

# COMSAT NEWS

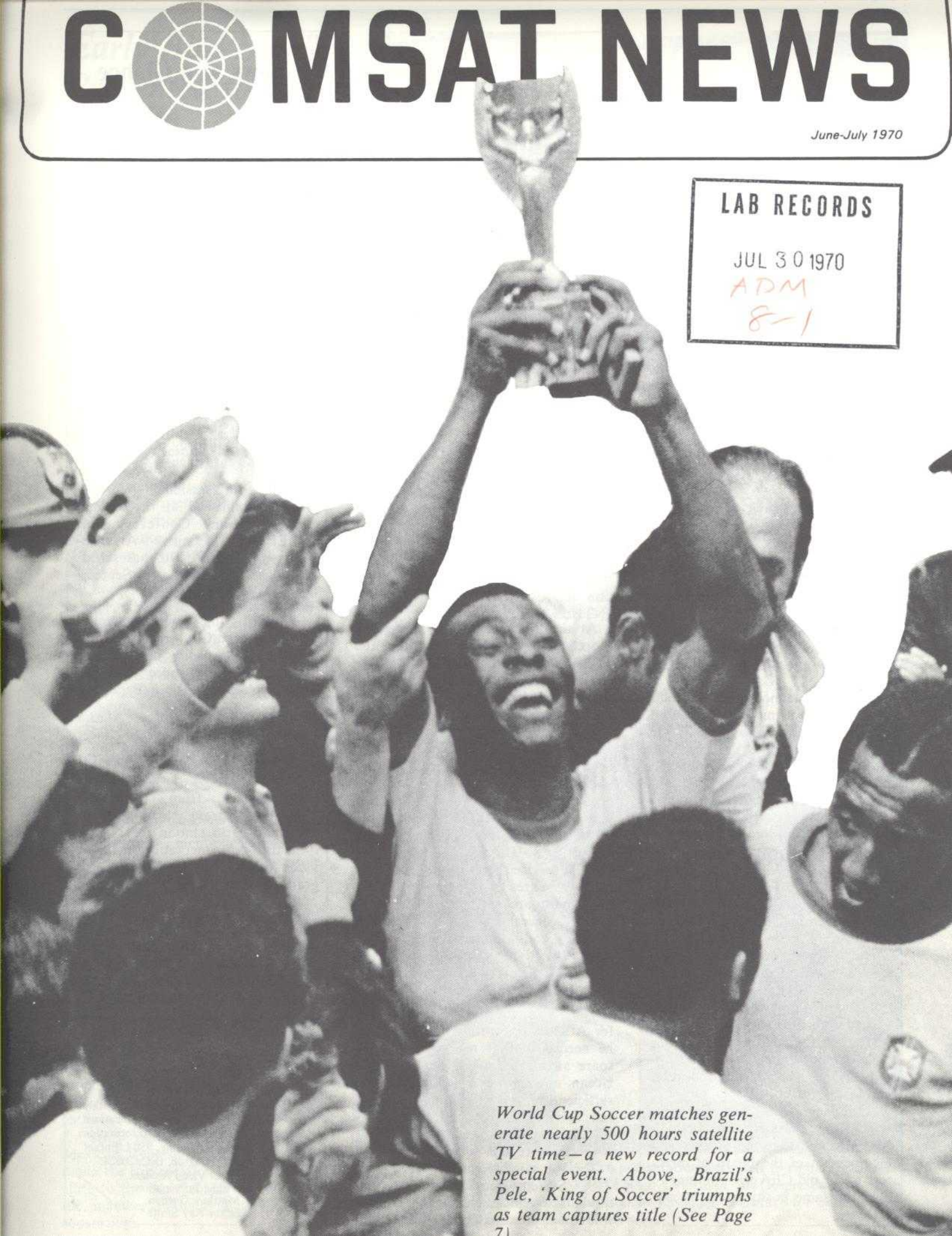
June-July 1970

LAB RECORDS

JUL 30 1970

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*World Cup Soccer matches generate nearly 500 hours satellite TV time—a new record for a special event. Above, Brazil's Pele, 'King of Soccer' triumphs as team captures title (See Page 7)*





High level government executives toured the Operations Center on June 16 as a part of their seminar, Federal Executives on Business and Public Policy, conducted by the Brookings Institute. Dennis Neill, space segment implementation, left, gave one of a series of briefings the men received.

## F-8 Planned for July Launch; To Serve as Pacific-Indian Spare

The eighth and final satellite in the INTELSAT III series is planned for launch from Cape Kennedy no earlier than July 22, to serve as a spare in orbit for the Pacific and Indian Oceans.

Approval to launch the F-8 satellite and to position it initially at longitude 128 degrees East was given by the Interim Communications Satellite Committee at its June meeting. The launch will be conducted by the National Aeronautics and Space Administra-

tion for COMSAT as manager for INTELSAT.

At the intended position the satellite could be controlled by either the Paumalu or Carnarvon tracking, telemetry and command stations. From the intended position, the satellite could be moved to an Indian Ocean station in about 6 days or to Pacific station in about 5 days, each with an acceptable level of fuel expenditure.

As a common spare for the two oceans, the satellite would assure service continuity in those regions in the event of the failure of either of the INTELSAT IIIs now providing commercial service there. While there now are two spares in orbit over the Pacific, both are satellites of the preceding generation, the INTELSAT II series, and do not provide sufficient capacity and flexibility to restore all of the Pacific traffic should the Pacific INTELSAT III fail.

The F-8 might also be repositioned for Atlantic restoration should it ever be needed in that region. There are spare satellites over the Atlantic Ocean now, however, which provide sufficient capacity for immediate and full service restoration in the event of a failure of either of the INTELSAT IIIs in regular service there.

The F-8 satellite was procured from TRW Systems for \$7.5 million, and the launch vehicle and launch services will cost approximately \$5 million.

### CEA Incorporates

The COMSAT Employees Association became COMSAT Employees Association, Inc. on June 4, 1970.

At its meeting on June 3, the CEA's board of directors voted to incorporate the Association of COMSAT Employees. The formal papers were filed with the Recorder of Deeds of the District of Columbia on June 4, and, upon their approval, the non-profit corporation was formed.

Announcing the new Corporation, CEA President Elizabeth J. Stover stated that the officers and membership of the board of directors of the old CEA will continue to hold the same positions in the new entity.

## News at a Glance

- Bartlett earth station is dedicated at Talkeetna, Alaska; Commercial communication services began July 1 (Page 5).

- Early Bird twin satellite is presented to the Smithsonian Institution by Carlos Nunez A. on behalf of the seventy-six member nations of INTELSAT (Page 3).

- John A. Johnson, COMSAT Vice President-International, begins term as Chairman of the ICSC (Page 4).

- COMSAT proposes single ownership of earth stations in filing submitted to the FCC in response to statements filed by other carriers earlier this year (Page 4).

- The Intersessional Working Group, established at the Second Plenipotentiary Conference on INTELSAT Definitive Arrangements in March, 1970, has scheduled its second meeting for September 8 in Washington (Page 7).

- World Cup Soccer matches held in Mexico City generate nearly 500 hours transmit and receive satellite TV time, more than any other single event to date (Page 7).

- COMSAT proposes Alaska satellite services which could meet diversified needs of the state (Page 11).

- Engineers from COMSAT Labs demonstrate capabilities of the small earth station for NASA officials; experimentation may be used for the NASA Skylab program to be developed and launched in the 70s (Page 13).

- Double-hop satellite circuit is demonstrated by COMSAT at the Armed Forces Communications and Electronics Association Convention in Washington (Page 11).

### June/July 1970—Year 5, No. 5

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# Early Bird Satellite Back-up Presented to Smithsonian Museum

On Wednesday, June 17, the operational back-up to Early Bird, the world's first commercial communications satellite, was presented to the Smithsonian National Air and Space Museum.

Opening remarks were given by Frank A. Taylor, Director General of Museums.

Dr. Joseph V. Charyk, COMSAT President, followed with comments on Early Bird and an overview of satellite communications today.

## Historical Importance

To the more than 200 persons attending, including members of the Congress, government, communications and aerospace industries and the international federation of newspaper executives, representing 17 nations, Dr. Charyk cited Early Bird's historical importance.

"As we approach the anniversary date on which Early Bird went into full commercial service we should remember that five years ago marked the opening of a new period in global communications. With the launch of Early Bird truly world-wide communications at the speed of light moved the initial step toward reality. For the first time, live television broadcasts between continents became possible and new windows for all forms of telecommunications opened for many countries."

## Rapid Communications Growth

Dr. Charyk mentioned the rapid growth of satellite communications over the past five years. By the end of 1970, he noted, the global system is expected to consist of 54 antennas at 46 earth stations in 33 countries. Satellite system capacity has increased from 240 half circuits provided by Early Bird to about 8,000 half circuits today.

## 'Model T' of Space

Dr. Charyk referred to Early Bird as the "hardy little Model T of space which opened a new communication era, and changed the communication pathways of the world."

Carlos Nunez A., Chairman of Mexican Representative to the ICSC, made the presentation of the twin satellite to the Smithsonian on behalf of the member nations in INTELSAT consortium.

"We (of INTELSAT) feel confident that through exhibition of this flying model, interest will be stimulated among historians of technology and among experts in the science of communication," he said. "We feel that the exhibition will have an outstanding educational meaning for the people at large and particularly for youth, those who will become architects of the new society."

## Display Satellite

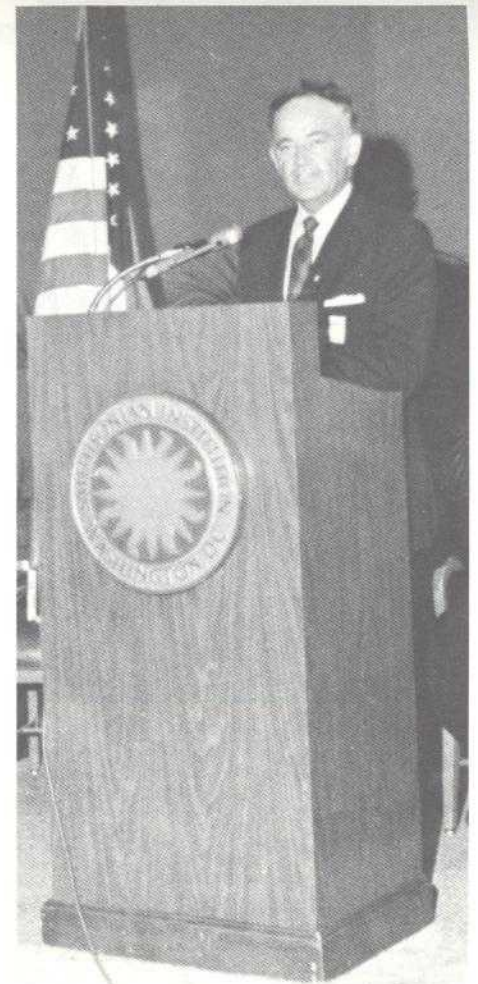
For almost two years, it has been used as a spare over the Atlantic to provide supplemental circuits for the other satellites positioned there.

The satellite was built by Hughes Aircraft Company as a back-up for Early Bird. It is identical in every respect to the satellite which provided reliable service for more than three years and is now in orbital retirement.

## COMSAT Labs Design

COMSAT Labs designed and built the display case which houses the satellite. It is located in the north hall of the Smithsonian Arts and Industries Building.

Following the presentation, a reception by COMSAT and the Regents and the Secretary of the Smithsonian was held for dignitaries and guests.

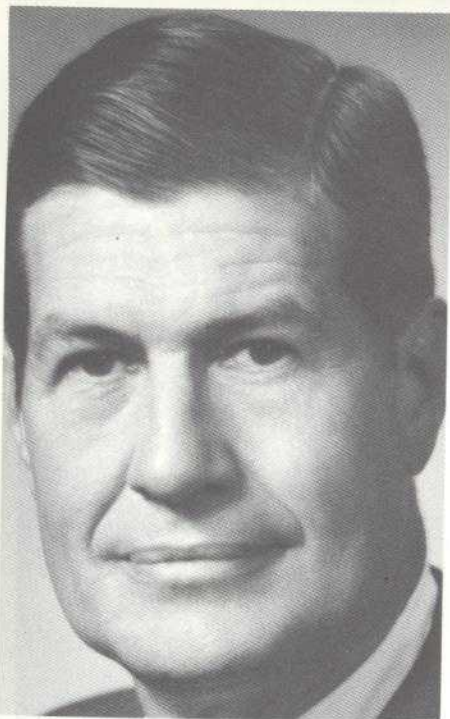


President Joseph V. Charyk spoke at Early Bird presentation ceremonies held at the Smithsonian.



Principles taking part in the Early Bird presentation were (left to right) Dr. Joseph V. Charyk; Carlos Nunez, A., INTELSAT Chairman and Representative from Mexico; Dr. Sidney R. Galler, Smithsonian Assistant Secretary for Science, and Frank A. Taylor, Director General of Museums.





John A. Johnson

## John A. Johnson Begins Term In ICSC Chair

John A. Johnson, COMSAT Vice President-International, assumed the Chairmanship of the Interim Communications Satellite Committee on July 1. The ICSC is the governing body of INTELSAT. Mr. Johnson has served as the United States representative since the inception of the ICSC, and was elected to his current term as Chairman at the forty-sixth ICSC meeting in April 1970.

Mr. Johnson has been Chairman twice previously, once for nearly three years during the early years of INTELSAT, and again for twelve months in 1968-69.

As the decision-making organ of INTELSAT under the Interim Agreements, the ICSC is directly responsible for the development, establishment and operation of the satellite portion of the global commercial communications satellite system. It meets six times each year.

Mr. Johnson has been with COMSAT since 1963 and has been Vice President-International since 1964. Formerly, he was General Counsel of NASA and General Counsel of the Department of the Air Force. He also was a member of the U.S. Delegation to the Legal Subcommittee of the United Nations Committee on the Peaceful Uses of Outer Space.

## COMSAT Proposes Single Owner In Earth Station Filing with FCC

COMSAT has rejected arguments by other carrier companies and reiterated its view that the present joint ownership arrangement for U.S. earth stations is unsatisfactory.

COMSAT made the statements in reply comments filed June 19 before the Federal Communications Commission, which is reviewing its interim ownership policy for U.S. earth stations providing international satellite communications service. Initial comments in the inquiry were first made on April 24.

In its June filing COMSAT agreed in part with AT&T, Hawaiian Telephone and Western Union International where they advocated that centralized control of all the stations be held by one entity. But COMSAT opposed these carriers on the subject of continuing the existing divided ownership, and also opposed AT&T and WUI suggestions that would involve changes in COMSAT's tariff offerings.

The bulk of the filing, however, was devoted to opposition to comments by ITT Worldcom and RCA Globcom.

"ITT and RCA on the other hand," COMSAT said, "urged the termination of the existing arrangements in virtually every respect and proposed the adoption of a policy which would entirely exclude COMSAT from the earth station scene and permit the dominant carrier (ITT's proposal) or 'best qualified' international record carrier (RCA's proposal) to assume complete control of each U.S. earth station.

"We believe the arrangements advocated by ITT and RCA to be without merit and that their implementation would be detrimental to the public interest by creating a series of regional monopolies over the modes of international communications."

Mr. Johnson is the recipient of the Air Force Medal for Exceptional Civilian Service and of NASA's Medal for Outstanding Leadership. He has authored articles in legal and professional journals and is a contributor to the Encyclopedia Britannica.

COMSAT said that the effect of the proposals by ITT and RCA would be the total exclusion of COMSAT from participation in any and all U.S. earth stations. COMSAT said the two carriers sought to ignore the objectives of the Communications Satellite Act, and both seemed unwilling to accept the existence of COMSAT some eight years after its creation under the Act.

COMSAT emphasized its view that the "most efficient and most economic resolution of this Inquiry would be to restore to COMSAT total ownership and full operating responsibility for all U.S. earth stations operating in conjunction with the global system.

This, as compared with any other arrangement, will best serve the public interest."

However, the Corporation said that since none of the proposals by any of the carriers for changes would improve in any way upon the existing arrangements, if joint ownership must be continued, the present arrangements should be retained.

## John G. Ernst Joins COMSAT, Succeeding O. Thomas Wilson

John G. Ernst has assumed the position of manager of purchasing at COMSAT Labs. He comes to the Corporation from Fairchild Hiller Corporation, where he also performed purchasing functions.

Mr. Ernst succeeds O. Thomas Wilson, who died in April following a third heart attack in less than a year.

Mr. Wilson had served as the Labs' purchasing manager since 1968 and earlier had worked as a COMSAT Headquarters purchasing officer.

He is survived by his wife, Dorthea, and two children, Valerie and Gregory.

## Advertisements

FOR SALE: 1970 Ford Maverick, six cylinder 170 cubic in. engine, manual shift, two door, blue. 10,000 miles, snow tires included. Available last week in July. \$1550. Ext. 6480.



## Earth Station Development

Formal dedication ceremonies were held during the month of June for three new earth stations, all operating in the Pacific Ocean area.

The ceremonies were held on June 2 for a new Korean station, on June 24 for the permanent Guam station, and on June 30 for the new COMSAT station in Alaska.

President Park Chung-hee delivered the main address at inauguration ceremonies for the new Kum San earth station, located about 100 miles south of Seoul.

In press reports, President Park said in his address that the station should help to remove "walls of aloofness and disbelief, and differences and frictions separating nations from nations and peoples from peoples."

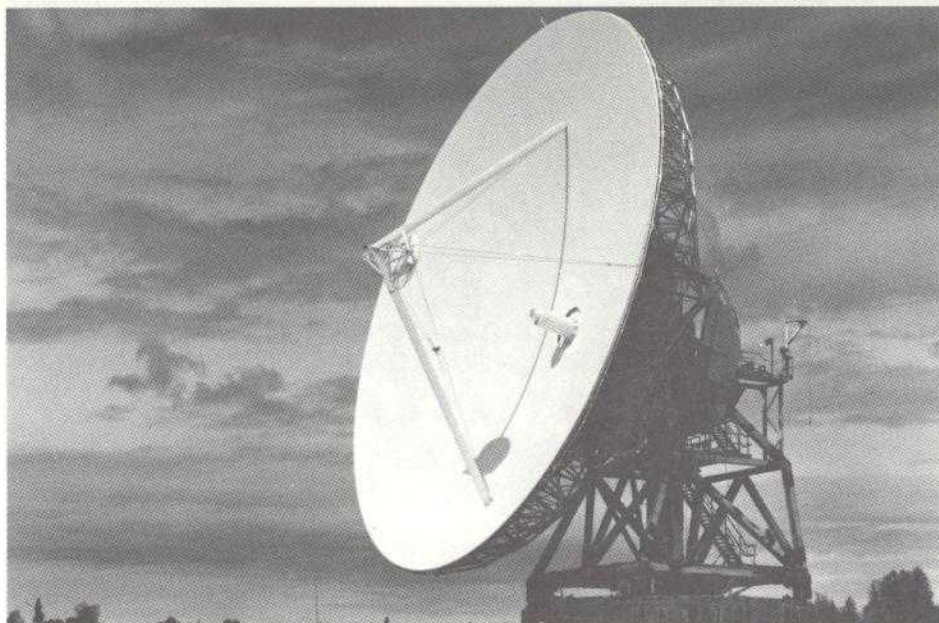
COMSAT President Joseph V. Charyk extended congratulations to President Park and the Korean people via live satellite television as part of the ceremonies.

In Guam, the permanent earth station at Pulantat, located about six miles from the capital city of Agana, was formally dedicated in a morning ceremony, followed by a luncheon in a downtown Agana hotel. Dr. Robert C. Barthle represented COMSAT at the dedication.

COMSAT serves as Guam's System Manager and owns a 50 percent interest in the station. Dr. Barthle said in prepared remarks that the station was "tangible evidence of the creative talents of those who participated in bringing it into operation, and symbolic of the progressive spirit of this vital island community."

On June 30, the Bartlett station at Talkeetna, Alaska, was dedicated, becoming the eighth U.S. earth station in operation.

As of July 1, there were 49 antennas at 41 stations in 29 countries operating as part of the global system.



Bartlett earth station is located at Talkeetna, Alaska, 100 miles north of Anchorage.

## Bartlett Begins Commercial Service Following Dedication on June 30

The new Bartlett earth station for commercial satellite communications, dedicated in public ceremonies on June 30, began commercial operation July 1.

The COMSAT station, newest and most northern in the present global system, is located at Talkeetna about 100 miles north of Anchorage in the Susitna River Valley.

Governor Keith H. Miller delivered the principal address on behalf of the State of Alaska. Members of Alaska's Congressional delegation and a number of industry, government and military officials attended the opening ceremonies.

Dr. Joseph V. Charyk, President, presided at the ceremonies. Mrs. E. L. Bartlett, widow of U. S. Senator E. L. "Bob" Bartlett, was present for the dedication honoring her late husband.

A series of radio and television broadcasts followed the dedication ceremonies. The programming opened with a radio message from President Nixon, followed by a 15-minute color film on EXPO 70 at Osaka transmitted via the earth station at Irbarkari and the INTELSAT III satellite over the Pacific.

Other programs included a 15-minute feature film and half hour news feature on Alaska. A one-hour telecast from Waikiki Beach, Honolulu, and a radio message from G. Comacho, Governor of Guam, provided additional programming.

Dean Burch, chairman of the Federal Communications Commission sent a telegram, relayed round the world to

Dr. Charyk, as a symbol of Alaska's new global communications.

The brief outdoor ceremonies were held at the base of the large antenna structure. Afterwards guests and visitors toured the facility and were given demonstrations of communications services, including reception of television programs via satellite.

The Bartlett station represents the latest advance in communications technology, providing a gateway for expanded long-haul communications between Alaska and other states, as well as overseas points in the Pacific Basin.

### Newest Equipment Advantages

The station is equipped with specialized and sophisticated facilities to perform its tasks with a high degree of reliability. It was built under a contract awarded by COMSAT to General Telephone & Electronics International, Inc.

The large "dish" antenna is 98.4 feet (30 meters) in diameter, weighs more than 30 tons, and is mounted on wheels riding a track 50 feet in diameter on top of the circular concrete pedestal. The pedestal also serves as the central control room, housing most of the operating electronic equipment.

The Bartlett station is one of eight U. S. stations. The other stations are at Brewster, Washington; Jamesburg, California; Paumala, Oahu, Hawaii; Pulantat, Guam; Andover, Maine; Etam, West Virginia and Cayey, Puerto Rico.





A television logo was used to identify the Etam earth station during coverage of recent World Cup Soccer matches held in Mexico City.

## *News and Notes from Etam*

# Etam Gains International Fame

By Deloris Goodwin

The Etam earth station reached international fame during the recent World Cup Soccer matches broadcast from Mexico City. An identification slide for the matches included credit for the Etam station, and was shown with broadcasts transmitted through Etam.

More than 90 hours of TV coverage (transmit time) to about 45 nations were handled by Etam during a three-week period.

### Visitors

The Etam station entertained various members of the staff of the Brazilian Embassy during June. The diplomats drove almost 400 miles round trip to make the journey, but seemed to enjoy their visit very much.

Marvin Rosenbluth, director of U. S. plant operations, along with his wife and son, accompanied the Brazilians on one occasion. George Lawler, director of marketing, accompanied by Carlos Coelho, Brazilian representative to ICSC and Mesdames Lawler and Coelho, also visited. Peter Andersen, general counsel's office also accompanied the visitors.

Penelope Chidester resigned from the Corporation on June 19. Penny was married on June 27 at the Albright United Methodist Church in

Albright, West Virginia. Her husband, Scott Graham of Kingwood, is serving with the United States Air Force at Forbes Air Force Base near Topeka, Kansas, where they will reside.

Robert Leard, senior technician, was recently elected president of the Parsons Kiwanis Club of Parsons, West Virginia. One of his responsibilities has been the sponsoring of Boy Scout Troop 97 in Parsons. Mr. Leard said "he enjoys working with the boy scouts very much." Just recently the group traveled to Elkins, West Virginia and camped at Bear Heaven Campground.

### Graduations

Edward Dean, son of Mr. and Mrs. Richard Dean of Rowlesburgh, recently graduated from Rowlesburgh High School and plans to attend the United Electronic Institute, Charleston, West Virginia, in the fall. While in school, he played on the basketball team, was a member of the Thespians, Pep Club, newspaper and yearbook staff and was class reporter his senior year.

Donna Lee Gaston, daughter of Mr. and Mrs. Don C. Gaston of Etam, also graduated in June from Rowlesburgh High School.

## *Betty Farbizio Named Credit Manager Replacing Mary Downs*

Mrs. Betty Farbizio has been named office manager for the COMSAT Federal Credit Union, replacing Mrs. Mary Downs, who left the Corporation. Mrs. Farbizio was the assistant office manager, a position now held by Mrs. Jean Eborn.

The Credit Union also announced the appointment of Betty Stover to the board of directors. She will serve as a member of the education committee.

Other officers of the board remain the same, including Randall I. Williams, president, James H. Kilcoyne, vice president and Lawrence Kopp, secretary. Members at large include Theodore Gottry, Paul D. Rankin and William Kaht.

New hours have been instituted for members' convenience. The office is now open daily from 10:00 to 1:30.

Among its new programs, the Credit Union offers low rate auto loans. Financing costs are at a rate of 1% per month on the unpaid balance for unsecured signature loans, and  $\frac{3}{4}$  of 1% per month on the unpaid balance for secured loans. Details may be obtained from the Credit Union office.

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Miss Gaston has been awarded a three-year scholarship furnished by Preston Memorial Hospital in Kingwood.

Vic Molek, technician, recently obtained his second class FCC license. Congratulations, "Vic".

### Ham Operators

Robert Ammons of AT&T is on the air and is usually found on 80 meters C.W. Jim Silvius, COMSAT, has completed building his transmitter and is in the process of erecting his antenna system. He hopes to be on the air soon.

### Softball

The Etam softball team, consisting of COMSAT and AT&T employees, has been organized and is off to a great start. The record to date is five wins and one defeat.

They're still talking about that game last month when Etam had to go "to the bench" to pull the game out in the late innings. Marv Bowser and Sam McNeil of Headquarters assisted the regulars in nailing down the victory. Jim Evans, operations supervisor and team organizer, said "the impressive win record may not be due to the excellence of the Etam team, but rather to the quality of the competition."



## IWG Schedules Second Session For September 8

The Intersessional Working Group (IWG) which met in Washington from May 18 to June 12 will reconvene here for a second meeting from September 8 to October 2.

At its next meeting, the IWG will continue its work on the intergovernmental agreement, and will begin consideration of the work accomplished by the Operating Agreement Subgroup.

The IWG, established in March at the conclusion of the Second Plenipotentiary Conference on INTELSAT Definitive Arrangements, is working on a single set of recommended texts of draft intergovernmental and operating agreements for consideration at a Third Plenipotentiary Conference.

The Third Plenipotentiary Conference is tentatively scheduled to commence in Washington on November 23. However, if the IWG finds that it can not complete its work without a third meeting, the IWG will then decide on the procedure by which the Third Plenipotentiary Conference will be convened.

Forty-five INTELSAT members participated in the first IWG meeting which began with the election of the following officers: Dr. Santiago Astrain of Chile, Chairman; R. Parthasarathy of India, Vice Chairman; Robert Lemaitre of France, Chairman of the Editorial Subgroup; and Andrea Caruso of Italy, Chairman of the Operating Agreement Subgroup.

The International Agreements for Interim Arrangements, which established INTELSAT in 1964, provided for the negotiation of more permanent or Definitive Arrangements beginning five years later. Accordingly, the first Plenipotentiary Conference on Definitive Arrangements was convened in Washington on February 24, 1969 and recessed four weeks later, its work being carried forward by a Preparatory Committee which met three times during 1969 and circulated a report in December.

The Second Plenipotentiary Conference then convened in Washington on February 16, 1970. The second conference considered and discussed the Preparatory Committee's report, along with other matters, and recessed on March 20. Its work is proceeding with the IWG. Meanwhile, the Interim Agreements remain in force until superseded by the Definitive Arrangements.



World Cup Soccer matches held in Mexico City from May 31 through June 21 set a new record for satellite TV hours for a special event. Above, West German goalie, Horst Wolfer, defends against an attack by Uruguay's Victor Esparrago. Germany won, 1-0, to place third.

UPI Photo

## Satellites Carry World Cup Soccer; Generate Nearly 500 Hours TV Time

The World Cup soccer matches hosted by Mexico during June were blamed for causing sleepless nights in Europe and Latin America, a rush on the sale of color TV sets abroad—and a big boost here in the use of satellite capacity for Atlantic area TV transmissions.

Coverage of the games, as well as news reports and features, totaled nearly 500 hours of transmit and receive time, generating more hours of satellite TV time than any other event to date. The total comprised 135 hours of transmit time and 347 hours of receive time.

Primarily because the Cup matches were only carried closed circuit in the United States and not broadcast in Japan, the Apollo 11 mission still stands as the most widely shared single event. It simultaneously reached millions of people in some 50 countries on six continents.

The World Cup, a sporting extravaganza held every four years, is considered more important than the Olympics to millions of TV fans outside the United States.

According to news accounts, its popularity abroad from Mexico to Siberia, caused many sports fans in Europe to stay up into the wee hours of the morning watching live TV broadcasts of the games from Mexico via satellites.

The trade publication *Advertising Age* claimed that the current Cup series had caused the biggest boost in the sale of color TV sets "the world has yet seen."

The Cup frenzy also brought an unprecedented use of satellites for TV coverage. Three transatlantic color TV programs were transmitted at the same time to assure live coverage of three different games being played simultaneously in different stadiums in the Mexico City area.

The final game of the Cup matches, in which Brazil defeated Italy 4-1, was televised to Mexico City and relayed from the Mexican station at Tulancingo by an Atlantic INTELSAT III satellite to earth stations in the U. S. (for closed circuit TV only), Puerto Rico, Panama, Venezuela, Peru, Argentina, Brazil, Chile, Colombia, Italy and West Germany.

The Raisting station in West Germany made the program available to the European Broadcast Union which, in turn, fed Intervision for distribution to the Soviet Union and the East European countries. The Raisting station also relayed the program via the Indian Ocean INTELSAT III satellite to Kuwait, Thailand and Lebanon, and sent the program via land line to the French station at Pleumeur-Bodou from where it was relayed via a second Atlantic INTELSAT III satellite to Iran and Lebanon.



## *A Perfect Day for a Picnic*

### **The Setting**

The pleasantly rustic Smokey Glen Farm, Gaithersburg, Maryland, Sunday, June 7, 1970.

### **The Plot**

A delightful day of fun for the entire family. Ponies, whip, carnival games, prizes, balloons, ice cream, radio-controlled model airplanes, hot dogs, horseshoes, hamburgers, beer, mini bikes, volleyball, softball, soft drinks, football, chicken, sing-a-long, and great sunshine, all combining to create an exciting event.

### **The Cast**

Approximately 1,200 persons comprising CEA members, families and friends.

### **Costumes**

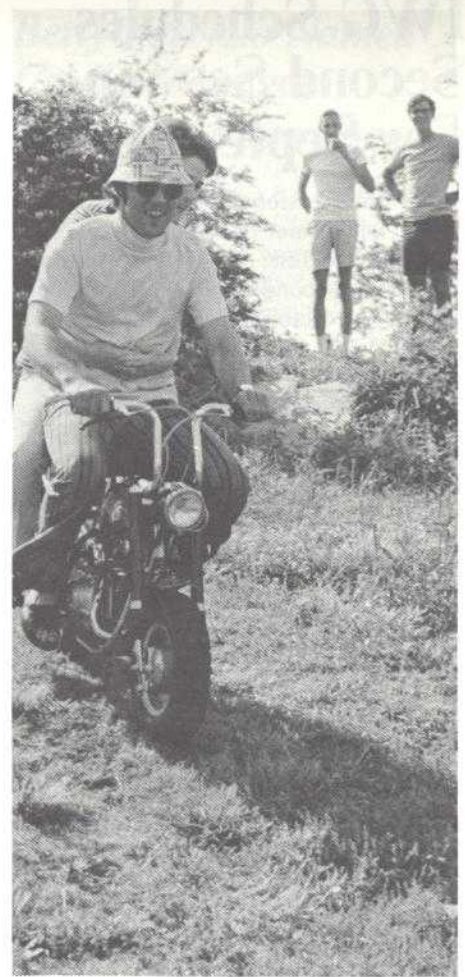
Hip huggers, shorts, sweat shirts, cut-off jeans, bell bottoms, mini skirts, body shirts, sandals, sneakers, loafers, bare feet and shades.

### **The Crew**

Chairman	_____	Bob Cool
Caterers	_____	Smokey Glen Farm
PA System	_____	Ray Scarborough Perry Klein
The Band	_____	Bill Pritchard - banjo Henri Suyderhoud - guitar Tom Kirkendall - banjo Joe Sciulli - guitar Perry Klein - trumpet Frank Corcoran - bass
Model Airplanes	_____	Members of the Andrews Fly Away Club and Prince George's County Radio Club
Rescue Squad	_____	Gaithersburg Volunteer Fire Department

### **Acknowledgments**

Many thanks to the crew and a special thanks to all who helped to make this year's Annual Picnic the best ever.



Hold on, I'm coming...

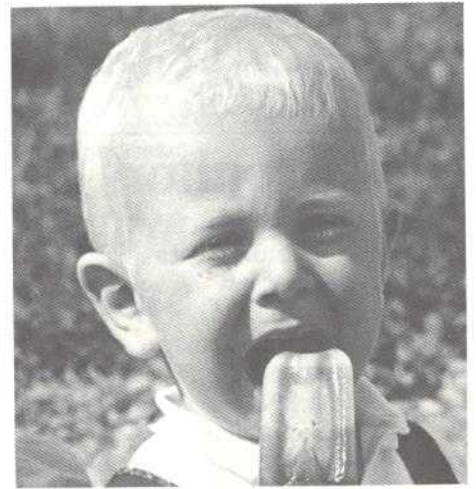


Ringling the liberty bell got the picnic underway.

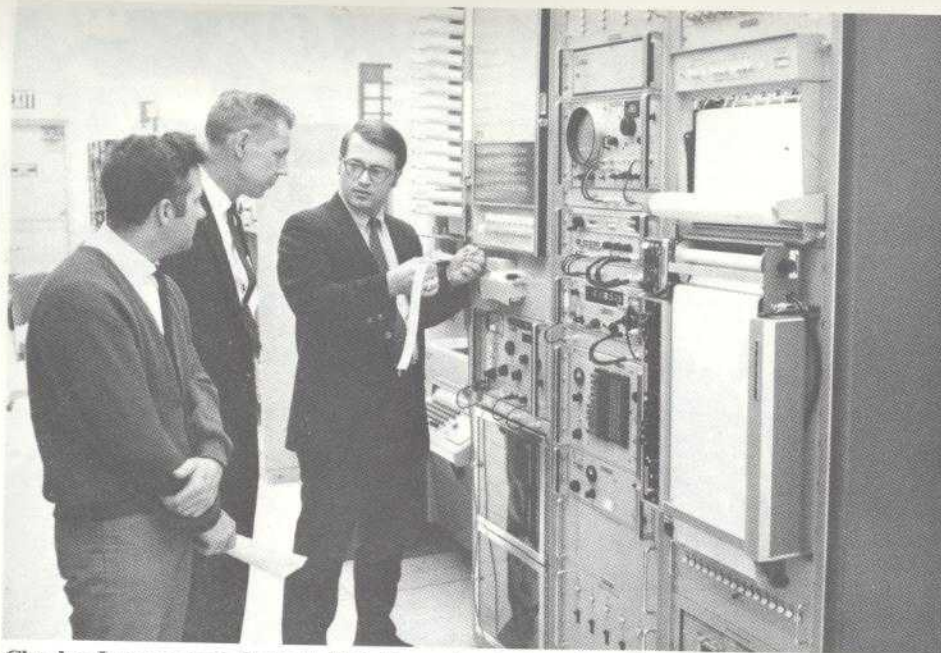




(Upper left) Volley ball was just one of the games picnic goers enjoyed. (Upper right) Dr. Charyk joined in the fun. (left) Wee people take to the ponies. (right) The Good Humor man... (lower right) Picnic lunches or fried chicken from Smokey Glen—either way the food was good.







Charles Lepage and Donald Fifield receive instructions from Dave Resier for operating the new monitors.

## News and Notes from Andover

# New Monitors Installed at Andover

By Joanne Witas

Donald Fifield, manager of the Andover earth station, and Chuck Lepage, TTC&M supervisor, are learning some of the features of the satellite system monitor group from Dave Reiser of COMSAT Labs.

Mr. Reiser and Ernst Steinbrecher, MTS/CL, spent the past four months installing and testing the SSMG, built as a prototype for INTELSAT by the earth terminals branch, R. F. transmission laboratory, COMSAT Labs.

The purpose of the SSMG is to provide automatic power measurements of the satellite carriers for all of the satellites operating in the Atlantic region. The system provides a power measurement, a frequency-deviation measurement and a center-frequency error measurement of frequency-modulated carriers received from the satellites. The measurements are displayed on a teleprinter at the earth station and are sent to the Operations Center in Washington for analysis.

This equipment is the product of three years of research and development by the labs earth terminals branch. It is anticipated that three similar systems will be commercially manufactured and installed in Italy, Australia and Hawaii.

Senior Technician Arthur Haseltine, is also Captain Haseltine, Commander of the Oxford Senior Squadron, Civil Air Patrol. Captain Haseltine points out a search target area for pilots and air crew during a training session. The situation map board in the foreground was donated to the Oxford Senior Squadron by Mr. Fifield. Captain Haseltine is a 20 year veteran of search and rescue activities in the United States Civil Air Patrol.



Arthur Haseltine, right, instructs pilots on Civil Air Patrol operations.

# Contract Planned For New Antenna At Andover

COMSAT has announced its intention to award to Philco-Ford Corporation, Palo Alto, California, a contract for construction of a new earth station antenna structure at Andover, Maine.

The new facility to expand and modernize the Andover station will be capable of handling all forms of communications via satellite in the Atlantic area.

In notifying the FCC of its intentions, COMSAT acted as Manager of the joint owners of the station who include itself, American Telephone and Telegraph Company, RCA Globcom, ITT Worldcom and Western Union International.

The proposed fixed price contract for the new antenna is for \$1,311,000. It covers installation of a large antenna structure or subsystem, not including the antenna feed and subre-  
(See Andover Antenna, Page 15)

## Safety Award

Recently, a safety award was presented to Bob Graham by Dave Durand for his suggestion to install holly-wood mirrors on the pick-up truck for better rear view vision.

COMSAT wives had a luncheon at the Madison Motel last month. The luncheon feature was a wine tasting session, enjoyed by everyone.



# Double-hop Loop Demonstrated at AFCEA Meeting

The Armed Forces Communications and Electronics Association held its annual convention at the Sheraton Park Hotel in Washington, D.C., from June 2 through June 4.

Nearly 1,000 persons visited COMSAT's exhibit, and 634 persons talked over the double-hop satellite circuit. A tandem or double-hop circuit is capable of transmitting two-thirds the distance around the earth, making communications among any points on earth possible.

## Simulated Demonstration

For the purposes of a simulated demonstration, the circuit was routed from booth one, via land lines to the Etam earth station, via the INTEL-SAT III F-6 satellite over the Atlantic to the Cayey earth station in Puerto Rico and via land lines to San Juan.

The circuit was then looped through and returned via the same route in reverse, terminating in booth two at the exhibit. The distance traveled by the transmission was almost 100,000 miles. The time needed to complete the circuit was about one-half second.

## Service Quality Rated

Persons who talked over the double-hop circuit filled out a questionnaire rating the quality of service. An analysis showed the following ratings:

Excellent	405
Good	209
Fair	19
Poor	1
	<hr/>
	634

Clay T. Whitehead, special assistant to the President of the United States, delivered the noon luncheon speech and then visited the COMSAT exhibit. He rated the service quality as excellent.

## Fighting Pollution

The individual can fight pollution and make a difference in our environment. Sally Abel, marketing, as an interested citizen would like to supply suggestions that are easy to follow. Call Ext. 6234.



COMSAT double-hop exhibit drew a lot of curious onlookers — two reasons why? — Sally Able, marketing, (left) and Cindy Watson, personnel.

## Proposed Alaska Satellite Service Could Meet Diverse State Needs

COMSAT has formally proposed before the Alaska Public Service Commission a plan calling for widespread use of satellite communications to serve the major areas of Alaska.

The filing was made in conjunction with hearings which began June 29 in Anchorage before the State Commission on the application of RCA Alaska Communications, Inc., to purchase ACS and furnish longline and toll communication services within Alaska.

COMSAT outlined a plan for the establishment of nine new small earth stations to provide long-line communication services via satellite to a number of areas within the state. The satellite facilities outlined would offer a wider range of communication services, including receive-only television, COMSAT claimed, and in several instances they would be in lieu of new terrestrial facilities proposed by RCA.

"COMSAT questions the adequacy of the RCA plan," the COMSAT filing said, "to meet the public convenience and necessity of the State, because the plan, except for services via the COMSAT facility at Talkeetna, does not specifically incorporate the benefits of satellite communications.

"COMSAT believes the people of Alaska would benefit both in the quality of service and from the economic point of view by the use of an appropriate mix of satellite and terrestrial facilities."

COMSAT said the overall RCA plan paid lip service to the use of satellite communications in Alaska, but it contained no specific provisions for satellite facilities, such as COMSAT suggested.

## Nine Station Sites Proposed

In its filing, COMSAT proposed that earth stations be built at Ketchikan, Juneau, King Salmon, McGrath, Shemya-Adak, Prudhoe Bay Area, Kotzebue, Nome and Bethel.

"The type, quality, flexibility and reliability of service offered to all these areas by means of satellite communications," COMSAT declared, "will meet or exceed that available in terrestrial systems alone.

"In the event that the (State) Commission should decide that the use of satellite facilities in these areas of Alaska is appropriate, COMSAT is ready to put forward specific engineering proposals concerning the satellite facilities contained in this plan."





Presenting the chess cup to Miss Rodriguez is Hermes Sanchez, president of the Chess Club. Looking on is Alberto Bracht, tournament director.

## CEA Headliners

# Summer Activities in Full Swing

By Beverly Nitkowski

The Plaza ping pong table is now set up and in use between 12 noon and 2:00 p.m. in the auditorium, fourth floor. Rules and regulations are posted in the auditorium.

Members wishing to use the ping pong table should contact Nicole Andrews, Ext. 6407. The Labs table is located in the basement. For further information, see J. Kaiser.

### Potpourri

Emogene Madison, lobby receptionist at the Plaza, and Judy Martin at the Labs are selling Shady Grove Music Fair tickets at a discount for CEA members.

CEA members were furnished with guest passes to Rosecroft Raceway. Many members took this opportunity to test their "win, place and show" ability.

Kitty Stephenson, directress of the Talent and Drama Club, is searching for talent. Wanted: guitar player to accompany singers.

Pilot Charles Heise and other interested members of the Flying Club are working on Flying Club incorporation. Among their many plans for the future is the purchase of an airplane. New members are welcome.

Amateur radio enthusiasts held their Field Day Weekend, 1970, on June 27 and 28. The COMSAT Amateur Radio Club teamed up with the ARINC Radio Club at Annapolis for the event. Clubs throughout the country participated in the weekend activities, including radio acquaintance calls to numerous other clubs.

The Tennis Club held a round-robin doubles mixer tournament on

May 23 at Hains Point. Some 30 members from the Labs and Plaza were divided into mixed teams, each playing 6 matches. Margaret Pocock and Bill Lowe were the big winners.

Tennis balls and refreshments were provided. Dick McBride and Jay Levatich were in charge of arrangements.

For information concerning the Golf Club, call Randy Williams, extension 6497.

Keep tuned for information concerning the fall bowling league.

Both the Labs and Plaza softball teams are well into regular season play. Only two problems have been experienced so far—broken bats and lost games!

Hermes Sanchez has been elected president of the CEA Chess Club. Ar-

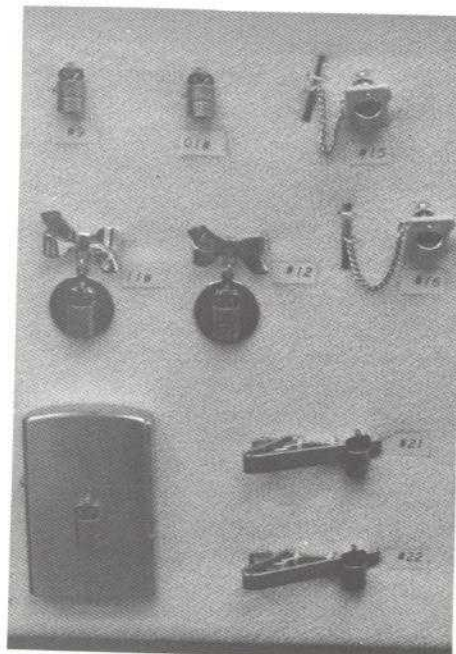
### Satellite Jewelry

Satellite jewelry is being sold on a continuous basis. Pat Lamphear has sales every Friday from 12 noon to 1:00 p.m. in Room 7163. Linda Fariello's store is open from 12 noon to 1:00 p.m. on Wednesdays in Room 2133 at COMSAT Labs. Samples are on exhibit at these locations.

Jewelry may be purchased by earth station and branch office personnel by contacting Pat Lamphear, Plaza.

### Chess Club Champion

Miss Consuelo Rodriguez was recently awarded a trophy as the winner of the Plaza Chess Club spring tournament. Miss Rodriguez, a translator trainee on the international staff, is former women's champion of Guatemala. She still held that title when she came to the United States several years ago.



Satellite jewelry is now on sale.



Nicole Andrews invites ping pong players to join the fun.



## News of People At Headquarters

### By Judy Holmes

Elizabeth Vincze, international agreements, and Lance Boerner, purchasing, were married on June 20 in Fairfield, Connecticut. The couple is spending their honeymoon in Europe. They are visiting Paris, Amsterdam and London.

Purchasing gave Liz one place setting of her china pattern as a wedding present.

Gary Drumming, mail room, married the former Diane Roundtree on June 27.

Paddy Allum-Poon, ICSC, married Peter Hill on May 9. The newlyweds spent their honeymoon in the Caribbean.

Ed Smith, mail room, married Patricia Banks on May 23. They plan to have a belated honeymoon in the Bahamas.

### Vacations

Jean Lutwin, Technical, just returned from a vacation in the Virgin Islands. En route she visited the Cayey earth station and attended the opening of the Casals' Festival in San Juan with Pablo Casals conducting.

Jackie Wakeling, Corporate Relations, spent ten days vacationing in Puerto Rico and at St. Croix, where she tried her hand at snorkeling. Jackie spent a day at Buck Island, a national park in St. Croix, which has unusual underwater trails.

A farewell and maternity surprise party was given for Joan Koehler, library, who is leaving COMSAT. The party was given by Elizabeth Preston and attended by about 50 people. Gifts included a bracelet and pin for Joan and a gold cup for the baby.

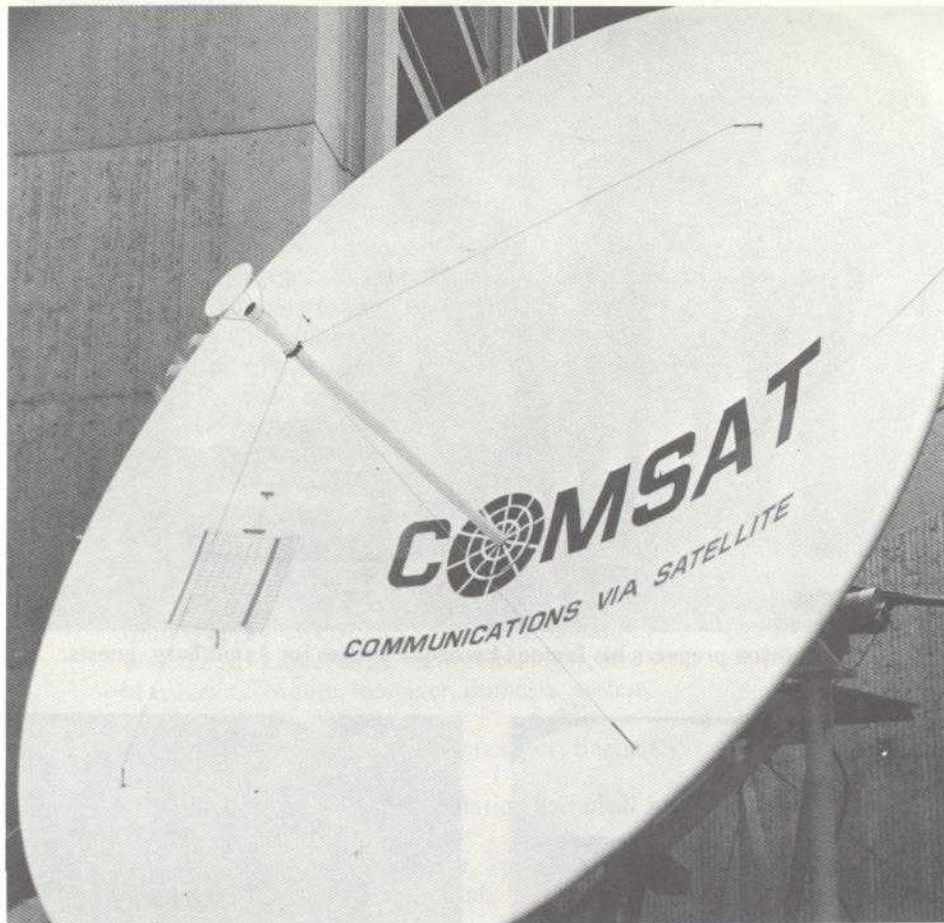
### Births

Rennie Stamminger, systems engineering, and his wife, Mary Anne, are the parents of a baby girl born May 20. She is their third child and is named Lisa.

Tony Bingham, international development, and his wife, Anne Elizabeth, have a new son, Matthew Richard Allen.

Belated congratulations to Bill Lockett, personnel, and his wife, Lena, on the birth of their son, Christopher Burrell, on March 14.

Linda Mercer, general counsel office, is doing well after having undergone surgery on June 2.



The sixteen foot antenna, located at the northeast corner of the COMSAT Building, is used for testing small antenna capability.

## COMSAT Engineers Demonstrate Small Dish Earth Station for NASA

On May 28 the Corporation's special projects office demonstrated for 25 NASA officials the recently constructed 16 foot earth station located at the east end of the Plaza.

COMSAT's Dave Lipke, Gene Cacciamani and Jack Beyer demonstrated the high quality and operational feasibility of small antennas to transmit and receive voice and data. COMSAT believes that small stations will be practical for the space agency's Skylab program to be developed and launched in the 70s.

One of the demonstrations consisted of two-way voice transmissions with the Etam earth station. NASA guests spoke over the satellite circuit using the INTELSAT III F-6.

Other tests conducted by the plaza station consisted of antenna pointing, digital voice transmissions with and without coding and a digital loop through Etam and back to the Plaza.



Gene Cacciamani, Labs, explains data analog transmission to NASA guests.

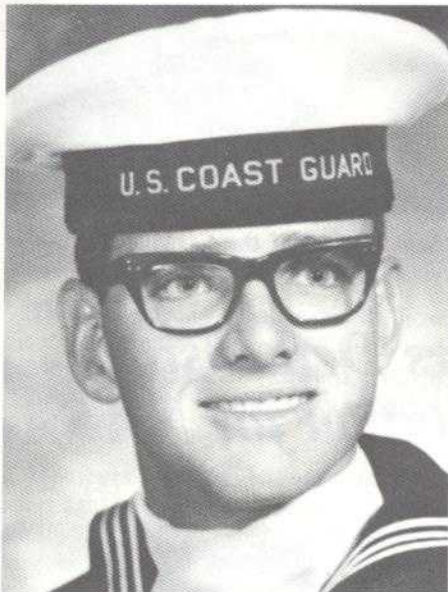


# News and Notes from Jamesburg

By M. Lee Dorsey



Walter Robinson prepares his famous barbeque patties for Jamesburg guests.



Michael McClure



West Coast Office honors Sue Pilcher.

Visitors from Japan brightened up the Jamesburg station during their recent visits. Sadao Takahaski, Toshiba Research and Development Center of Tokyo Shibaura Electric Company, was given a tour by Jack Inman, electronics engineer. Mr. Takahaski is engaged in the development work on low noise amplifiers and stopped at Jamesburg after attending the 1970 IEEE International Symposium at Los Angeles.

Other visitors from Japan included Mr. Komine, Mr. Takahaski and Mr. Ishimaru, all from Nippon Electric Company. They were here to update the MUX equipment. They joined employees for one of Walter Robinson's famous barbeques.

John Little from COMSAT Headquarters conducted Phase I and Phase II of the Supervisory Development Course for station personnel.

Harold McClure, senior facilities mechanic has left COMSAT for a position with the Mountain States Bell Telephone Company in Phoenix, Arizona. He contributed much as the president of the JCEA and also as the station photographer.

Mr. McClure's oldest son, Michael, graduated from U.S. Coast Guard training in May.

Doris Ford, wife of technician George Ford, graduated from Monterey Peninsula College. She received a degree in business administration.

Larry Cisneros, operations supervisor, is training to be a volunteer fireman for the Carmel Valley Fire Department. With the hot weather coming, the Valley needs all the volunteers it can get, and Larry is doing his part.

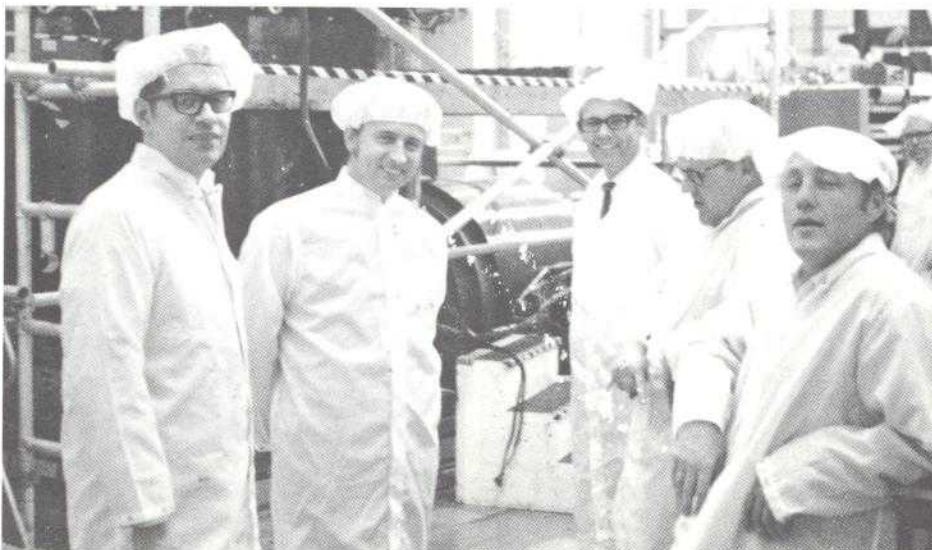
## News and Notes From COMSAT West

Employees at COMSAT West gathered together May 28 at Si Bennett's place on the beach to bid farewell to Sue Pilcher. She is leaving the office in anticipation of the birth of her second child.

Mrs. Pilcher had been with COMSAT since 1964 and transferred to the West Coast office in September 1969.

The casual party was highlighted by Marty Votaw's gift to Sue of a camera.

Mrs. Marilyn Milcher recently joined COMSAT West as a replacement for Mrs. Pilcher.



Paul Schrantz, (left) spacecraft laboratory, gets a tip on INTELSAT IV progress from West Coast crew, (left to right) J.W. Ouellette, Erland Magnusson, Neil Lardy and William Day.



## Andover Antenna

flector. It will be located in front of, and connected to, the existing Andover control building.

The new facility will have a "dish" antenna 97 feet in diameter. It will be a "wheel and track" design similar to U.S. antenna facilities now located on Guam and in Alaska.

The pioneering Andover earth station, equipped with a "horn" antenna protected by a bubble-like radome, was first built in 1961-62 for experimental use as part of the Telstar Project. Later, in 1965, it was used as a link in the Early Bird between North America and Europe.

## Health Unit News

COMSAT reached its quota of blood donors by June 30, the end of the fiscal year, allowing the Corporation to remain in the family plan with the Red Cross. Those who contributed helped to make the program a successful one.

The narcotic film series entitled "The Distant Drummer" was shown at the 4th floor auditorium on June 8, 9 and 10 to an audience of 250 employees. The films were shown in cooperation with the U.S. Department of Health, Education and Welfare as a part of COMSAT's own health education program.

## Ecoss de la Montana

By Luis Rodriguez

A picnic held on Sunday, May 24, turned out to be one of the best events of the year.

The sizable affair took place at Camp Guavate, a mountain resort located in the center of the island of Puerto Rico, near the Cayey earth station.

Employees and their families enjoyed the food and entertainment. The barbeque started at 9:00 a.m. and lasted until 5:00 p.m., and offered all the usual good cookout foods.

The CCEA board of directors deserves credit for this fine event along with Mrs. Medina, Mrs. McGranahan, Mrs. Irizarry and Mrs. Reyes, who helped to make the picnic a success.

A group of 12 school teachers from Chicago and New York visited the station during May. They were visiting the island as part of the educational exchange program and decided to have a look at satellite communications operations as a part of their tour.

## Five-Year Awards

The following persons have received five-year service awards during June or are scheduled to receive them during July:

Office of Chairman and President,

June Burton, secretary

Corporate Relations,

James H. Kilcoyne, information officer

James F. Strother, manager, management information center

Finance and Administration,

James E. Clifford, management compensation

A. Russell Elm, manager, mail records and security

Harry F. Jones, senior financial analyst

Helen D. Ryan, senior accounting clerk

John B. Thaler, director of purchasing

Operations,

Robert W. Adams, manager, budget department

Lawrence W. Covert, manager, INTELSAT Operations Center

David L. Surand, chief station engineer, Andover

W. W. First, staff engineer, international systems, management

John E. Gray, electronics engineer, Paumalu

Wallace M. Lauterbach, station manager, Brewster

Matthew C. Mautz, manager, domestic system implementation

William T. Patterson, station manager, Bartlett

Technical,

Eugene R. Cacciamani, modulation technical branch, communication processing labs

Anthony W. Clark, supervisor, environmental testing labs and assembly facilities spacecraft lab.

Jean M. Lutwin, secretary

Richard J. McBride, manager, station site development

Richard B. McClure, modulation technical branch, communication processing lab

Walter S. McKee, branch manager, T&C equipment, space craft implementation

Marvin R. Wachs, technical staff, RF transmission lab.



Recent CCEA picnic was held at the beautiful Camp Guavate site in Puerto Rico.

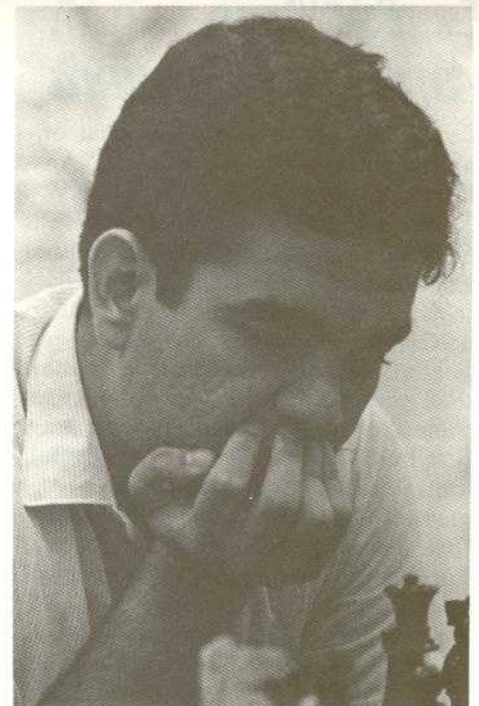




Challengers (left to right) Dr. Peter Varadi, Wilbur Pritchard and E.N. Wright listen to the champion's advice.



Consuelo Rodriguez checks her move.



Rene Costales contemplates game.

## Chess Club Plays A Grandmaster

Recently the COMSAT Chess Club sponsored a simultaneous exhibition by Arthur Bisguier, International Grandmaster (the highest ranking in chess) and for a number of years one of the leading players in the United States. Mr. Bisguier lives in New York.

Thirteen players from COMSAT Headquarters, COMSAT Labs, and Bellcomm, arranged in a large rec-

tangle, played Mr. Bisguier at the same time. Mr. Bisguier rotated along the inside of the rectangle, moving on each board in turn. At the end of two hours he had won all thirteen games.

Before the exhibition, Mr. Bisguier gave a short talk and answered questions. He also answered questions about the play of the games following the matches.



Jerry Bidlack plans his strategy.



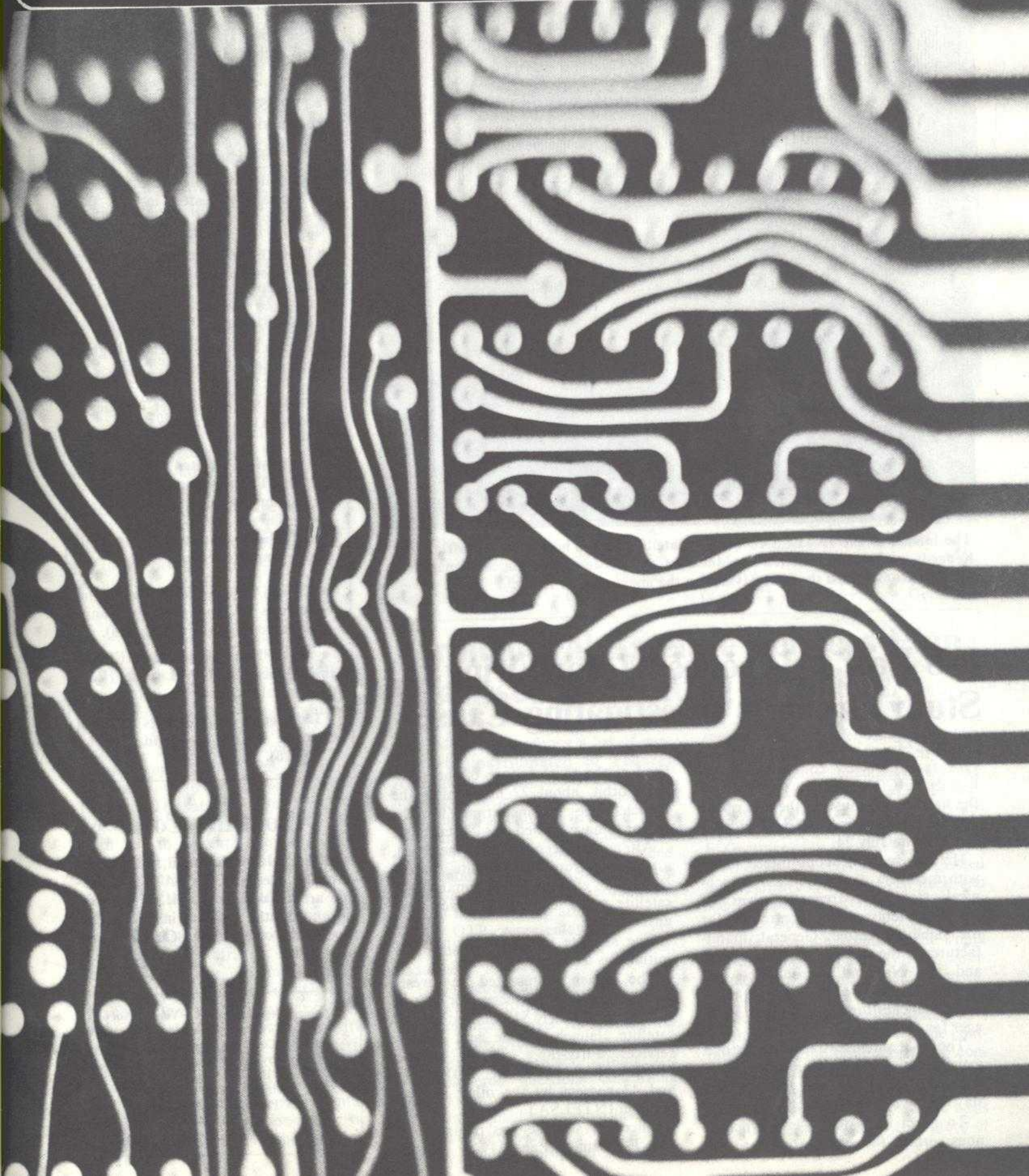
International Grandmaster Arthur Bisguier takes player's challenge in stride.



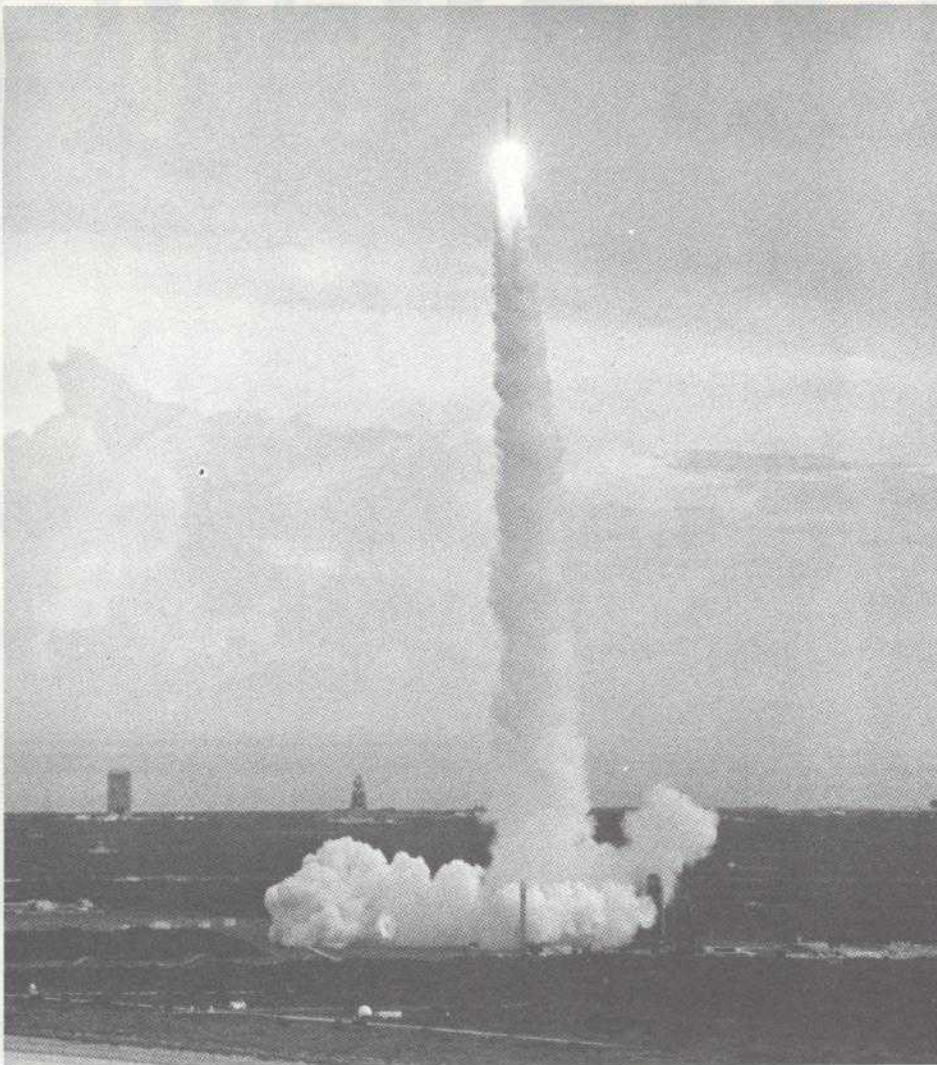
# COMSAT NEWS



August-September 1970







The launch of the INTELSAT III F-8 satellite, shown here after lift-off at Cape Kennedy on July 23, resulted in a satisfactory transfer orbit. But all signals from the satellite were lost the next day during the apogee motor firing.

## F-8 Lost In Apogee Motor Firing; Study Group Is Investigating Cause

A failure review committee established by COMSAT is investigating the nature and cause of the loss of the eighth satellite in the INTELSAT III series on July 24.

Helping with the committee, along with members of the COMSAT technical staff, are representatives of TRW Systems, prime contractor for the satellite; Aerojet General, manufacturer of the satellite's apogee motor; and the National Aeronautics and Space Administration, which conducts launches for COMSAT as Manager for INTELSAT.

The F-8 satellite, launched into a satisfactory transfer orbit from Cape Kennedy on July 23, was lost the next day during the apogee motor firing.

To inject the satellite into synchronous orbit, the apogee motor was

fired at the third apogee of the satellite's orbit, about 27 hours after the launch. The nominal time for the motor to have burned was 27 seconds.

After 14.5 seconds into the burn, all signals from the satellite ceased. Repeated efforts to command the satellite or to locate it in space were unsuccessful.

The satellite was intended to serve initially as a spare in orbit.

The launch represented an investment—regardless of success or failure—of approximately \$13 million for the satellite, launch vehicle and launch services. Fifty-three percent of the investment is borne by COMSAT, and 47 percent by the other participants in INTELSAT.

Since the satellite was planned for (See F-8 Launch, Page 4.)

## News at a Glance

- III F-8 satellite, launched July 23, is lost during apogee motor firing (Page 2).

- Siegfried H. Reiger, Vice President-Technical, died, July 14 (Page 3).

- COMSAT wins court reversal in trademark infringement suit (Page 4).

- Satellite Multiple Access System is successfully tested in the field (Page 5).

- FAA holds meeting to discuss plans for aeronautical satellite services (Page 3).

- ICSC schedules 48th meeting to be held in Sydney, Australia, beginning August 26 (Page 3).

- COMSAT reports net income up for second quarter (Page 5).

- Birth of a printed circuit—how COMSAT Labs makes and uses them (Page 14).

- COMSAT participates in ITU study committees (Page 6).

- COMSAT joins other Washington companies in support of the Junior Achievement program (Page 13).

- CEA Plaza softball team ties for third place in D.C. League (Page 16).

- Labs tennis team defeats Plaza to capture Irving Novgrad Trophy (Page 16).

## About the Cover

In their elaborate detail, printed circuits produced at COMSAT Labs provide artistic design as well as performing an essential function in electronics. (See 'Birth of a Printed Circuit', Page 14.)

August/September 1970—Year 5, No. 6  
COMSAT News is published for employees of the Communications Satellite Corporation by the Information Office, COMSAT Building, 950 L'Enfant Plaza, S.W., Washington, D.C. 20024.

A.V.P. for Public Information

Matthew Gordon

Editor: Kay Smith



## ICSC Schedules 48th Meeting in Sydney, Australia

The 48th meeting of the Interim Communications Satellite Committee is scheduled for August 26 in Sydney, Australia. The schedule was set at the 47th meeting of the ICSC, held June 16 to 24 in Washington, D.C., with Mr. Carlos Nunez A. of Mexico as Chairman.

At the time of the 47th meeting, membership in INTELSAT numbered 76 countries with quotas approved for five additional countries that have not yet acceded to the interim agreements.

Among its actions, the Committee:

- Authorized COMSAT as manager to order four additional Atlas Centaur launch vehicles at an estimated cost of \$62,500,000 for use in connection with the launch of the INTELSAT IV F-4 through F-8 spacecraft.

- Authorized the manager to execute an agreement with Telesat of Canada for the use of INTELSAT foreground data in connection with the procurement of satellites for the Canadian domestic system. The agreement included payments in the sums of \$244,400 for INTELSAT IV data, \$49,000 for INTELSAT III data relating to the propellant valve and thruster, and \$17,400 for INTELSAT III data relating to the sun sensor.

- Approved access of the Warkwarth, New Zealand, and the Tanum, Sweden, standard stations to the INTELSAT II, III and IV satellites; granted initial approval for access of the Karachi and Chittagong, Pakistan, standard earth stations to the INTELSAT II and III satellites; and formal approval of the following earth stations to operate with the INTELSAT III satellites: Balcarce I in Argentina; Thermopylae in Greece; Kum San in Korea; Kuantan in Malaysia; Buitrago II in Spain; Andover, Brewster, Paumalu I, and Pulantat (Guam) of the United States.

- Approved one-year extensions for personnel of Signatories working with the Manager's staff: Dr. Heinz Haberle of Germany, Technical; Surjit Jerath of India, Finance, and Gerhard Kirsch of Germany, Operations.

- Designated as observers to the Fifth Regular Meeting of the Inter-American Telecommunications Commission (CITEL) held in Bogota, Colombia, July 22-29, the Mexican Representative and any other representative or alternate representative who planned to attend.

## Siegfried H. Reiger, Technical V.P.; Guided Development of Global System

Siegfried H. Reiger, Vice President-Technical, died on July 14. He joined the COMSAT staff in May 1963 and became Vice President-Technical in May 1964.

Mr. Reiger spent the last ten years of his career in the development of commercial communications satellites. His dedication to this concept was instrumental in creating the present global system. At COMSAT he was directly responsible for the Corporation's technical activities, including the launching of communications satellites by NASA for COMSAT in its role as manager for INTELSAT.

Dr. Joseph V. Charyk, President, commended Mr. Reiger's unique role in the successful growth of the Corporation.

"The establishment of the global commercial satellite system, in a time frame that did not appear possible to most, is in a very direct way due to his inspiration, guidance, technical wisdom, perseverance and selfless dedication," Dr. Charyk said.

Funeral services were held on July 17 at the Emmanuel Lutheran Church, Bethesda, Maryland. William B. Schaffer, pastor of the church, conducted the service. Dr. Charyk delivered a short eulogy to the assembled



members of Mr. Reiger's family, friends and associates.

Pallbearers were Allan R. Coburn, Louis B. Early, David W. Lipke, Edward J. Martin, Wilbur L. Pritchard and Edward N. Wright.

Interment was at Parklawn Memorial Estate, Rockville, Maryland.

Mr. Reiger is survived by his wife, Irmgard; a son, Peter, and a sister, Lislotte Geys of Wuerzburg, Germany.

## Aeronautical Satellite Services Plan Discussed at Meeting With FAA

COMSAT was among a list of parties who participated in Federal Aviation Administration (FAA) meeting to review of pending plans for aeronautical satellite services.

Others attending the meeting, held by the FAA on August 12, included representatives of NASA, Defense Department, ARINC (Aeronautical Radio, Inc.), DOT (parent agency of FAA), OTP, representatives of both domestic and international airlines, and others.

The meeting aired differing views and proposals to provide voice and/or data communications via satellite for airlines flying overseas routes.

COMSAT spokesmen summarized and answered questions concerning the services proposed by the Corporation in a detailed submission last May to the FAA and ARINC.

This pending proposal calls for

specialized dual-frequency synchronous satellites capable of providing communications channels in VHF and UHF bands. The COMSAT group was led by John L. Martin, Jr., supported by Edward J. Martin and John F. Gerstner.

Alternatively, NASA has suggested a cooperative effort between itself and the European ESRO organization to build and place in service by 1975 a satellite over the Atlantic that would provide only L-band (UHF) communications for aeronautical purposes.

The airlines and FAA are interested in the use of some satellite system as a means of providing more reliable communications for both air traffic control and airline operational purposes. The meeting involving the major parties was designed to provide a basis for making decisions on the future of aeronautical satellite services.





Rudolf A. Peterson of San Francisco, Chairman of the Executive Committee of the Bank of America, was nominated by President Nixon on July 21 to a three-year term on the COMSAT Board of Directors, a position conditional upon U.S. Senate approval. Mr. Peterson formerly served as a Series I director.

From Page 2

## F-8 Launch

commercial service in the event of a failure of one of the four INTELSAT IIIs now in service, the loss is not expected to affect COMSAT or INTELSAT revenues or earnings. Degradation in the satellites now in orbit could, of course, have such an effect since a high-capacity spare is not now available.

The four INTELSAT IIIs now in service are fully meeting the steadily growing requirements for full-time commercial service over the Atlantic, Pacific and Indian Oceans. In the meantime, contingency plans are being reviewed to determine the best method of assuring maximum restoration of service with existing in-orbit satellites.

Two satellites of the preceding generation, the INTELSAT II series, are stationed in synchronous orbit and provide capacity for partial restoration of service if needed. The feasibility of launching an on-the-ground spare of the INTELSAT II series to serve as a backup in space is being considered.

Meanwhile, construction is proceeding on the next generation of satellites, the large, high-capacity INTELSAT IVs, for launches beginning early in 1971.

# COMSAT Held to be 'Famous Name' As Court Reverses Trademark Ruling

The U. S. Court of Appeals for the Fourth Circuit has ruled that the Corporation's tradename and trademark (COMSAT) is a "strong mark" and "famous name" and as such is entitled to broad protection.

In the opinion reversing an earlier decision of the U.S. District Court for the District of Maryland, the Court of Appeals held that the use of the name COMCET by a Maryland corporation (Comcet, Inc.) constituted trademark and tradename infringement of COMSAT.

The appellate court's ruling directed the issuance of "an injunction prohibiting the defendant from using Comcet in its name, publicity, advertising, stock sales, general business activity and trademark".

The court, indicating that it was acting to protect the interests of the public as well as COMSAT, labeled the COMSAT mark "distinctive, unique and fanciful", and found a "likelihood of confusion...sufficient to

impair the public's interest in accurately identifying the (two) businesses, and to prejudice COMSAT's image."

COMSAT was used as a tradename shortly after the Company's incorporation early in 1963 and as its service mark in October 1964. Since then, the court said, COMSAT has become renowned for its world-wide satellite communications.

### 'COMSAT' Identifies Corporation

COMSAT, the court continued, has become recognized throughout the United States as identifying and distinguishing the Communications Satellite Corporation and its communications services. These facts, coupled with COMSAT's "uniqueness as a coined word, establish it as a strong mark and a famous name."

Proof of actual confusion in the matter of coined names need only be slight, the court said, because of the common law's solicitude for unique names. The court also cited the promptness with which COMSAT first warned Comcet, Inc. and then sued to protect its rights.

Whether the test be common law or statute, the court said, the likeness is so striking that it is apparent that Comcet—though requested not to do so—is using a colorable imitation of COMSAT's name and mark.

Although COMSAT and Comcet, Inc. do not compete, their services and products are closely related and they frequently deal with the same customers. Comcet, Inc. is engaged in the manufacture of communications computers. "A reasonable person may well believe that Comcet's communications computers come from a source related to COMSAT's communications services," the court said.

The court concluded "that the evidence established sufficient likelihood of confusion among prospective purchasers about the source of sponsorship of Comcet's computers to justify protection of COMSAT's service mark."

The original case and the appeal were handled by William H. Berman, Assistant Vice President and Associate General Counsel, J. Frank Osha, counsel for patent, data and trademark matters, and Alan J. Kasper, patent attorney.

## Merit Scholarship Program Announced By COMSAT

Sons and daughters of COMSAT employees who wish to be eligible for the COMSAT merit scholarship program must inform the principal of their high school of their intention to register for the National Merit Scholarship Qualifying Test to be given in February 1971. Each student who registers for the test will receive a copy of the Student Information Bulletin, containing further instructions.

Dates to Remember:

*October 1970:* Notify high school principal of intention to take the National Merit Scholarship Qualifying Test.

*February 1971:* Take the National Merit Scholarship Qualifying Test, given under the auspices of the student's high school.

For further information, call Eugene P. McCarthy, Ext. 6059.



# COMSAT Says Second Quarter Net Income Up

COMSAT reported a net income increase to \$3,974,000 or 40 cents per share for the second quarter of 1970 compared to \$1,976,000 or 20 cents per share for the second quarter of 1969. For the first six months of 1970, earnings totaled \$7,319,000 or 73 cents per share, compared to \$3,501,000 or 35 cents per share for the first six months of 1969.

The increase in net operating income from \$578,000 a year ago to \$2,424,000 for the second quarter of 1970 resulted from the continued growth of revenues occasioned by more complete utilization of satellite facilities placed in service during the year 1969 and early 1970.

Revenues totaled \$16,793,000 for the second quarter and \$32,228,000 for the first half of 1970. Last year revenues totaled \$11,546,000 for the second quarter and \$21,768,000 for the first half. The increase in revenues is attributable to the growth in the number of leased equivalent full-time half circuits from 1,334 a year ago to 1,657 at June 30, 1970, with most of the growth occurring in the higher priced circuits.

Operating expenses for the quarter ended June 30 of this year were \$14,369,000 compared to \$10,968,000 in the second quarter of 1969. Operating expenses for the first six months of 1970 were \$27,954,000 and \$21,053,000 for the comparable period of 1969.

Other income, consisting principally of interest on temporary cash investments (net of income taxes), was \$1,550,000 for the second quarter of 1970 compared to \$1,398,000 for the second quarter of 1969. For the first six months of 1970, other income was \$3,045,000 compared to \$2,786,000 in the first six months of 1969.

## Advertisements

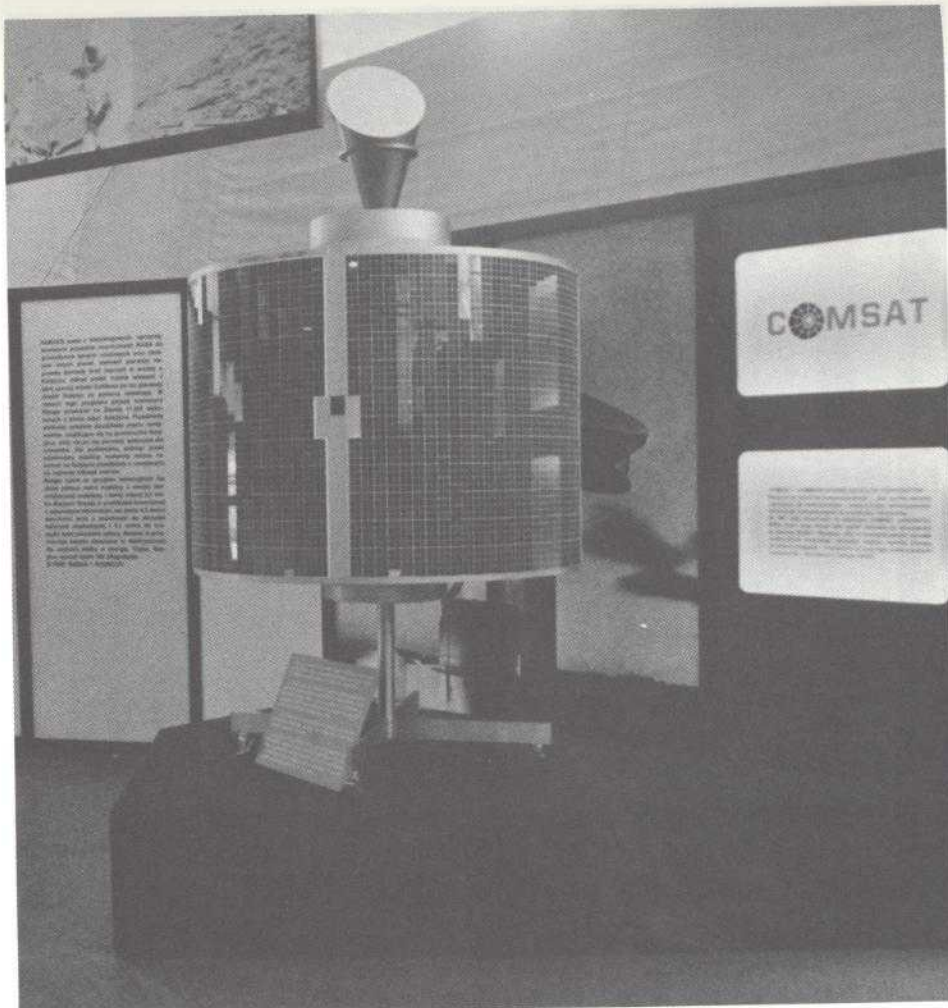
*For Sale. Rug, Kodell, shag, dark green, 12'x17'. Original cost \$10 per yd. plus binding (\$246). Asking price \$190. 1 yr. old.*

*Rug. Polyester, Beige, 11x17. Original cost \$10 per yd. plus binding & pad (\$267). Asking price \$160 including full pad. 1 1/2 yrs. old. Joan Koehler, 423-3998.*

*For Sale: STEREO TAPE RECORDER - Sony TC-350 plus 6 blank Ampex Recording Tapes #541, 1800 ft., 1 mil. Original cost \$230; Selling price \$110. Joan Koehler, 423-3998.*

*Camera, Nikon F. Photomic T. w/50 mm f1.4, plus case. \$275. B. Grayson, Ext. 6784.*

*Car Pool Wanted: Indianhead, Md. - Headquarters. B. Sedgwick, Ext. 6223.*



Above is a model of the INTELSAT III, as exhibited at the Poznan, Poland, International Fair, which ran from June 14-23. The model is on loan to the United States Information Agency, for a tour of Eastern European International Fairs. It was exhibited at the Budapest International Fair, in Hungary, May 22-June 1, and will be at the Bucharest International Fair in Romania, October 13-24. Harry Hirsch of USIA said the satellite model received large numbers of visitors daily.

## Satellite Multiple Access System Is Successful in Pacific Field Tests

A new signal processing system designed to make more efficient use of communications satellite bandwidth and power has been successfully field tested at three earth stations in the Pacific region. The stations at Paumalu, Hawaii; Moree, Australia; and Ibaraki, Japan, were linked in exchanging the experimental signals through an INTELSAT III satellite above the Pacific Ocean.

Called MAT-1, Multiple Access - Time, the new system employs digital coding and sampling techniques to allow many users at various earth stations to use the same carrier frequency. Participating stations transmit voice traffic through the satellite in sequential bursts. The system constantly monitors itself and automatically repositions the bursts on the basis of real-time traffic demands.

The MAT-1 system was designed at COMSAT Labs, as part of the INTELSAT R&D program. Some of the signal processing equipment in the MAT-1 terminals was supplied by Nippon Electric Company, Ltd., under contract to INTELSAT.

Using pulse code modulation (PCM) at a speed of 50 million bits per second, the MAT-1 system in full operation with 10 stations can handle up to 700 voice channels simultaneously with less bandwidth than an ordinary satellite television relay. The system samples all channels in turn, translates the samples into a coded stream of pulses, transmits the pulse stream in bursts through the satellite, sorts out the channels at the receiving end, and reconstructs the input signals. The field tests of MAT-1 demonstrated the reliability and flexibility of high-speed signal processing techniques in an operational environment.





Dr. Charyk talks with William B. Carroll, manager of the Etam earth station, in a two-way voice transmission via the 16-ft. antenna at Headquarters, the IN-TELSAT III F-6 satellite and the Etam station. John Beyer and Robert Briskman, both of the domestic and special projects office, conducted the experiment for Dr. Charyk and several COMSAT Vice Presidents on July 21.

## James B. Potts Named Head of U.S. Study Unit

James B. Potts, director of the earth station implementation division, has been appointed Chairman of the International Radio Consultative Committee (CCIR) U. S. Study Group 4 by Gordon Huffcutt, Chairman of the U. S. CCIR National Committee.

Study Group 4 is a new committee formed to investigate questions relating to systems of radio communication for the fixed service using satellites (including the associated tracking, telemetry, and command functions).

Mr. Potts will be responsible for organizing and directing the work leading to the U. S. contributions to the International CCIR Study Groups. Committee findings will also be applied to the work for the World Administration Radio Conference (WARC) to be held in Geneva, Switzerland, in June 1971.

Mr. Potts has been active in CCIR work since coming to COMSAT in 1963. He is COMSAT chairman for Study Group IV and led COMSAT delegations to the 1968 and 1969 interim meetings in Geneva. He also participated in the XII Plenary Assembly of the CCIR held in New Delhi, India, during February 1970.

## 137 Nations Cooperate Through ITU To Attain Telecommunications Goals

The 137 nations participating today in the activities of the International Telecommunications Union (ITU) contribute to cooperative world-wide communications.

Formed out of a universal concern for telecommunications compatibility, the ITU, then called the International Telegraph Union, was founded in 1865. Its first major task was to negotiate the interconnection of telegraph lines at international borders.

In 1932 the ITU was expanded to encompass regulatory standards for a wider range of communication systems—radio, telegraph and telephone. At the same time, the Union's name was changed to the International Telecommunications Union.

### ITU Today

The ITU members hold regular meetings at their headquarters in Geneva, Switzerland. Operations are

carried out by four major bodies, including the General Secretariat, the International Frequency Registration Board (IFRB), the International Radio Consultative Committee (CCIR) and the International Telegraph and Telephone Consultative Committee (CCITT). Today communications regulatory agencies throughout the world regard ITU recommendations as guidelines in operating communication systems.

The work of all ITU committees is directed toward common goals:

- to maintain and extend international cooperation for the improvement and rational use of all telecommunication;

- to promote the development of technical facilities and their most efficient operation with a view toward improving the efficiency of telecommunication services, increasing their usefulness and making them, so far as possible, generally

available to the public;

- to coordinate the action of nations in the attainment of those common goals.

### Technical Operations

Both technical groups, the CCIR and the CCITT, work toward providing answers to relevant questions posed by the membership at the Plenary Assembly, held approximately every three years. The answers and discussions are written into papers that are presented to the Study Groups appointed to deal with specific problems. Selected recommendations are submitted to the next Plenary Assembly and, if they receive approval there, are published along with supporting reports.

These reports and recommendations are widely held by the telecommunications organizations as guidelines for designing, manufacturing and using (See COMSAT and the ITU, Page 9.)



## *Jerry Breslow Heads Hexagon Club Which Aids Area Charities*

The Hexagon Club of Washington is starting its sixteenth season of giving money away. Club president Jerry Breslow, assistant Corporate Secretary, is trying his hardest to give away more.

Hexagon performs an annual musical review, usually held in March, with all the proceeds going to a selected charity.

### **Benefit Proceeds**

In the last 15 years, the club has given more than \$100,000 to worthy civic causes. Last year, \$13,000 was donated to Children's Hospital. Among other things, the hospital purchased a \$10,000 heart-lung pump with the money.

Each year the club selects a charity to receive the proceeds from benefit performances. In return, the selected charity takes on certain responsibilities, such as helping to sell tickets, providing rehearsal space, donating props and services when possible. Children's Hospital has been chosen as the recipient again in 1971.

More than 200 persons donate their time and talent to making the Hexagon production a success. All work is volunteer, and all proceeds are given to charity.

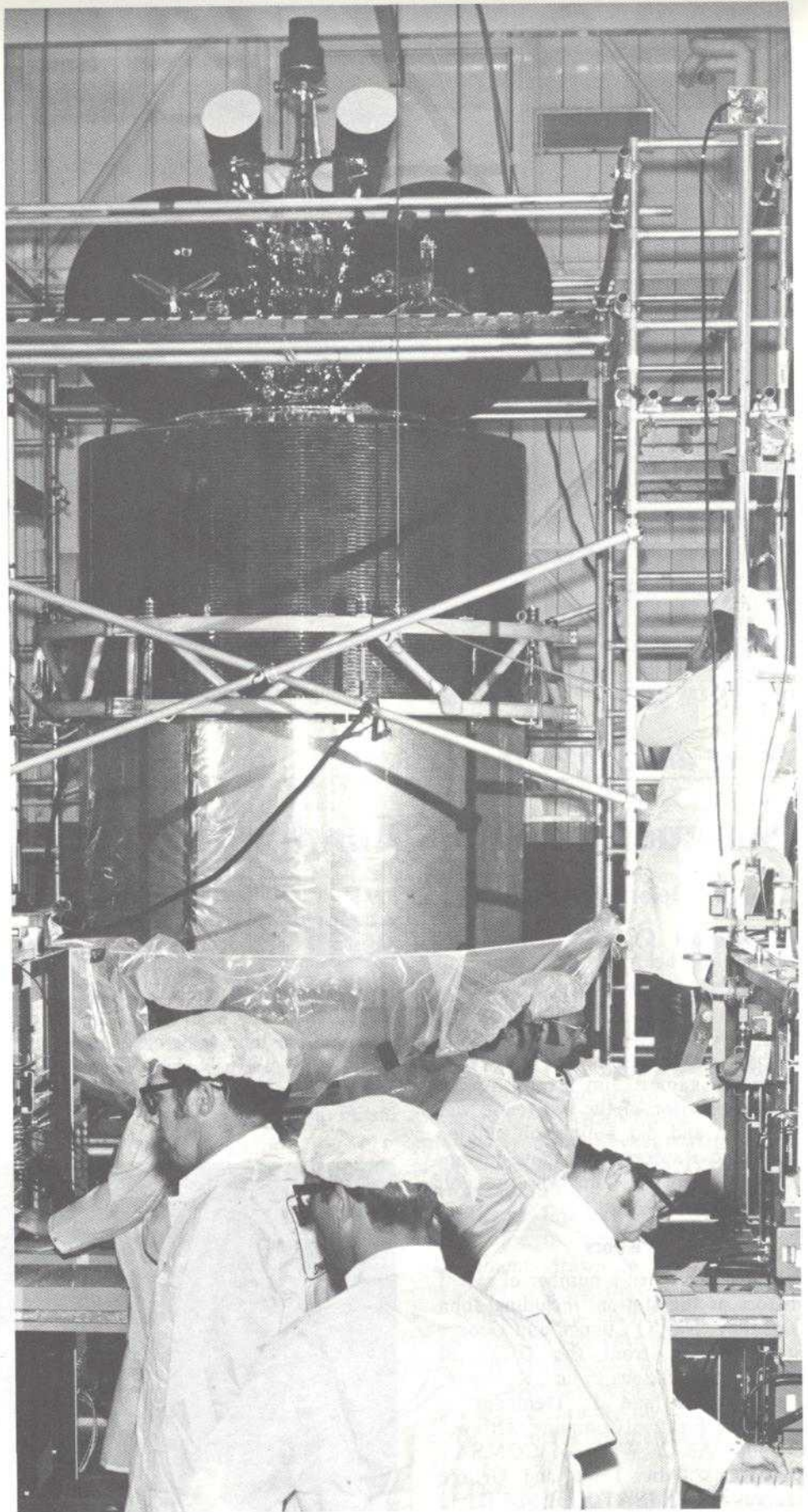
As president, Mr. Breslow has set priorities for the 1971 production. He wants to improve the depth of the material in the show, and most importantly he wants to increase the benefit proceeds.

The musical review typically consists of over 30 skits, musical numbers and vignettes, many of them written on topical subjects.

### **Talent is Sought**

During the fall, Hexagon officers solicit written material from members and friends, amateurs and professionals. In January, auditions are held as announced in the local papers. Rehearsals begin approximately six weeks before opening night.

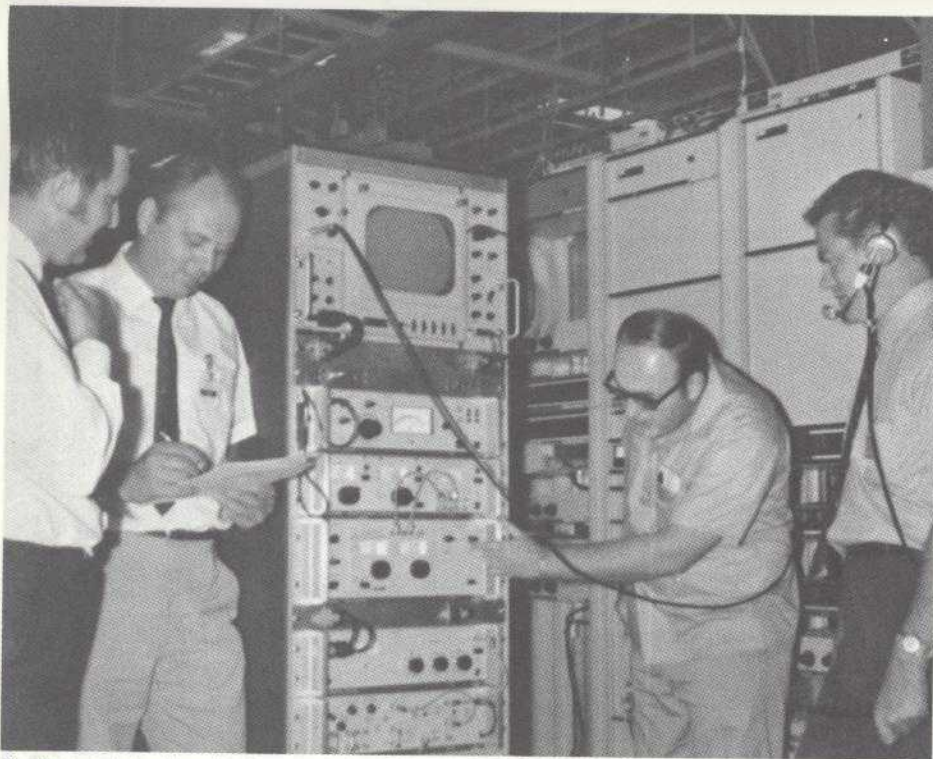
Anyone is invited to help with the musical review, whether or not he is a member of the club. COMSAT employees wishing to offer services or join the Hexagon Club, which also has a continuous social activity program, may obtain further information from Jerry Breslow.



## **IV Undergoes Acceptance Vibration Tests**

Engineers scan electronic test equipment recording data from the first flight model of the INTELSAT IV satellite as it undergoes acceptance vibration testing at Hughes Aircraft Company's environmental lab in El Segundo, California. Cage-like scaffolding surrounding the 17½-ft. high satellite affords engineers an opportunity to examine the satellite at close range during tests.





Equipment testing is done at the Etam station by Operations team members Ivan Knight (left) and Gerhard Kirsh (second from left). Cooperating with them are Lynn Rector (third from left) of Etam and G. Lamprecht (right), Siemens America Co.

## News and Notes from Etam

# Summer Picnic Is Fun for Everyone

By Deloris Goodwin

The Etam COMSAT Employees Association held its first picnic of the summer at Mountaintop Vacationland near Terra Alta, West Virginia. Activities included golf, badminton, softball, swimming and a variety of children's games. Jim Evans, operations supervisor of the red team, was chairman and did a fine job making the picnic a success. To show our appreciation, we let him win the golf tournament.

### Visitors

There have been a number of recent visitors at the station, including John O'Malley, Ray O'Connell and George Steltzenmuller from the Office of Telecommunications Policy; K. Fagan, P. Parkinson and J. Trenholm of Northern Electric Company, Ottawa, Canada; A. C. Walle of COMSAT Operations, Abu Taleb and George Szarvas of COMSAT Labs, and David Gregory, chief engineer, New York Office of the BBC.

### Equipment Installed

Two Tele-Signal representatives, M. Cargill and P. Lessner, were recently in Etam to begin the installation of the new orderwire equipment.

On a previous trip, the men attempted to land their Cessna in unfavorable weather conditions, missed the runway and crash landed in an area behind the hangars. Both men were treated for head lacerations and other injuries and released. Neither of them was seriously hurt, and both returned to Etam at a later date to install the equipment.



A picnic at Mountaintop Vacationland brought Etam families out for a day of fun.

### Training

James Silvius, procedures and training supervisor, spent two weeks at Andover receiving training on the new engineering service circuit equipment being manufactured by the Tele-Signal Corporation.

### Personal Notes

Sam St. Clair, senior technician, has purchased a new airplane. During July, he used his vacation to build a hanger, and now he has his own landing strip on his ranch in Arthurdale, West Virginia.

William Carroll, station manager, successfully passed his examination for a private pilot license.

Bill Adams, facility mechanic, has obtained his water technician license, in compliance with the state's request that our water be tested weekly.

The William Carrolls spent their vacation touring Spain, Portugal, and Morocco. During their stay in Madrid, Mr. Carroll visited the Buitrago earth station as the guest of Mr. Barjau, station manager.

James Evans and his family vacationed in Canada where they enjoyed great fishing.

The Robert Leard family, including granddaughter Brenda and son Robert, spent their vacation visiting relatives in Texas.

### Amateur Radio

Jim Silvius has passed his examination for "home brew" receiver. His transmitter is ready to be installed and soon will be D-XING.

Bob Ammons, AT&T, now has a long wire on the 80 meter band.

Roger Janis, AT&T, anticipates taking his general radio license exam.



# News and Notes From Jamesburg

By M. Lee Dorsey

The JCEA held its annual picnic on June 20 at the Saddle Mountain Recreation Park in Carmel Valley. About 60 people joined in the games, swimming and partying.

The picnic lunch was handled by the JCEA committee, and the luncheon extras were donated by the employees' wives, who made plenty of salads and desserts for people to enjoy.

Swimming was great, but just about everyone who played horseshoes agreed that the horseshoe pits at the station are about the best they've seen.

## Visitors

Dr. Robert Barthle was at Jamesburg to take part in the Bartlett earth station dedication on June 30. He participated in a telephone conversation via satellite with dignitaries attending the outdoor ceremonies in Talkeetna, Alaska.

Five visitors from the FAA visited the station with Henry Hartmen and Lenard Wood of Western Union International. L. G. Galloway, M. Larson, Robert Young, R. Willetts and H. Steward were given a tour and briefing by station personnel.

## Foreign Visitors

Abdul Qadio and M. Z. Faroogui of the Pakistan Telegraph and Telephone Agency, Karachi, visited Jamesburg as guests of Jack Hershey and G. B. Avery of Philco-Ford. Other guests were A. Lovas and T. M. Stuart of RCA Limited, Montreal, Canada.

## Special Seminar

Jack Inman, electronics engineer, and Mel Stauffer, operations supervisor, completed the five-day Hewlett-Packard Microwave Measurement Technique Seminar in Palo Alto, California.

## Promotions

Larry Baley has been promoted to senior technician from technician.

## Potpourri

The Carmel Valley Kiwanis Club is sponsoring the Indians, a Little League baseball team. This is meaningful to the people at the station,



Jamesburg's annual picnic turned out to be fun and games, including horseshoes, for everyone.

since four men, John Scroggs, Jim Clark, Mel Stauffer and Larry Cisneros, are involved with the team. Recently the team presented the Kiwanis Club with a plaque in appreciation of the club's support.

Jack Inman's daughter, Darlene, graduated from Salinas High School and plans to attend Hartnell College in September.

## Births

There are two new baby girls in the Jamesburg families. The Baley's daughter, Christine Ann, was born on June 19. The Clark's daughter, Danielle Marie, was born on June 27.

Belated congratulations are offered to Mr. and Mrs. Jack Ramey, whose first child, Tony Lee, was born on April 10.

Stan Nubin, technician, was hospitalized at the Ft. Ord Army Hospital for surgery and returned to work after a short recuperation period.

Condolences are offered to Walter Robinson, whose wife, Virginia, died on August 12 at the Naval Hospital in Oakland.

Assistant Station Manager Mike Downey and his family vacationed at Morro Bay, where they did some deep sea fishing.

Roy Scheiter, facilities mechanic, and his family have moved into a mobile home on Cachagua Road. Roy has shortened his drive to work, but now he has to mow his entire yard, all 76 acres of it.

## From Page 6

## COMSAT And the ITU

telecommunications equipment and for implementing services throughout the world.

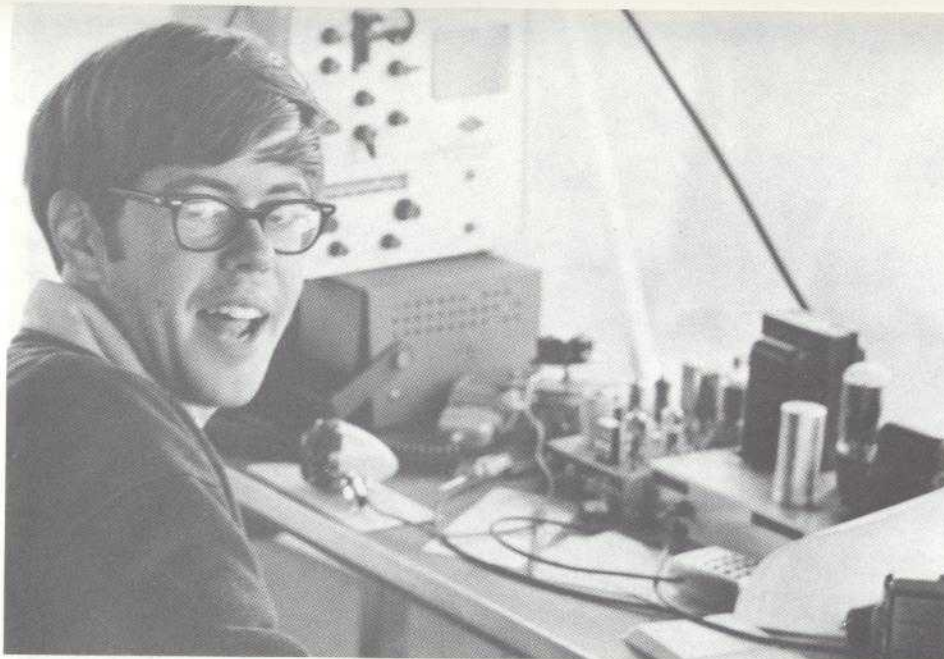
As a private corporation, COMSAT participates in the work of both technical groups. There is a COMSAT group which corresponds with each international technical Study Group. Each COMSAT group has a chairman and alternate, who are responsible for maintaining COMSAT's interest in each study area. Several corporate offices are involved with ITU study groups, including COMSAT Labs, Operations, International, Technical and Finance.

Documents drawn up by COMSAT employees relating to CCIR matters are submitted to appropriate U. S. Study Groups and enter the cycle of document circulation. After a series of committee approvals, the documents may eventually become recommendations made by the Plenary Assembly.

CCITT papers are submitted directly to the international committees for review and approval.

COMSAT's role in drafting and preparing papers plays a meaningful role in the ITU, which in turn fosters cooperation among nations and provides policy for telecommunications, in which satellite systems play an important part.

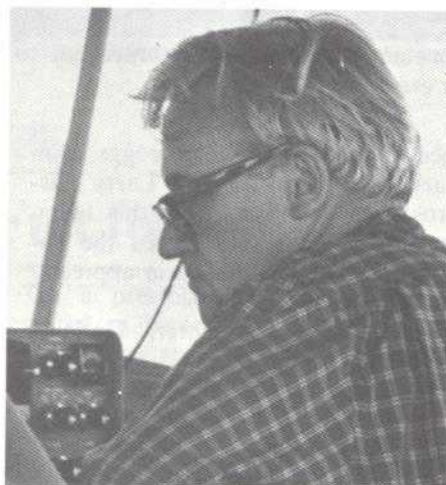




Richard Mott, COMSAT Labs, takes his turn at contacting other amateur radio stations participating in Field Day exercises.



Norman Miller, COMSAT Labs, prepares crabs from the Chesapeake Bay.



Lawrence Gray, COMSAT Labs, operating during Field Day.



Members of the Radio Club and their families enjoy the crab feast.

## Radio Amateurs Participate in Field Day, 1970

By William Chidester

On the weekend of June 27, the COMSAT Amateur Radio Club took part in an annual emergency communications exercise known as "Field Day." Every year, on the fourth weekend in June, ham operators in the United States and Canada set up temporary stations, capable of two way communications, as a demonstration of amateur radio's ability to provide communications during time of emergency. These stations are set up within 12 hours and completely independent of commercial power lines, often on mountaintops, large plains, or shorelines—anywhere that would promise improved high frequency radio propagation.

This year, twelve COMSAT ARC members teamed up with the ARINC Amateur Radio Club of Annapolis and operated from Thomas Point, Md. Five stations were in simultaneous operation under ARINC's club call, W3ZH. In 24 hours, 900 other stations had been contacted in 46 states and 7 countries. When not busy operating, the COMSAT group managed to take advantage of the nearby beach, the crabs in the inlet, and the unexpectedly pleasant weather.

The COMSAT Amateur Radio Club, sponsored by the CEA, maintains two amateur radio stations for use by licensed members. The Clarksburg station, WA3LOS, is capable of operating all amateur bands from 3.5 to 50 MHz., with plans for a 1000 watt 144 MHz. station to be built within the coming year. The L'Enfant Plaza station, WA3IGQ, operates all bands between 3.5 and 30 MHz. on single-sideband, AM or CW (Morse code) at the maximum legal power limit.

In addition to station upkeep, the club is active in radio contests, emergency drills, communications exercises and ham radio satellite projects. Plans are being made to conduct Morse code classes for COMSAT employees interested in obtaining an amateur license. Anyone who is interested in the club should contact either Cal Cotner, Ext. 4418, or Perry Klein, Ext. 6886.



# News of People At Headquarters

By Judy Holmes

Headquarters welcomes Dr. John Loutit, International, back in the office after an illness.

A farewell party was given by Bobbi Zupancic for Nancy Goodrich, Technical, on July 31. Miss Goodrich left COMSAT to return to Oklahoma and college.

Gene Ladin, Finance, was honored at a going away luncheon at the Sirloin and Saddle on July 31. He left COMSAT to work in New York.

Assistant Librarian Elizabeth Preston has found a way to beat the heat. With a little wind and lots of luck with the weather—she's off sailing the Bay in her 18-ft. sloop.

## Weddings

Marlene Vactor, purchasing, married Eric Pamer on July 18 in Pittsburgh. On their honeymoon they toured the New England states and Canada.

Barbara Stynchula and Ed Lucia, both of Technical, were married on July 25 and spent their honeymoon camping.

Jeffrey Steinhorn, Technical, married the former Brigitte Adler on July 19. The newlyweds honeymooned in Bermuda. Mr. Steinhorn, incidentally, has just come on board as a permanent employee after having been employed as a co-op student for the past two years.

## Births

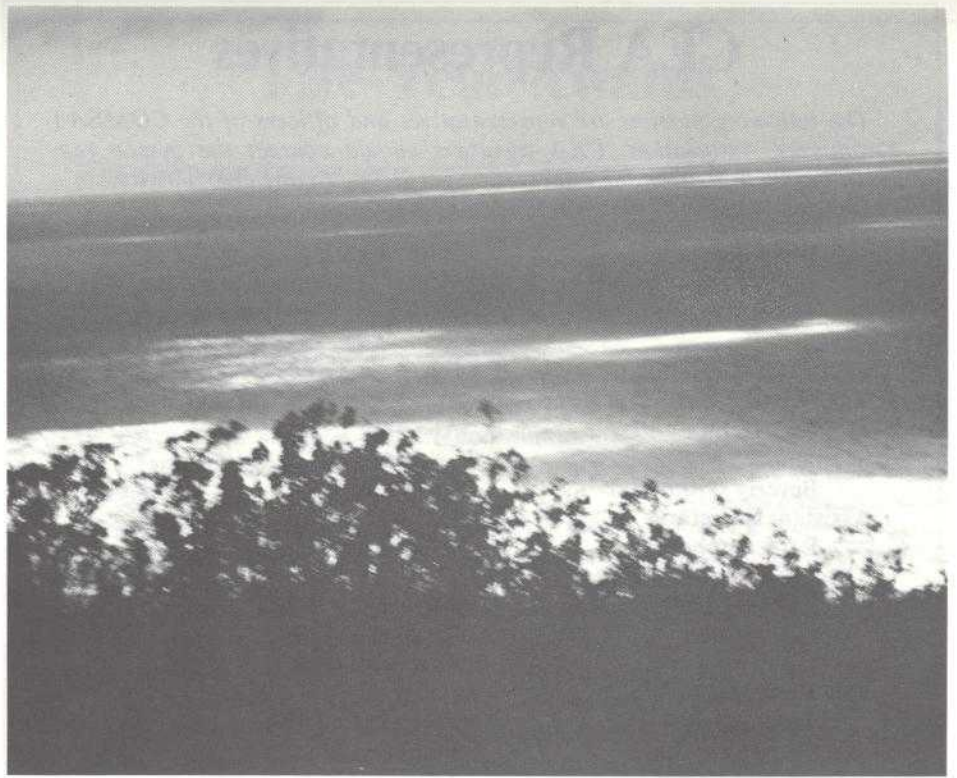
Mrs. Joan Koehler, former librarian, gave birth to a boy, Richard David, Jr., July 18.

Tom Tuttle, legal, and wife, Susan, are the parents of a baby girl, Amanda, born August 1.

Will and Pat Zarecor, Operations, became parents for the first time on June 10. They have named their son Edward Eugene.

John Husted, Labs, and wife, Teresa, are the parents of a baby girl, Teresa, born August 2.

The Tom Kirdendalls, Labs, had a special way of announcing the birth of their son: Satellite Series: Kirdendall; Designation: Robert Renick; Launched: 10:27 a.m., July 27; Weight in Orbit: 7 lbs. 8 oz; Length: 20 1/2 inches; Communications Capacity: one voice channel.



Paumalu employees have one of nature's more beautiful settings right in their own backyard—Sunset Beach, Oahu, Hawaii.

## News and Notes from Paumalu

Thongsuk Wongpudee, recipient of an ITU Fellowship, completed his six-months of training at Paumalu and returned to his position at the Sri Rachi station in Thailand on July 24.

The Paumalu employees gave Mr. Wongpudee a grand Hawaiian send-off on his last day at the station by gathering in the cafeteria and sharing a cake baked for the occasion by Mrs. Thelma Park, station secretary. He was presented with several souvenirs by the station manager, Glenn M. Vinquist, during the ceremony.

Mr. Wongpudee thanked all the station employees who were responsible for the training he had received during his stay at Paumalu and for the friendly and cordial treatment he was given by all personnel. Mr. Wongpudee expressed his pleasure with Hawaii, and more particularly the employees at the station.

### Service Award

John E. Gray, electronic engineer, became Paumalu's first recipient of the five-year award under the Corporation's service award program. In a brief ceremony on June 22, witnessed by several of his fellow employees, Mr. Gray was presented with a jeweled COMSAT tie clasp by Mr. Vinquist. In making the presentation on behalf of Vice President G. P. Samp-

son, Mr. Vinquist expressed the Corporation's appreciation for Mr. Gray's five years of service and his contribution to the station effort.

Mr. Gray's service began on June 21, 1965, at the Andover earth station, where he served as operations supervisor. He transferred to Paumalu in February 1967 and has since served as the station's electronics engineer. Mr. Gray, his wife Rita, and their three daughters reside in the Sunset Beach area.

### COMSAT Family Gathering

Though the usual Hawaiian weather with its blue skies and abundant sunshine were not in evidence, the spirits of the Paumalu station employees and their families were not dampened at the recent Paumalu CEA picnic. The annual affair was held on Saturday, July 11, at a private beach pavilion several miles from the station.

Tender, juicy steaks barbecued with sauce prepared by Ken Elder, shift supervisor, as well as all the trimmings prepared in chef Elder's kitchen, prompted many questions about his culinary activities from the ladies present. Mr. Elder and his wife, Irene, were in charge of the day's activities.

As usual it was a very pleasant get together; much good food and fun were enjoyed by all.



# CEA Representatives

The following persons are representatives and officers of the COMSAT Employees Association. CEA members should contact the person representing their division for information pertaining to any club activity.

**President:**

Betty Stover

International,  
General Counsel, Corporate  
Relations, Management  
Review and Coordination,  
Executive Office

**Vice President and Treasurer:**

Neil Helm

At Large

**Secretary:**

Beverly Nitkowski

At Large

**Assistant Secretary:**

Pat Lamphear

Operations

**Vice Presidents—Social:**

Robert Cool

Judy Stotler

Technical—Labs.  
Finance and  
Administration

**Vice Presidents—Athletics:**

Tony Buige

George Domurot

Technical—Labs  
Finance and  
Administration

**Vice President—Special Arrangements:**

Perry Klein

Technical

game to be held September 12. One hundred CEA members and guests will attend.

If enough interest is expressed, a horseback riding club will be sponsored in the fall. For further details, please contact Bev Nitkowski, Ext. 6141.

## Tournaments

The golf tournament is tentatively scheduled for the end of September. Watch for flyers.

The tennis club is holding its annual singles and doubles tournament. The singles tournament began August 7; doubles play is slated to begin August 21. Each tournament is based on one round per week, single elimination.

## Performing Arts Society Tickets

The Washington Performing Arts Society has offered the CEA a block of seats at a reduced rate. Among the many fine concerts scheduled are: Moiseyev Dance Company, September 23; Van Cliburn in recital, Oct. 11; Zagreb Philharmonic Orchestra on its first American tour, November 1; and many others. For ticket information, see the CEA's president, Betty Stover.

## Christmas Socials Planned

CEA's social chairmen, Judy Stotler and Bob Cool, have announced the when and where of the Christmas socials. The International Ballroom of the elegant Washington Hilton Hotel will be the setting for the Annual CEA Dinner Dance, Saturday, December 5. The Children's Christmas Party will be held on Saturday afternoon, December 19, at the American Legion Hall, Bethesda.

## Art Show

Miss Gloria Sapia-Bosch, Spanish translator, recently gave a showing of her water colors at the Racquet and Ski Shop, Ltd., of Georgetown. Having started as a dabbler just three years ago, her paintings are already being given recognition in the art world in and around Washington, D.C.

According to Miss Sapia-Bosch, who previously studied dance, painting is another creative outlet. "It's plain fun," she said, "and I'd encourage others to try it."

## CEA Membership

New CEA members are always welcome. Dues—\$2 a year and \$1 for new employees. Join now, if you're not already a member. You won't want to miss out on the upcoming events. See your CEA representatives for further information.

## CEA Headliners

# CEA Plans Fall Cocktail Party To Celebrate Labs Anniversary

By Beverly Nitkowski

The Fall Cocktail Party celebrating the first anniversary of COMSAT Labs is at the top of the list of special events. The party will be held Friday evening, September 11, at the Labs. Hot and cold hors d'oeuvres, door prizes, beverages, entertainment, music, and a creative atmosphere will highlight the event. See any CEA representative for information and tickets.

### Flying High

Plans for incorporation of the flying club are progressing rapidly. The club's first endeavor will be the purchase of an airplane from Michael Hoene, a COMSAT employee now at the Fucino earth station. New officers were elected at a recent meeting. For more information, contact Charles Heise, president.

### Board Tours Facilities

At the regular July meeting of the CEA, board members toured radio club and table tennis facilities and

saw a chess exhibition by club members at the Labs.

R. Williams's and J. Kaiser's table tennis clubs are going strong. Anyone needing lunch hour exercise, see CEA's Ping Pong Rulers.

### Potpourri

A photography club is in initial planning stages. Interested parties should contact J. Tallon, Ext. 6526.

Anyone interested in Dinner-for-Two club coupons, contact Pat Lamphear, Ext. 6219.

For Shady Grove discount tickets, contact Emogene Madison, Ext. 6661.

QUESTION: Should the talent club sponsor a Miss CEA contest for early fall? What are your views? Submit responses to Bev Nitkowski, Room 7043.

Satellite jewelry is still being sold on a weekly basis. See Paula Hayes in the Credit Union from 12 noon to 1 p.m. on Fridays and Linda Fariello, Room 2133, COMSAT Labs, between noon and 1 p.m. on Wednesdays.

The CEA recently sold tickets for the Shriner's Redskins-Colts football



## News From COMSAT West

By Deanne Wallace

The West Coast Office has two new arrivals. Pat and John Melville have their fifth child, Michael Henry, born on June 14.

Jean and Al Verbin are the parents of a baby girl, Inger Lynn, born on June 17.

Vacation time is here again. Ann and Erland Magnusson and children spent their vacation camping in Colorado. Don and Jeannette Campbell spent an enjoyable weekend in Palm Springs, California, just soaking in the sun. Napa Valley, California's Wine Country, was the vacation choice of the John Wallaces. They also spent some time in San Francisco.

A party was held by TRW and COMSAT on July 23 at the Turtle Club in Manhattan Beach. It turned out to be a good time for everybody.

## Worldwide Television Rises in First Half

Television transmission via the satellite system during the first six months of this year totaled 1,322 hours of transmission and reception time, double the volume for the same period last year.

The increase resulted largely from worldwide demand for TV coverage of the World Cup soccer matches in Mexico which established a record number of hours for a single event. Demand for TV coverage of the perilous return of Apollo 13 astronauts also contributed to the increased volume.

## Health Unit News

Miss Hazeltine Durant, COMSAT nurse, has announced the Flu Immunization Program, to take place sometime in September.

This year's program is a continuation of last year's program, which included immunization against the Hong Kong strain and others. Those employees who had the shots last year need only take the booster this time.

In addition to booster shots, Miss Durant plans to give the initial flu series again this year to those who want it. There will be no charge for this service. Watch the information flyers for details and dates of the program.

## Five-Year Awards

*The following persons have received five-year service awards during August or are scheduled to receive them during September:*

### Finance and Administration:

O. Lee Bair, manager, personnel records and analyses

S. J. Jordan, chauffeur

Don E. Wagner, director of administration, planning and general services

### Operations:

Theodore A. Gottry, senior systems analyst

Arnold P. Sanchez, systems coordinator

James R. Warren, manager, maintenance

### Technical:

R. Neil Benedict, manager, earth station engineering department

D. Gene Gabbard, section head, switching and multiplexing processing lab

Frederick J. Gauvreau, member of the technical staff, project control, earth station implementation division

Francois Giorgio, member of the technical staff, earth station engineering

L. Howard Reagan, manager, support, earth station implementation division

Luin B. Ricks, West Coast office

Frederick Seaman, supervisor, shipping and receiving.

## COMSAT Joins Other Corporations Supporting J.A. Enterprises in D.C.

COMSAT has joined a number of other corporations in making a monetary contribution to the Junior Achievement drive to raise money for the 1970-71 program. The local J. A. program is a part of a national effort directed toward teaching business skills to high school students through ownership and operation of mini-corporations.

In addition to a moderate cash contribution, Dr. Charyk on behalf of the corporation invites employees with a business, accounting or finance background to act as advisors to the program.

Washington area participation in J. A. began in Arlington, Va., in 1965 with the initiation of 13 student-operated companies. Since then the program has expanded to 29 companies in Arlington, Fairfax and Leesburg. In addition, a 10-company pilot program was successfully inaugurated by District of Columbia students in the 1968-69 school year. The current drive is aimed at expanding the D. C. program to 31 such companies.

### Building a Business Background

Each company sponsored by Junior Achievement is organized as a corporate structure. There are approximate-

ly 20 high school youngsters in each company, from which are elected the board of directors, working force and sales representatives.

The company selects a product to make or a service to provide. The capital is provided through public sale of capital stock. Production lines are set up and distribution plans are made. All administration is done by the members themselves.

Salaries and wages are determined by the members. The budget includes all production, administration, advertising and operation expenses. At the end of the school year, the company is dissolved—and the profits or losses are absorbed by the stockholders. In short, the J.A. company is a mini-corporation with a life expectancy of one school year.

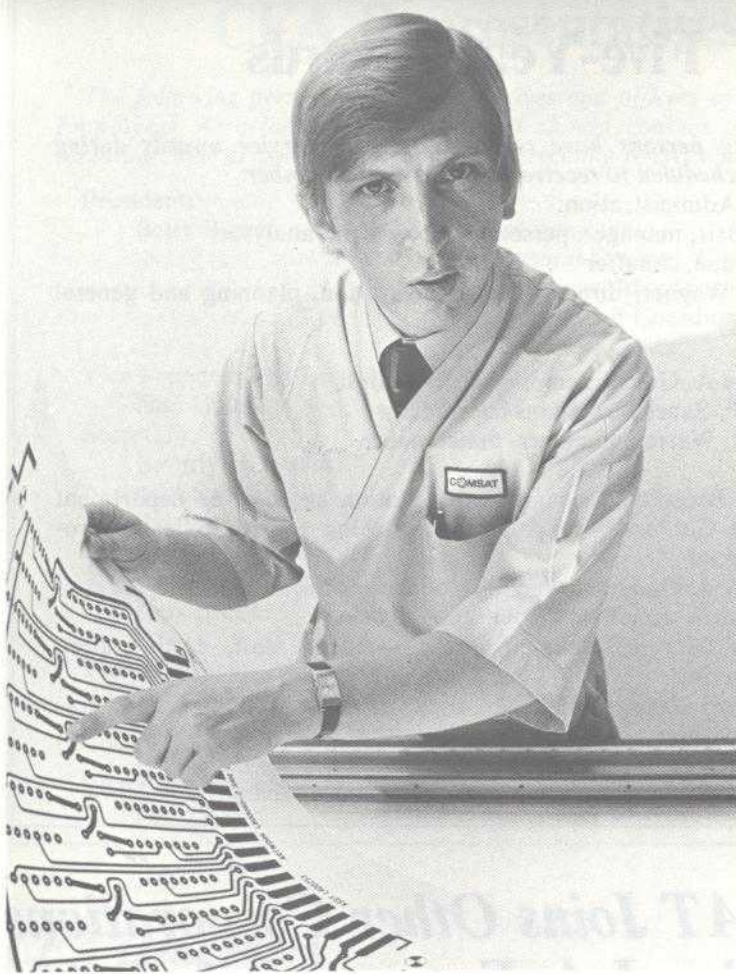
### Advisors are Needed

In order to operate efficiently and effectively, the J. A. needs advisors who can guide the company through its nine-month operation. The companies meet once a week, and the advisor is generally needed for a two-hour period during the meetings.

Those interested may obtain more information by contacting John Hill, Ext. 6093.



## Birth of a Printed Circuit



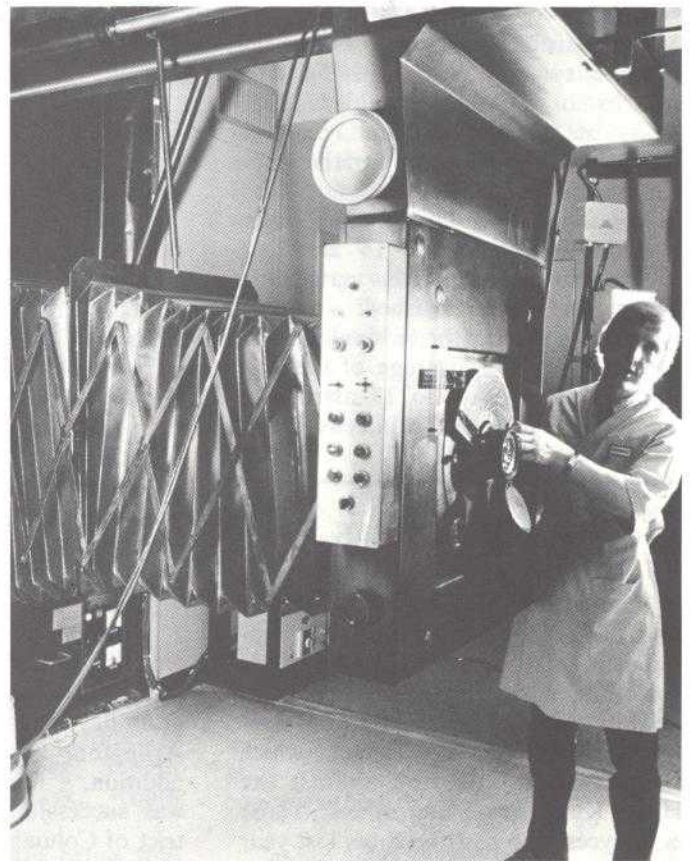
The large-scale circuit drawing is mounted in the 23-foot precision photoreduction camera. The big camera is mounted on a vibration-free concrete pad. Temperature and humidity are controlled in the camera room to permit extremely accurate reductions; the camera elements can be positioned to within 1/2 mil (.0005 inch) over its 23-foot length. Here Mr. Para is adjusting the lens setting.

The materials technology branch of the Physics Laboratory contains a complete photo and chemical processing lab—a production line in miniature—for making experimental printed circuit boards. The playing-card-size boards are covered with metal patterns which interconnect several kinds of active and passive elements—transistors, capacitors, resistors, and tiny integrated circuits.

These devices are essential to the generation and processing of electronic signals. According to Dr. Peter F. Varadi, manager of the materials technology branch, over half of the professional staff at COMSAT Laboratories and a number of the technical staff at L'Enfant Plaza use specially designed printed circuit boards in their work.

The chemical processing lab can make circuits to handle frequencies from DC (0 frequency) to 15 GHz, well into the microwave range. The facility has produced single-sided, double-sided, and multilayer plastic boards, as well as ceramic hybrid circuits.

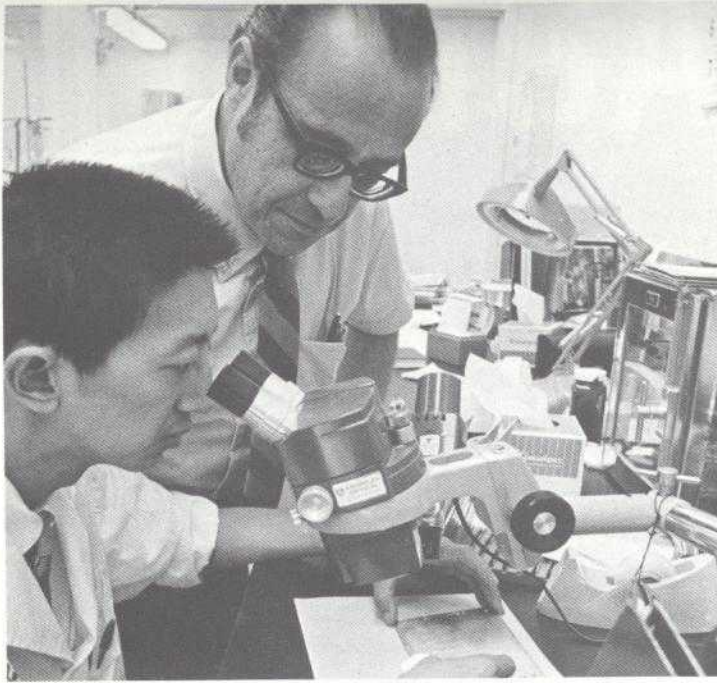
Stan Para, senior lab technician in charge of the photo lab, displays a drawing of a proposed circuit design. After an engineer has designed a circuit, Drafting and Design makes an exact, oversized drawing on plastic film. Here Mr. Para checks the drawing on a sensitive measuring and drawing device called a coordinatograph.



Herbert Edwards, senior lab technician, drills a stack of plastic circuit blanks using a template made from the precision film. The dozens of tiny holes, when coated with metal, will carry signal current from one side of the board to the other.

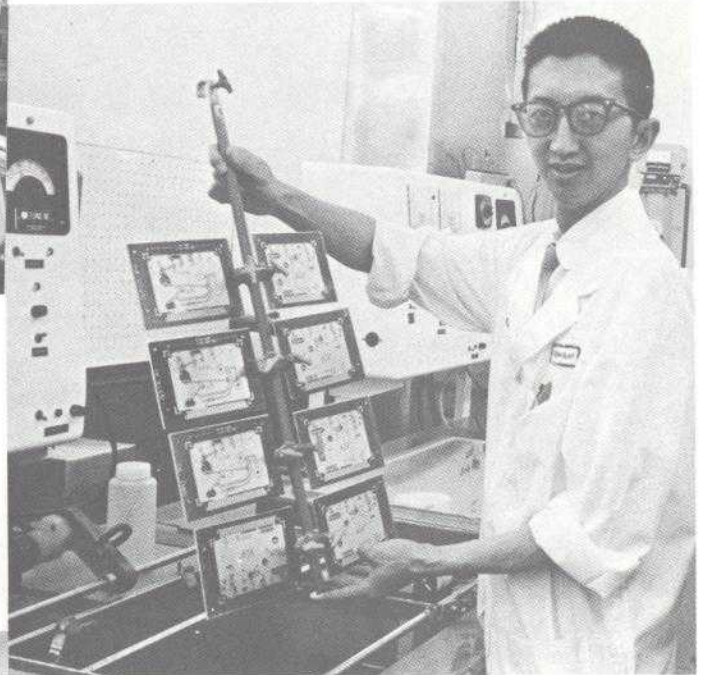






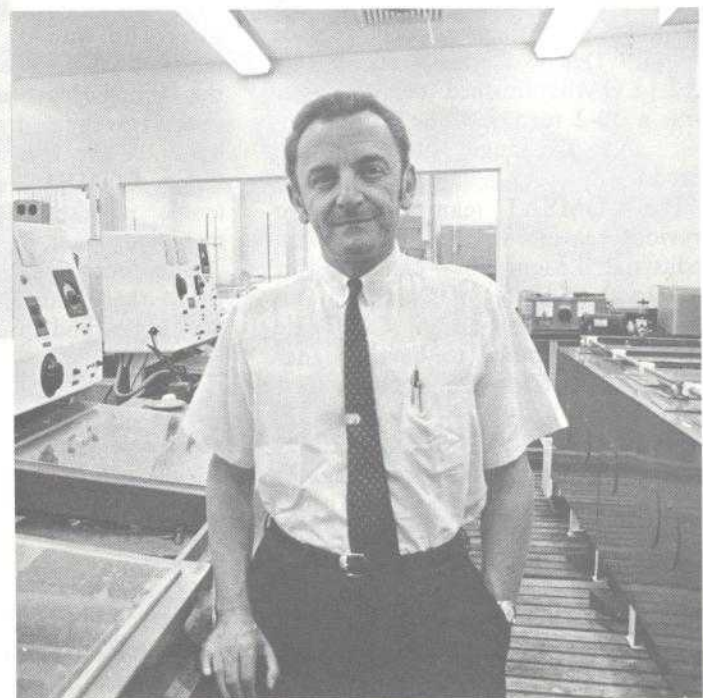
Larry Sparrow, who oversees the chemical processing lab's operation, and Rocky Lee, technical specialist, inspect the coating on a circuit board. At this stage the blanks, plated with copper, are coated with photosensitive lacquer and exposed to light through the precision film. Any breaks or pinholes in the lacquer will spoil the finished board. The lacquer covering the part of the pattern exposed to light will be dissolved, while the unexposed portion remains. The exposed copper design will then be coated with gold.

Rocky Lee holds up a rack of boards, just removed from the gold plating tank. The gold on each circuit is worth about a dollar. The addition of gold is the final plating step; it serves to protect the copper beneath from etching and corrosion.



Wayne Moore, senior lab technician, inspects a completed board after etching has removed the excess copper and left the gold plated areas intact. Now the board is essentially complete except for trimming.

Dr. Varadi stands in the plating room. To his right are electrolytic copper and solder tanks, and to his left are electroless copper tanks. Electroless processing must be used to coat non-conducting materials, like the insides of the holes through the plastic boards.







CEA's Plaza softball team tied for third place in the D. C. Recreation League. The players are (front row, left to right) Russ Campbell, Jim Hall, Vince Jordan, (second row, left to right) John DeCaro, Dave Jordan, Alvin Booker, Ed Smith, Stan Jordan, Rudy Thomas, Melvin Harley, and Earl Turner.

## Plaza Softball Team Finishes In 3rd Place Tie

The COMSAT softball team completed the 1970 season with a 5-5 record, putting them in a third place tie with Deleuw-Cather Corporation. BELLCOMM finished in first place with a 10-2 record, while the Securities and Exchange (9-3) finished second.

The COMSAT team played two previous seasons in the Metropolitan Industrial League, but changed this year to the District of Columbia Department of Recreation City-Wide Division, considered to have tougher competition. The teams played fast pitch softball.

Player-coach Jim Hall (.444) ended the season with the team's highest batting average, with Earl Turner (.440) running a close second. Mel Harley (.423) turned in the third best batting average.

Al Booker joined the team as pitcher after the third game and ended the season with a 4-2 record.

## Labs Tennis Team Defeats Plaza To Capture Irving Novgrad Trophy

COMSAT Labs dominated the second annual team tennis match between the Labs and the Plaza, winning the one-day tournament 5 matches to 4. The Labs will receive the Irving Novgrad Trophy, a 20-year traveling trophy initiated in honor of the late Mr. Novgrad, who was a COMSAT employee and avid tennis player. The Plaza won the trophy last year.

The tournament was held on July 18 at the Hains Point tennis courts. Six singles and three doubles matches

were played. Results in the singles tournament were:

Carl Wenrich, Labs, defeated Lee Battle, Plaza, 6-2, 6-0;

Henry Williams, Labs, defeated Ed Jordan, Plaza, 6-2, 6-3;

Jay Levatic, Labs, defeated Alan Kasper, Plaza, 6-4, 13-11;

Tony Bingham, Plaza, defeated Bill Lowe, Labs, 6-3, 6-3;

John Ball, Plaza, defeated Bruno Blanchier, Labs, 6-2, 6-0;

Bob Strauss, Labs, defeated Stan Schachne, Plaza, 6-1, 6-3.

The three doubles matches were played simultaneously. Results of these matches were:

Margaret Pocock and Dick McBride, Plaza, defeated Henry Meyerhoff and N. Chitre, Labs, 6-0, 6-1.

Tom Tuttle and Marty Fliesler, Plaza, defeated Burt Edelson and Al Williams, Labs, 6-3, 2-6, 9-7;

Tony Buige and Tom Patterson, Labs, defeated Frank Osha and Marcellus Snow, Plaza, 6-1, 6-0.

The season started May 5 and ended on July 7. Each team played ten games.

### Team Compiles 'Perfect Record'

COMSAT Labs had a disappointing season in the Montgomery County Softball Recreation League, finishing the season with a 0-14 record.



# COMSAT NEWS

October 1970





# COMSAT Says 'Let's Be Competitive' For Satellite-Cable Traffic in Future

COMSAT urged the FCC to reject any long-term fixed formula for dividing all future overseas communications between cables and satellites.

COMSAT said each mode of communications should be encouraged to develop and compete to the fullest extent possible. But rewards should be based on each mode's contribution, not on some arbitrary formula guaranteeing a share of communications traffic years in advance.

The comments outlined in an FCC filing received widespread coverage by the national press.

The Corporation said the test for construction of any new facility should be cost, benefit to the entire public, and contribution toward enhancing the flexibility, diversity and reliability of the total communications network.

Expressing its confidence in the competitive vitality of satellite technology, COMSAT said that "each technology should be permitted to achieve its appropriate level of use in relation to the benefits which it can furnish to the public. No arbitrary determinations of a future mix of different technologies would accomplish these objectives."

## COMSAT's Response

The views were expressed in a detailed 235-page filing in response to an FCC Inquiry issued last June asking for comments on policies governing future licensing of cables, satellites and other facilities for overseas communications needs.

COMSAT noted that the new INTELSAT IV series satellites, whose construction already has been authorized by the Commission, offered sufficient capacity to handle the entire U. S. overseas communications needs until 1976. The first INTELSAT IV is scheduled to be launched late this year or early next year.

COMSAT said that "an arbitrary 50/50 division as proposed by AT&T for all major traffic areas for the entire decade of the 1970s appears unsupported on the basis of the total contribution made to global communications for the required investment that would appear to be in excess of two-thirds billion dollars."

"We do not believe that the Commission should endorse a cable construction program involving a total cost to the public during the life of the cables of billions of dollars for the sole purpose of maintaining an unsubstantiated and arbitrary split of traffic."

"We are convinced," the filing said at another point, "that there is nothing inherently sound in an arbitrary 50/50 division and that, if sharing formulas are required, the same formula would not be appropriate for different areas."

If sharing formulas are used, COMSAT emphasized, then other communications carrier companies, who have an economic self-interest in cables, should be required to adhere to firm commitments guaranteeing they will use satellite circuits.

## Satellites Proven Successful

COMSAT declared that the satellite system was not created to prove "its superiority merely as a scientific curiosity." In less than five years, a dependable and commercially viable global system has been placed in operation: "The technological feasibility and economic attractiveness of the commercial satellite system have now been proved."

COMSAT said INTELSAT III series satellites, each with approximately 1,500 circuits capacity, now are in commercial service and stationed over the Atlantic, Pacific and Indian Oceans. On the ground, some 50 earth station antennas, including nine U. S. antennas, are in service, linking every major continent.

## INTELSAT IV Expectations

The INTELSAT IV satellites will have a capacity of from 3,000 to more than 9,000 circuits each. Eight have been ordered.

The economic superiority of satellites over cables can be demonstrated in a number of ways, COMSAT said.

An INTELSAT IV satellite configured to provide 9,000 circuits for point-to-point service, such as a cable provides, would have a per circuit-year cost of about \$500, compared with \$4,350 for the proposed TAT-6

(See **Against Fixed Formula Page 5.**)

## News at a Glance

• COMSAT urges FCC to encourage competition among communication systems for overseas traffic (Page 2).

• Forty-eighth ICSC meeting held in Sydney, Australia (Page 3).

• ICSC/T meetings held in Munich, Germany, September 24-30 (Page 4).

• IWG resumes meetings in Washington, D.C. (Page 16).

• Earth station development: new station operating at Mt. Margaret, Kenya (Page 5).

• Operations life line provided by Maintenance and Supply Service Center (Pages 8-9).

• COMSAT goes to the State Fair (Pages 12-13).

• U.S. Senate approves President Nixon's nomination of Rudolph A. Peterson to COMSAT Board (Page 15).

• Sports get boost in broadcasts carried via satellite TV (Page 20).

• Carl Wenrich wins tennis singles tournament, takes doubles crown too with Henry Williams as partner (Page 15).

• Paumalu wins first Operations Open Golf Tournament as Hawaiian team tops Headquarters No. 3 team by 3 points (Page 20).

## About the Cover

*A young cowgirl trades in her Sheriff's badge for a COMSAT button at the 109th Minnesota State Fair. Get the big picture in "COMSAT goes to the State Fair," Pages 12-13.*

October 1970 - Year 5, No. 7

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A.V.P. for Public Information

Matthew Gordon

Editor: Kay Smith





The Honorable Alan S. Hulme, Postmaster-General of Australia, welcomes ICSC delegates to 48th meeting, held in Sydney.

## COMSAT's Representatives

John A. Johnson, Chairman of the ICSC and COMSAT's Vice President-International, and Yves Fargette of France, ICSC Vice Chairman, presided at the 48th meeting.

The meeting in Sydney, Australia, was the fifth to be held outside of the United States. One ICSC meeting annually is held away from INTELSAT headquarters in Washington.

Preparations for the meeting were begun months in advance by the INTELSAT Affairs Division and the ICSC Secretariat. Robert W. Kinzie, Director, and Harry M. Tollerton, Administrative Secretary, were responsible for arrangements.

Selected IAD staff members also attended the meeting. They were Jane Boyd, Helga Burrell-Sahl, Ishmael Dieguez, Chris Dziekonski, Madeleine Fishkin, Richard Magee, Henry Massey, Carmen Nelson-Sloan, Janet Tingley, Fernando van Reigersberg, Carmen Vazquez, and Marie-Elise Wilfart.

(See Representatives, Page 5)

## Actions Taken at the ICSC Meeting

The following actions are highlights of the 48th meeting of the ICSC held August 26-September 1 in Sydney, Australia:

- Adopted a U.S. proposal to reduce the fulltime satellite use charge from \$20,000 to \$15,000 annually—and for occasional use by 25 percent—effective January 1.

- TV and associated audio services are excluded from the decision because they are scheduled to be considered at the 49th meeting.

- Renewed existing allotment agreements for NASCOM service with the British Post Office and COMSAT. Renewals are for 12 months for the Ascension links and for nine months, with a three-month extension option, for ship-mobile links.

- Authorized the Manager to advise NASA to incur necessary costs to launch the INTELSAT IV, (F-1) spacecraft. Instructed the Manager to complete, at a cost of not more than \$400,000, readiness of the INTELSAT II (F-5) for shipment to Cape Kennedy, and to insure, at a cost not higher than \$220,000, the availability of an appropriate launch vehicle should such a launch be authorized by the Committee.

- Authorized the Manager to execute amendments to the Lease and

Operation and Maintenance Agreements with the Overseas Telecommunications Commission (Australia). The agreements extend TT&C arrangements to accommodate the INTELSAT IV satellites, and cover a five-year period, beginning January 1.

- In the system monitoring area, the Committee:

- authorized the Manager to execute an \$840,167 contract with Philco-Ford.

- authorized the Manager to spend up to \$290,400 for customs duties and taxes in procuring computers for the Carnavon, Fucino and Paumalu earth stations.

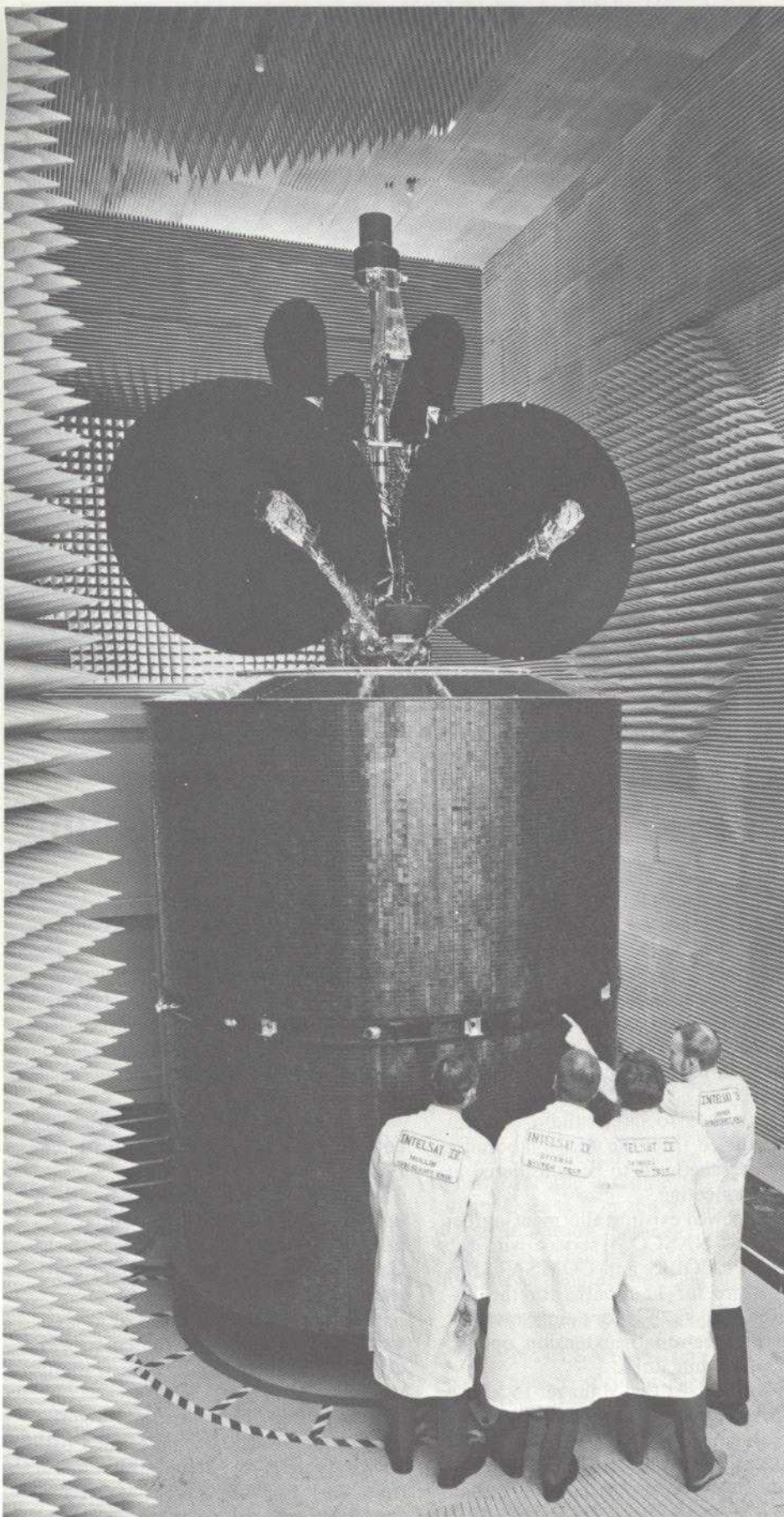
- authorized negotiations of amendments to TT&C agreements with OTC (A) to incorporate system monitoring services.

- Approved El Salvador's request for a quota of 0.05 percent, Costa Rica's request to increase its quota from 0.01 to 0.05 percent and Paraguay's request to decrease its quota from 0.05 to 0.01 percent.

- Granted initial access to the INTELSAT II, III and IV satellites to the Camatagua, Venezuela; Canary Islands, Spain, and Abidjan, Ivory Coast, earth stations. Granted formal

(See ICSC Actions Page 7)





## Testing Continues on IVs

Engineers check solar cells of INTELSAT IV satellite following light testing at the Hughes Aircraft Company. Dagger-like spears protruding from the walls of the cavernous anechoic chamber are absorber material to soak up stray microwave energy rebounding about chamber during tests. Final tests on the IV are scheduled for late October.

## ICSC/T Holds 37th Meeting In Munich

The 37th Meeting of the ICSC Advisory Subcommittee on Technical Matters was held in Munich, Germany, from September 24-30. Attending from COMSAT were Wilbur Pritchard, director of COMSAT Laboratories and the U.S. Representative to the ICSC/T; Ed Wright, the Alternate U.S. Representative; Rene Stamminger, Clarence Blackwell and Andrew Werth of Technical; Joe Pelton, Fernando van Reigersberg, Henry Massey and Susan McLynn of International, and Erika Hofmann of the European Office.

### Agenda Items

The meeting considered a particularly heavy agenda of items since there had been no meeting of the ICSC/T since May, and therefore subjects referred from both the 47th and 48th Meetings of the main Committee were reviewed. Among the important items under consideration at this meeting were:

- The INTELSAT IV follow-on Systems Study;
- Plans for implementation of TDMA equipment in the INTELSAT IV era;
- The final INTELSAT IV earth station specifications, including earth station filter design;
- The philosophy and concept of operation during the INTELSAT IV time frame;
- Final actions associated with the implementation of the SPADE system;
- A new definition of a unit of utilization.

Also being considered were various INTELSAT R&D projects, base-band loading of VF telegraph and voice band data bearer channels for INTELSAT IV, increased capacity of INTELSAT III satellites, use of INTELSAT III satellites for field trials with a German TDMA system, and use of COMSAT's environmental testing laboratory for INTELSAT purposes.

## Classified Ad

Opel G.T. for sale. Steel blue, 3400 miles, still under warranty. \$2850. Ext. 6152.



## Earth Station Development

The addition of a new earth station at Mt. Margaret, Kenya, in August raised the total number of antennas in commercial operation in the INTELSAT system to an even 50.

The Mt. Margaret station is operated by the East African External Telecommunications Co., Ltd. It serves the three countries of Kenya, Tanzania and Uganda in east central Africa. It operates with the Indian Ocean INTELSAT III satellite.

Here is a late-September box score of earth station developments: 50 antennas in commercial service, located at 42 earth station sites, operated by 29 different countries.

From Page 2

## COMSAT Opposes Fixed Formula

type cable and \$1,200 for projected 3,500-circuit type cable now under development.

### Figuring Costs

On a per circuit mile basis, the TAT-6 type cable costs \$30 and the type under development about \$8, compared to a cost of a 9,000 circuit satellite, and two earth stations, of about \$1.30 per circuit-mile.

As for dependability, the filing noted that the satellite system, based on continuity of service, was 98.5 percent of the 19-month period January 1969 through July 1970, which is approximately the same as for service over major cables.

COMSAT said AT&T's figures on outages were misleading.

In its response to the FCC Notice, AT&T earlier claimed 416,780 circuit-hours of outages on satellites, compared with 99,797 circuit-hours cable outages for the 19-month period ending July 31 of this year.

"These figures, however, are quite misleading since the outage criteria

applied by AT&T are inappropriate," COMSAT stated.

The bulk of the outages cited by AT&T resulted from a single outage when service was interrupted on the INTELSAT III (F-2) satellite over the Atlantic in 1969; but the figures failed to note that most of this service was promptly restored on other satellites in the system at the time.

The figures also failed to include "scheduled" cable outages for maintaining and improving the cable systems, such as burying cables in hopes of reducing breakages. COMSAT said that when outages are calculated under this criteria, the figures should read:

U. S. satellite circuit-hours of outage, 192,556; major U. S. cable circuit-outages, 207,728.

## News and Notes From Brewster

Brewster personnel welcomed Wallace M. Lauterbach back to Brewster after an extended stay in Anchorage, Alaska. A welcome home party was given for Mr. and Mrs. Lauterbach at Paul's in Okanogan. It was a very pleasant get together, much food, drinks and fun were enjoyed by all.

Jim Adams, senior technician, left this month to attend the University of Missouri. He will return to the station next June. David Morgan is also taking a leave of absence to attend Wenatchee Valley College and will return next spring. Both are studying toward an EE degree.

Jerry Hart, facilities mechanic, joined our COMSAT family in May. He and his family moved to Brewster from California.

Wayne Colpitts, technician, was married in June. His wife, Bonnie, is now teaching in the Brewster High School.

There are two new babies in the Brewster family. The Dick Eliason's son, John Philip, was born on August 12. The John Banister's daughter, Ramona, was born on August 24.

Brewster may not be the oldest or the newest COMSAT earth station, but we are unique in one respect — our station administrator is a lady. Imogene Cook assumed the duties of station administrator in addition to her duties as personnel/accounts clerk.

From Page 3

## Representatives

They were responsible for translation, interpretation, typing of documents and general preparation.

Richard Renfield served as recording secretary.

In addition, COMSAT, as Manager, was represented by William D. English, Lewis C. Meyer, Carl J. Reber, H. William Wood, Edward N. Wright and Martin I. Votaw.

### *New Employee Benefit Plan*

## Thrift-Savings Comes to COMSAT

The COMSAT Thrift and Savings Plan is being initiated as another part of the developing Employee Benefits Program. This program is available to all regular COMSAT employees.

Among its many provisions, the Plan will feature the following:

- A convenient method for systematic saving via payroll deduction.
- An incentive to save in the form of a contribution by the Corporation equal to 50 percent of your savings deductions.
- An opportunity to supplement your active employment income and your retirement benefits.
- A means of building a financial estate and increasing your family's security.

Employee briefings concerning the Thrift and Savings Plan are scheduled. Headquarters and Labs personnel briefings are taking place during the week of September 28 through October 2. Earth station employee briefings are scheduled from October 5-16. Watch your bulletin boards and flyers for further information.





The first passengers of the early evening rush hour board home-bound bus at the southwest bus terminal.

## *Traveling the Route to Southwest*

Revitalization of public transportation in the southwest Washington business district began with the inauguration of the southwest bus terminal by Washington's Mayor Walter Washington on June 1. Since then, four major metropolitan bus companies have been adjusting routes and schedules to suit public demand.

The terminal is situated adjacent to L'Enfant Plaza on D Street S.W.

According to Jack Gural, General Services Administration, periodic surveys show approximately 500 persons using the bus terminal during both morning and evening rush hour traffic. This figure shows an increase over the number of passengers using bus services scattered throughout the area before the terminal was installed.

Both the Transit Companies and the General Services Administration, however, admit there is room for increasing the number of passengers. One way they're attempting to do this is by providing effective service.

Four major bus companies serving the metropolitan Washington area provide routes between the southwest terminal and urban and suburban centers.

### **Who Goes Where?**

D. C. Transit has routes traveling the main thoroughfares of Washington with some routes extending into Maryland.

The WMA Transit Company serves Maryland with limited service on the main routes within the District.

Serving Arlington, Falls Church and vicinity is WVM. Routes travel to the main business centers of the District.

Another company serving Virginia is AB&W, which operates between Alexandria and surrounding areas and the District.

Schedules and routes for all bus companies have been posted in the L'Enfant Plaza Shopping Mall, at the northwest corner of the Hallmark Card Shop. A map of metropolitan bus routes is also posted there.

### **And What About the Trains?**

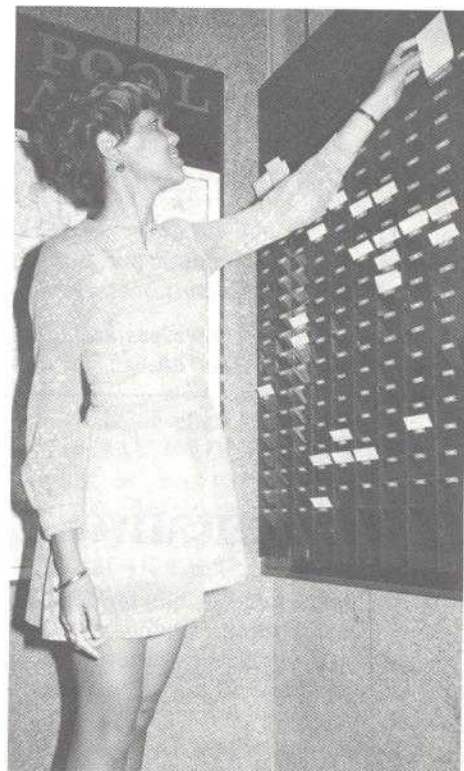
Union Station is alive and well and operating in downtown Washington. Some people even commute to work via the trains, believe it or not.

One train company providing such service is the Baltimore and Ohio (B&O) Railroad, which makes daily commuter runs between Harper's Ferry and the Union Station, stopping along the way at such places as Rockville, Garrett Park, Silver Spring and Kensington.

But for those thinking of traveling that route, the going is not easy. Because the line ends at Union Station, commuters have to find their own way to southwest.

And there seems to be little chance of extending train service to the southwest terminal area, where there is the possibility of setting up a station if some costly modifications were made. But, even if arrangements were made to establish a train station there, the cost of the use of the track between Union Station and the southwest area appears to be prohibitive.

The Washington Terminal Company, which operates Union Station also owns the track. The asking price for using the track to southwest is considerable—too high anyway when considering the number of passengers expected to use the service. So what it amounts to for the time being is that the price is high and the demand is low—which for now, anyway, adds up to no deal. (See *Alternatives*, Page 7.)



Pat Thompson, receptionist, checks car pool board in L'Enfant Plaza Mall for rides to and from work.



## Fares and Bus Routes

### D. C. Transit

... Serves main thoroughways of Washington and some outlying Maryland districts.

... Fare: 40 cents within the district, additional 10 cents for zones one through five, five cents per zone beyond that.

### WMA Transit

... Serves Maryland and part of the District.

... Fare: 35 cents within the District, 60 cents for the first zone in Maryland and five cents for each zone after that. Exception to charges is route T to Bowie and Belair, for which each zone beyond the first is an additional 10 cents.

### WVM Transit

... Serves Arlington, Falls Church and vicinity.

... Fare: 50 cents for first zone and 15 cents for each additional zone.

### AB&W Transit

... Serves Alexandria and surrounding areas.

... Fare: 35 cents for first zone, 45 cents for second zone and five cents for each zone beyond that.

## From Page 6

## The Alternatives

For those who don't own a car, there is an alternative. You can submit an application to the car pool board which has been installed by the L'Enfant Plaza Corp.

The board is located in the central mall, next to the bus route map in the northwest corner of the Hallmark Card Shop. There, along with the map showing the bus schedules and routes, is a prezoned map for easy car pool grouping. Applications for both riders and drivers are welcome.

And the last resort for those who have a car but no parking space is found on Frontage Road where there is free parking --- if you arrive before 6:00 a.m. But competition for the few spaces is keen, so be forewarned, arrival after 6:00 will probably do you no good.



COMSAT earth station managers visited Headquarters for briefings the week of September 14-18. Photographed at the L'Enfant Plaza fountain, they are left to right, Donald Fifield, Andover; William T. Patterson, Bartlett; Wallace Lauterbach, Brewster; Glenn M. Vinquist, Paumalu; William B. Carroll, Etam; John P. Scroggs, Jamesburg, and Juan R. Castanera, Cayey.

## Award Presented To Credit Union For Savings Plan

The Thrift Honor Award has been earned by the COMSAT Federal Credit Union for its success in stimulating savings among small savers. Stephen Pirk, regional director of the National Credit Union Administration, announced the award in August to the heads of the 13,000 credit unions belonging to the Administration.

According to Mr. Pirk, the Thrift Honor Award program is conducted to provide an incentive for officials of the Federal credit unions to encourage members with small accounts to save regularly as part of their family financial management plans.

The COMSAT Federal Credit Union attained a monthly rate of growth of 5.2 percent in accounts under \$1,000 according to William Kaht, treasurer. This growth rate is above the average for Federal credit unions of similar size.

According to Randall Williams, president, the credit union had 890 active members as of July 31 who had savings totaling \$711,786.53. The credit union was chartered in 1967 for use by COMSAT employees.

## "Get Off Your Apathy" To Boost UGF Drive

The United Givers Fund of the metropolitan Washington area, to which many COMSAT employees donate, will seek a 10 percent higher goal for its 1971 drive under the slogan, "Get Off Your Apathy."

### \$14.4 Million Sought

The higher goal will mean a fund objective of \$14.4 million. Funds officials report more than a million residents of D.C. and the nearby counties in Maryland and Northern Virginia received UGF benefits during the past year.

### Corporate Plans to Come

Plans for the 1971 drive at COMSAT will be announced by the Personnel office. Employees may earmark their gifts to specific UGF agencies.

## From Page 3

## ICSC Actions

approval to the Choconta, Columbia, and Taipei, China, earth stations to operate with the INTELSAT IV satellites.

- Accepted an invitation to hold the 54th ICSC meeting in Australia.

A total of 18 Committee members, representing 49 of the 76 signatories, attended the 48th meeting.



# Maintenance and Supply Service Center — —

## *M & S Center*

The Maintenance and Supply Service Center, Operations, is responsible for supplying and maintaining vital earth station equipment. Located on the third floor of COMSAT Labs, its 21-member staff is in constant contact with the seven U.S. earth stations and the Operations Center at COMSAT Headquarters to assure against a breakdown in round-the-clock operations. It must be totally responsive to the requirements of the operating earth stations.

The Center is believed to be unique within the United States, and possibly worldwide, in that it has been planned, organized and is functioning with a single objective—to assist and support communications satellite earth stations.

James Warren, below, explains the relationship between the Center and the earth stations.



## *Maintenance*

The responsibilities of the maintenance section are to provide repair and overhaul facilities for equipment which is beyond the scope of station maintenance, and to provide technical counseling, assistance and analysis services.

An important service is the maintenance of cryogenically-cooled equipment. (Cryogenics is the science of producing, testing and operating equipment at extremely cold temperatures.) The low temperature at which the equipment operates—between 17° and 19° Kelvin—enables some types of equipment, which under ordinary temperature would produce undesirable noise levels, to operate at peak performance.

Before implementing the cryogenics facility, COMSAT was totally dependent on outside vendors for equipment and service maintenance. Since implementation, the cryogenics facility has taken on numerous programs, substantially reducing on-station maintenance, improving reliability and extending operating life of cryogenics subsystems.

Above, Dave Coombs demonstrates one use of cryogenics tech-

## *Test Equipment*

The two-man mobile test team is a highly specialized one which travels annually to each COMSAT earth station, inspecting, calibrating, certifying and repairing the stations' test equipment. The team uses instrumentation and transit cases designed for flexibility and rapid set-up at the operating stations.

During an average station visit 205 items of test equipment are inspected and certified. Of this number an average of 15-25 percent requires additional repair or calibration.

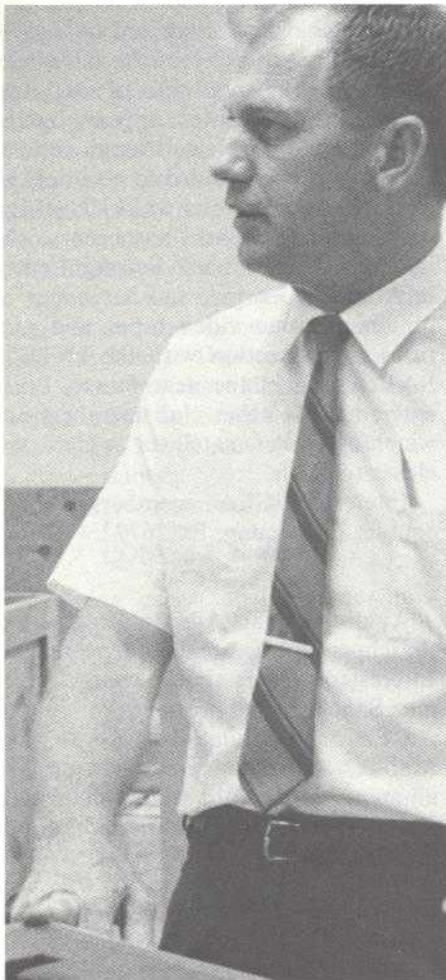
An additional test equipment facility is maintained at the Service Center to calibrate and repair items which require very complex measurement techniques and those items which require service between mobile team visits.

Below, Norman Cloud prepares a fly-away case, designed for rapid mobility, for shipment to Andover.





## — — An Operations Life Line



### *Warranties*

Another function of the Service Center is to tabulate and act on all warranties on communications and electronics equipment. This process insures rebate on malfunctioning equipment under warranty. During the first half of 1970, \$61,000 was recovered from warranties, and another \$156,000 is being sought in warranty claims outstanding.

The failure analysis section is closely related to warranty control. An attempt is made to determine cause for malfunctioning parts, especially to determine failure commonality. When failure commonality is found, the center issues a maintenance bulletin to the earth stations informing them about the nature of the failure and directing them to take corrective action.

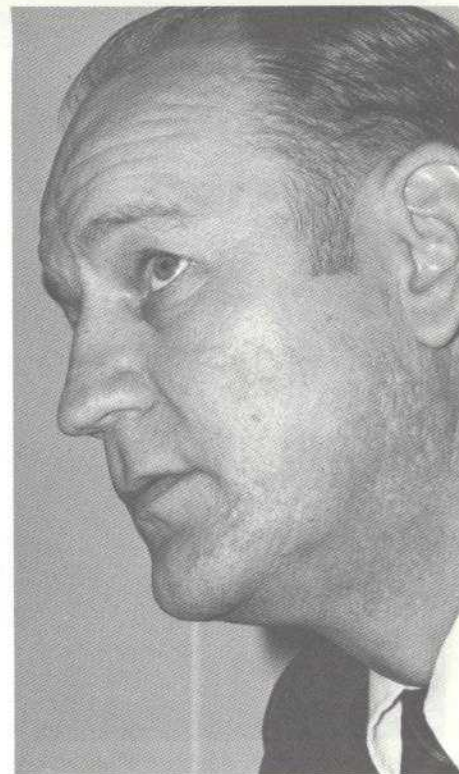
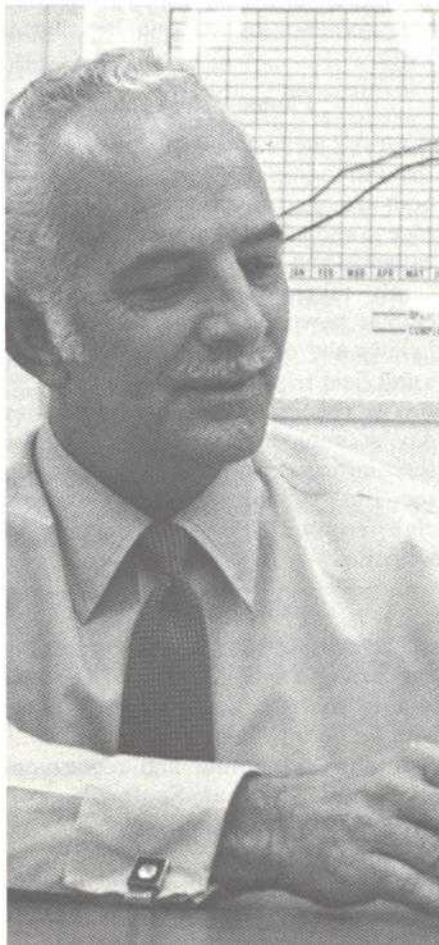
F. Lee Bolinger, above, asks for final check of supply carrier components, including warranty tabulation.

### *Supply*

Central warehousing is the basic principle under which the Supply Center operates. Equipment is stored in one location for all the earth stations instead of each station individually stocking its own equipment. Between October 1, 1969, and July 1, 1970, the Center saved an estimated \$1,600,000 through central warehousing operations.

Maintaining an adequate supply of earth station equipment starts with a computerized real-time inventory system to insure against over- or under-stocking an item. All stations as well as the supply center have immediate access to the 3,500-item inventory lists, a key function for operating under a central warehousing system.

Charles Byrum, systems analyst, who organized and conducts the equipment inventory program, explains the advantages of identifying each stock item with a code number.



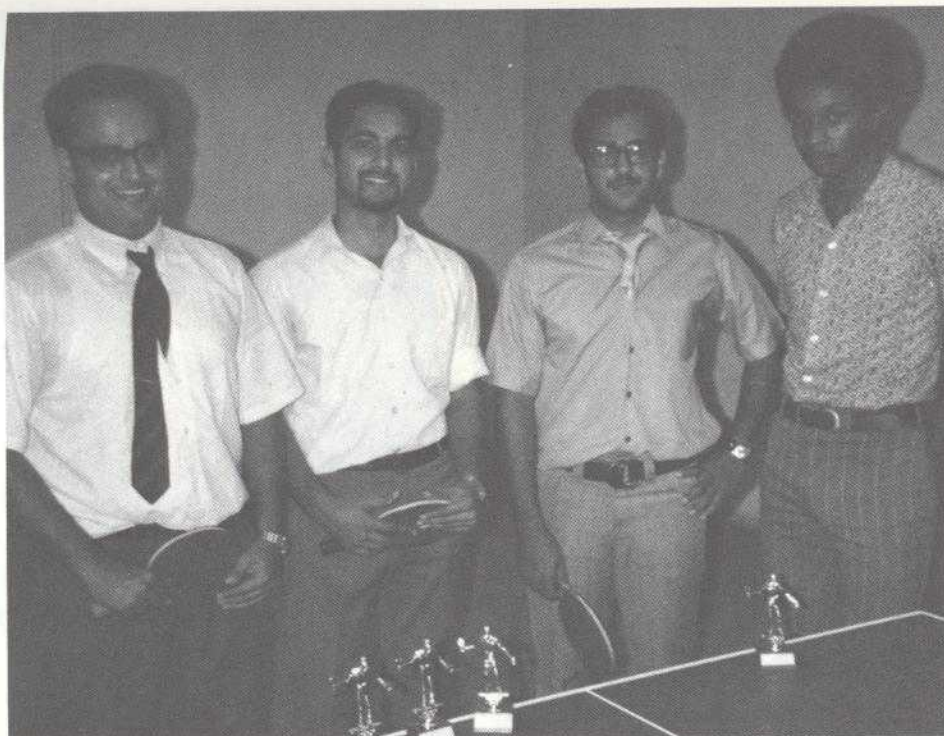
### *Growth*

Frederick Chipps, manager M & S Center, has seen the shop grow from a one-man effort to a highly specialized 21-man team. The Center now proposes to do international work in addition to servicing U.S. earth stations.

The life line of the Service Center is the round-the-clock Telex operations, which provide communications between the Center and the earth stations. Mrs. Darlene Jones, senior clerk, checks office records as well as helping with telex communications.







Labs table tennis doubles winners are Pradman Kaul, left, and A. Sabnis, second from left. They defeated Pradeep Kaul, third from left, and Dwight Walden, right, for the championship.

## CEA Headliners

# Tournaments, Clubs Keep CEA Busy

By Beverly Nitkowski

COMSAT Labs table tennis club tournament was held on August 14. The singles winner was Pradman Kaul, with A. Sabnis taking second place. The team of Pradman Kaul and A. Sabnis beat runners-up Pradeep Kaul and Dwight Walden. Trophies were awarded to first- and second-place winners.

Randy Williams, Plaza table tennis president, is presently organizing a ladder so that Plaza champs can take on the Labs team this fall. For details, see Kim Kaiser at the Labs or Randy Williams, Plaza.

Table tennis rules are posted at the locations of both tables. Please do not abuse CEA table tennis privileges; *no food or beverages* are permitted in the auditorium at the Plaza. All participants and spectators are urged to cooperate.

### Annual Golf Tournament

The 1970 Annual Golf Tournament is scheduled for September 30 at the Washingtonian Country Club. Tee off time is noon. Prizes will be awarded in five flights plus low gross and low net from a total of 12 foursomes.

### Tennis

Once again, another tennis season is nearing an end. The CEA would like to thank Jay Levatich and Dick

McBride for all their fine efforts in making this another season filled with tennis fun. Stay tuned for a last planned event—a mixed doubles tournament.

### Photography Club

CEA's newest special arrangement, the Photography Club, now 18 members strong, has discussed the advantages and disadvantages of various cameras and has critiqued pictures recently taken by club members. The club is now in the process of drafting bylaws and electing officers. Plans for a fall field trip are under way.

The regular meeting date is Wednesday at noon in Room 5102. For further information regarding this club, see Jim Tallon or Linda Kortbawi, club secretary. New members are welcome.

### Boating Club

The boating club is in the process of purchasing a small day sailer. The boat is a 14 to 16 ft. sloop rigged sailboat with outboard engine and trailer.

A weekend outing and rendezvous at Pirates Cove at South River is planned for September 25 and 26.

**WANTED:** One male to head up a CEA football team. Contact George Domurot, if interested.

### Astronomy Club

Since the summer sky did not provide much activity for the astronomy club, plans for a full autumn season are progressing rapidly. Regular meeting dates will be set soon.

Vic Slabinski has advised us that at certain times of the year the sun's light reflects off the solar cells of satellites, making the satellites appear lighter and possible to view through a telescope. This is scheduled to occur at the end of September and will kick off the season. Mr. Slabinski has been working with the Fernbank Science Center in Atlanta, Georgia, and has hopes of obtaining some video tapes and pictures in connection with the INTEL-SAT system in the near future. Presently, he and other club members are watching other satellites which are closer to earth.

Interested CEA members should contact Bill Young, Ext. 6792.

### Chess Club

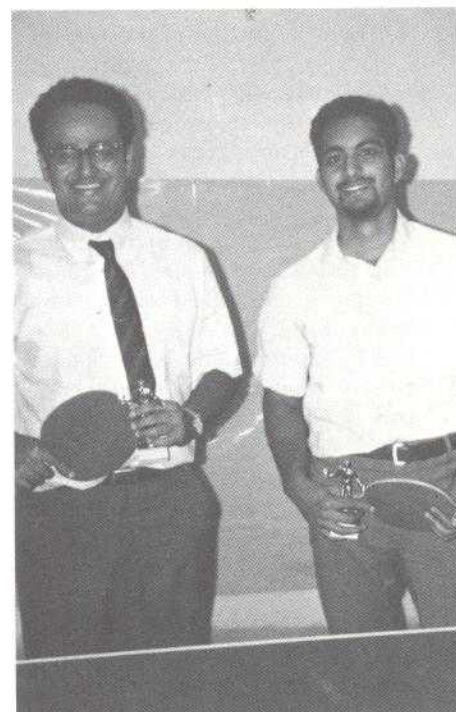
Avid chess fan Alberto Bracht said the chess club is small but proficient. Interested players should contact Hernandez Sanchez, club president.

CEA congratulations go to W. Maillet, the new president of the amateur radio club. Many thanks to Cal Cotner, outgoing president, for a job well done.

### Flying Club

Flying Club incorporation is nearly complete. See Charles Heise for details concerning this exciting new club.

(See Miss CEA, Page 11)



Pradman Kaul, left, took the singles table tennis crown by defeating runner-up A. Sabnis in the play-off.



**Miss CEA Contest**

Kitty Stephenson, director of the talent club, has advised that plans are being made for a "Miss CEA Contest" to be held in the early fall.

The contest procedures are as follows: CEA members will nominate the girl of their choice by means of a nominating flyer. After a tally, the girls with the most votes will become the semifinalists. If too many girls are nominated at the first run, a voting flyer will be distributed.

The final drawing will be at random; the names of the finalists will be put into a hat and the winner drawn at the Christmas Dinner Dance. The only requirements are that all semifinalists must be in full agreement to becoming "Miss CEA" and must be present at the dinner dance.

Watch for a nominating flyer!

**COMSAT Jewelry**

Shopping early for Christmas this year? See Paula Hayes, Plaza Credit Union, or Linda Fariello, Room 2133, Labs, for satellite jewelry orders.

**CEA Services Grow**

The American Film Institute, which recently moved to L'Enfant Theatre, is offering CEA members a discount rate of \$7 membership fee per year (regular price \$10 per year). As a member, you will see a different film each night grouped by themes with at least two contrasting themes running concurrently. A small amount is charged for each movie in addition to the membership fee.

Among the programs now being planned are retrospectives on Swedish and British films; the work of Douglass Fairbanks, Sr., and Buster Keaton; and outstanding films of American independents tributed to the vintage years of major studios. Film-makers will be invited to introduce their work, to lecture and to hold informal discussions with members.

For further details, contact Betty Stover, Ext. 6144.

**United Buyers Service**

If you are contemplating the purchase of a new car, carpeting, furniture, appliances, fabulous furs, or photo equipment, CEA has made arrangements for you to check with the United Buying Service for purchases at wholesale or slightly above wholesale cost. Just pick up the telephone and call the United Buying Service Office in Chevy Chase, Maryland (657-1920) and they will refer you to the area's largest dealers. You incur no obligation when you call.



Crawford Booth, facilities supervisor, left, receives a safety award from Jim Silvus for his recent suggestion. Mr. Booth warned against possible injury when using the saber saw, which does not have a safety lock. Both men are at Etam.

**Contract Is Awarded To Philco-Ford Corp. For Monitoring Gear**

COMSAT acting for INTELSAT has awarded a \$798,433 contract to the Communications and Technical Services Division of Philco-Ford Corporation, Menlo Park, California, to install communications satellite monitoring equipment at four earth stations around the world. The earth stations are at Carnarvon, Australia; Fucino, Italy; Paumalu, Hawaii; and Andover, Maine.

The new equipment will be used to monitor satellite signal carriers to ensure continuous satisfactory transmission of communications traffic.

The contract calls for Philco-Ford to fabricate, deliver and install the monitoring equipment over 11 months. Delivery of the equipment is expected at Andover in six months, at Paumalu in seven months, at Fucino in eight months and at Carnarvon in nine months.

**News and Notes From Etam**

**By Deloris Goodwin**

Miss Beverly Budd from West Newton, Pennsylvania, joined the Corporation on August 17 as station secretary. She was previously employed at the Mellon National Bank and Trust Company in Donora, Pennsylvania. Everyone at Etam welcomes Miss Budd aboard.

William Adams, facility mechanic, was recently promoted to senior facilities mechanic.

William Bell has obtained his second class FCC license.

**ECEA Picnic**

The ECEA held its summer picnic on August 29 at Camp Horsehoe Recreation Area near Parsons, West Virginia. The weather was perfect and everyone took part in at least one of the activities, horseshoes, softball, swimming, and of course everyone's favorite sport—eating.

**Five-Year Awards**

*The following persons are scheduled to receive five-year service awards during October:*

General Counsel:

Peter M. Andersen, attorney, regulatory matters

Milton C. Nomkin, assistant general counsel for commercial matters.



# COMSAT Goes To the State Fair

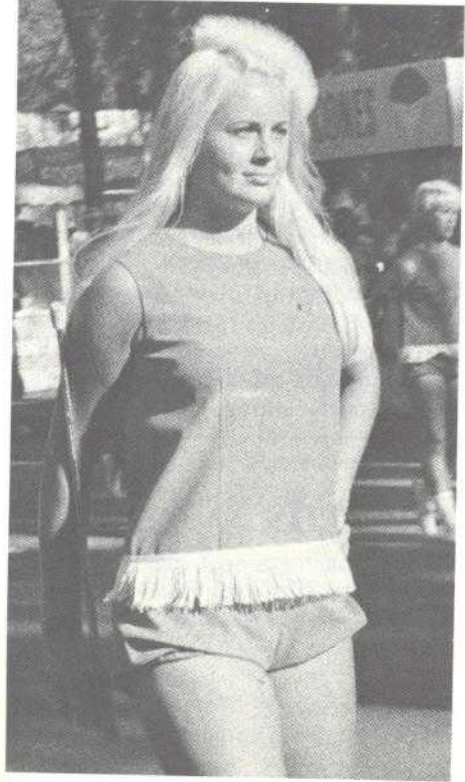
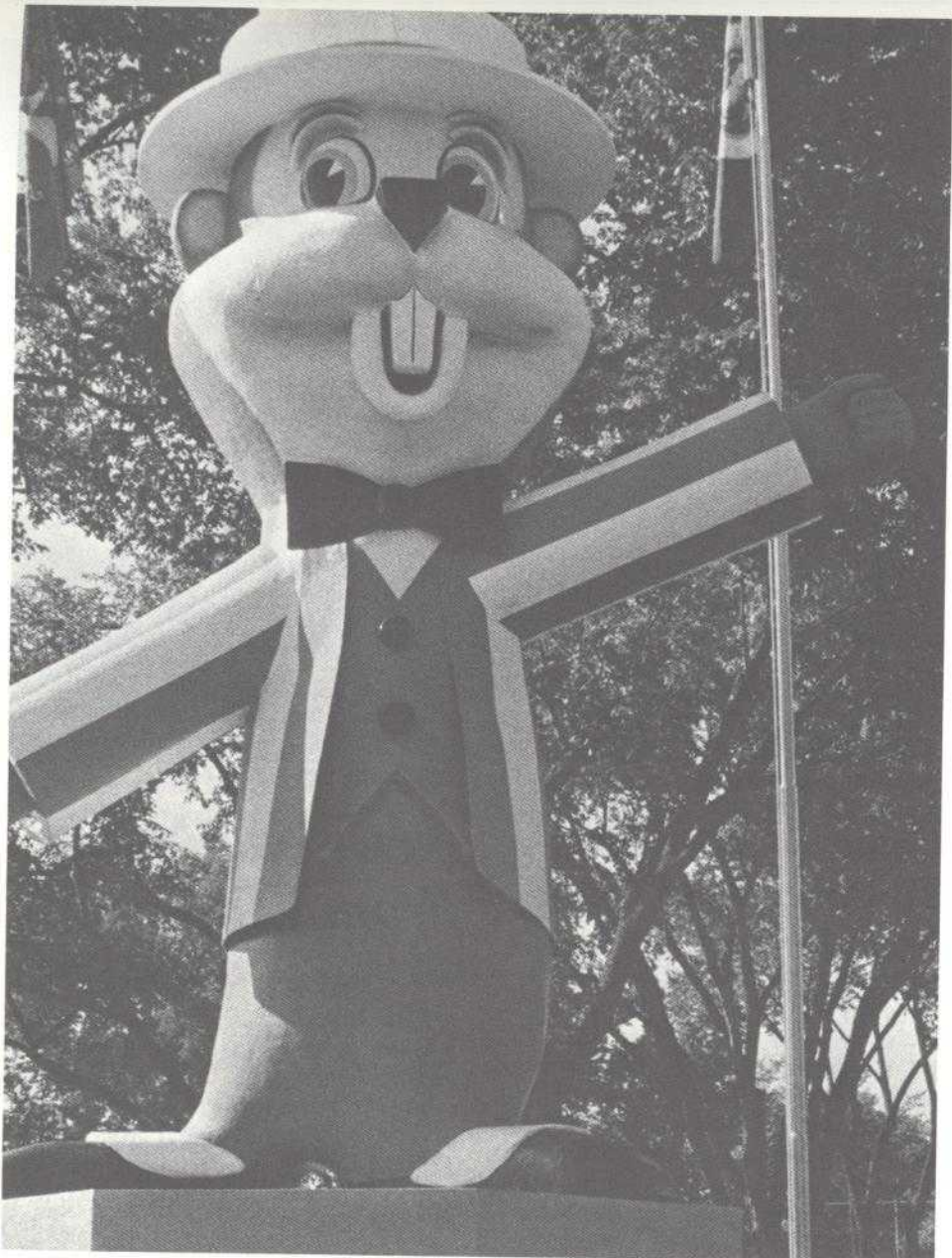
A full scale model of an INTELSAT III satellite was one of the feature attractions at the 1970 Minnesota State Fair. The 109th of its kind, the Fair was held in Minneapolis from August 29 to September 7.

Fair officials estimated that over one and a quarter million people visited the 10-day exposition and, on Sunday, August 30, a record-breaking 172,717 persons passed through the turnstiles.

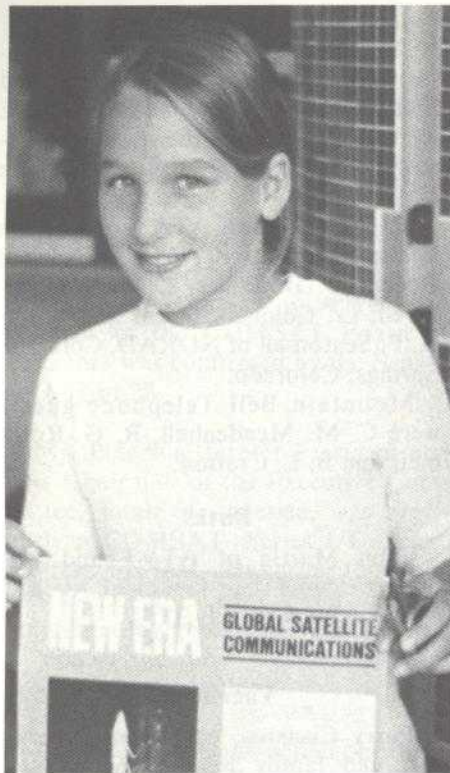
The INTELSAT III model was attractively displayed in a booth, surrounded by photo-murals describing its function and area coverage. Minneapolis station WCCO-TV staffers dispensed smiles and literature about COMSAT, INTELSAT and the global satellite system. Large signs indicated the way to thousands of curious fairgoers, while spot announcements on TV and radio exhorted listeners to "be sure to see the COMSAT display at the Fair."

Another model of the INTELSAT III has been touring Eastern European countries as part of a USIA exhibit, while two more are on permanent display at COMSAT Headquarters and COMSAT Labs.

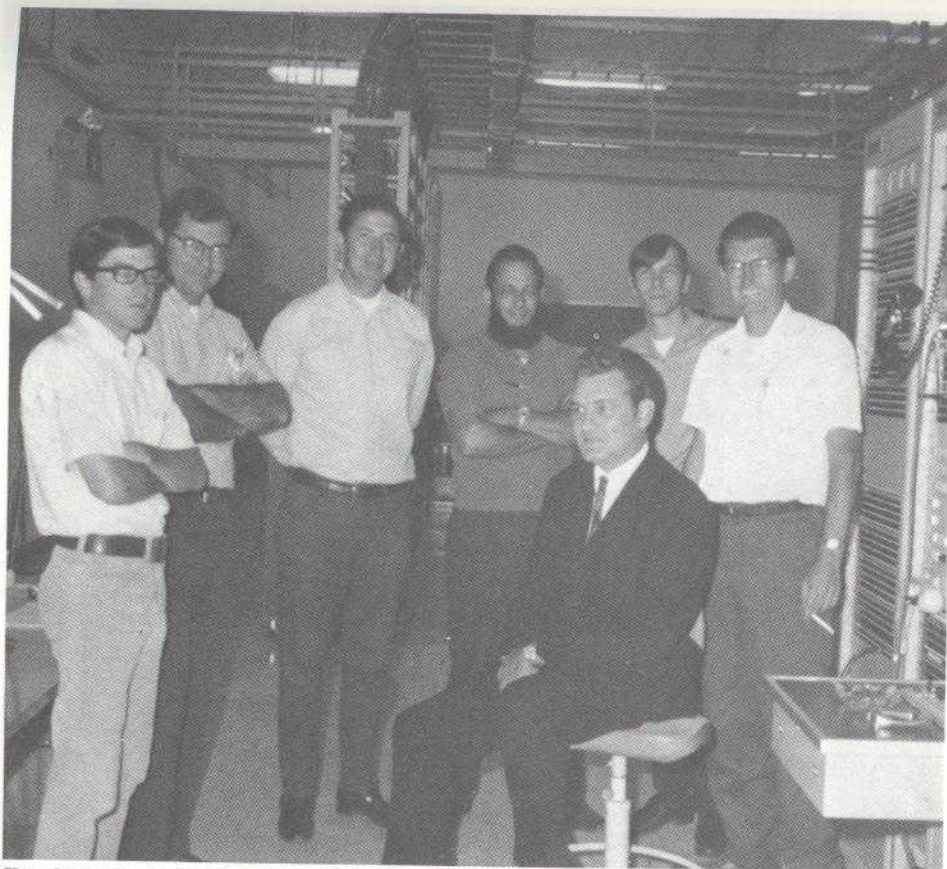
Allan Galfund, senior information officer, represented COMSAT. In addition to his other duties, Mr. Galfund also took the pictures for this article, including the magazine cover photo.











Employees enrolled in the Tele-Signal class taught by H. Emholtz, seated, are (left to right) James Clark, Vic Jeter, Larry Cisneros, Al Sousa, Larry Baley and Joseph Speek.

## News & Notes from Jamesburg

# In Memory of Varian Tube No.128

By M. Lee Dorsey

The end came quite suddenly with no warning of failing health, according to Jack Inman, electronics engineer. The "Grand Old Man" was installed in an REL transmitter by station personnel and will be sorely missed. The Varian TWT tube leaves behind a record of hours of operation that, according to the manufacturer, has never been equalled anywhere in the world. The remains are to be forwarded to the manufacturer for autopsy and, who knows, it may be revived yet.

In recognition of this significant event, Jamesburg received the following message from Marv Rosenbluth, headquarters manager, plant operations. "It is with great remorse that we note the passing of VTC666 serial number 128, after over 14,000 hours. We have observed with considerable joy its vitality in these waning hours of its long life time."

### Tele-Signal Equipment Installed

H. Emholtz of Tele-Signal Corporation conducted training classes at Jamesburg for Jamesburg and Bartlett personnel, August 24 - September 4. Operation and maintenance of the

Tele-Signal telephone and telegraph orderwire switching system were taught.

Larry Baley, James Clark, Lawrence Cisneros, Cecil Jeter and Joseph Speek of Jamesburg attended as well as Al Sousa of Bartlett.

When the satellite and terrestrial interface is completed this equipment will provide a more sophisticated means of orderwire service between Pacific Region earth stations and the International Operations Center in Washington, D. C.

### Visitors

Twenty-nine persons from the Richmond-San Pablo-San Francisco Bay area, VIP guests of AT&T public relations escorts, visited the station.

Senior management personnel from Western Electric Company, Denver, and PT&T, San Francisco, were taken on a tour through the station by John Scroggs.

Senior public relations personnel from PT&T, Sacramento and San Francisco, were given a station tour.

### VIP's Tour Station

William Hays, President of the California American Water Company, and four executive members of the IEEE were given a tour of the station by Assistant Station Manager Mike Downey.

F. G. Hellyer of AT&T and guests toured the station. Guests included General J. B. James, Colonel R. W. Ewell, Lt. Colonel Stevens and Major H. P. Sexton all of NORAD, Colorado Springs, Colorado.

Mountain Bell Telephone guests were C. M. Mendenhall, R. G. Rothmeir and B. L. Crafton.

### Births

John Martin of AT&T and wife Joan welcome their first child, Michael Warren, born on July 31.

### Vacations

Larry Cisneros, operations supervisor, and family went to Minnesota, while Mel Stauffer, operations supervisor, and family spent their vacation in Washington state. It was like being home for Mel, because he was at the Brewster station before transferring to Jamesburg.

Chuck Andersen, technician, and family visited family and friends in Oregon.

Station Manager John Scroggs and family returned from vacation at Orcas Island, Oregon. During their visit they bought a 14 ft. boat and trailer. Wonder if he plans to moonlight and run fishing excursions in the Monterey Bay?

### Personal Notes

Ruby Downey was hospitalized at the U. S. Army hospital at Ft. Ord, Monterey, California.

Joe Wirkkala of AT&T was hospitalized for surgery in the Herrick Memorial Hospital in Berkeley, California. After a four-week convalescence, he is slowly starting back at work.

Secretary Patty Blatnik's children, Kelly and John, took part in a beginners swimming class. They participated in a relay race during a local jamboree and both won first place ribbons.

### New Cachagua Residents

The Dorseys have finally made the big move. After driving sixty-six miles a day for two years they decided to move closer to the station. Really country living. . .log cabin, tree house and even a old fashion swimming hole. All that's needed now is a horse.



## Senate Approves Nixon's Nominee As Board Member

President Nixon's nomination of Rudolph A. Peterson to serve as a member of the COMSAT Board of Directors was confirmed by the Senate on August 28.

Mr. Peterson, former President and now Chairman of the Executive Committee, Bank of America, was previously a COMSAT Series I Director. He resigned that seat earlier this year.

Subsequently, Mr. Peterson was nominated by President Nixon to serve as one of the three presidentially appointed board members.

Before the Senate action, hearings were held on Mr. Peterson's nomination before a Senate Commerce Subcommittee on August 25. At that time, Chairman John O. Pastore, Democrat of Rhode Island, referred in opening remarks to the current INTELSAT negotiations and the pending domestic satellite system issue.

Sen. Pastore said:

"Currently the United States and other member nations of the International Telecommunications Satellite Consortium are meeting in a plenipotentiary conference to adopt definitive arrangements for a global satellite system. I have repeatedly urged that the United States not give away its birthright in these negotiations, and I mention it again today not only to emphasize my concern but to impress its importance on Mr. Peterson and all the members of the Board of Directors of the Corporation.

"Despite our leadership in international satellite communications, a domestic satellite system for the United States is still not a reality. The reasons, of course, are not technological, they have to do with matters of policy. Nevertheless our failure to have such a system is a loss to the American people."

In addition to Mr. Peterson, the other two Presidentially appointed Directors now on the COMSAT Board are Frederick G. Donner, former General Motors Chairman, and George Meany, AFL-CIO President. Eight Series I Directors are elected by public shareholders, and four Series II Directors by carrier company shareholders.



Singles champion Carl Wenrich, left, and runner-up George Szarvas, second from left, watch presentation of the Irving Novgrad Trophy to Jay Levatich, captain of the Labs team, which won the team competition this year. Stan Schachne, representing the Plaza team, relinquishes the trophy, which the Plaza won last year.

## Wenrich Wins Tennis Singles Crown Then Wins Doubles With Williams

If at first you don't "win it all," they say in sports, then try again.

A Procurement Officer assigned to the Labs, Carl Wenrich, did just that this year to win COMSAT's annual singles and doubles tennis tournament.

Wenrich claimed his second straight singles title and won the doubles crown—the championship that escaped him a year ago—along with his partner, Henry Williams, a Labs technician.

But the "win it all" maxim worked against George Szarvas. He and Jay Levatich, both Labs' engineers, fell by the wayside in semi-final action in defending their doubles crown, and Szarvas, just as he did a year ago, lost the singles final to Wenrich.

On their way to the doubles laurel Wenrich and Williams ousted Lavatich and Szarvas in two straight semi-final sets, 6-3 and 6-2. In the doubles final, Wenrich and Williams downed Tony Bingham, Labs, and Ed Jordan, Technical, 7-5 and 6-0.

Wenrich, however, needed three sets to turn back Szarvas in the singles final. Szarvas won the opening set, 7-5, but Wenrich came back with 6-0 and 6-1 victories.

The champions have already received trophies from the CEA, which sponsored the single elimination tournament, played during August and early September.

A total of 36 players entered the singles competition, an increase of nine over a year ago, while 16 teams competed in doubles play, up four from last year.

Levatich served as tournament director for singles play while Dick McBride, Technical, had a similar role for doubles.

It marked the third straight year that the CEA has run a COMSAT singles tourney and the second time for doubles action.

Results of all matches:

### SINGLES

#### First Round

Carl Wenrich, procurement, defeated Henry Meyerhoff, Labs, 6-0, 6-1.

Jeff Rubin, Labs, won by default over Dan Flynn, Personnel.

Alan Kasper, Legal, defeated Margaret Poock, Operations, 6-0, 6-2.

Jay Levatich, Labs, defeated Ray Sicotte, Labs, 6-3, 6-1.

Ed Jordan, Technical, defeated Kishore Chitre, Labs, 6-0, 6-0.

Dick McBride, Technical, defeated Marty Fliesler, Legal, 6-2, 6-0.

Henry Williams, Labs, defeated Hugh Hutchens, Labs, 6-1, 6-0.

James Dunlop, Labs, defeated Raph Loffredo, Labs, 6-1, 6-1.

Lee Battle, Technical, defeated Marcellus Snow, International, 6-2, 6-1.

Tony Williams, Labs, defeated Tom Payterson, Labs, 6-0, 6-1.

Tony Clark, Labs, defeated Kay Smith, Information, 6-0, 6-0.

(See Tennis Results Page 17)



# IWG Resumes Meetings in Washington, D.C.

The Intersessional Working Group of the INTELSAT conference resumed its discussions recently in Washington on draft documents to govern the development and operation of a global satellite communications system. Approximately 40 member countries were on hand for the sessions, which are scheduled to continue until October 2.

Ambassador Abbott M. Washburn continues as Chairman of the U. S. Delegation. Representing COMSAT are Philip W. Buchen, Richard Colino, Thomas Donahue, Jr., William English, John Johnson and Lucius D. Battle.

State Department representatives are Alden Lowell Doud, William Miller, Ward Allen, Bromley Smith, and Franklin Willis.

Asher Ende and Robert Greenberg are representing the Federal Communications Commission.

## Bartlett CEA Elects First Officers

The members of the Bartlett CEA have elected the following to office: President—Larry McKenna, Vice President—George Furford, Vice President Social—James Shaff, Secretary Treasurer—Pat McKenna. The BCEA is considering plans for a 'pre-hibernation' party before the first snowfall which incidentally won't be too long from now.

## Flying High

A charter has been written for the formation of the Talkeetna Flying Club. The idea of a flying club was formulated by Bartlett personnel interested in obtaining their private licenses at a reasonable cost. Seven Bartlett employees and four FAA employees will be charter members. We are negotiating for the purchase of an aircraft and the services of a licensed instructor.

Due to our closeness to Mt. McKinley Park we have had several climbing parties from Japan visit out station. We have also had visitors from England and France. We have conducted 170 tours for visitors since going operational.

For all DX'ers on SSB, Merle Albert, formerly at Andover, is now operational on 20 meters K1ZOZ Portable KL7.

We have been treated to spectacular displays of the Northern Lights during the last few nights. This apparently



The Bartlett station at Talkeetna, Alaska, is surrounded— by trees that is, and beautiful mountain scenery.

## News and Notes From Bartlett

# Bartlett is Off to Lively Start

By James Shaff and Larry McKenna

Now that the initial burst of activity has subsided somewhat, we would like to take a few lines to introduce ourselves and tell you a little about our new earth station.

There are fourteen men manning our station, eight experienced old hands and six new Alaskan employees. The new technicians are teamed with experienced technicians and are rapidly being exposed to all phases of earth station operation and maintenance.

### Living at Talkeetna

The area around Talkeetna is a sportsman's paradise, and most of the employees have taken their limit of silver salmon, dolly varden and grayling. Moose have been sighted outside the perimeter fence and at least one black bear has left his footprints inside the entrance of the mechanical room.

Five snowmobiles have been purchased by station personnel so far, and as soon as the snow falls, the silence will be shattered. Commuting to and from work by snowmachine may seem

unusual, but it is practical here. The three-mile-long road leading to the station winds around several lakes and is a beautiful drive any time of the year.

The contractor is working on the interiors of the COMSAT houses now, and families will be moving into their new homes shortly. Several employees have purchased land and/or trailers and live in the Talkeetna area, only a ten-minute drive from the station.

Technician Al Sousa departed from Bartlett on August 23 for Jamesburg to attend two weeks Tele-Signal training on the new ESC equipment. Al's wife, Pat, accompanied him and will be enjoying her first vacation "outside" in several years. Pat will also spend a week in Las Vegas visiting her father before returning.

### Five-Year Award

Bartlett Station Manager Bill Patterson received his five-year pin on the same day Bartlett went operational. Bill is the only recipient of this award at Bartlett.



# News of People at Headquarters

By Judy Holmes

Lance Boerner, purchasing, and wife Liz have left the Corporation and moved to Philadelphia, where he plans to enter dental school.

A going away luncheon was given for Barbara McMahan, internal audit, at the Gangplank restaurant. She is returning home to California.

Vernell Yarborough, Finance, has returned to the office after maternity leave. Vernell had a baby boy, Troy, born June 27.

Carol Louthan, Labs, is back at work after giving birth to a son on July 23. The baby was named John Christopher.

Ruth Sickel, Labs, married John Swort on September 5 in Gaithersburg and honeymooned in the Pocono Mountains.

Bill Byrnes and Cathy Rollings, both of International, were married on August 15 at St. Dominic's in Washington. A party was given for them by their fellow employees and a gift of crystal was presented.

Barbara Rensco, Operations, married Ltjg. William F. Grant at Bolling Air Force Base on September 19. They spent their honeymoon visiting Williamsburg and the Shenandoah region.

Peg Walker, Finance, is recovering from surgery performed September 8 at Suburban Hospital.



Officials from the Department of Defense, representing a portion of a worldwide communications network, recently received a briefing at Headquarters. Larry Covert, right, explains the Operations Center.

## *Ecos de la Montana*

# CCEA Elects Officers For Year

By Luis Rodriquez

John Gonzales is the new CCEA president, supported by Efrain Flores, vice-president. Both were elected to office at the Annual CCEA meeting held on September 11.

Others elected to office at the same

time were Elfren V. Castro, treasurer, and Emiliu Rodriquez, member of the board. Miss Ada A. Gonzales was named to her second term as secretary.

Last year's President Luis Medina addressed the group and especially the board members with praise for the work done in the previous year. Among the social events and projects of the CCEA, Mr. Medina made special mention of the savings and checking account the CCEA initiated with the Banco Popular of Cayey, Puerto Rico.

Refreshment and "lechón asado" with "guineo" were served after the meeting. Also, a raffle among the members resulted in the lucky winner, Lee Jondahl, taking home a bottle of rum and two cases of soft drinks.

## From Page 15

### Tennis Results

Bill Lowe, Labs, defeated Tony Buige, Labs, 6-2, 6-3.

George Szarvas, Labs, defeated Ernie Robertson, Labs, 6-0, 6-0.

Bruno Blachier, Labs, defeated Frank Osha, Legal, 6-1, 6-2.

Bob Brown, International, defeated Burt Edelson, Labs, 6-0, 6-2.

Tony Bingham, International, defeated John Ball, Technical, 6-3, 6-3.

#### Second Round

Wenrich defeated Rubin, 6-0, 6-0.

Levatich defeated Kasper, 6-2, 6-0.

Jordan defeated McBride, 8-10, 6-1, 6-2.

H. Williams defeated Dunlop, 6-4, 7-5.

T. Williams won by default over Battle.

Clark won by default over Lowe.

Szarvas defeated Blachier, 6-0, 6-0.

Bingham defeated Brown 6-1, 6-2.

#### Quarter-finals

Wenrich defeated Levatich, 6-4, 6-2.

H. Williams defeated Jordan, 6-1, 6-2.

Clark defeated T. Williams, 6-0, 6-3.

Szarvas defeated Bingham, 6-4, 8-6.

#### Semi-Finals

Wenrich defeated H. Williams, 6-0, 6-1.

Szarvas defeated Clark, 5-7, 6-0, 6-1.

#### Final

Wenrich defeated Szarvas, 6-2, 6-3.

In elimination matches to enter the first round Meyerhoff won by default over Tom Tuttle, Legal; Chitre defeated Frank Klish, Technical, 6-3, 6-2; Snow defeated Tom Dobyms, Labs, 7-5, 6-2 and Robertson defeated Renate Pawlik, Finance and Administration, 6-0, 6-0.

#### DOUBLES

##### First Round

Wenrich and Williams defeated Sicotte and Tom Dobyms, Labs, 6-3, 6-0.

Lowe and T. Williams defeated Joachim Kaiser, Labs, Loffredo, 6-1, 6-1.

Szarvas and Levatich defeated Rich Colino and Dick Mizrack, both of International, 6-1, 6-0.

Clark and Dunlop defeated Hutchens and Rubin, 6-0, 6-0.

Bingham and Jordan defeated Margaret Pocock and Paul Troutman, Operations, 6-1, 6-2.

(See Tennis Results, Page 20.)

#### Personal Notes

The home of Lee Jondahl, chief engineer, is enlightened by the birth of a baby boy. Esteban Francisco weighed 6 lbs. 4 oz. and was 20 inches long at birth.

The personnel at Cayey take this opportunity to wish the Otto Irizarry family deepest sympathy for the death of Mrs. Irizarry's father, Jose Bravo Acevedo, who died at Aguadilla on August 28.





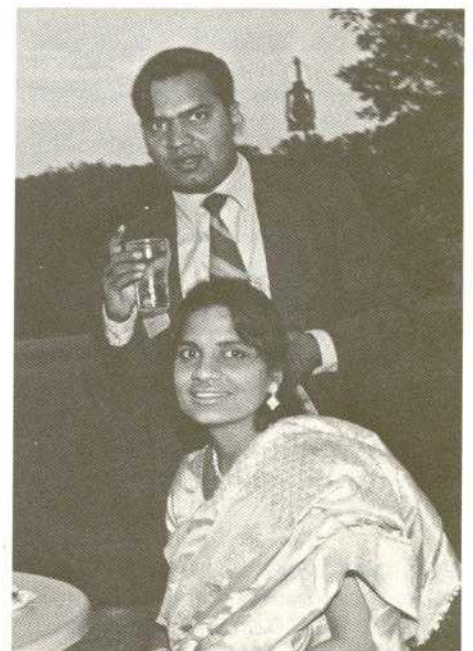
## *Labs Anniversary Feted*

*Four hundred CEA members and guests danced to the music of "The Debonnaires" Friday night, September 11, celebrating COMSAT Labs First Anniversary.*

*The Labs cafeteria, dressed in blue and white, and the patio sprinkled with colored torches, set a pleasant and relaxed atmosphere.*

*The Hot Shoppes catered an excellent selection of delicious hot and cold hors d'oeuvres. In addition, five bartenders, who never got a rest, encouraged the relaxed pace.*

*Highlighting the evening was the cake-cutting ceremony in connection with the anniversary. Dr. Joseph V. Charyk and Labs Director Wilbur Pritchard were given the honors. The huge sheet cake, sporting an INTELSAT III satellite cake decoration, carried out the blue and white theme.*







## Awards Ceremony

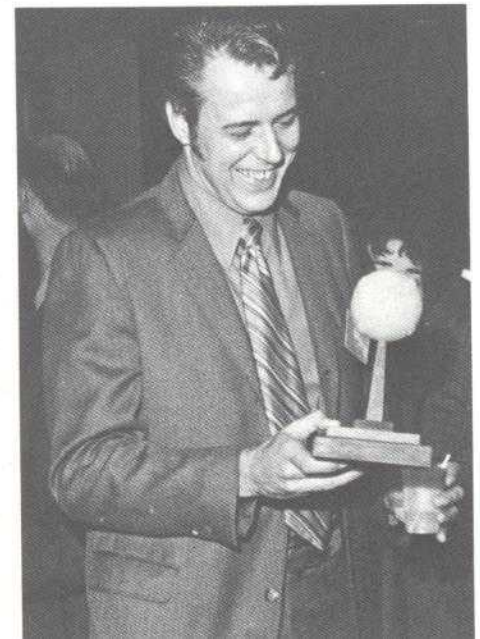
During the party, Carl Wenrich was awarded the trophy for the top player in the tennis singles tournament. George Szarvas, runner-up, received the second place award.

Jay Levatich, head of the Labs tennis team, was presented the Irving Novgrad Award for the Labs victory over the Plaza. Stan Schachne accepted the gold plated broken tennis racket mount presented by the Labs to the Plaza team. Last year this racket (minus the gold plate) was proudly hidden at COMSAT Labs.

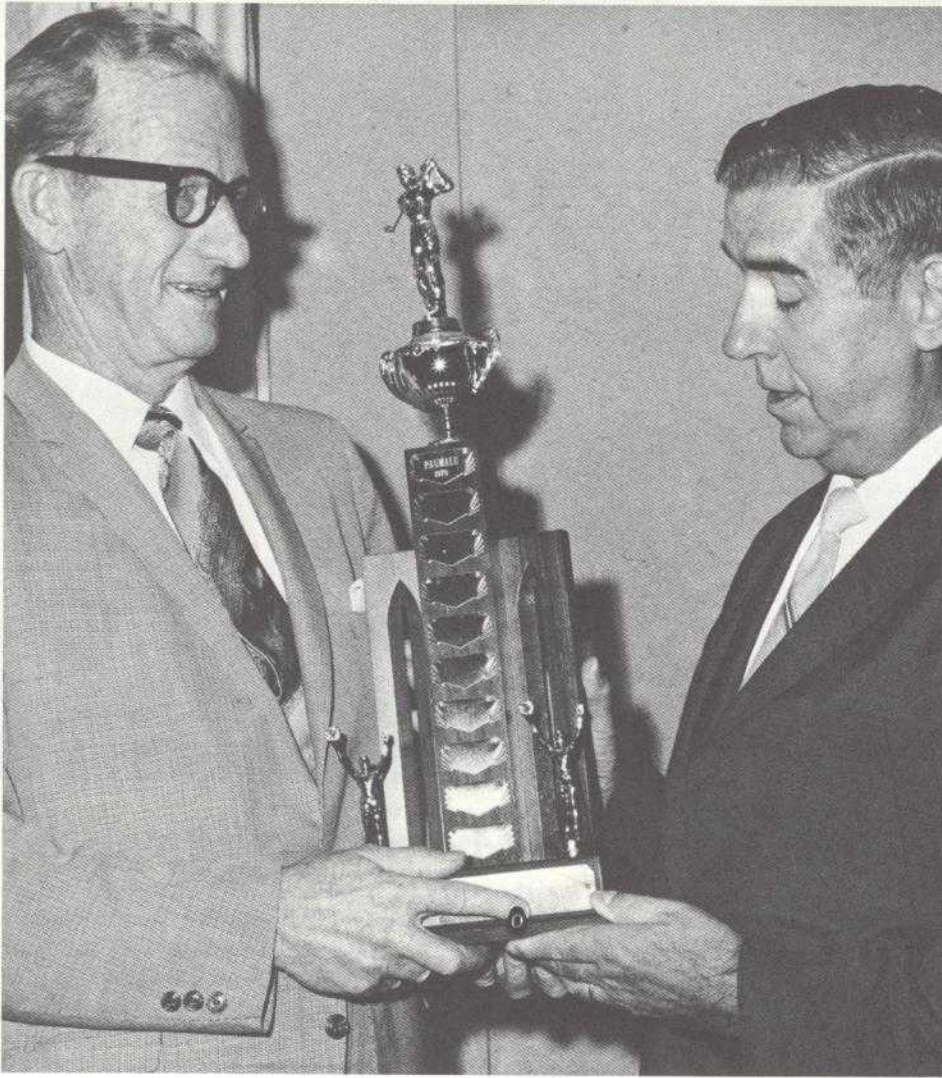
The last trophy, a very bright "hot red" softball mount went to Charles Dahl, manager of Labs "Red Hots" softball team for their perfect "0" score.

Door prizes including bottles of good cheer and COMSAT satellite jewelry, were given to numerous lucky winners.

A delightful evening it was, thanks to chairman Bob Cool and his many assistants.







Gen. George P. Sampson presents the Operations Golf Tournament team trophy to Station Manager Glenn M. Vinquist, who represented the winning Paumalu team of Castor Corpuz, Stan Holt, Les Goya and Paul Motoyama.

## Paumalu Wins First Operations Golf Tournament

The fearsome foursome of Paumalu rounded up the first place team trophy in the first annual Operations Open Golf Tournament. Castor Corpuz, Stan Holt, Les Goya and Paul Motoyama turned in a net team score of 294, three points better than the second place Headquarters team number three (297).

Other teams participating in the Operations Open were Andover (303), Headquarters one (304), Headquarters two (305), Jamesburg (307) and Etam (311).

The tournament, open to all operations personnel, was played over a two week period in August and offered prizes for the low gross, low net and best team score.

### Corpuz, Burks Winners

Castor Corpuz, Paumalu, won the trophy for the lowest gross score, 73, while Dave Burks, Headquarters, took the honors for the lowest net, 72. Both men will receive a trophy.

General George P. Sampson presented the team trophy during the station managers meeting September 14-18 to Station Manager Glenn Vinquist, who represented the Paumalu team. Paumalu will keep the trophy until next summer, when the title and trophy will be offered in competition again. Members of the winning team also received suitably inscribed individual trophies.

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## Tennis Results

Fliesler and Tom Tuttle, Legal, defeated Buige and Patterson, 6-4, 8-6.

Don Graul, Operations, and McBride defeated Osha and Kay Smith 6-2, 6-1.

Brown and Kasper defeated Charles Baer, Technical, and Irv Goldstein, Legal, 6-0, 6-0.

### Quarter-finals

Wenrich and H. Williams defeated Lowe and T. Williams, 7-5, 6-2.

Szarvas and Levatich defeated Clark and Dunlop, 6-4, 7-5.

Bingham and Jordan defeated Fliesler and Tuttle, 6-2, 6-4.

Brown and Kasper defeated Graul and McBride, 6-1, 5-7, 6-0.

### Semi-finals

Wenrich and H. Williams defeated Szarvas and Levatich, 6-3, 6-2.

Bingham and Jordan defeated Brown and Kasper, 6-2, 6-8, 9-7.

### Final

Wenrich and H. Williams defeated Bingham

## Sports Go Big, and Little, Too As Demand Grows For Satellite TV

Broadcasters have booked almost 140 hours of time on the Pacific satellite to televise this season a full schedule of professional football games to Hawaii.

The three competing TV stations in Honolulu representing the three major commercial networks will broadcast the games live and in color from the mainland starting in September and running through January 24. An opening game between Dallas and Philadelphia on September 20 was seen by Honolulu home viewers in "living color" on a Sunday morning beginning at 9 o'clock.

Two of the Honolulu stations will broadcast different Sunday games, sometimes at the same hour, offering Island sports fans a choice on the dial. The third Honolulu station will broadcast professional football played on the

mainland on Monday nights.

### Little League World Series

In August, the INTELSAT III Pacific satellite was used to telecast games from the site of the Little League Baseball World Series at Williamsport, Pennsylvania, across the Pacific to the Republic of China.

To watch the 11- and 12-year-old players for the Chiaya Tigers, viewers in Taipei had to sit up until about 3 a.m.

The satellite system's won-lost record suffered when the Taiwan team lost the opening game to Nicaragua, 3-2. Taiwan broadcasters had optimistically booked 13½ hours of satellite time, but cut this down to a total of 6 hours when their team failed to make the finals. The winner of the eight-team series, held annually, was a team from Wayne, New Jersey.