R. D. Smith To Head Manpower Utilization

Robert D. Smith, formerly Corporate Director of VeFAC Programming, has been named Corporate Director of Manpower Utilization, reporting to Robert C. Sprague, Jr., Senior Vice President, Corporate Services.

In his new position, Mr. Smith will be primarily responsible for installing, maintaining and perpetuating Company approved programs for properly controlling indirect and direct labor levels throughout the Company. In addition, he will be responsible for corporate cost reduction programs involving methods, facilities and plant layout as well as the establishment of time standards for direct labor areas.

The concept of manpower utilization brings together within one group the basic functions necessary to properly control labor, reduce costs per piece and improve profitability. To further strengthen the Manpower

Second Quarter Sales Up; Profit Announced

Both record quarterly sales and a return to profitable operations were announced for the three months ending June 30, 1969.

Net sales for the second quarter were $38,813,995, up 15% from last year’s figure of $33,248,137. Net income recorded a two fold increase to $813,232 or $.24 per share compared to $396,939 or $.12 per share in 1968.

Net sales for the first six months of 1969 amounted to $73,046,773 compared to $69,543,921 last year. First half net profit after taxes, despite the $395,846 loss reported for the first quarter, was $417,386 or $.12 per share on the 3,406,889 shares outstanding at June 30, 1969, against $1,277,868 or $.38 per share on the 3,390,422 shares outstanding at June 30, 1968.

Time Capsule Left On Moon’s Surface By Apollo II Astronauts

Produced On Crash Basis By Worcester Semiconductor Employes

Over 50,000 Parts Produced By Sprague For Apollo II Flight

More than 40 different parts for a total of over 50,000 units were supplied by Sprague Electric for the Apollo 11 moon shot. The Company was, in fact, the major supplier of electronic components for the Apollo program.

In a brief message to all employees following the successful moon landing, Robert C. Sprague, Chairman of the Board and Chief Executive Officer, said, “Your many contributions to the Apollo 11 program have once again proved the ability of Sprague Electric to provide components of outstanding reliability. I look forward with you to other new challenges of the Space Age.”

Sprague employees were extremely conscious of the importance of their workmanship on units marked for the space program. They were well aware that failure of a unit could have cost the lives of the astronauts.

Components were manufactured in North Adams and also at Concord, Nashua and Plymouth, New Hampshire; Dearborn Electronics in Orlando, Florida; and in Worcester, Massachusetts.

The time capsule, left on the moon by the Apollo 11 astronauts, is a new process in information technology, developed on a crash basis by the Semiconductor Division in Worcester. The body of the capsule is a disc of pure silicon on which microscopic messages 1/200th of their original size are inscribed. The disc was placed in an 11-sided silver anodized aluminum capsule, produced by the Machine Shop in North Adams.

On the disc, with plenty of space to spare, are messages from 74 heads of state, as well as four documents, including listings of NASA officials, House and Senate committees, a quotation from the National Aeronautics and Space Act signed by President Eisenhower in 1958, and quotations from Presidents Kennedy, Johnson, and Nixon. At the top of the wafer is an ultraminiature replica of the plaque on the leg of the landing gear of the lunar module signed by President Nixon and the three astronauts which carries the message, “Here men from the planet earth first set foot upon the moon July 1969, A. D. We came in peace for all mankind.”

Request From NASA

On June 23, the NASA Research Center in Cambridge, Massachusetts approached Sprague Electric with a request for help in reproducing the messages in a permanent form no larger than microfilm but which would not have the disadvantages of microfilm.

In one day, Sprague’s Semiconductor Division personnel, under Dr. Robert S. Pepper, Director of Research, Development and Engineering, had extended one of its most sophisticated processes for producing ultra-high speed microelectronic circuits for digital computers and proved the feasibility of placing the equivalent of about 660 pages of printed and typed material, each filling a standard 8½ x 11" page, on a 1½" diameter disc of silicon.

The original messages of goodwill were delivered to Sprague Electric by NASA on July 3 and 4 and the first test wafer was completed at 3:00 A.M. on July 5. The supposedly final message wafers were picked up by NASA on July 6 to be flown to Houston for degassing and inserting in the capsule for transmittal to Cape Kennedy and installation on Apollo 11.

Job Redone

On July 9, Sprague Electric was asked to redo the complete job so that messages from eight additional heads of state could be included. The documents were received from NASA at 7:00 A.M. on July 10. By working on an around-the-clock basis, the final wafer incorporating all 74 messages from heads of state was completed at 3:30 A.M. on July 11 and picked up later that morning by a NASA messenger from Eugene P. Donovan, Manager of Semiconductor Process Engineering.

The new Sprague process for reducing information to permanent form results in an extraordinarily high packing density. For example, using a pica typewriter with 12 characters to an inch and 60 lines to a page, each 1½" diameter silicon wafer can contain almost 600,000 words. A wafer 14/1000 of an inch thick, such as is being used in the Apollo 11 time capsule, with the messages reduced to 1/200th of original size and a 2/1000 of an inch space between silicon discs will result in packing 24,300,000 words into a cubic inch! Sprague Electric has already processed silicon wafers 7/1000 of an inch thick with a 400 times message reduction. Using a 1/1000 of an inch spacer between these silicon discs will give a packing of 97,200,000 words per cubic inch (585,200,000 characters per cubic inch).
...I will not be discussing the sometimes predicted demise of the components manufacturer (which, incidentally, I do not believe, but rather the technological evolution of the ‘component’ into the ‘function’).

Classically, the components supplier has been oriented towards the processing of materials, the investigation and utilization of material phenomena, and the design, application, packaging and testing of the resultant devices.

The next logical response for the components supplier was to increase the complexity of certain of his ‘components’ by forming several of them simultaneously on a single substrate to offer, for example, ceramic base screen passive networks. With the availability of transistors and diodes, it was then only natural to add such devices to these networks, thus forming hybrid integrated circuits.

The advent of planar technology in 1960 also allowed the transistor manufacturer to synthesize complete circuits in a single block of silicon, with intricate interconnections of such circuits into more complex functions. As a parallel development, passive networks were used to interconnect monolithic integrated circuits into more complex composite integrated circuits.

But, all this has not been the sole province of the components manufacturer. Certain large systems manufacturers have themselves moved aggressively into monolithic integrated circuitry, both at an engineering and prototype level as well as, in some cases, a manufacturing level. In addition, a large number of systems houses are working on hybrid circuits in one form or another. Conversely, with several exceptions, the major semiconductor manufacturers are, either in, or rapidly moving into, the systems business.

Interestingly enough, this interface is probably as well defined in the consumer market area as anywhere. Possibly the major reason for this has been the relatively slow acceptance of semiconductor technology, particularly integrated circuitry, by this industry. What has caused this?

The initial impetus for usage of integrated circuits was by the military seeking smaller, lower weight and power requirements and, above all, improved reliability. In the industrial and computer markets, increasingly cost and performance have been the impetus. But, in the consumer market, cost has been the prime stated concern.

I am convinced that the consumer market is a particularly fertile one for the integrated circuit supplier; that the end equipment manufacturer can realize increasing cost savings, performance improvement, better reliability, and simpler maintenance by incorporating integrated circuits, and that the most innovative thing we can do from a profit standpoint is to effectively bridge the component supplier/systems manufacturer interface without losing the identity of either. How can we do this?

The challenge to the components supplier is to make available to the systems manufacturer, in its most useful form, his total competence in materials processing, device and circuit design, and component manufacturing.

Because of his interface with the ultimate customer, the final systems design is, and should remain, with the systems manufacturer. But, he should increasingly concentrate on the proper partitioning of the basic systems involved, the optimal relationship of the various partitioned functions to the overall systems performance, and the proper definition and specification of the partitioned functions. Increased expertise in the solid state and monolithic design of these functions should be gained, but the challenge to the designer is to think of the system not from the point of view of an assemblage of individually specified components, but as an assemblage of optimally partitioned functions.

We have defined the relative roles of the components supplier and systems manufacturer, but not how to bridge the interface. Depending on the nature of the systems company, there seem three distinct ways of doing so. Certain large companies, with a successful history in both components and systems, will try to do the whole job themselves, increasingly calling on their component divisions to supply the necessary hybrid and integrated circuits. I recommend second sourcing: to permit greater utilization of the total industry competence, to allow the influx of fresh ideas, and as a safety factor if the prime source runs, for example, into yield problems. Mostek, with its long history in components and less inclination to move in this direction, can enter into custom circuit design or development programs with one or more broad-based component and integrated circuit suppliers. The principal advantage to be gained in such relationships is an early competitive advantage in performance and cost savings due to optimization of the circuit design from both a systems utilization and a yield standpoint.

Finally, there is a third group of companies which, presently lacking the necessary resources, do not choose to enter into the components industry in any way, including at the prototype level. By effectively optimizing the advanced technology of MOS devices as well as new circuit techniques for the future, Mostek's integrated circuit products will be marketed by Sprague Electric through their worldwide marketing and distribution organization.

Dr. Petritz, Dr. Sharif and Mr. Sevin are considered to be among the electronic industry's leading experts in MOS integrated circuit technology. They plan to apply a number of manufacturing and marketing concepts original with them, particularly in the relationship between users and the design and manufacturing facilities of the supplier of large-scale arrays. Dr. Petritz said that Mostek is setting up design facilities at its headquarters in Dallas which will be staffed with outstanding personnel who can contribute to the realization of these new concepts. Mostek will not adopt a second-sourcing philosophy, but will be a leader in product development, combining MOS processing technology with new concepts in system partitioning and design of arrays.

The combination of Mostek capability in circuit design and application with Sprague Electric's processing capability should permit the new company to achieve significant penetration of the rapidly growing MOS-LSI market.

Sprague Electric Company and Mostek, Inc., of West Palm Beach, Florida jointly announced the amicable settlement of pending litigation between them in the United States District Court, Southern District of Florida, Miami Division, brought by Sprague Electric to enforce its Rector Patent No. 3,066,247. NCI, Inc. has been granted a license under the Sprague patent for solid electrolyte capacitors.

The litigation, begun by Sprague Electric in October 1967, was one of the most thoroughly contested cases in the annals of that Federal Court. The settlement resulted from a conference held on June 3, 1969 between Robert C. Sprague and Robert Bristol of NCI, Inc., Chairman of the Board of Directors of their respective companies.

Prior to the settlement, Sprague Electric Company had won, on a preliminary motion, dismissal on the merits of antitrust charges made against it by NCI, Inc. As a part of the settlement, Sprague Electric charges of unfair competition and trade secret misappropriation against NCI, Inc. and two individuals were dismissed with prejudice and the latter conceded validity, infringement, and enforceability of the Robinson patent and NCI, Inc. agreed to take the Sprague Electric Company to court.

Mr. Sprague and Mr. Bristol both expressed their pleasure with being able to so dispose of the litigation and expressed mutual desires for friendly future relations between their companies.

Sprague Electric Company and Mostek, Inc. have entered into an agreement under which Mostek will manufacture MOS (metal-oxide semiconductor) devices in Sprague's Worcester Plant. In addition, Sprague Electric will be a substantial investor in Mostek.

Principals in Mostek include Dr. Richard L. Petritz, President; and Dr. Louay E. Sharif and Leonce J. Sevin, Vice Presidents. Another substantial investor in the firm is New Business Resources Venture Capital Partnership of Dallas, Texas.

Sprague Electric has a high level of competence in MOS processing technology and Mostek will utilize this technology in the manufacture of new types of arrays, many of which will be custom designed for specific customers. Mostek and Sprague Electric have also entered into a joint agreement to share continued research and development efforts to advance the technology of MOS devices as well as new circuit techniques for the future.

NCI, Inc. Granted License Following Prolonged Litigation

Semiconductor Dist. Managers Announced For Midwest Areas

The promotion of Anthony J. Tedeschi and Henry M. Josefczynsk to the new posts of Semiconductor District Manager for Wisconsin as part of the Company's expanding semiconductor effort in the Midwest was announced by James J. Roderer, Central Regional Manager.

Mr. Tedeschi will be Semiconductor Sales Manager for Wisconsin, Iowa, Illinois, Missouri, Kansas and Nebraska. He will make his headquarters in the Chicago Sales Office. Mr. Tedeschi has been a Semiconductor Sales Engineer for Sprague Electric since March, 1968. He was previously District Sales Manager in Chicago for Motorola Semiconductor Products, Inc.

Mr. Josefczynsk will make his headquarters at the Dayton, Ohio office and will be responsible for semiconductor marketing in Ohio, Western Pennsylvania, Michigan, Indiana and Kentucky. He has been with Sprague Electric since 1967 as a Semiconductor Sales Engineer and was previously Commercial Sales Manager for the Dayton Electronic Products Company.

Vol. XXXI  SPRAGUE ELECTRIC LOG  No. 7  JULY-AUGUST 1969  MARION H. MASON  Manager, Corporate Publications  JUDITH S. COLLINS, Associate Editor  Circulation Manager: MARION CARON  Photographer: PAUL F. SPRAGUE
Geissler Assumes New Marketing Position

Edward C. Geissler, Jr. has been appointed to the new post of Manager, Computer Components Marketing. He had previously been Marketing Manager of our Special Components Operation.

In his new responsibility Mr. Geissler will be in charge of promoting the use of Sprague components in the electronic data processing field. He will report to William L. Moorhead, General Marketing Manager, Passive Components, Industrial and Military Sales.

Mr. Geissler joined Sprague Electric in 1958 and has held various engineering and marketing positions. Prior to that time he was associated with Hazeltine Electronics Corporation, Little Neck, New York as a Project Coordinator.

Mr. Geissler is a graduate of Rensselaer Polytechnic Institute where he received a bachelor of management engineering degree and a master of electrical engineering degree.

Dearborn Employes Honored By G. E.

Dearborn Electronics, Inc., a subsidiary of Sprague Electric Company, was recently awarded the 1968 Vendor Zero Defects Craftsmanship Award and Vendor Achievement Award by General Electric Company, Aerospace Electronics, Utica, New York. The awards were presented by Walter Biggs, of General Electric to Eamonn D.A. Geoghegan, Dearborn President, who accepted on behalf of the employes. The awards were made at the Dearborn plant in Orlando, Florida and coverage of the event was provided by both the news media and television.

Mr. Biggs said that General Electric purchases about forty million dollars worth of material from 6,000 vendors each year and that Dearborn is the best I have ever been associated with."

John Krider, Executive Manager of the Seminole Chamber of Commerce, noted that this was the second time in three years he had attended an award ceremony at Dearborn. The Bendix Navigation and Control Zero Defects Award was received by Dearborn in 1967.

Simon Ulcickas, Manager of Upstate New York Sales, was also present for the ceremony.

Eamonn D. A. Geoghegan Succeeds E. L. Ward

As President of Dearborn Electronics, Inc.

Eamonn D. A. Geoghegan has been elected President of Dearborn Electronics Inc., a subsidiary of Sprague Electric. The Dearborn plant manufactures precision film capacitors and allied components for the aerospace and military electronics industries.

Mr. Geoghegan, formerly Vice President and General Manager of Dearborn, succeeds Ernest L. Ward, Vice Chairman of the Board of Sprague Electric.

A well known executive in the electronics industry, Mr. Geoghegan began his career with the Radio Corporation of America in 1927, after receiving his engineering degree from the City College of New York. He has been Chief Engineer of Polyemt Manufacturing Corporation, Chief Engineer and Production Manager of Tele Deutschmann Corporation, and Vice President of Engineering of the capacitor division of General Instrument Corporation.

He came to the Orlando area in 1960 as Chief Engineer of the former Dearborn Electronic Laboratories, Inc. and was named General Manager of that company in 1964. He continued at Dearborn Electronics, Inc. as Vice President and General Manager when that company was organized by Sprague Electric to take over the business of Dearborn Electronic Laboratories, Inc. at the end of 1967.

Mr. Geoghegan is a member of the Institute of Electrical and Electronic Engineers. During World War II, he was active in the formulation of American war standards for electronic components. He was formerly Chairman of the fixed mica capacitor committee of the Electronic Industries Association.

Two New Engineers

Join Concord Staff

Two additions to the engineering staff in Device Development and Power Transistors in Concord were recently announced. They are Kosta Xhajanka and Edward Werder.

Kosta Xhajanka reports to Dr. James Sluss as a Senior Development Engineer in Device Development. He comes to Sprague Electric from Bendix Semiconductor where he was a Senior Process Engineer. Previously he was a Senior Development Engineer for I. R. C. Division of TRW in Pennsylvania; an Assistant Professor in Physics at the University of Montreal; on the Scientific Staff of Northern Electric in Ottawa, Canada; and a Research Physicist for Westinghouse in France for eight years.

Mr. Xhajanka graduated from the University of Plovna in Italy and the University of Strasbourg in France, receiving the Licentiat in Sciences (degree). He did graduate work at the University of Paris in France.

Edward Werder joins the Power Transistor group as a Senior Process Engineer. He comes to Sprague Electric from Bendix Semiconductor in Holmdel, New Jersey, where he was in Development Engineering and General Instrument Corporation in Newark where he was a Process Engineer.

Mr. Werder graduated from the Missouri School of Mines and Metallurgy with a Bachelor of Science degree in Chemical Engineering. He is a member of the American Institute of Chemical Engineers and enjoys bowling and gardening.
Quality Products And On-Time Deliveries Bring Special Award To Los Angeles Group

Sprague Electric Company was one of 20 recipients of a Golden Quality Award presented by ITT Gillilian, Inc., of Van Nuys, California in their first annual vendor recognition program. Presentation of the award was made to R. David Miner, Western Regional Manager.

The 20 companies were selected from the International Telephone and Telegraph Corporation subsidiary’s 990 active suppliers because of their superior quality record.

A. B. Porter, director of quality assurance for Gillilian, said that the purpose of the program is to recognize suppliers who have provided quality products and on-time deliveries. “Our suppliers play an extremely important part in our ability to deliver quality products,” he said. “In addition, the quality level of our suppliers’ products can and does affect the price and our ability to meet delivery schedules.”

The companies winning the awards were selected on the following merits:
1. The quality of material supplied as reflected by the low number of rejects throughout 1968.
2. The record in delivering on schedule.
3. The willingness to correct problems.

As an example of the importance of quality, Porter described operation of ground controlled approach radar systems built by Gillilian for military use by the United States and many free world governments.

“The Air Force will not commission an airfield until this navigational aid is installed and operational,” he said. “This equipment was used during the Korean War and is now in use in Vietnam to provide landing instructions to our transport and fighter aircraft, including helicopters. Many of these landings are made under conditions where the aircraft have been damaged by enemy fire and are low on fuel. The choice of an alternate airfield does not exist. They must land. Whether or not these landings are a success or failure, where many lives are at stake, depends a great deal on the performance of the Gillilian radar.

“There were 221 aircraft ‘saves’ chalked up by Air Force traffic controllers in 1968,” Porter said. “We estimate that at least 90 percent of the ‘saves’ involved landings assisted by Gillilian radar equipment. A save is defined as an aircraft that would have crashed if the radar had not been operational. As these statistics indicate, quality and reliability are just as important in a ground controlled approach radar system as they are in the various systems in our space program.”

A. G. Martin Assumes New Marketing Post

Arch G. Martin has been named to the new post of Operations Marketing Manager, Ceramic Components. The announcement was made by William S. Templeton, Vice President, Operations. In his new position, Mr. Martin will have full responsibility for the marketing of all components, including thick-film ceramic based passive component assemblies and active ceramic based thick-film hybrid circuits within the ceramic operations at Nashua, New Hampshire and Wichita Falls, Texas. Mr. Martin will report to George A. Boyloun, General Manager, Ceramic Component Operations, and will move to Nashua in the near future.

Mr. Martin has been with the Sprague Electric Company since 1959, starting as a Sales Engineer in the former Commercial Engineering Department. He later was a Product Specialist in integrated circuit marketing and more recently has been Product Manager for industrial and military ceramic based hybrid circuits.

Mr. Martin received his bachelor degree of science degree from Northwestern University and later received the degree of bachelor of science in chemical engineering from Montana State University.

P. B. Talarico Named Corp. Traffic Manager; Bourdon and Pasierbiak Assume New Duties

The promotion of Philip B. Talarico, to Corporate Traffic Manager was announced by John D. Washburn, Corporate Director of Facilities and Industrial Relations. Also announced was the promotion of Alfred Z. Bourdon, to North Adams Traffic Manager and Stanley F. Pasierbiak to Foreman of the North Adams Shipping and Heat Seal Department.

A native of North Adams and a graduate of Drury High School and Biss Business College, Mr. Talarico originally joined Sprague Electric in 1934. From 1938 to 1951 he was employed at various local business concerns including Gevaert Company of America in Williamsport.

In 1951, he rejoined Sprague Electric, as Traffic Manager. In his new position he will coordinate all shipping.

Joseph Allard Moves To Matamoros, Mexico

Joseph A. Allard, Foreman of Dry Rolling, Aluminum Electrolytic Capacitors in North Adams, has transferred to the Company’s new Matamoros, Mexico operation where he has assumed similar duties. His wife, Ruthie, also a Sprague employee will be employed in Quality Assurance and Reliability at the new facility.

Mr. Allard is a native of North Adams and originally joined Sprague Electric in 1944, but left in 1945 for military service. He rejoined the Company in 1950 and the following year he was promoted to Foreman, the position he held until his recent transfer.

R. D. Smith

Utilization effort, Corporate Industrial Engineering, headed by Donald Melklejohn, and Corporate Time Study, headed by Harold L. Carson, will report directly to Mr. Smith.

Mr. Smith joined Sprague Electric in 1950 as a Methods Engineer and in 1958 was named an Industrial Engineer for the special products division. He was subsequently promoted to General Foreman Factory Manager, and Manager of the Special Components Division. In 1967, Mr. Smith was named Assistant to William S. Templeton and in 1968 assumed the duties of Corporate Director of VEFAC Programming.

Peter Loconto Named Applications Engineer

Peter R. Loconto has been named Application Engineer for Integrated Circuits at the Company’s semiconductor headquarters in Worcester. Announcement of Mr. Loconto’s promotion was made by Joseph L. Chenail, Marketing Manager for Integrated Circuits.

Mr. Loconto received his technical education at Northeastern University and Lowell Technological Institute. He was previously a design engineer with the Raytheon Company at Sudbury, Massachusetts.

Mr. Loconto and his wife, the former Carolyn Jenkins, make their home in Millbury, Massachusetts.
Changes Announced

For QAR Personnel
In NA and Nashua

Several organizational changes in Corporate Quality Assurance and Reliability were announced recently by Anthony A. Tiezzi, Director of Corporate QAR.

Harold Weyers and Milton Lavigne, both Group Leaders of Quality Control Inspection, were promoted to Foremen.

Peter Tsatsa has returned to the Nashua plant where he is serving as Shop Head, Methods and Planning, Ceramics. Harold Toupee has assumed most of Peter Tsatsa's responsibilities. He will be Chairman of the Packaging Committee, responsible for Northern Berkshire Manufacturing Company and will assist on corporate environmental test equipment studies and projects.

Joe Brewer will be Department Head of the Corporate Mechanical Design group with Richard O'Neill as his Assistant. Nemrod Nowell, previously a Foreman of Quality Control, has transferred to Nashua Plant and will join Albin Vaskas, who received his master's degree in Management Engineering from Rensselaer Polytechnic Institute in June, as Operations Head of Nashua Ceramics QAR.

Mr. Vaas, who received his master's degree in Management Engineering from Rensselaer Polytechnic Institute in June, has been promoted to Operations Head of Nashua Ceramics QAR.

Harold Weyers joined Sprague Electric in September 1955 and has worked in Check Inspection since that time. A native of the area, he graduated from Williamsport High School and then spent four years in the Air Force. While in the Service, he attended Boston University for courses on Aircraft Fundamentals and Jet Engines.

In his new position, Mr. Weyers will report to Don Mesick, Manager of Product Engineering Corporate Services.

Milton Lavigne became associated with Sprague Electric in September 1950. Originally, he was employed in the Incoming Inspection Department and has worked in various areas of Quality Assurance and Reliability. He attended local schools and is a graduate of Bliss Business College.

In his new position, he will report to Charles Wilson, QAR Superintendent.

Becker Promoted
At Wichita Falls

Promotion of Karl A. Becker to General Foreman in charge of Monolithic Operations at the Wichita Falls plant was announced in mid-July.

A native of Boston, Massachusetts and employed by Sprague Electric since 1959, Mr. Becker came here when the Company opened its Texas plant. He had been an Operations Foreman since 1965.

Mr. Becker holds an electrical engineering degree from Northeastern University in Massachusetts, will be in charge of production buildup, screening, assembly and finishing in his new position.

Ezelle Joins Concord

The appointment of Guy W. Ezelle as Concord Marketing Services Manager was announced by David Prohska, Concord Marketing Manager. Mr. Ezelle comes to the Company with a background of 12 years in electronic component marketing. He was employed as Marketing Administrator by Monia Company in Cupertino, California, prior to which he was National Sales Manager for the Electronic Division of Rucker Company, San Leandro, California, and Vario in Garland, Texas. Mr. Ezelle spent approximately 10 years as Marketing Administrator Manager for Texas Instruments Semiconductor Division in Dallas, Texas and at one time was a Field Representative for the Social Security Administration.

A graduate of the University of Texas at Austin, Mr. Ezelle received his Bachelor of Business Administration degree in Management and has done graduate work at the University of California, Los Angeles and Southern Methodist University. He served as a radio operator in the Army Air Corps and through the years has been active in community theaters in both amateur and professional productions.

Mr. Ezelle is a member of the American Marketing Association.

Barre Employes Receive Service Awards

Following the acquisition of Rock of Ages Capacitors, Inc. by Sprague Electric, 261 long service employees were presented service award pins and bracelets. There were 53 employees with 20 years or more of service; 93 with 15 years or more; 41 with 10 years or better; and 74 with five years or better.

A luncheon was held honoring the 53 employees with 20 years or more of service with the Company. William E. McLean, Vice President, Operations, spoke briefly to the group and presented the following recipients with 20 year service awards:

Maurice Aldrich
Amelia Ambrosini
Amelia Baldar
Flossie Baldwin
Gloria Bishop
Henry Boucher
Blanche Bourdard
Richard Carlson
Juliana Chalou
Elsie Clark
Irene Colombo
Maria Crespo
Helen Desilets
Annette Ducharme
Alice Elliott
Adie Fair
Lena Fournier
Glady Gas
Rachael Gould
Victoria Groppone
Florence Grenon
Lula Hayes
Rachel Henry
Alice Jarvis
Doris Ladd
Bernadette Lally
Wilfred Lessard
William Little
Rena Louisa
Minnie MacRitchie
Annette Maltais
Catherine Martin
Nettie McDermott
Evelyn Mercier
Frank Mercier
Selma Mercier
Clarence Milne
Hans Modica
Violet Moran
Bernice Needham
Alberta Peduzzi
Frances Perry
Walter Perry
Dorothy Provost
Virginia Riedel
Doris Secon
Mildred Slagton
Ruth Siera
Livia Venner
Phyllis Walker
Robert Walters
Gertrude Wilkin
Alice Williamson

Spero Dephtereos Named Plant Manager
Of Newly Acquired Barre, Vt. Operation

The appointment of Spero Dephtereos as Plant Manager of Sprague Electric's Barre, Vermont operation was announced by William E. McLean, Vice President, Operations.

Mr. Dephtereos joined Sprague Electric in April 1966 at the Concord plant and in July 1967 transferred to the Barre Rock of Ages Capacitor operation. Prior to that time, he had 10 years' experience in various positions with Western Electric Telephone Company.

After receiving a BA degree from Cornell University, Mr. Dephtereos attended New York University where he received his master's degree in business management and administration.

Sprague Electric assumed ownership of the former Rock of Ages Capacitors, Inc. of Barre, Vermont in April of this year. The decision to enter into direct management of the capacitor firm was prompted by Sprague Electric's need to have more direct control of the operation in the face of increased foreign and domestic competitive pressure in the electronics field. Further, products have become increasingly complex in the past several years and require technical personnel which only Sprague Electric can supply.

In the past, Sprague Electric had a contractual arrangement with Rock of Ages whereby Sprague supplied machinery, materials and orders, while the Barre firm provided the building and workers.

New IR Managers
In Wisconsin and Visalia

R. J. Hughes  J. D. McEntire

The appointment of Richard J. Hughes and James D. McEntire as Industrial Relations Managers at Sprague of Wisconsin, Inc. and Visalia, California respectively was recently announced.

Mr. Hughes was originally employed by Sprague Electric of Wisconsin, Inc. from January of 1952 through October of 1955 as Personnel Manager. Prior to rejoining Sprague Electric in June, he was associated with several Milwaukee concerns.

Mr. Hughes completed four years of college at Marquette University studying business administration and also served in the United States Army.

Mr. McEntire comes to Sprague Electric from Ideal Basic Industries of Redwood City, California, where he held the position of Personnel Supervisor. He studied at Ohio University and the University of Toledo, obtaining a Bachelor of Business Administration degree from the latter. At the University of Kentucky, he participated in two graduate courses.

Mr. McEntire and his wife, Carole, a registered nurse, reside in Visalia.
Ashe County, Dearborn, NA and Wichita Falls Employes Share $2784 In Suggestion Awards

North Adams

At recent Suggestion Committee meetings in North Adams, a total of $2039.00 was awarded to industrious employes.

Bruce Bard, Sprague Products, was awarded $855.00 for suggesting an improved method of distributing work in the Sprague Products packing operation.

Cyrilla Vadnais, QAR, was the recipient of two suggestion awards. She received $145.00 for suggesting the use of a less expensive barrier wrap in the Heat Seal Department and $280 for suggesting a less expensive packaging material for the same department.

William Fortini and Raymond Chalifoux, both employed in the Machine Shop, shared two suggestion awards. For suggesting a new type, multi-stack crucible, the two men divided $170.00 and for improvements in the construction of heating elements, parts B-20642 and B-20643, for the Tantalum Gintering Furnace, they split $175.00.

In the Tantalum Assembly Department, Yvonne Nadeau and Nelson Montgomery shared a $130.00 award for suggesting the use of 48M tantalum wire or strip inside the front plate instead of the present material.

An award of $45.00 was made to Silvio Volpi, Machine Shop, for suggesting conversion of hand cutting jigs for use in the machine cutter. Mr. Volpi also received $45.00 for suggested modifications to the Ceramic DuPont machine to prevent jamming.

Francis Mroz, Jr., Clorinal Finish, was awarded $85.00 for suggesting that rollers be covered with plastic.

Awards of $25.00 each went to Neville Toye, Filter Measurement Production, for his suggestion to update all outmoded, antiquated and obsolete specifications; Chester Lenski, Clorinal Finish, for his suggestion to solder three resistors to three terminals; and Edna Remillard, Large Tank Rolling and Assembly, for suggesting the use of scrap .062 kraft rather than scotch tape.

Ashe County

Twelve employes of the Ashe County plant recently received suggestion awards totalling $75.00.

Top award of $300.00 went to Doyle Tucker of the Shipping, Receiving and Warehouse, for his suggestion to use cardboard dowels for shipping. An $80.00 award went to Herbert Bare of the Aluminum Assembly Finish and Test Department for suggesting an improved method of heat scaling methods.

Those receiving awards of $25.00 each were: Joe Young, Shipping, Receiving and Warehouse, for his suggestion to reduce copying cost for manufacturing orders; Joseph Jones, Aluminum Formation, for his suggestion to move the foil guide closer to clutched idling rollers on reroll machine; Boyd Stewart, Shipping, Receiving and Warehouse for his suggestion to install a small tank in one side of wash pit equipped with a steam coil for washing trays; Dean C. Shatley, Aluminum Formation, for suggesting mounting a device on the front of tab machine to roll the broken coils of tab; Marcella Goodman, Aluminum Assembly, Finish and Test, for the suggestion to end seal 34D units and place in spacer to prevent them touching and getting resin on tubes; and Edward Sullivan, Aluminum 32D, 36D, and AC Assembly, for suggesting a change in the method of installing new elements in master heat gun.

Sharing a special $15.00 award were Darrell Baldwin, Walter McCoy of Quality Assurance. Also receiving special awards of $15.00 were Andrew J. Mock, Quality Assurance and Ruania Stansberry, Aluminun Foil Rolling.

Dearborn

Two employes at Dearborn Electronics were recipients of suggestion awards. Roger Whitehurst received an award of $105.00 for his suggestion to change the posting cards for fabrication parts.

Rebecca Nielsen was awarded $15.00 for her safety suggestion.

Suggestions Mean Extra $$$

Karen West, Wichita Falls, received her $25 Suggestion Award check from Department Head John B. Heron. Rachel Kelnhoffer (not shown) also received a $25 award.

Doyle Tucker (right), of Ashe County, was congratulated by Department Head Richard Neaves on his recent $300 award winning idea to use cardboard dowels for shipping foil.

The Vanishing Component

Continued from page 2

partitioning and functional design of their systems, and using standard integrated circuits as they become available, such companies can well benefit from the increasing advantages of integrated circuit use.

In conclusion, I have suggested that more profit can be realized by effectively bridging the components-function supplier/systems manufacturer interfaces, rather than by eliminating it. The greatest profit can be realized depending on how innovative we can be in bridging this interface. The challenge to the component supplier is in effectively making available his total device and circuit function competence. That of the systems manufacturer is to recognize and most effectively utilize the optimum mode for making use of this competence.

CONCORD SPORTS

In the Concord Industrial Softball League, Sprague men finished in fourth place with eight wins and six losses. The team consisted of Player Manager Len Burritt, Dave Johnson, Bill Tomaskovic, all of Semiconductor Manager Len Burritt, Dave Johnson, Bill Tomaskovic, all of Semiconductor Material Preparation; Bob Burritt, Hermetic Seal Production; Bruce Bonnette, Planar Batch Engineering; League with assists from Norm Robinson, Purchasing. George Mills, Industrial Engineering, coached the Concord Industrial Softball League.
Dearborn Man Serves With Advisory Group

Douglas Smith, Dearborn Quality Assurance and Reliability Manager, has been appointed a member of the first advisory committee concerned with quality oriented technical professional programs to be offered at Seminole Junior College located two miles from the Dearborn plant.

Due to the large number of technically oriented plants in the area of the college, the decision was made to form a five member advisory committee concerned with quality control and technology as a part of the school's curriculum.

Seminole, which opened two and a half years ago and enrolls 1400 day and 400 night students, is currently offering a quality control course.

Mr. Smith has been with Dearborn since 1956 and moved with the Company when they located in Orlando from Chicago in 1959. He is also a member of the American Society of Quality Control.

Barre IR Manager

Stuart Sutherland, an employe of Sprague Electric since 1964 has been named Industrial Relations Manager and VeFAC Coordinator for the Barre plant. Announcement of Mr. Sutherland's appointment to this position was made by Spero DePeters, Plant Manager.

Mr. Sutherland joined Sprague Electric at Concord, New Hampshire, and transferred from Sanford, Maine where he has been for the past three and a half years. He received a bachelor's degree in political science and a master's degree in public communications.

The Sutherlands are the parents of three children and live in Barre.

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Sprague Students Complete Courses

Ashe County employe, Larry Neaves, (right) recently received his diploma from International Correspondence Schools for successful completion of a course in Mechanical Drafting. Leroy Robbins (left) is shown offering congratulations.

Larry first joined Sprague Electric in October 1963 as a production employee. In January 1966 he transferred to the Maintenance Department as a Machinist Apprentice and was later named a Junior Detail Draftsman and then a Draftsman Detailer and Junior Layout. He is now taking an ICS Course in Machine Design.

Bond Named Assistant

Richard E. Bond, VeFAC Analyst for the Ashe County, North Carolina and Hillsville, Virginia plants, recently assumed additional duties as Assistant to Unix Sheets, Plant Manager at Ashe County.

Mr. Bond received a degree in industrial engineering from the University of Florida. Prior to joining Sprague Electric, he was employed by the Doubleday Publishing Company of Berryville, Virginia.

1st Half Report

According to Robert C. Sprague, Chairman of the Board, and Bruce R. Carlson, President, "the favorable earnings turnaround" resulted from "continued aggressive cost reduction efforts combined with substantially higher sales volume." They said, second quarter shipments "were particularly strong in the special components, semiconductor, and electrolytic and ceramic capacitor segments" of the Company's business.

"We continue to be optimistic about the outlook for the balance of 1969", they said. "Currently, weekly average incoming orders are running more than 30% ahead of this time last year, and open order backlog is up by approximately 25% since the beginning of the year."

New Marketing Mgr. For Sprague Products

Sprague Products Company has a new Marketing Manager, Bernard J. Shine. Announcement of this promotion was made by R. William Woodbury, President.

Since 1957, Mr. Shine has been associated with Sprague Products in various capacities, most recently as New England District Manager. He majored in marketing at Boston College and also attended Northeastern University. Prior to joining Sprague Products, Mr. Shine was employed in the Communications Division of the Massachusetts State Police and the Sales Engineering staff of the Boston Gas Company.

Mr. Shine is married to the former Patricia White of Wollaston, Massachusetts.

Chicago Sales Engineer

Karl D. Cox has joined the Sprague Electric semiconductor sales staff in Chicago as a Sales Engineer. A veteran of nearly 15 years in the semiconductor business, he was with Fairchild Camera and Instrument Corporation immediately prior to joining Sprague. He has also had various sales, marketing and engineering posts with Transistor Electronic Corporation, Motorola Semiconductor Products, Inc. and Hoffman Semiconductor Corporation.

He is married to the former Alice Nickolausen of Milwaukee. Mr. and Mrs. Cox and their son live in Hanover Park, Illinois.

Polly Morin Honored At Farewell Party

Charles Dean (right) Concord Maintenance Superintendent, treated Pauline (Polly) Morin to a piece of cake during her farewell party. Polly has been employed at Concord since 1962 as a janitress. She plans to join her family in California.
It's Plant Picnic Time

The annual Sprague of Wisconsin, Inc. picnic was held Saturday, July 19 at Mill Pond Park in Grafton, Wisconsin. About 500 employees and their families turned out for the sunny afternoon affair. Door prizes were won by 32 employees with the presentation being made by Harry W. Rubinstein, President. The good weather and refreshments were enjoyed by all.

The Dearborn Electronics annual picnic was held at Bear Lake with approximately 500 employees, spouses and children in attendance. The menu included chicken, hot dogs, hamburgers, salads, baked beans and desserts made by the employees. Needless to say, a good time was had by all!

2000 Attend Family Day At Worcester

The first Worcester Family Day was a complete success thanks to the special efforts of the Maintenance Department, Recreation Committee, and a host of volunteers. Over 2,000 people participated in the day's activities. The lucky door prize winner was Agnes Swenson, Final Test. We hope Agnes enjoys her new air conditioner.

In the Hole-In-One contest, Jay Gagnon walked off with first prize, Bill Bis with second, and Al Spaziante with third.

The Fishing Derby prize winning youngsters were Tim Lamber, 15" Hornpout; Walter Frick, 9½" Hornpout; Hally Eldred, 5" Bluegill; Joan Allen, 5" Grayfish; Mark Robinson, 4½" Grayfish; and Keith Reynolds, 3½" Grayfish.

Prizes for the Running Contest went to: (Ages 6-8) Girls - Kathleen Russo, first; Joan Cotter, second. Boys - Mike Barton, first; Paul DeSpre, second. (Ages 9-12) Girls - Marie Rainville, first; Susan Bonci, second. Boys - Dave Harris, first; Ronnie Mongeon, second.

Winning contestants in the Softball Throw were: (Ages 6-8) Girls - Joan Cotter, first; Donna Heckman, second. Boys - Paul Murphy, first; Steve Kupastas, second. (Ages 9-12) Girls - Denise Catacchio, first; Cindy Bonci, second; Denise Rainville, third. Boys - Mike Monder, first; Steve Barry, second.

Concord Sports

Bill Selley and Dick Zinn, Electro Chemical Process Engineering; Edgar Amrol, Shipping; Ron Hemond, Marketing; Andre Villeneuve, Electro Chemical Transistor Assembly; Bruce Grey and Joe Gilbert, Semiconductor Specification Engineering; Cliff Seddon, SEPT; and Russ Robinson, George Bouche, Randy Daniel and Frank Wilner.

Spike Carlson, Epoxy Engineering, was a Coach of the Concord Pony Little League team that finished in first place in the Concord National League.

The Babe Ruth team sponsored by the Concord Plant won that League's pennant this year and were awarded a plaque at their annual banquet.

SC Marketing Manager

Lawrence T. May has been named to the new post of Operations Marketing Manager, Special Components, it was announced by William S. Templeton, Vice President, Operations.

Mr. May was previously a Product Specialist with the Special Components Operations. He has been with Sprague Electric since 1964 in various Sales Engineering posts. Before coming to Sprague Electric, he was connected in various sales and engineering capacities with Amperex Electronics Corporation, Tungsol Electric, Inc., Allen B. DuMont Laboratories, Inc. and Mendelson Speedgun Company.

A graduate of Newark, New Jersey high school, he received his B.S. in electrical engineering from the Newark College of Engineering.