

# SERVICE

AN RCA FAMILY PUBLICATION



**The BIM Business**

(see page 6)

MARCH, 1959

**RCA SERVICE COMPANY**



# SERVICE

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## THE COVER

Surrounded by Coca-Cola bottles on our cover this month is Ivor Winby, Technical Products Service Specialist on the RCA Beverage Inspection Machine. BIMs, produced by RCA at the Camden, N. J., plant are installed by RCA Service Company Technical Products personnel and kept in top operating condition under RCA Service contracts. Our thanks, for his assistance, to Mr. Frank Stratton, Plant Superintendent of the Philadelphia Coca-Cola Bottling Company, where the cover photograph was taken.



## SERVICE TALK

### Fan Letter

Hugh Fitzpatrick, Field Service Manager at the Franklin Square Consumer Products Branch in Long Island, tells us that the following is typical of many letters they receive from satisfied owners of Color TV sets:

"I have had a color set for almost two years under contract and have delayed too long to thank you for the wonderful, efficient and courteous service your company has given me. You have always answered my calls very promptly and even though I rarely have the same serviceman, I have yet to have one who doesn't do a fine job, no matter how minor my complaint may be. They are all gentlemen and excellent technicians."

Congratulations to the Franklin Square Branch—and the many others who are consistently "keeping color sold."

### Recent Appointments

In BMEWs Service: W. F. Given, to Manager Engineering; J. T. Shields, to Manager Equipment and Installation Engineering; R. S. Frary, to Manager Equipment Engineering; N. W. Strinkowski, to Manager Installation Engineering; W. B. Stonelake, to Property Control Manager. In Government Service, DEP Services: C. Binzer, to Manager, Scatter Programs.

### National Engineers' Week

The week of February 22-28 was set aside by the National Society of Professional Engineers to honor the profession's spectacular achievements in the dawning age of space. Sponsored by over 367 member chapters, working through 47 state societies, the movement was broadly supported by 32 engineering and technical societies, including Philadelphia's Franklin Institute, the ASME, AIEE, AKHE and ACS.

President Eisenhower formally launched the week by a letter to engineering management groups, in which he said, "I am heartened by the sense of urgency and public responsibility displayed by American scientists and engineers, and by their determination to be of service to the nation."

### Give It A Whirl

Consumer Products branches are marketing a new double-action all-purpose detergent named ORBIT, which washes clothes cleaner, makes dishes glisten, gets floors, linoleum, tile and woodwork spotless; cleans washable rugs and upholstery and makes fixtures and appliances shine. All the housewife need do is call her nearest branch office, as listed in her local phone directory, and a case of 10 giant size boxes will be delivered to her door.

# What's in the Future for TV-Service?

**Service Company President  
offers solutions to Industry's  
Problems in NARDA address.**

In an impartial address to National Appliances and Radio-TV Dealers at their annual convention in Chicago in January, RCA Service Company's President D. H. Kunsman analyzed the industry's major service problems in keeping the nearly 50,000,000 TV sets in the country operating, and pointed out what the Service Company is doing by way of solution.

Going straight to the heart of two important issues, he accentuated the durability of printed circuits and advantages to the trade of a reasonable labor warranty program.

## **"Security Sealed Circuits"**

Using statistics based on an extensive 6-month survey made throughout RCA Service Company branches, Mr. Kunsman stated that printed circuits have proved so reliable that a technician would have to replace, on the average, only one circuit board in two-and-one-half years of servicing sets so equipped.

"During the six months ended October 31, 1958," he said, the RCA Service Company in its branches throughout the country replaced exactly two printed boards on every 10,000 service calls.

"A technician," he continued, "can handle 40 calls per week, 50 weeks per year, or about 2,000 calls per year. That means that a technician working on RCA Victor sets, exclusively, would replace a board on the average of once every 2½ years."

## **Beneficial Labor Warranty**

Mr. Kunsman cited another Service Company survey which showed that the ten leading brands of television sets required less than ¾ of a service call per set during the first 90 days—the period of the labor warranty now being granted by many dealers.

"By make of set, the survey showed a variation from less than one-half of a call to slightly more than one call during the 90-day period," he said. "The average of all 3,051 sets surveyed was less than ¾ of a call—.727 to be exact."

Mr. Kunsman said the survey was based upon servicing records of self-servicing dealers, department stores and independent service contractors, and did not include any information from RCA Service Company records.

"Consumer complaints have dropped off dramatically in those markets where a labor warranty program has been adopted," he said, "and for just one reason—after purchasing a reputable



**D. H. Kunsman**

brand name the customer doesn't have to pay more to make it work during that early period when it still is considered new."

About 40 RCA Victor distributors have adopted the labor warranty program suggested by the RCA Victor Television Division last June. The Warranty service can be provided by the dealer himself, by a reliable independent service organization, or by the RCA Service Company.

Mr. Kunsman also allayed speculation that the introduction of transistors or micro miniature modular assemblies may affect service work. "I know that assembly of television and radio will never be without its problems," he said, "and when those problems reach the consumers' homes, this will provide service work."

# The Pros and Cons of Labor Warranty

As excerpted from  
D. H. Kunsman's address,  
National Appliances and  
Radio-TV Dealers Association

**Q. Why did the RCA Service Company offer a warranty program to RCA Victor Distributors?**

**A.** In the first place, distributors asked for it. But customer satisfaction alone is sufficient reason to up-date TV warranties to include labor to fulfill them. The practice has been so well established by most other businesses that customers expect full coverage on the appliances they buy. Good examples in point are the electric razor you purchase, or the home heating equipment you install.

**Q. How did the standard 90-day parts warranty evolve?**

**A.** It was generally used in the radio business up to about eight years ago. Because radio repairs were of a minor, low-cost nature, the dealers naturally took care of any labor required. Since television grew up in the shadow of the radio business, it was an understandable if erroneous tendency to put television in the same category.

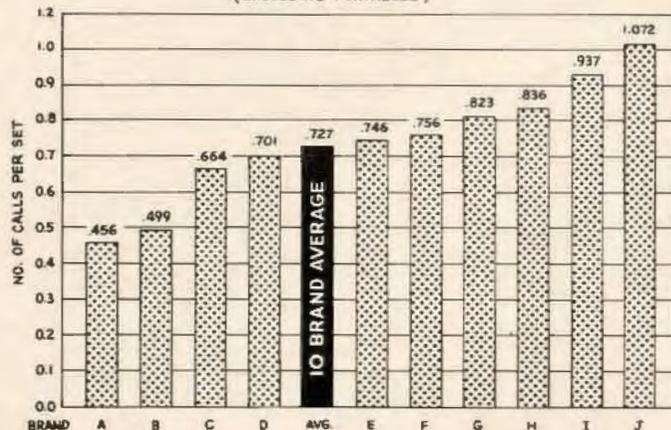
**Q. When was labor warranty introduced?**

**A.** GE added a 90-day labor warranty to the traditional parts warranty on all radios about four years ago. In 1956, Magnavox introduced a 90-day labor warranty for part of its TV line and extended the parts warranty to one year. In mid-1956, GE distributors introduced a 90-day labor warranty in a number of markets on the complete line of TV receivers. Other distributors followed, and a 90-day labor warranty then spread to other markets on a hit-or-miss basis.

**Q. When did the RCA Service Company first offer to perform labor warranty?**

**A.** In January, 1958, a 90-day labor warranty program on RCA Victor portable television was offered to RCA Victor distributors.

**AVERAGE TELEVISION SERVICE CALLS DURING FIRST 90 DAYS  
TEN MAJOR BRANDS  
(EXCLUDING PORTABLES)**



**Q. What were the conditions on which it was offered?**

- A. 1. The warranty would cover all RCA Victor portable television sets sold in the market.
2. The dealer would have complete freedom of choice in selecting his service agency, or handling the service himself.
3. The warranty amount would be pre-billed.
4. The amount charged by the RCA Service Company would be \$2.50 per set purchased and would include labor at the shop only, the set to be brought to the shop and picked up by the customer.

**Q. When was this program extended to the complete line?**

**A.** In June, 1958, the RCA Service Company offered a labor warranty plan to include table models and consoles at a price of \$6.00 per unit purchased by the dealer and providing for service in the home.

**Q. Is service warranty standardized now in the industry?**

**A.** No. Warranties vary from 90 days to 5 years, with and without labor. Dealers and service people are antagonized; the public is confused.

**Q. What does RCA believe regarding warranties?**

**A.** That there should be a reasonable warranty on a new product; that it should include both parts and labor for a maximum of 90 days, unless good business practices beneficial to the customer and the trade make a change mandatory.

**Q. Is the RCA Service Company warranty plan profitable?**

**A.** Yes. It has been profitable to RCA Service Company as well as for those who are handling warranties under it. Consumer complaints have dropped dramatically where it has been adopted.

**Q. Does a warranty program such as this aid discount houses?**

**A.** Actually, it provides a more uniform base for everyone. The spread in prices between the discount house and the servicing dealer is not so great if the charge for service warranty is added to the cost of goods.

**Q. Is the RCA Service Company subsidized?**

**A.** Not in any way. The RCA Service Company stands completely on its own and liquidates its full share of corporation overhead.

# SEA-GOING "LAB" UNDERWAY ON MISSILE TRACKING DUTY

## Service Techs Are Aboard Ship Bound for Atlantic Test Range

The S. S. American Mariner, a "floating laboratory" of electronic equipment, has sailed for a post in the South Atlantic to aid in tracking the experimental ballistic missiles fired by the U. S. military services, and in recording data on their performance.

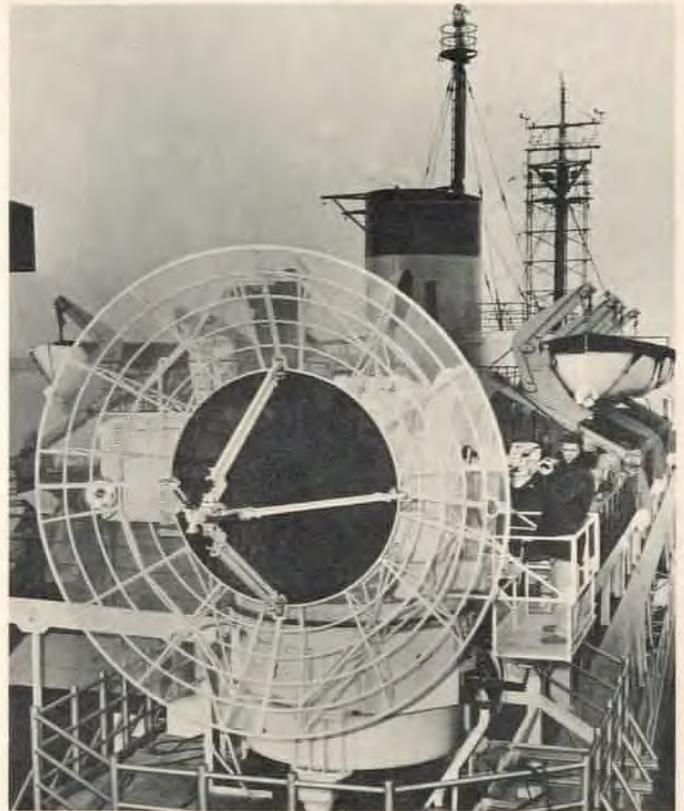
Sailing with her were Government Service technicians recruited from the RCA Service Company, which is also responsible for missile tracking telemetry at the Atlantic Missile Range at Cape Canaveral, Florida. They, together with civilian scientists and engineers, form RCA's electronic operations complement aboard ship.

Known as a "missile measurement ship," the vessel is equipped from stem to stern with some of the most advanced electronic equipment in existence, including tracking radars described as the most accurate in the world. The ship's elaborate system even includes a videotape recorder similar to that used by broadcasting networks for recording and rebroadcasting television programs.

The Mariner's scientific staff will make precision observations



DEP Services engineers Gerald Guess, Kenneth Hardy and Grover Burns (left to right) manning the Mariner's operations plotting and recording equipment. It is a part of the complex electronic and optical network which RCA installed, and which RCA technicians will operate for the Department of Defense.



This huge "Dish" aboard the S.S. American Mariner is an RCA development, described as the most accurate tracking radar in the world. Gerald Guess, of DEP Services, at right.

and collect data on the characteristics of a missile's performance from its ascent to remote altitudes in space, through all levels of the earth's atmosphere, to the final plunge into the sea.

The information collected—by radar, by telemetry, and by optical apparatus—will supplement the data already being recorded on the missile range by ground stations and picket ships operated by the Air Force. The range extends from Cape Canaveral, Florida, more than 5,000 miles southeast across the Atlantic to the vicinity of Ascension Island, half-way between Brazil and the African Coast.

The Navy provided precision computing equipment to compensate for the ship's roll, thus making possible accurate radar measurements at sea. The Air Force, in turn, will contribute valuable information on missile firings from its Air Force Missile Test Center at Patrick Air Force Base, Florida.

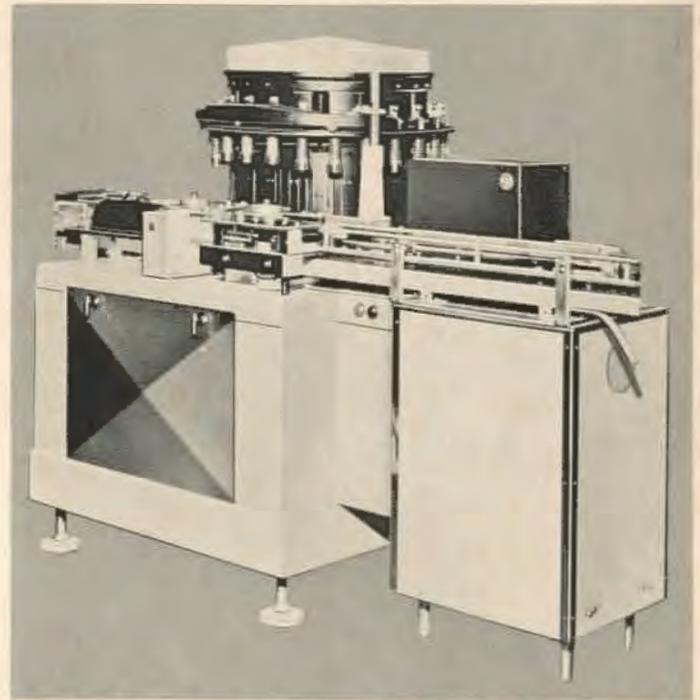
The project is sponsored jointly by the Advanced Research Projects Agency, Department of Defense, and the Army Ordnance Missile Command, Huntsville, Alabama.

The Radio Corporation of America is the systems management contractor for the ship. The Maryland Ship Building and Dry Dock Company executed the refitting operation under contract to RCA.

Naval architect in the project was J. J. Henry, of New York and Philadelphia. The Barnes Engineering Company, of Stamford, Conn., was in charge of the design and operation of non-radar measuring projects. The Barnes Company also has technical personnel on the ship to operate its equipment.



10-Year-Old BIM—one of six in daily operation at the Coca-Cola Bottling plant in Philadelphia. Tech Products BIM Specialist Ivor Winby has a look-see.



New S-Type BIM casts an electronic eye over 300 bottles per minute; passes those containing no foreign particles, but shunts the rejects to one side.

## It's what's NOT in the bottle that counts . . . .

To keep your sparkling ice-cold bottle of Coke free of foreign particles, hundreds of Coca-Cola bottling plants across the USA employ the electronic eyes of RCA BIMs—Beverage Inspection Machines—as the guardians of their quality.

Proved far superior to your own eyes in examining bottled soft drinks and beer, the BIM can locate and segregate even those bottles containing transparent materials (such as glass and cellophane), and also detect contaminants (such as caustic or grease carried over from the bottle washer).

One enthusiastic bottler confided that, were it not for the watchful "Electronic Eye" ten thousand cases of product with a caustic taste would on one occasion have been shipped to his customers. By checking the bottles being rejected he found that the rinsing mechanism was not doing its job and all bottles coming from the washer had a coating of caustic on the inside. Not readily recognized visually, contaminants such as this cause tiny gas bubbles; are rejected by the BIM.

### How It Works

Bottles enter a rotating turret through a standard in-feed timing gate and star wheel. Each is clamped between lower and upper cups, and suddenly spun at a rate of from 800 to 1200 revolutions per minute, stopped, and then spun again.

It is again braked instantaneously and the electronic inspection apparatus scans the swirling liquid.

Consisting of a lamp, lenses, and phototubes, this device is mounted on an oscillating swing-arm moving in exact synchronization with the turret during the inspection period. It projects a strong narrow beam of light through the bottle and its contents and on to a bank of phototubes. Minute foreign particles and excess bubbles, passing through the light beam, cause a slight change in the intensity of the light reaching the tubes. This signal is transformed into a strong electric current to actuate a selector mechanism, which "remembers" the contaminated bottle and automatically rejects it as it leaves the turret.

### The First of the BIMs

The need for inspection of bottled beverages was recognized from the very early days of the industry, and as production rates increased, the inadequacies of even the best visual inspection became more and more obvious. As a result, bottlers who realized the importance their customers place on product purity looked for a more effective device.

Consequently, in 1935, RCA in close collaboration with the Coca-Cola Company, started development of an electronic



Most of the BIMs produced by RCA in Camden have gone to U. S. bottlers, but some have been shipped to Cyprus, Amsterdam, Mexico, Uruguay, and Canada.



The one-thousandth BIM off the line in Camden, with K. R. Hollister (left), Manager of RCA Inspection and Control Equipment, and Jack Barkow, Camden Commercial Plant Manager.

## .... and BIMS keep it clean at the Coke Plant!

system. By 1940 a commercially practical design had evolved, and RCA was awarded a contract to build twenty-five units for an expanded field test.

The first of these machines—the first of the BIMs—was installed in 1941 for Coca-Cola at Clarksville, Tenn., by Service Company field technician Ken Hollister. Responsible for the formulation of service policy activities since their inception, Mr. Hollister is now Manager of RCA Inspection and Control Equipment.

### Servicing BIMs

The comprehensive care of BIMs is much the same today as it was in the early days when the Installation Supervising Contract Service and Replacement Parts Plan originated. Customer personnel was trained in the operation and maintenance of the equipment, and periodic checks were made and servicing done by Service Company technicians.

Formal training was provided for field specialists, who worked with engineering in both the laboratory and the field. The first of such specialists was L. W. (Les) Leidy, now Technical Products' Manager of Electronic Engineering Service.

Today, the Technical Products Department of the Service Company has trained BIM specialists located or operating in

every state of the Union. The RCA Service Plan for the Beverage Inspection Machine is a preventive campaign against break-down and operational losses. The Plan begins with installation and instruction of the customer's personnel, followed by a continuing program of regularly scheduled inspection. A point-to-point check is made of the equipment, performance faults corrected, parts replacements made, emergencies covered, all for one fixed fee.

### One Thousand BIMs

Last summer the one-thousandth BIM produced was purchased by the Norfolk (Va.) Coca-Cola Bottling Works, Inc., who already had nine of the machines in use. A streamlined unit, the "milestone" BIM is capable of inspecting up to 150 bottles per minute, passing those containing no foreign particles and shunting all others aside.

The newest "S-Type" BIM, shown publicly for the first time at the American Bottlers show in Atlantic City last November, handles 6-ounce to 16-ounce bottles at the rate of 300 per minute, twice the previous speed of such machines. It is the only electronic beverage inspection equipment available which can accommodate quarts, inspected at a rate of 200 per minute.



This is the opening scene of "A Blueprint for Action" presented by Consumer Products Service Management for Branch Managers.

Produced at meetings in Atlantic City and St. Louis. "Blueprint" was a comprehensive wrap-up of the department's plans for 1959.

## ***ACTION - (by blueprint)***

Gerry Pfister, Consumer Products Service V. P., set the pace for two lively premieres in January when Regional, District, and Branch Managers met to hear Management plans for service in 1959.

Northeastern, Eastern and Southern Regions convened January 15-16 in Atlantic City's Chalfonte-Haddon Hall. St. Louis was the headquarters city for all other regions, at the Hotel Chase-Park Plaza on January 21-22.

A "Blueprint for Action" was presented at both locations in a series of on-stage skits, starring Management personnel and detailing a step-by-step course toward pre-determined 1959 operating and sales objectives.

### **The Cast**

The meeting opened with a conference-room setting and a planning board in session. On stage, in order of appearance, were L. G. Borgeson, Manager of Field Operations; R. C. Gray, Manager of Appliance Service; R. W. Redecker, Manager of Sales & Merchandising; S. E. Baker, Manager of Television & Radio Service; R. L. Shoemaker, Manager of Commercial Service; H. W. Johnson, Manager of Field Support Service; A. L. Spaeth, Purchasing Agent, and J. Lippincott, Jr., Manager of Consumer Products Service Personnel. G. W. Pfister, Vice President, Consumer Products Service, joined them and called the meeting to order.

Present at the planning session was an attentive audience . . . the assembled

Branch Managers, who were thus given a vivid "behind-the-scenes" picture of Home Office activities.

### **The Credits**

Mr. Pfister chose, as Topic One on the agenda, a hearty round of congratulations to Branch Managers for their role in the department's achievements in 1958, and spoke of his personal pride in the improved customer service record.

From then on, the meeting unfolded a wrapped-up solid plan for action, in which Managers were given the objective "blueprints" on Black and White Television, Radio-Victrola, Color TV, Multiple Systems, promotional items and Appliance service.

Operational functions, too, and their effect upon the profit picture were soundly reviewed by department heads: Purchasing, Branch Operations, Technical Training, Personnel Relations, Consumer Relations, Sales and Merchandising.

Sales Vice President R. N. Baggs projected the service potentials on coming new products. Treasurer and Controller E. H. Griffiths spoke on Financial Growth.

### **The Finale**

Not to be outdone, Branch Managers themselves (during the dinner) staged an act or two, in costumes and slogans traditional to their Regions. Confederate flags vied with "The Spirit of '76" for the spotlight, and Hollywood berets and Chicago derbies spoofed the spoofer from Southwestern Region.



Vice President Pfister exhibits Trophy won by action in 1958.



Northeastern applied the old "Spirit of '76."



Eastern Region sings their chorus of "yeas."



Central's Davis (left) with Western's Adams.



Southern Region takes the spotlight.



In Atlantic City—E. M. Tuft (extreme left), RCA Vice President of Personnel, with RCA Service Company management (clockwise) J. F. Murray, T. Y. Flythe, D. R. Creato, E. H. Griffiths, A. L. Conrad.



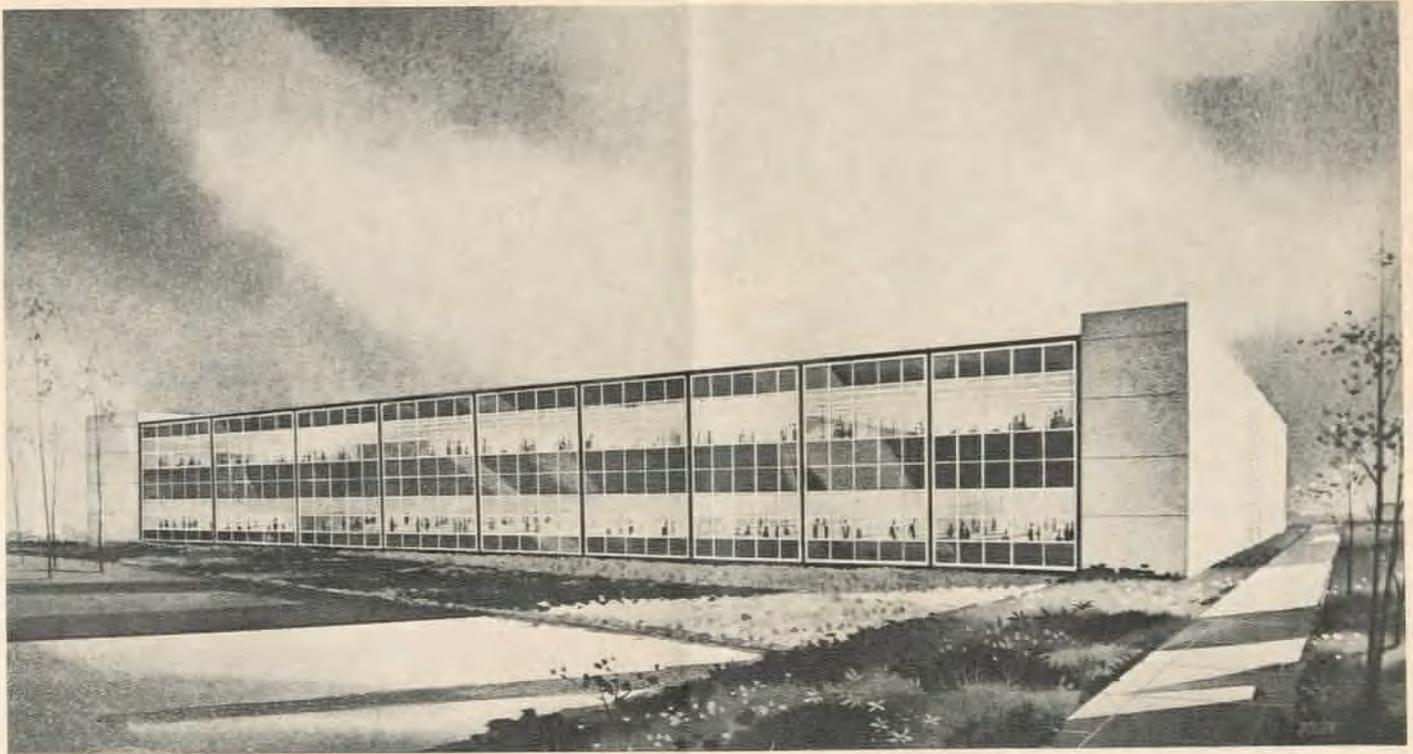
Southwestern en masse, with mascot.



The "pride" of East Central Region.



The congenial crowd from West Central.



Architect's sketch of typical Engineering Buildings for the new RCA Defense Electronic Products missile and radar center in California.

## The Site is Van Nuys . . .

. . . in the heart of the West Coast's Missile Production Area

Radio Corporation of America will establish a major missile and radar center at Van Nuys, California, on a 50-acre tract in the rich San Fernando Valley, 15 miles northwest of Los Angeles.

Partial occupancy of the new facility—a cluster of engineering, production and administrative buildings—is scheduled for late summer.

The decision to locate a major plant at Van Nuys stems from the company's growing business in the weapons system and radar fields. Among major radar and systems contracts held by the company are those for the Ballistic Missile Early Warning System, for which RCA is the prime system contractor to the U. S. Air Force, and the electronic checkout and launching system for the Atlas missile, under sub-contract to Convair.

The Van Nuys location was chosen because of its proximity to other leading missile system manufacturers, airframe manufacturers, and military centers in the greater Los Angeles area. With modern facilities in the heart of the West Coast military system design and production area, RCA will be able to contribute even more effectively to missile systems and weapons component projects centered in this area.

The new plant will also help satisfy expanding requirements

of the present RCA defense product plant on Olympic Boulevard, Los Angeles, as well as the RCA Missile and Surface Radar plant at Moorestown, N. J.

### Modern California Design Features

The new Van Nuys plant will consist initially of six California-style buildings designed by Nelson Rice, well-known West Coast architect. Engineering and manufacturing facilities will be of the most modern and advanced design to satisfy the stringent requirements of electronic missile and radar equipment. Construction will be of the masonry, glass and porcelain-on-steel curtain-wall type.

The initial group will consist of three engineering buildings, an administration building, a cafeteria and a production building, providing a total of 220,000 square feet of floor space. One- and two-story construction will be employed.

Completion of the initial phase of construction is due by the end of the year. Future plans include provision for the construction of three additional engineering buildings and expansion of the production building.

Initial projects scheduled for the Van Nuys plant include work on missile check-out and launch, information handling and radar systems.

## Service Company Personalities

**ROBERT F. "BOB" ADAMS**, Consumer Products Western Region Manager, was assigned to the Foster Avenue branch in Chicago as an installation technician when he first joined the company in 1948. Transferred within six months to the Oak Park branch, he became its Supervisor of Installation and Service before another six months had passed.

His meteoric progress continued via the Branch Managers' training course in Camden (in October, 1949), which led to his appointment as the Tulsa, Oklahoma, Branch Manager in November of that year. In the next 2½ years, he also served the Memphis, Dallas and St. Louis branches as Manager.

Mr. Adams became the Dallas District Manager in 1952, then moved to Chicago District as its Manager, where he remained for three years.

His next advance was to Central Region Service Manager (in September, 1956) and, a year later, to his present post in Los Angeles.

Prior to his RCA association, Bob Adams spent twenty-seven months in the Aleutian Islands with the U. S. Navy, assigned to the installation and maintenance of instrument landing systems. He was discharged as an Aviation Electronic Technician 1/c.

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**EDWARD R. WAGNER** is Government Service Manager of Systems Engineering Operations, responsible for the supervision and administration of various technical services provided to the Military, to Government Agencies and Industry by facilities in Alexandria, Va.; Dayton, Ohio; National City and Vallejo, California; Tucson, Arizona and Westmont, N. J.

In his varied career he has been a radio mechanic/operator for Pan American Airways; a radio operator for the U. S. Maritime Service (during World War II); a leadman at LaGuardia Airport and Radio Shop supervisor at Shannon Airport, Ireland, for American Overseas Airlines.

In October, 1947, he joined Consumer Products Service as a TV Serviceman, Collingswood Branch. His association with Government Service began in 1950 as a field engineer at Palermo Air Force Base in New Jersey. He then became field Supervisor, CADF Headquarters, Kansas City in 1951, and in 1953, was appointed Manager, Field Evaluation Group, Washington, D. C. From 1954 to 1956 he was Manager of the Alexandria Systems Engineering Facility, transferring to his present post in 1956.



Robert F. Adams



Edward R. Wagner



Sidney E. Baker, Jr.



Lloyd R. Yoh

**SIDNEY E. BAKER, JR.**, Manager of TV and Radio Service, has for the past two years supervised TV and Radio Administration, Technical Training and Engineering for the Consumer Products Service Department.

His nineteen years with the RCA Service Company began in theater and industrial equipment servicing, in which he continued for two years, as Theater Service Engineer. World War II years (1942-46) were spent as a field engineer on radar equipment for RCA on a Navy contract, after which he returned to Theater Service as a Technical Supervisor.

In 1947, Mr. Baker was appointed Consumer Products Manager of the St. Louis TV branch; became St. Louis District Manager in 1948, and Western Service Area Manager in 1953.

During his four years as Western Area Manager, he directed his districts to national leadership in service contract renewals, increased net operating income, and other total efficiency factors. He received the Corporation's Award of Merit in 1954.

Mr. Baker takes an active interest in professional and civic organizations; also enjoys the fine art of amateur photography.

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**LLOYD R. YOH**, Manager, Government Service Administration & Contracting Services, once washed windows in the Camden plant to avoid depression layoff. Since 1936, when he joined RCA's Service division, he has contributed much "elbow grease" in far different ways.

From field engineer in the Cincinnati district (when, he remembers, "Ed" Cahill was Chicago District Manager), he advanced to Cincinnati Manager, then to Cleveland District Manager.

During war years, in charge of the Navy shipborne communication program and fire control, Mr. Yoh won an RCA citation for his design of a simplified system of Fire Control Test. In 1950, appointed Manager of Government Contracting, he played an important part in the establishment of the Missile Test Project at Cocoa, Florida.

A master negotiator in the contracting phases of government business, he received the Corporation's Award of Merit for outstanding achievement in 1955. In 1958, he was elected Vice President and a Director of the RCA International Service Corporation.

Mr. Yoh has operated a licensed amateur radio station (W2EI) since 1922; also builds and operates amateur astronomical telescopes.

# Report from Headquarters

## Sarnoff Discloses RCA Study of Special-Purpose Satellites

In a Year-End Statement on the highlights of RCA's business activities, Brig. General David Sarnoff, Chairman of the Board of the Radio Corporation of America, disclosed that RCA is studying possible uses for special-purpose satellites including an orbital post office to speed mail delivery anywhere in the world.

General Sarnoff said that RCA scientists and engineers, who developed a large part of the communications relay system for the Atlas satellite, are now investigating satellite relay stations for international television as well as orbital weather stations.

### Electronics in Outer Space

"The recorded voice of President Eisenhower relayed earthward from the Atlas satellite," General Sarnoff said, "heralded the dawn of an era when man will become almost as active in interplanetary space as he has been on the earth's surface."

The communications equipment in the Atlas satellite was designed to receive and transmit simultaneously several written messages and one voice message, when within range of designated ground stations. A major part of the communications system, both in the Atlas and on the ground, was developed and built by RCA for the Army Signal Corps.

"Engineers and scientists of RCA have conducted investigations pointing to the technical feasibility of special-purpose satellites in several areas," General Sarnoff continued.

"They have made detailed studies of the possible use of an artificial moon as an orbital post office for space mail delivery between the United States and Europe. Ground systems on both sides of the ocean would link post offices in major American and European cities with transmitting and receiving stations communicating via the satellite relay. Letters written on special forms would be converted electronically into radio signals for trans-Atlantic space transmission. At the receiving end, high-speed electronic printing techniques would convert the signals back to letter form for postal delivery.

"Also under study are systems of specially equipped satellites which might be placed in orbit at various levels above

the earth to serve as relay stations for international communications, television and other services.

"Orbital weather stations are another possibility. Carrying special equipment for detecting changes in cloud cover and heat radiation, they might very well improve our techniques of weather forecasting and lead to further understanding of phenomena relating to climate and weather."

### RCA Highlights of 1958

Among RCA's major achievements of 1958, General Sarnoff listed the following:

1. Development of a new micromodule concept in electronic circuitry that makes possible the reduction of many important military items to one-tenth—and in some cases to as much as one-thousandth—their present bulk. Experimental circuits, including entire assemblies of transistors, wiring and other elements compressed into micro-modules no bigger than a cough drop, have been built for the Army Signal Corps.

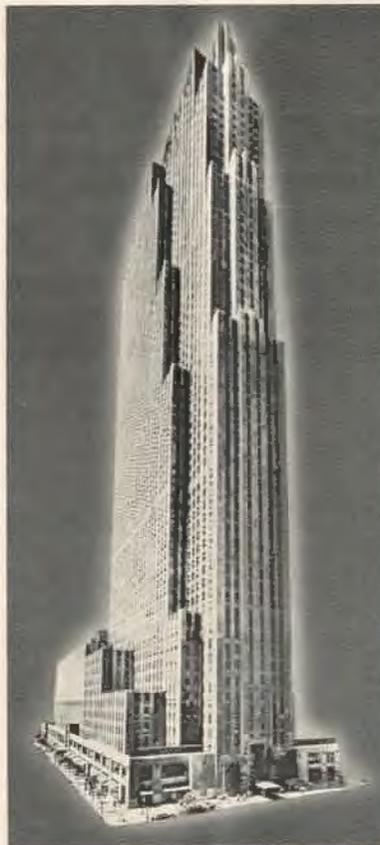
2. Introduction of almost 100 new products including the first fully transistorized, general-purpose electronic data processing system. Known as the RCA 501, the system is designed to bring full scale data processing within range of the average company.

3. Inauguration of a Ballistic Missile Early Warning System of long-range radar based in the Far North, a project on which RCA is prime contractor to the U. S. Air Force.

4. Development of an automatic check-out system that will reduce the "count-down" time for the Atlas ICBM, helping to make it ready for firing almost immediately after an alert. In the experimental work now going on with the major long-range missiles, the checkout may take from ten to fifteen hours.

5. Introduction of stereophonic sound to the popular market with the first complete line of stereo high-fidelity instruments, and a revolutionary stereo tape cartridge providing four times as much music as the standard tape.

6. Improvements in color television production and programming that were reflected in a "significant increase in sales." RCA's plans call for increases in color activities in 1959.



RCA Building, New York City

# FOR A BETTER VIEW — a 12-Point TV-Checkup

Owners of RCA Victor television sets are endorsing the foresighted plan introduced by the RCA Service Company by which TV performance is kept at peak. Available through Consumer Products TV Branches, the 12-point checkup for operating but "tired" TV sets is a thorough one; the \$7.95 it costs could save the owner ten times that much in future service. It includes:

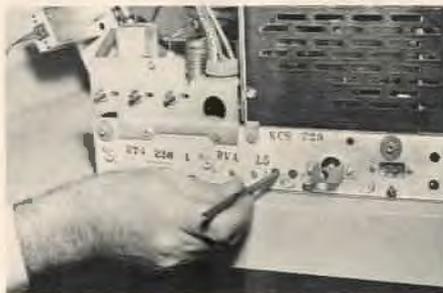
1. Examination and tightening of connections at lightning arrestor, receiver and ground connection.
2. Chassis examination and cleaning, including check of tubes and components.
3. Readjustment of Horizontal Lock.
4. Resetting of oscillator trimmers and readjustment of wave trap.
5. Readjustment of kinescope coils, including repositioning of yoke, focus coil and ion-trap assembly.
6. Adjustment of all electrical and mechanical controls of deflection components.
7. Resetting of beam focus.
8. Examination of protective seal between kinescope face and safety glass.
9. Inspection of AC power cord at plug and receiver connection.
10. Cleaning of tube face and safety glass.
11. Telecast check, insuring that circuits and tubes are functioning correctly.
12. Written report, covering technical conditions and performance.



1. For a steadier picture



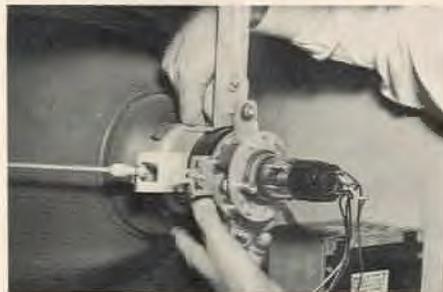
2. For sharp clear focus



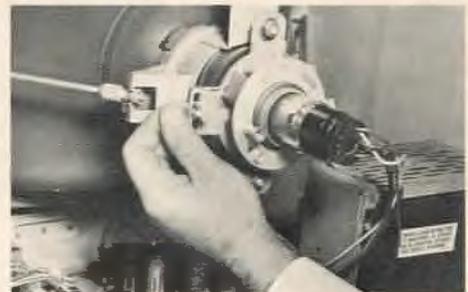
3. For "flop-over" prevention



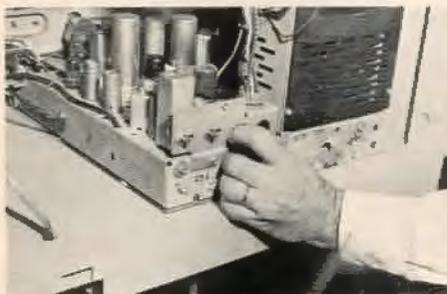
4. For minimum interference



5. For brilliance, definition



6. For perfect centering



7. For sharp natural picture



8. For dust protection



9. For a short circuit safeguard



10. For a clean screen



11. For overall performance



12. For written recommendations

# — A Page from the Family Album —



**Ft. Lauderdale, Fla.**—This Consumer Products Service Branch opened in November. Frank Mahony (left) is Manager. Joe Barnard, Chief Clerk, has left for military service.



**Patrick Air Force Base, Fla.**—Medalist Juanita Argo, MTP typist-clerk (from left): R. W. Stephens, M. W. Boggs, Jr., T. W. McCarthy, J. A. Robinson.



**St. Louis, Mo.**—J. J. Holland, Consumer Products St. Louis Branch Sales Manager, started as apprentice technician at the Des Moines TV Branch.



**Clayton, Mo.**—Consumer Products' West Central Field Sales Manager W. L. Luecke (left) with Salesman Roy Larson.



**Washington, D. C.**—Fernando Garcia, Consumer Products TV Technician, got kudos for courtesy and a service contract order from a former A.T.&T. official.



**Hollywood, Calif.** — Combining nearly 100 years of experience in the Consumer Products office (from left): F. D. Miller, W. E. Thackrey, John Bergstrom, James Coil, Harry Blackmore, Joe Fenole, Fred Mosher, J. J. McGuire, Sid Kaelin.



**Philadelphia, Pa.**—John Baptista, Consumer Products' Northeast Office Manager, sailed the "Miss Nancy" in the Frostbite Regatta on the Delaware River.



## The RCA Service Company Congratulates:

ALFRED W. BISTI

Asbury Park Branch, Consumer Products

VIOLET CURTIS

Northeast Philadelphia Branch, Consumer Products

HAMPTON S. KALYN

Technical Publications, Consumer Products

HAROLD M. MADISON

Western Region, Technical Products

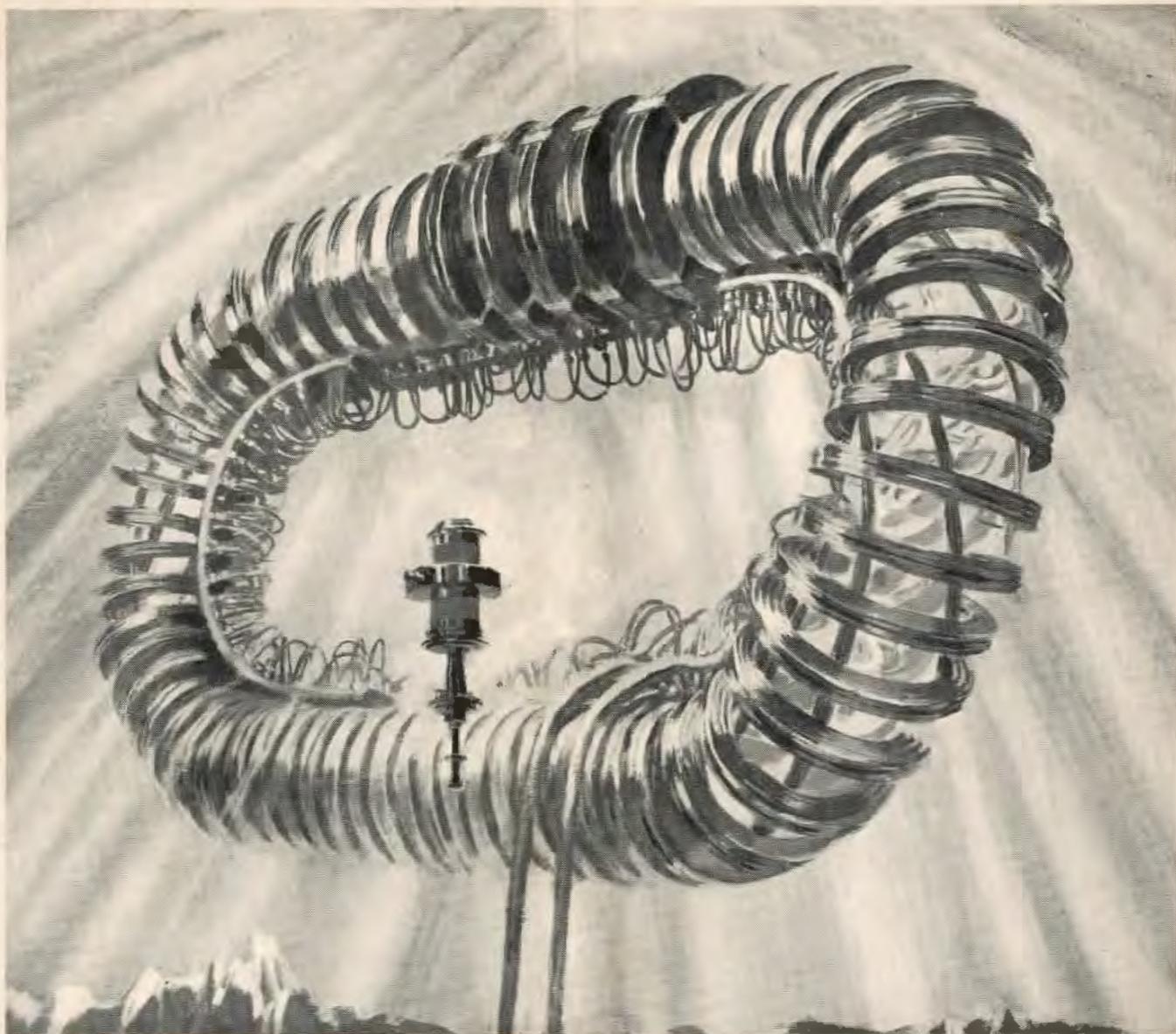
LLOYD R. YOH

Administration & Contracting Service, Government Service

on achieving 25 years of continuous service with the Corporation. Sincere wishes are extended to each of these new members for good health and continued success.

RCA's Service Award Program was inaugurated in Camden, New Jersey, on December 18, 1948, with a charter membership of 861 men and women who had completed 25 or more years of continuous employment.

This year the Club welcomes 529 new members who achieved a quarter-century of service in 1958. They increase the membership, on a national scale, to 3,722 members.



## RCA electronics helps nuclear science harness the energy that lights the sun

Inside Princeton University's James Forrester Research Center, scientists are seeking to create energy as the sun and stars do—by nuclear fusion. Success would mean inexhaustible power for the peaceful needs of mankind. For example, one cubic mile of sea water contains enough fusion fuel to meet the present U. S. power needs for 15,000 years!

To advance the quest for fusion power, a major research facility is now being built in Princeton. It will include the C Stellarator, a machine

which will attempt to produce the environment needed for fusion to occur. That means an initial super-high vacuum and temperatures up to 100 million degrees. How do you create and control such conditions? With *electronics*.

That is the reason RCA and Allis-Chalmers were chosen by Princeton University and the AEC to build

the C Stellarator and all related equipment. Allis-Chalmers will provide the heavy electrical components. RCA will provide the electronic system to create the heat and control the Stellarator.

RCA welcomes this opportunity to help bring the age of peaceful nuclear power a little closer . . . through leadership in electronics.



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