating; all other benefits terminate with the termination of employment. Both the medical coverage and the life insurance policy, however, may be continued at the individual's sole expense provided he makes application to the insurance company within 31 days after terminating.

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On the Dais...

Dr. Ira Blei, Head of the Biological Detection Section, Life Sciences Laboratory, spoke at the Symposium on Recent Developments in Research Methods and Instrumentation sponsored by the National Institutes of Health. The symposium was held at the NIH facility in Bethesda, Md., October 5-8. At the session devoted to exobiology, Dr. Blei discussed optical rotation as a means of detecting extraterrestrial life. Optical rotation, or rotation of the plane, of polarized light occurs when the light passes through material that contains living organisms.

Dr. Lee Herrington described Melpar's mobile meteorological data acquisition system at the National Conference on Micrometeorology at Salt Lake City, October 12-14. The system was used in the "jungle canopy" trials in South Carolina this summer. (See June 1964 *Melpar-a-graph.*)

Edward M. Connelly presented a paper, "The Application of Trainable Logic Networks to Control Systems," at the Southeastern Regional Meeting of the Association for Computing Machinery. The meeting was held in Atlanta, Ga., October 15-17.

Company Awarded Army Contract For Study of Dehydrated Foods

Melpar recently announced the award of a contract from the Department of the Army for the study of interrelationships between storage stability and the moisture sorption properties of dehydrated foods.

The study includes starch foods, protein foods, and foods with high sugar content and high molecular weight constituents, all in dehydrated forms.

The data obtained are to be interpreted to establish levels of dehydration compatible with optimum textural quality and storage life of dehydrated foods, and specification requirements for moisture content and storage condition of dehydrated foods.

The study at Melpar is being directed by Julian H. Chaudet, Manager of the Physical and Analytical Chemistry Laboratory.

H. F. Sykes, Budget Coordinator, made a presentation, "Problems of Delegation," at a two-week management development seminar conducted by the National Park Service at Harper's Ferry, W. Va. Mr. Sykes gave his talk on October 28.

L THE REAL JIM FRICK STAND UP? Thousands of TV viewers see him as the guy with the whirling balls and wild headgear in spot commercials for a local restaurant chain. Hundreds at Melpar see him in a considerably more serious aspect, as an electrical engineer. He's James F. Frick of Aerospace Division, and what he can do with his eyes defies description. His somewhat offbeat talent is displayed in 11 commercials he has made, several already on the air and the others slated for release over the next few months. Some of the characters he assumes are a Caribbean type (inset), a racetrack tout, and a mophead in the Harpo Marx style. Photos by Glittenberg.

Kirby Named Manager In Engineering Services

The appointment of Guy S. Kirby III as Engineering Services Manager was announced recently by Robert E. Miller, Vice President for Engineering Services.

G. S. Kirby III

Mr. Kirby has been with Melpar since 1958 as an engineering services representative, with responsibility for contract liaison and for presenting Melpar's experience and capability to appropriate Government agencies.

A former Air Force officer, Mr. Kirby served in the USAF Security Service and in the Air Defense Command.

He attended the University of North Carolina and received the B.S. degree from the University of Houston. He has done graduate work in communications at American University.

Did You Know?

The Employee Utilization Section of the Personnel Department has chalked up quite a record of matching people and jobs:

Since January the Section has found suitable jobs within Melpar for 213 people who had been on Company programs with diminishing manpower requirements (this is in addition to other, more-or-less routine transfers and reclassifications).

Each month over the past several months, the Section has referred about 35 employees, who could not be placed within the Company, to *specific* job openings in other companies—openings in line with the employees' qualifications.

Thin-Film Transistor Survives Nuclear Radiation

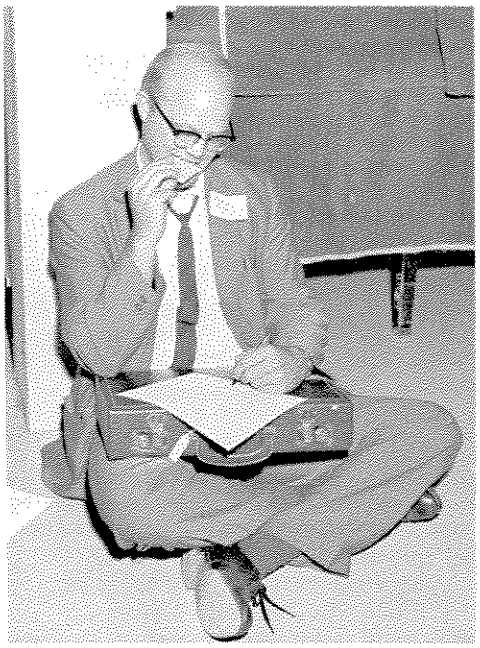
A significant step in advancing the capability of electronic circuits for military and space radiation environments was recently revealed at Melpar. Post-irradiation examination of thin-film field-effect devices (transistors) showed that they had survived nuclear integrated fluxes exceeding 10^{16} neutrons/cm^2 and 2×10^{10} ergs/gm (C) of gamma radiation. This is approximately 1000 times the neutron radiation tolerance exhibited by conventional transistors.

For space application this could mean improved penetration in deep space, long-term communication satellites, and reduced shielding in nuclear-propelled spacecraft. For military application the development may lead to special radiation-resistant electronic systems and reduced shielding. The thin-film devices were exposed to reactor neutrons and radiations at the National Aerospace Research Facility.

These results of continuous exposure confirm previous transient-radiation tests using the Hughes Aircraft Co.'s 10-Mev electron linear accelerator. Hughes' personnel also used pulsed neutron reactor radiations. In all cases improved radiation tolerance over conventional transistors is attributable to significant differences in device structure. Thin-film devices contain polycrystalline material, operate by majority carrier conduction, and are so thin that they do not significantly absorb radiation.

The radiation resistant thin-film field-effect devices were fabricated by scientists headed by Dr. Charles Feldman, Manager, Physical Electronics Laboratory of Melpar's Research Division. By high-vacuum deposition techniques, extremely thin films of semiconductors, dielectrics and metals are deposited in particular configurations to produce electronic devices having amplifying characteristics. These devices, in combination with other vacuum-deposited components, such as resistors, are being used to form complete electronic circuits.

A $429,000 contract for thin-film research at Melpar is sponsored primarily by the U. S. Bureau of Naval Weapons.



ROUGHING IT. Melpar safety engineer Stephen Bush takes the best seat he can get and munches on a cracker, the only food available. Where is he? At Fairfax County police headquarters, in the air-raid shelter in the basement.

To climax an Office of Civil Defense course he was taking, Mr. Bush spent 24 hours in the shelter with 18 other volunteers. They ran through an exercise that telescoped 2 weeks under emergency conditions into a single day. The volunteers performed, or simulated the performance of, tasks they might be responsible for in the real situation.

Photo by Sakamoto

Joseph J. Shanahan 1904-1964

There is an empty desk in the Purchasing Department, and Purchasing will never be quite the same. A friend and coworker, Joseph J. Shanahan, suffered a heart attack following a major operation, and died November 11. A subcontract buyer, he had been with Melpar for almost nine years. He will be missed not only by Purchasing but by his many friends throughout Melpar.

Mr. Shanahan was a proud man—proud of his family, proud of his home, proud to be working for Melpar. Besides his wife, he is survived by a daughter, Sister Joseph Michael, St. Mary's of the Woods, Indiana, a son at Princeton University, and a teen-aged daughter.

Mr. Shanahan will be missed, too, by the children and grandchildren of Melpar employees to whom he was Santa Claus at Melpar's Christmas Party the past two years.

Melpar Joins NCSL

Melpar recently became a member of the National Conference of Standards Laboratories, an organization to promote cooperative action on common problems of management and operation of such laboratories. Frank L. Carau, Head of the Measurement Standards Laboratory, has been appointed Member's Delegate, to represent Melpar in NCSL activities.

Hardy Made Diplomate Of Microbiology Board

Dr. Frank M. Hardy, who heads Microbiology Branch of the Research Division, was recently made a diplomate of the American Board of Microbiology. The Board certified him in Public Health and Medical Laboratory Virology.

Certification denotes that in the opinion of the Board the diplomate is well-trained, competent, and established in his field. A program of training and experience beyond the doctorate is a requirement for certification.

The American Board of Microbiology is sponsored and promoted by the American Academy of Microbiology. Its purpose is to establish and maintain in the United States a reservoir of highly trained microbiologists for better service to mankind.

Streeter Named to Post On NSIA Subcommittee

Kenneth C. Streeter, Manager of the Engineering Technical Staff, was recently appointed Vice Chairman of the Personnel and Training Subcommittee of National Security Industrial Association. His two-year term of office began October 8.

Kagan Addresses Seminar

Morton R. Kagan, senior physicist of the Physical Sciences Branch, CW Defense Lab, spoke by invitation at the Electrical Engineering Seminar, Catholic University, on November 13. His topic was lasers. Mr. Kagan's address covered solid-state, gaseous-discharge, and electron-injection or semiconductor lasers. His main emphasis was on organic chelate lasers, an area in which Melpar pioneered.

Campanella's Work On Laser Report Cited

S. Joseph Campanella, Head of the Electronics Research Laboratory, contributed significantly to a report "Underwater Application of Lasers," recently prepared for the Bureau of Naval Weapons by the American Ordnance Association.

Admiral E. R. Eastwold of BuWeps described the report as "an excellent summary of a very complex technical area which is currently being investigated with keen interest for ASW applications."

In a letter to President E. M. Bosti... Alton D. Anderson, Chairman of ... Underwater Ordnance Division of the American Ordnance Association, wrote "Mr. Campanella deserves congratulations for his recognized contribution."