MELPAR-A-GRAPH

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HEFFRON, BAUR TO PUT COMPUTER THROUGH PACES AT LECTURE

W. Gordon Heffron, Manager of the Vehicle Laboratory, Aerospace Division, and William H. Baur, senior aerospace engineer of the Laboratory, will collaborate on the fourth evening technical lecture of the current series. The lecture, "Solving Aerospace Problems with an Analog Computer," is scheduled for 7:30-9:00 p.m., Tuesday, March 31, in the cafeteria of the Falls Church plant.

Mr. Heffron and Mr. Baur will demonstrate how an analog computer solved actual problems that arose in the design of a sounding rocket by the Vehicle Laboratory. This demonstration will be the meat of the program. For dessert, the two lecturers promise to let members of the audience try their hands at landing a spacecraft on the moon, the computer ...lping.

All Melpar employees and their husbands and wives are invited to attend. According to Mr. Heffron, a good part of the lecture and demonstration will be of interest to the layman. Admission will be by presentation of badge at the main lobby of the Falls Church plant.

FIELD SERVICE MEN COMMENDED BY FAA

Two Melpar field engineers, Ted Campbell and Bruce Snyder, were recently commended by the Federal Aviation Agency for their valuable contributions to a research project at the FAA National Aviation Facilities Experimental Center (NAFEC) in Atlantic City, N.J.

In December 1963 the two men wound up a four-year stint at NAFEC, where they were responsible for a simulator used in a research project in collision avoidance. The simulator was a modification of an F-100A simulator that Melpar designed and built for the Air Force. The two Melpar engineers, working with human factors engineers and other re...arch personnel, designed and adapted ...rcuits and displays so that the simulator could be used in the development of a Pilot Warning Indicator.

(Continued on page 4)

Army Awards $2.5 Million Chemical Agent Detection Contract to Melpar

A $2.5 million contract covering chemical agent warning and detection studies has been awarded to Melpar by the U.S. Army Edgewood Arsenal of the Army Munitions Command.

Besides providing for the development of new concepts, the contract provides for feasibility studies as well as the construction of prototype instrumentation to improve existing detection and alarm systems.

The new contract is an expansion and advancement of an existing program in which Melpar and Edgewood Arsenal's U.S. Army Chemical Research and Development Laboratories (CRDL) blend their research efforts. This program combines in-house activity at CRDL with the unique talents and facilities of Melpar as prime contractor, making available specialized technical talent and equipment of many different universities and independent research organizations through a subcontracting arrangement.

The contract was signed at Edgewood Arsenal, Maryland. Representing the Army were Mr. Ellis W. Bankert, Contracting Officer, and Mr. L. Archer Walker, Contract Negotiator. Melpar's representatives were Dr. Paul E. Ritt, Vice President for Research, and Mr. N. J. Sargis, Director of Contract Administration.

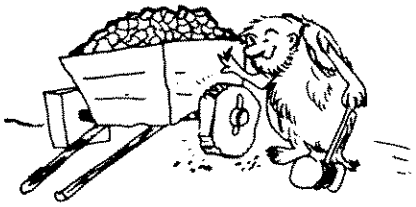
Melpar Top Aerospace Contractor in Virginia

Melpar topped all other aerospace companies of Virginia in aerospace contracts awarded during 1963, according to statistics appearing in the March 1964 issue of *Aerospace Management*.

The market analysis service of the magazine recorded $149.6 million in aerospace contracts for all Virginia firms. Total for the U.S. was $14.8 billion.

HURLEY AWARDED LEGION OF MERIT. Frederick J. Hurley (right), senior operations research analyst in the Chemistry and Life Sciences Research Center, Research Division, was recently awarded the Legion of Merit for exceptionally meritorious service as Chief, Chemical-Biological Branch, Development Division, Directorate of Research and Development, U.S. Army Materiel Command, Washington, D.C. With him above, to offer their congratulations, are Dr. Paul Ritt, Vice President for Research (left), and Dr. Donald MacArthur, Manager of the Chemistry and Life Sciences Research Center.

Mr. Hurley retired from the Army in February, joined Melpar soon after. According to the citation accompanying the award, "Colonel Hurley's decisive leadership, technical skill, and unique organizational ability contributed materially to the success of important military objectives. Photo by Salmon



Cost Shavings

Twenty cost-saving suggestions were accepted and implemented in the period December 16, 1963, through January 31, 1964. Together they accounted for $73,151 in annual savings.

The suggestions ranged over a variety of subjects—from improvements in assembly methods to the elimination of paperwork. But they all indicated a growing awareness among Melpar people of the importance of cutting costs and improving methods.

Nine suggestions were accepted and implemented from December 16 to December 31. Contributors were Francis B. Bruso and Clifford W. Ford of the Minuteman operation, and William A. Gerade and Harry M. McClarren of Administration.

The 11 suggestions accepted and implemented in January make the originators eligible for the Melpar Value Improvement of the Year award. Now in the running are Keene Hepburn, Madeline Faucette, Minnie Burdin, Geraldine Graham, John R. Hurd, and Alvin P. Hogan of Minuteman; William K. Barrett and Thelma Davis of Research; and James E. Moore of Administration.

Once more, dear friends, what to do when struck with a cost-saving idea: Jot your suggestion down on Form GO-340, available near all plant entrances, and address it as indicated on the form. If you need help in explaining your idea, talk it over with your supervisor or with your VIP representative.

Let's have your name on the list of candidates for the VIP award!

"THERE'S A GAL WHO'S GOT EVERYTHING!! WIDOW'S PENSION, SOCIAL SECURITY, AND U.S. SAVINGS BONDS!!"

IN PRINT . . .

The February issue of *Engineering Opportunities* carries an article, "Better Cooperation Needed Between Industry, Education," by Anthony B. DePasquale, supervisor in the Personnel Department. The article explores the problems that our explosive technological expansion raises for the schools and for technical employers and suggests some avenues of joint attack on these problems.

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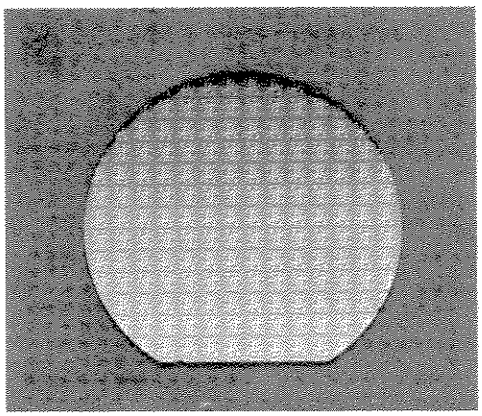

In its February issue, *Space/Aeronautics* surveys the microelectronics field and discusses the relative merits of thin-film, silicon-integrated, and hybrid microcircuits. Among the integrated circuits it shows is the one above, made at the Melpar Silicon Integrated Circuit facility. This single wafer of silicon, about an inch in diameter, contains 138 logical elements (*nand* gates).

20 Observe Anniversaries

Two employees, Helen B. Hyre and Lewis L. Lough, earned 15-year service pins in January-February. Eighteen people earned 10-year pins. They are Henry O. Ambrose, Thomas A. Baroga, Rudolph T. Benson, Herman S. Boltic, Orlan D. Falck, Frank Ferencz, Mildred R. Finnell, Byron L. Gates, Donald R. Gibbs, Gonzy L. Kelly, Virginia MacMinn, John D. McLain, Lee J. Miller, Robert E. Miller, Charles R. Parker, Paul R. Potts, Carmen A. Tomasino, Bertha D. Valdes.

Pins were awarded at a luncheon in the cafeteria of the Falls Church plant on February 19.

SUPERVISORS' FORUM

A recent panel of supervisors, in one of the Wednesday morning sessions regularly scheduled by the Personnel Department, discussed expense reports and procedures for handling them. The main points of the discussion are reported below by Lawrence Shaw, Assistant to the Personnel Manager.

Expense Reports

Cost Accounting normally carries on its books from $80,000 to $100,000 representing cash allowances and transportation tickets advanced to employees who have made official trips but have not yet submitted expense reports for them. Reimbursement for official travel cannot be claimed from customers until expense reports are cleared.

The chief reason for the high amount carried by Cost Accounting is delay in the reporting of expenses. Some people have delayed nine months before submitting an expense report on official travel. In fact, reports have been received long after the jobs to which they pertain were closed out. That's no way to run a railroad.

Errors in reporting expenses are the second factor in holding up recovery of funds from the customer. A common error is the failure of travel authorization, expense report, and time cards to agree on the job charge or charges to be debited. If it is found that travel should be charged to a different job from the one given in the original travel authorization, an amended authorization should be submitted or the original one corrected.

Another topic of concern is how to report expenses when part of the furnished transportation cannot be used and additional transportation is procured. The answer: It is not necessary to report the net value of transportation actually used. It will suffice just to show the cost of the transportation originally issued plus that procured en route, and add a brief explanation of the incident.

Instructions for the preparation and submission of travel authorizations and expense reports are found in Procedures ACT 6 and on the reverse side of the respective forms.

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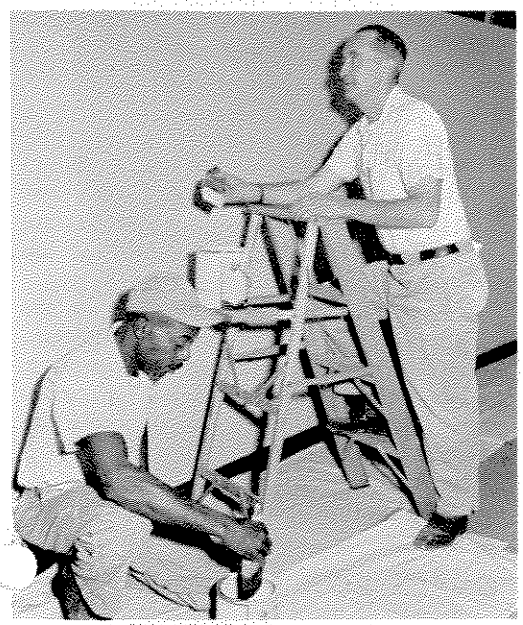
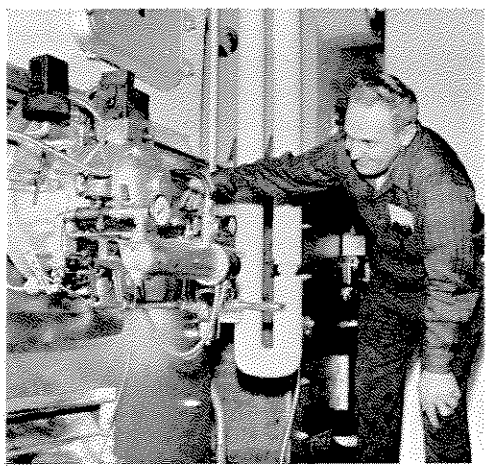
Approved: Good Housekeeping

The comfort, the attractiveness, and in some respects, the safety of our work areas — often taken for granted — are the end products of a well-organized housekeeping effort. According to James E. Hilfiker, manager of Plant Engineering, 130 people of his department are engaged in full-time routine and preventive maintenance. Some of their activities are shown here.

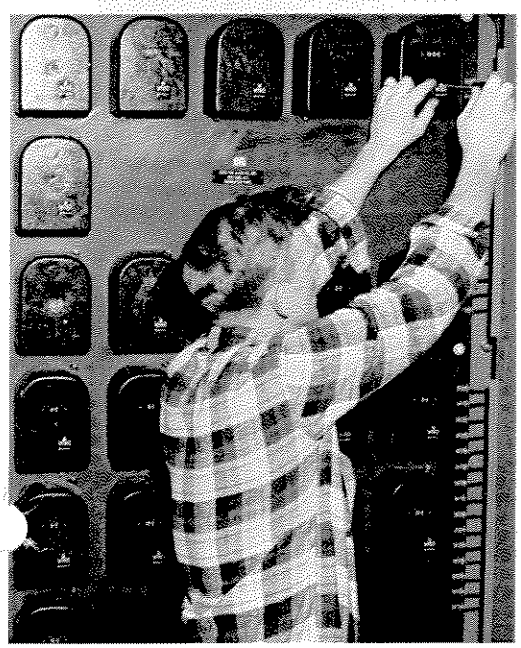
THOUGH APRIL SHOWERS MAY COME OUR WAY, the roof should withstand them. Here (left to right) Roscoe Newman, William Pickering, Wilbert Ewell, and Chauncey Johnson repair the flashing around a vent on the roof of the Falls Church plant.



A PAINTER'S WORK IS NEVER DONE. No sooner do Willie Wilson (left) and James Blevins complete one round of the FC plant, spreading champagne beige and mint green as they go, than they start all over. About 1770 gallons of paint are used each year to keep work areas bright, attractive.



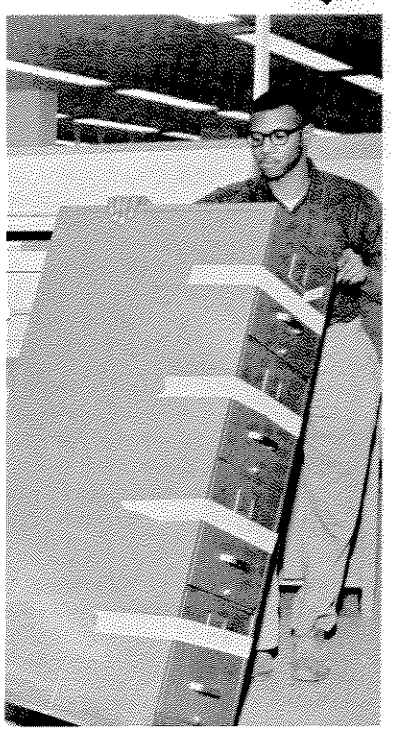
THE HEAT'S ON. In the main boiler room, Horace Kalbach checks one of his four charges.



CHECKOUT. One of the duties of maintenance electricians is to check the fire-alarm system, as Robert Thompson is doing here. Other duties include servicing and repair of a variety of motor-driven equipment throughout the plants.

PHOTOS BY SALMON

EVERY DAY IS MOVING DAY. Every day someone-somewhere, sometime-has a desk or filing cabinet that needs quick and safe removal to another spot. Here Edward Graves obliges.



TEACHERS HEAR LECTURE. These Fairfax County biology teachers attended the evening technical lecture given by Dr. Frank M. Hardy (front and center) in the cafeteria of the Falls Church plant on February 25. Dr. Hardy, of Melpar's Chemistry and Life Sciences Research Center, talked about cell-virus interactions and illustrated his talk with time-lapse motion pictures. PHOTO BY SAKAMOTO

GOING UP!

January advancements started the year right for the employees listed below. The classifications following their names are their new ones:

Carroll T. R. Ambrose, Planning Coordinator; Frank L. Brown, Supervisor of Graphics, Publications; and Simeon H. Cotton, Jr., Project Engineer.

Kenneth W. Dockter, Senior Chemist; Frank J. Donini, Fabrication Estimator; and George R. Forse, Electrical Engineer.

LeRoy D. Hochhalter, Senior Electrical Engineer, and John M. Howard, Electrical Engineer.

Neal H. Ishman, Senior Electrical Engineer; Clyde Jackson, Principal Engineer; and William H. Johnston, Principal Engineer.

Lester A. Kearney, Senior Planner; Thomas H. Lyons, Jr., Junior Metallurgical Engineer; and John A. Makarczyk, Senior Electrical Engineer.

Aaron R. Martin, Junior Chemical Engineer; William D. Oaks, Senior Engineer; and Richard B. Oliver, Programmer.

Joseph G. Ross, Jr., Supervisor of Publications Production; George D. Schwald, Senior Technical Illustrator; and Barbara A. Spradlin, Secretary.

Charles J. Sullivan, Senior Draftsman A; Albert Trujillo, Engineering Assistant; and William J. Watson, Supervisor, Programs and Proposals.

Field Service Men

(Continued from page 1)

In a letter to Stephen V. Covaleski, Manager of the Field Service Department, project engineer Guy S. Brown, Jr., Flight Simulation and Test Section, Systems Research and Development Service, FAA, wrote: "I would like to express my appreciation to Melpar for the excellent choice of personnel for this assignment. Representatives of this caliber will enhance the status and reputation of your company."

MELPAR TUNING FORK RELIABILITY PREDICTED

Reliability predictions for Melpar tuning forks and frequency standards are given in a recent report by the Reliability Engineering Section. The study was conducted using failure rates obtained from MIL-HDBK-217, *Reliability Stress and Failure Rate Data for Electronic Equipment.* The report indicates that the predicted mean time between failures for the tuning fork alone is 2,604,166 hours at room temperature and 514,403 hours at +85 degrees centigrade. For a combined oscillator circuit and fork the predicted mean time between failures is 906,618 hours at room temperature and 344,709 hours at +85 degrees centigrade. The tuning fork and standards are made by the Special Products Division.

On The Dais . . .

Morton Kagan, Senior Physicist of the Research Division, recently made a presentation, "Electron Spin-Phonc Interactions in Paramagnetic Solids," to a meeting of the Washington Area Magnetic Resonance Seminar. The seminar is made up of scientists of local Government and industrial establishments who pursue research in the general area of magnetic resonance. Mr. Kagan's talk concerned the use of ultrasonic techniques in the investigation of magnetic resonance phenomena in solids, a topic related to his doctoral research at Catholic University.

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Ronald E. Irons spoke at a dinner meeting of the Armed Forces Communications-Electronics Association (AFCEA) at Tinker AFB, Okla., on February 25.

Mr. Irons, a project engineer in the Communications Department, discussed Melpar's work in voice data processing.

The purpose of AFCEA is to maintain and improve cooperation between the Armed Forces and industry in the design, production and maintenance of communication and electronic equipment.

CALLS FOR PAPERS

Information on the following calls for papers can be obtained from M. N. Ingrisano, chairman of the Publications Committee:

The American Institute of Aeronautics and Astronautics is sponsoring a Space Simulation Testing Conference, to be held in Pasadena, Cal., November 16-18. The emphasis will be on space-simulation facility technology. Areas of interest are man-rated testing, propulsion-system testing (chemical and electronic), interplanetary space probe testing, nuclear system testing, and lunar and planetary environment testing. Abstracts of 500-1000 words are due by April 10.

Technical papers outlining previously unpublished results of research or development in electronics are invited for the National Electronics Conference, Chicago, Illinois, October 19-21. Abstracts are due by May 1.

The IEEE International Convention on Military Electronics (MIL-E-CON 8) will be held in Washington, D. C., September 14-16. General theme will be "Changing Horizons in Defense Electronics." Interested authors are invited to submit technical papers (presentation time no more than 10 minutes) on such topics as microelectronics, communications, detection systems, instrumentation, navigation, and lasers. For consideration, submit three copies of 500-word abstract plus biographical sketch before May 1.

The 34th Symposium on Shock, Vibration, and Associated Environments will be held at Fort Ord, Monterey, Cal., October 13-15. The theme will be "Designing for the Dynamic Environment." Deadline for submission of summaries of papers is July 20.