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MELPAR, INC. A SUBSIDIARY OF WESTINGHOUSE AIR BRAKE COMPANY

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FIRST QUARTER BOOKINGS EXCEED $8.7 MILLION

Melpar Vice President and Acting General Manager, J. P. Chambers, has announced that total new business for the first quarter of 1967 has exceeded $8.7 million. February bookings totaled $1.4 million and March topped all months since January 1966, with a total of new contracts and change orders to existing orders of more than $4.1 millions.

February and March contracts were received from the Atomic Energy Commission, National Institutes of Health, Westinghouse Airbrake Company (WABCO), NASA (Houston), the U. S. Army, the Naval Air Systems Command, the Commonwealth of Pennsylvania, Autonetics and Wright Patterson Air Force Base.

Melpar Receives Acoustic Signal Analysis Contract

The Electronics Research Center under the direction of **Dr. S. J. Campanella** has been awarded an Acoustic Signal Analysis contract by the Department of Defense.

The contract effort is devoted to an applied research study to evaluate the potential capability of a proprietary system developed by Melpar to provide a highly reliable mechanism for the analysis and classification of acoustic signals. Analysis and classification are defined for purposes of this contract as the capability to distinguish between acoustic signals with respect to the type of event or occurence which generated the signals.

The work is assigned to **Rex Klopfenstein**, Supervisor of the Signal Analysis Branch of the Electronics Research Laboratory.

DR. ROBERT S. POWELL AUTHORS FLYING SAUCER ARTICLE

Preliminary results of a Melpar Research Program to investigate freakish atmospheric phenomenon which might explain some UFO sightings were recently published in the U. S. News & World Report. The article was written by **Dr. Robert S. Powell** of the Space Experiments Laboratory, supported by **D. C. Vogel, A. G. Konheim, P. D. Woodson, III** and **M. A. Alexander.** In addition to the application to UFOs, further studies may help to understand ball lightning, the irregular high temperature of the Planet Venus and some observed characteristics of the Planet Jupiter. The following is reprinted from 'U. S. News & World Report':

WASHINGTON – Several scientists, working at a privately financed laboratory near Washington, think they may have a new answer to the old mystery of "flying saucers."

If their theory is correct, the unidentified flying objects, or UFO's, are finally pinned down as a particular kind of freakish physical phenomenon—not spaceships from another planet.

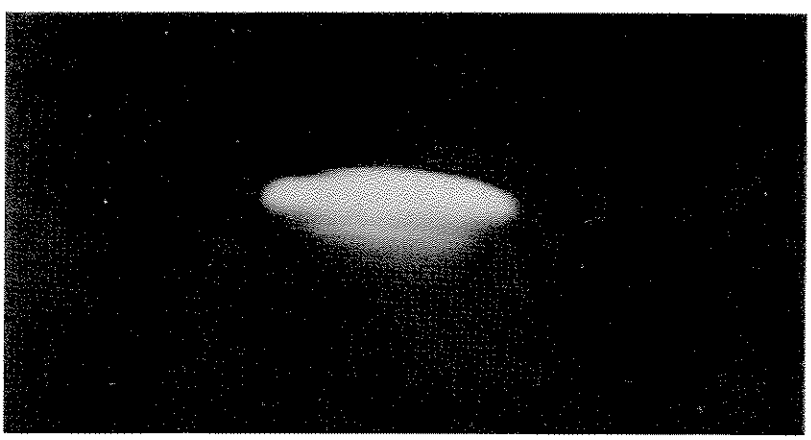
The scientists' explanation has been tested at length in the laboratory, by igniting ammonia vapor with a high-voltage spark.

Saucer with windows. The result is a mass of glowing gas that quickly assumes the shape associated with UFO's—a disk-shaped object with an inverted-saucer top and sometimes the appearance of tiny windows around the rim.

The laboratory model pictured here is only an inch or so in diameter. But it does things associated with saucers—hovering in one spot for several minutes, sometimes darting

See Flying Saucer, *Page 3*

NEW LIGHT ON "FLYING SAUCERS"



"Flying object" made in a laboratory—a mass of glowing gas.

DR. S. J. CAMPANELLA HEADS ELECTRONIC RESEARCH CENTER

Dr. S. J. Campanella has been appointed Manager of the new Electronics Research Center reporting to Dr. Paul E. Ritt, Vice President for Research.


DR. S. J. CAMPANELLA

Technologies covered by the Center include pattern recognition theory and application, signal analysis theory and application, development of special programming on Melpar's general purpose IBM 360 computer, communication systems, vocoder systems, underwater sound, atmospheric acoustics and seismics, laser applications, active thin film devices, fabrication of passive thin film networks and design and development of complete micro-electronic systems.

The Center will continue to perform its principal role of development of new technologies which are important to the future growth of Melpar.

Dr. Campanella came to Melpar in 1953, progressing through the positions of Engineer, Project Engineer, Technical Assistant to the Vice President for Research, and Laboratory Manager. He received his BEE degree from Catholic University, his Master's degree from the University of Maryland, and his Doctorate in 1965 from Catholic University.

MARGUERITE E. HENLEY

Marguerite E. Henley, a Planner in Inventory Control, passed away on March 16, 1967. She had fought a long battle with leukemia.

Mrs. Henley had been with Melpar since August 1956. First employed as a clerk, she made excellent progress through the ranks, to Planning Aid, Jr. Planner, and in August 1962, was promoted to Planner, the classification she held at the time of her death.

Marguerite was versatile, efficient, and well liked. She will be greatly missed by her co-workers. Mrs. Henley is survived by her parents, a sister and two children, a daughter Carol Ann, and a son, Gary.

Earnings Improvement Program

24% Ahead of Last Year

Al Ross, Cost Reduction Administrator, has announced that Melpar's Earnings Improvement Program has already exceeded last year's figure by 24%.

A substantial share of the total dollar savings to date is attributable to the efforts of employees in Purchasing. Reports of Procurement Savings have been submitted during the month of February by **H. Fox, C. J. Hammond, P. J. Krakes, J. W. Miller, H. L. Phillips** and **G. W. Pierce.**

Other major contributions to this outstanding performance are the result of Employee Suggestions and Reports of savings, such as the following:

TWO FOR THE PRICE OF ONE

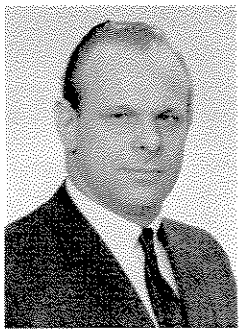
Myra Hunter, of the Security Office, noted the large volume of Polaroid film being used, due to the necessity of taking three photographs of each new employee (one for Personnel files, and two for badge preparation). Myra decided to find a less expensive method for producing the photographs. She recommended the use of an attachment for the camera lens, which, by an arrangement of mirrors, enables the camera to produce two photographs for each film exposed. The initial cost of producing photographs of new employees has been reduced by one third, in addition to providing an extra picture which can be used in the event of damaged or lost badges or for changes from non-exempt to exempt status. This suggestion resulted in a savings of $1,126.

A SWITCH IN TIME

The sharp eyes and inquiring minds of two employees of the Micro-Circuits Department resulted in a suggestion which produced more than an 83% savings in the cost of the solution used to produce a conductive metallic coating on plastic. **Lawrence E. Clifford** and **David W. Boldt** observed that the solution being used was unstable and often lasted less than one day—resulting in high material costs and lost production time. This aroused their curiosity. Investigation of alternatives resulted in switching to a more stable solution capable of lasting up to six weeks, lowering annual cost an estimated $13,538. Intangible savings include greater ease in planning and scheduling as a result of decreased down-time.

Anders Heads Systems Analysis Laboratory

Mr. James Anders has been appointed Manager of the Systems Analysis Laboratory, reporting to Dr. Paul Ritt, V. P. for Research. Prior to joining Melpar in 1966, he was the Director of Planning for Technical Operations, Inc.


JAMES ANDERS

Mr. Anders received his Master's in Applied Mechanics from Harvard University, and his Bachelor's in Civil Engineering from Virginia Polytechnic Institute. Jim, his wife Ann, and three boys, Jimmy, 6, Billy, 5, and Teddy, 2, reside in Arlington. Jim's hobbies, when time permits, are bridge and music.

RECORDS OR WASTEPAPER?

Mary Lee Wood, of Personnel, questioned the need for storing a tremendous amount of paperwork at one of our buildings. Her investigation resulted in new improved record retention schedules, and Melpar was able to dispose of approximately 50 tons of paper by file cleaning alone. The savings resulting from this action amounted to $6,178 through saving of floor space, file cabinets and pendaflex folders and racks.

Additiogal suggestions and reports of savings have been submitted by the following:

RESEARCH
S. C. Ban — D. F. Miller
P. L. Everett — I. S. Miller
J. F. L. Shenk

OPERATIONS
M. L. Weetman — G. W. Pierce, Jr.
L. R. Harrison — D. W. Boldt

PERSONNEL
Mary Lee Wood

ENGINEERING
W. F. Vivori — J. A. Cicotello
R. E. German

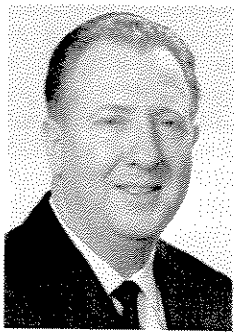
FINANCE
B. A. Kreitzer — L. M. Barrick

RELIABILITY & QA
A. O. Plait — F. L. Hickisch

MARKETING
R. Rogusky — C. C. Fritsche

Haley Appointed Employment Manager

Mr. C. C. "Jim" Haley has been appointed Employment Manager by Dr. T. L. Wood, Personnel Director. Jim, formerly with the Air Force, joined Melpar in 1966 as a Personnel Representative at the Leesburg Pike Plant where he handled the personnel functions for several hundred employees. He attended the University of Maryland majoring in Business Administration, and is a member of the Washington Technical Forum.



C. C. HALEY

Jim and his wife Lillian reside in Mt. Vernon, Virginia. His hobbies include music, golf and special foreign dishes. Jim succeeds Clarence Endsley who moves to Staff Assistant to the Personnel Director.

WABCO Establishes International Manufacturing Operations Division

Westinghouse Air Brake Company (WABCO) has established an International Manufacturing Operations Division for its Construction and Mining Group. It will provide management, technical and advisory service to WABCO's manufacturing operations in South Africa, Belgium, Australia, Brazil and Canada.

Simultaneously, the company announced the appointment of Thomas J. Guendel as General Manager-International Manufacturing Operations Division. He was formerly Manager of the Construction Equipment Division's foreign manufacturing subsidiaries.

The new division will be headquartered in Peoria, Illinois, providing WABCO with a formal structure to further identify and implement its opportunities to service world markets from either existing or new international subsidiaries. WABCO will be better able to quickly meet the changing conditions of the markets in these countries.

GOING UP!

The month of March found the following employees moving up: J. B. Lynch to Senior Engineering Assistant, Leona J. Gayle and Thelma Y. Davis to Staff Secretary A, D. F. Guinn to Principal Engineer, M. L. Hunt to Senior Q. C. Assistant, and R. G. Black to Senior Design Engineer.

W. A. Payne moved up to Junior Chemist, Donna A. McGuire to Information Specialist, J. E. Crapp to Field Buyer Expediter, J. J. McCormick, R. E. Bates and S. C. Hancock to Junior Electrical Engineer, L. P. Glekas to Lab Manager, C. J. Falkenhan to Senior F. R. Designer, and P. L. Everett to Senior Administrative Assistant. Congratulations to all.

Fifteen Mark Ten and Fifteen Years at Melpar

Fifteen employees will be honored at the Service Pin Luncheon on April 19th. Four will receive 15 year pins and eleven their 10 year pin.

Pictured are the employees who will be recognized for their service with the Company.

15 YEARS SERVICE

William F. Dupree

Loyd E. Evans

James H. Leatherwood

Robert O. Braun

10 YEARS SERVICE

O. Bess Lee

J. C. Bullman

Nina Clatterbuck

M. E. Garner

Melvin M. Scott

Frances L. Wilbur

Rudolph L. Wilke

Faye L. Wood

W. C. Baumgardner

Cosimo M. Alessi

(Lucille A. McVay was not available for the portraits.)

FLYING SAUCER

(Continued from Page 1)

about erratically, then breaking up or appearing to soar off.

It can also be tracked by radar, and produces a "charge field" that could affect radio performance nearby, says Dr. Robert S. Powell, who heads a small group of scientists experimenting with "the thing" at Melpar, Inc., in Falls Church, Va.

Spark from lightning? The gases involved in creating an artificial "saucer," Dr. Powell points out, are similar to those sometimes found in nature—often given off from newly fertilized fields or from swamps. The spark needed to touch it off, he adds, could be produced by lightning or a power line.

Other scientists have been able earlier to produce in a laboratory objects that resemble the saucers. Their techniques, however, have required a "constant energy input to sustain the effect," while in the ammonia-gas experiments the only energy input in the initial discharge spark, Dr. Powell explains. Full-scale experiments in the open atmosphere are possible now, he believes, but this might be very difficult at the present stage of work with gases.

The investigation by Dr. Powell and his associates has had no formal tie with either the Air Force or Government UFO research groups at the University of Colorado, although there was informal consultation with the latter scientists.

WABCO Awards Melpar Transportation Study Contract

A major contract to perform an evolutionary study of urban transportation has been awarded Westinghouse Air Brake Company (WABCO) by the U. S. Department of Housing and Urban Development. The Technological Study will point the way toward attaining improved urban transportation systems which could evolve from present transportation means utilizing current technology. The character and ability of future systems will be coordinated to achieve the continuity of effort.

Associated with WABCO for performance of the study are the Institute of Public Administration, Wilbur Smith & Associates, and Melpar.

The study will be concerned with current realities and future needs relating to institutional, environmental and technological forces which influence the effectiveness of urban transportation. Detailed areas for study include the movement of goods and people within metropolitan areas of different sizes; factors that influence the efficiency of systems designed to achieve such movement, and consequences of transportation system alternatives upon urban life and the urban environment.

Throughout the study, cause and effect interactions between the transportation system and the metropolitan area will be identified and socio-economic and natural science studies proposed to answer pertinent questions. At the same time, criteria and methods essential to cost-benefit analysis of alternative urban transportation systems will be developed.

It is anticipated that approximately 10½ months will be required to complete this study. The Systems Analysis Laboratory headed by J. Anders is performing Melpar's portion of the study. John Garcia is the Principal Investigator.

SPONTANEOUS IGNITION OF WET CHARCOAL

With the advent of warm weather many of us will be laying in our supply of charcoal for picnics and barbecues. We would like to share an item with you which appeared in a recent National Safety Council publication advising supermarkets and other stores which stock charcoal as a retail item that they "should be aware that this material provides a spontaneous ignition hazard whenever it comes into contact with water.

Therefore the following warning should be heeded. Store charcoal in a dry location away from any possible contact with water."

Personnel should guard against leaving their charcoal stock outside, or near outside doors where dampness could trigger a costly fire.

The explanation for this phenomenon is rather simple. Heat is released during absorption of the water by the charcoal. If this "heat of absorption" cannot be readily dissipated, it can raise the temperature of the charcoal to its ignition point producing spontaneous ignition—similar to spontaneous ignition in oily rags stored in an unventilated broom closet or wet hay in a barn.

If your charcoal does get wet, store it in a well ventilated location away from other combustible materials.

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ON THE DAIS

Dr. John C. Kim of the Computer Laboratory and **Mr. Eugene P. Kaiser** of the Communications Laboratory will present a technical paper titled "Degradation Analysis of Digitized Signal Transmission" at the Spring Joint Computer Conference '67 Atlantic City, New Jersey on 19 April 1967.

This paper presents some results of the degradation analysis of digitized sampled analog signals transmitted through a communication system. This analysis was accomplished by a theoretical investigation and a digital computer simulation of the problem. Two different measures of degradation were used in the analysis. The first measure was the normalized rms (root-mean-square) difference between the spectral components associated with each pair. The second measure was selected in order that one, using a computer to perform a spectral analysis, could better relate the degradation to the channel noise.

New Treasury "Freedom Shares" Announced

The Treasury Department has announced it's new "Freedom Shares", providing the individual, who is already buying Series "E" U. S. Savings Bonds regularly, through Payroll Savings, with a bonus opportunity to help himself, while helping his Government.

The "Shares" will be sold in four denominations—$25, $50, $75, and $100—with purchase prices of $20.25, $40.50, $60.75 and $81, respectively. There will be an annual limitation of holdings of $1350 face value, and "Freedom Shares" must be held for at least one year before they can be redeemed.

"Freedom Shares" which go on sale May 1, 1967, will be available to eligible buyers on an approximate one-for-one basis. With Payroll Savings, the two securities will be issued as one package, which can be broken down into equal payday installments.

Series E Bonds will continue to mature in 7 years and pay 4.15% interest, when held to maturity. "Freedom Shares" will mature in 4½ years and pay 4.75% interest.

With the investment of $39, the purchaser can get back $50, half of it in 4½ years, the other half in 7 years. The combined yield of the two securities, if each is held to full maturity, is 4.39%.

It is expected that dollars invested in "Freedom Shares" will be dollars that would not, otherwide, enter the savings market.

AMERICAN SOCIETY FOR METALS AWARDS CERTIFICATES . . . Four Melpar employes received certificates for successful completion o a course, "Elements of Metallurgy" at a meeting of the Washington Chapter of the American Society for Metals on March 13, 1967. The course, sponsored by the Society, was completed by (left to right) R. H. Rowe, Jr., S. C. Ban, Leah V. Loy, and A. V. Best.