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MELPAR, INC. A SUBSIDIARY OF WESTINGHOUSE AIR BRAKE COMPANY

Volume 11, No. 8 October, 1966

WELCOME AESCON

Melpar welcomes the Institute of Electrical and Electronic Engineers' 1966 Aerospace and Electronic Systems Convention (AESCON) and invites all convention guests to visit our laboratories while in the Washington area.

Transportation is being furnished by the Company to our headquarters building and laboratories in nearby Virginia on Monday evening where a buffet supper will be served. AESCON guests will have an opportunity to meet our Melpar officers and technical center managers.

Research, engineering and manufacturing personnel will be present to answer questions about the various exhibits, displays and demonstrations. Personnel and Marketing Representatives will be available to answer questions from convention guests who express interest in these areas. Elsewhere in this issue information is presented on each technical center with a description of exhibits to be seen.

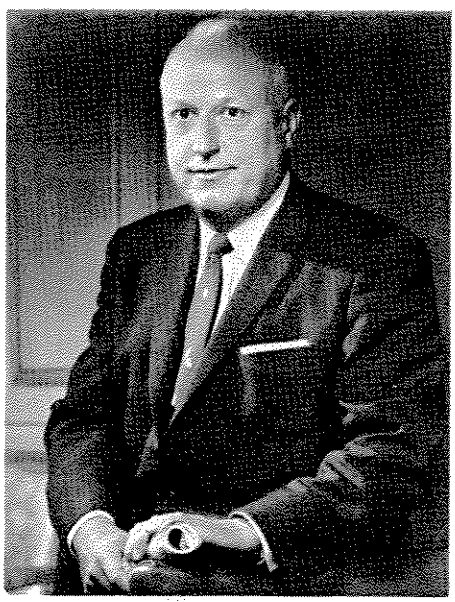
Melpar's capabilities are enhanced by significant experience and competence found in its parent organization, the Westinghouse Air Brake Company (WABCO), and subsidiaries.

Open House for Employees

Employees and their spouses are invited to attend an Open-House at the Falls Church Plant on Tuesday, October 4th from 7:30 to 9:00 P.M. The Open-House will be held in the cafeteria where exhibits of Melpar achievements and capabilities will be on display for our guests. Employees are asked to enter and leave the plant through the Main Lobby or the North Door.

Meet Our Officers

Jay V. Wilcox was elected President and Chief Executive Officer of Melpar on December 7th of last year while continuing as President of Wilcox Electric Company, Inc., of Kansas City, Missouri, a subsidiary of Melpar.



Jay V. Wilcox

Mr. Wilcox founded the Wilcox Electric Company in 1931 to manufacture broadcast equipment. The company now produces a variety of communication and navigation systems, primarily used in civil aircraft and ground applications, including general aviation, commercial air transport, and airways installations.

Mr. Wilcox is also a director of Union National Bank of Kansas City and several other corporations in the Kansas City area.

Stuart L. Dance, Vice President for Marketing, directs all marketing functions, including field and local area sales, contract negotiation and administration, proposal coordination and bid preparation, market research, product planning, advertising and customer and industry relations. Stu came to Melpar in 1966 from HRB-Singer, Inc., where he was Vice President of Program Development.

Stuart L. Dance

(See Officers, page 3)

EXHIBITS

THE ADVANCED ELECTRONIC WARFARE LAB will display antennas developed for the Lunar Excursion Module (LEM) and a "Fractional Scale Model of a Battlefield Surveillance System."

THE COMMUNICATIONS LAB will demonstrate their Frequency Usage Monitoring Equipment developed for the Naval Electronic Systems Command. This is a system that indicates channel occupancy data to aid communications circuit controllers in selecting specific channels for high frequency communications. In addition, they will exhibit their HF 103 Receiver, an electronically tuned, 2 to 32 megacycle, high performance, transistorized receiver.

THE COMPUTER LAB is showing a twelve minute movie, "Maze Runner Vehicle," which will demonstrate an adaptive network solving a maze search problem.

THE ELECTRONICS RESEARCH LABORATORY will conduct tours of its facilities where the following demonstrations and exhibits may be seen: fourier analysis demonstration in real

(See Exhibits, page 3)

MELPAR CAPABILITIES

CHEMISTRY AND LIFE SCIENCES RESEARCH CENTER, Paul Duhamel, Manager. The Center is engaged in research leading to the development of automatic instrumentation for detection of trace contaminants of toxic or infectious nature such as

Paul Duhamel

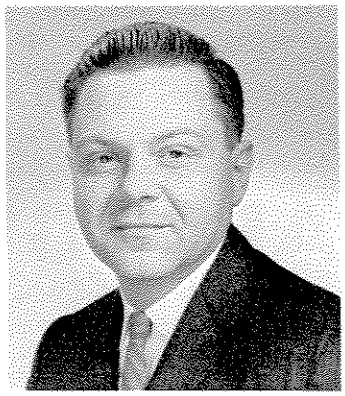
viruses, bacteria, pesticides, and hydrogen gas. Custom laboratory instrumentation is developed by this Center for research purposes in time-lapse cinematography of living cells, automatic continuous fermentation of bacterial cultures and instrumentation for controlled oxidation of organic compounds. The Center is also engaged in theoretical and field studies of micro-diffusion phenomena.

FIELD RESEARCH CENTER, Dr. John Ambrose, Manager – Provides a quick reaction task order effort and supporting services to various government agencies. The scope of this capability

Dr. John Ambrose

includes all of the operational and technical disciplines from theoretical studies, design development, fabrication, through environmental testing.

INFORMATION SYSTEMS ENGINEERING CENTER, Leonard Kings, Manager – Provides all the capabilities necessary to design, develop and construct a variety of information gathering and processing systems and subsystems using techniques encom-



Leonard Kings

passing the fields of seismics, acoustics, infrared and other electromagnetic radiations. Among the hardware development programs handled by this laboratory are ECM equipments, special purpose radars and fuses.

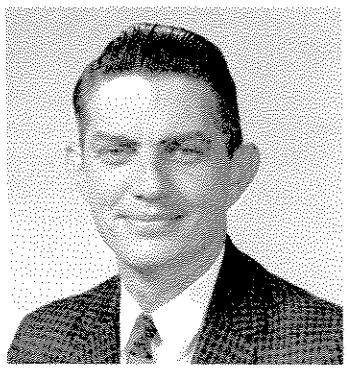
SIMULATION AND APPLIED SCIENCES CENTER, Sim Cotton, Manager – Performs applied research and, based on the results of this research, designs specialized electronic and electromechanical equipment.

Sim Cotton

Many of the items of equipment designed by this Center have been specialized training aids. These training aids range in size up to large, complex simulators of aircraft and aircraft environment. The Center has designed both rigid and rotary wing flight simulators and weapons systems involving analog and digital devices.

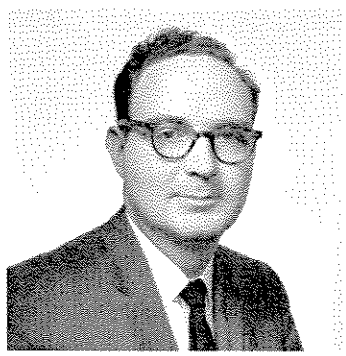
SPACE RESEARCH AND TECHNOLOGY CENTER, Ed Ditz, Manager – Contributes to Melpar's space-directed capabilities principally through research and application in the science of physics. Some of the typical programs conducted in this Center are thin films research, development of flat plate thermoelectric generators, survival equipments, electro-optical test equipment, phase change thermal controls, and metallurgical research.

TACTICAL AVIONICS ENGINEERING CENTER, Don Gibbs, Manager – Design and development of airborne homing and warning systems and related subsystems and support equipment.



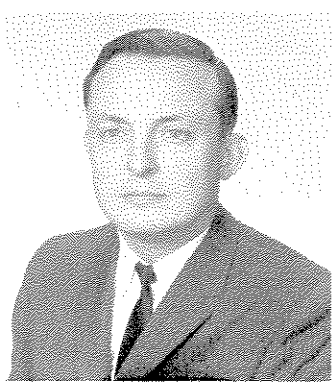
Don Gibbs

TRANSPORTATION SYSTEMS (RESEARCH), B. D. Smith, Manager – Applies modern technology to the evaluation of improved transportation systems and controls. Electrical and mechanical research and engineering



B. D. Smith

are combined with advanced techniques in mathematics, simulation, and data handling to study and solve the problems of a mobile society. The Center has complete facilities for instrumenting, collecting, and recording measurements under dynamic or static conditions.



Ed Ditz

Officers

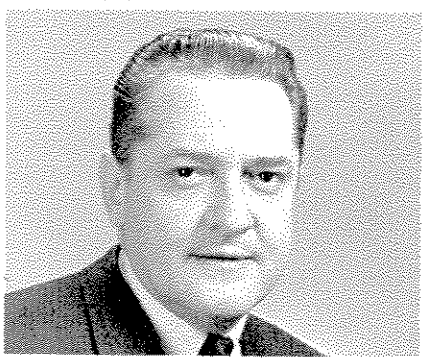
(Continued from Page 1)

Robert E. Miller, Vice President for Engineering, joined Melpar in 1954, was appointed Project Manager of B-58 systems in 1955, and headed the

Robert E. Miller

Reconnaissance Engineering Department until 1960 when he became Vice President for Advanced Development. He was elected Vice President for Engineering in 1966.

Charles B. Raybuck, Vice President for Operations, has served Melpar since his appointment as Assistant Chief Engineer in 1951.



Charles B. Raybuck

Elected Vice President for Engineering in 1954, he now heads Melpar's efforts in manufacturing operations producing high-reliability, precision components and assemblies resulting from our electronics technology.

Dr. Paul E. Ritt, Vice President for Research, joined Melpar in 1952 and was elected to his present position in 1962. Melpar's Research organization has evolved under Dr. Ritt's technical leadership with special emphasis on basic research oriented toward applications in aerospace electronics and life sciences. Dr. Ritt is a Fellow, American Institute of Chemists and a member of the IEEE and eleven other professional organizations. He has published more than forty papers and has five patents.

Exhibits

(Continued from Page 1)

time, pattern recognition exhibit, formant vocoder demonstration, laser (helium-neon) demonstration, underwater sound demonstration, synthesized speech demonstration, and a psychoneural demonstration in the Biological Electronics Laboratory.

FIELD RESEARCH CENTER exhibits will consist of models, photographs and small-scale hardware typifying this Center's operations at Goddard Space Flight Center and Aberdeen Proving Grounds. These will include p-c board assemblies, welded modules, a spark chamber assembly, aerobee simulation facility, spacecraft photographs and models, meteorite and teklite specimens and a model of the "Aber Dome."

THE INFORMATION SERVICES LABORATORY is presenting a display of a novel method for handling the mushrooming information problem. This display will relate the various intellectual phases prerequisite to information handling that will result in rapid storage and retrieval. The application of data processing techniques to library operations will also be exhibited.

MANUFACTURING OPERATIONS: On display are samples of our multilayer boards, p-c assemblies, intricate sheet-metal and machined parts; as well as special product applications including photoelectric readers, tuning fork and crystal frequency standards, time base generators, ionization chambers, thermoelectric pumps and MEL-INK.

THE PUBLICATIONS AND DRAFTING DEPARTMENTS are exhibiting typical examples of their engineering and technical data support services.

Dr. Paul E. Ritt

Reliability and Quality Assurance

Melpar's Reliability and Quality Assurance Directorate, under Mr. Leonard J. Blumenthal, provides support to all Company products and services, including operations of the Test and Evaluation Laboratory. Geared specifically to the aerospace and electronics market, capabilities are brought to bear in the fields of Reliability Engineering, Syste, Effectiveness and Component Part Engineering. For products

Leonard J. Blumenthal

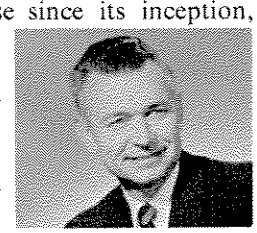
SIMULATION AND APPLIED SCIENCE CENTER is displaying panels and sub-assemblies from the 2B18 Helicopter Flight Simulator and other simulators and weapons systems in their exhibit area. Visitors to this Center's exhibits will also see a five minute movie, "Melnamic IV," illustrating Melpar's Dynamic Cockpit Motion System with 4 degrees of freedom. Those interested in seeing the 2B18 Helicopter Simulator in action and an A7A Weapon System Trainer will be invited to take a tour of the Center's laboratories.

SPACE RESEARCH AND TECHNOLOGY CENTER will display flat plate thermo-electric generators, survival equipments, whisker reinforced composites and dispersion hardened alloys (metallurgical research), salt bicrystals, electro-optical test equipment and phase change thermal control. This Center will conduct a tour of its Thin Films Laboratory where materials, devices and systems applications in monotronic thin film technology will be exhibited.

Tours will be conducted through the **Space Systems Laboratories** where integrated microcircuits (amplifiers, digital logic diode gates, etc) are being exhibited; high accuracy fine-eye solar sensors and extendable, storable, tubular booms (structural materials for space craft and orbital space laboratory application) are displayed. The tour also includes a demonstration of "Lab Scat," a laboratory electromagnetic scattering instrument that measures the electromagnetic scattering properties of spherical and irregularly shaped particles.

PERSONNEL

In order to achieve the high quality in our research, development and manufacturing programs that has been Melpar's purpose since its inception, the Personnel Directorate, under the leadership of Dr. Thomas L. Wood, places special emphasis on individual performance and recognition in its personnel policies. The Company's recruitment, employee relations, training and educational assistance, and merit review programs are designed to encourage and promote individual performance.



Dr. T. L. Wood

Dr. Wood's service with Melpar dates from 1955, when he joined the Company as Assistant to the Personnel Director. In the intervening years he held the positions of Supervisor of Wage and Salary Administration, Compensation and Training Supervisor, and Personnel Manager for the Minuteman Division. In July 1963 he was appointed corporate Personnel Manager and was named Director of Personnel in January 1966.

Reliability and Quality Assurance

(Continued from Page 3)

in process, the more sophisticated techniques for process and quality control are applied consistent with the requirements of Mil Q 9858A and NASA NPC-200-2.

The Test and Evaluation Laboratory, which contains the full range of environmental simulation equipment, supports the engineering evaluation and qualification of all designs and products in accordance with applicable government specifications. The Laboratory is also available to other companies that require environmental test and analysis of their products.

Mr. Blumenthal, Director of Reliability and Quality Assurance, joined Melpar in 1961. He is also Zero Defects Administrator at Melpar, and has been responsible for the planning and implementation of the Zero Defects Program.