

Construction Of STL 'R&E Center' Progressing Swiftly

Bldgs. R1, R2, E Now Under Way

Construction is progressing swiftly on STL's ultra-modern Research and Engineering Center in Redondo Beach, according to Philip M. Lawhead, Project Manager. Three of the 10 buildings planned are already begun: Research 1, Research 2, and Engineering.

The first phase of the Complex will include seven more buildings: three two-story research buildings of the same type as R1 and R2, one single-story fabrication, assembly, and test building, a three-story service building, an auditorium-library, and an eight-story administration building. The engineering building already started will be five stories high.

Lawhead explained the actual state of development of the buildings. "R1 is the farthest advanced," he said. "As of today's date its basement is complete, the entire first floor has been poured, and half the shoring and forms for the second are complete."

"R2's basement is also complete," Lawhead continued, "half of its first floor is poured, and the shoring for second floor forms

(Continued on Page Four)



Space Technology Laboratories, Inc. Research and Engineering Center Redondo Beach, Calif.

Minuteman Successful In First Test Launch From Canaveral

STL-Engineered ICBM Flies 4000 Mi., Hits Target

First information indicated that the Minuteman ICBM "did everything right" in its initial free-flight launch last Wednesday, 1 February, from Cape Canaveral, according to C. W. Besserer, Associate Director of the Minuteman Program Office. Dr. Robert R. Bennett, Program Director, headed the STL team at the Cape providing test direction.

The U.S. Air Force solid fuel missile system, for which STL provides system engineering and technical direction under a Ballistic Missile Division contract, sent its nose cone approximately 4,000 miles downrange, where it landed within the chosen impact area, Besserer said.

"The flight followed the programmed trajectory, and all objectives previously planned for the launch were accomplished," he reported, adding, "Each subsystem operated entirely satisfactorily also, as far as could be ascertained from early reports."

Other leading participants in the STL Minuteman effort are Harold Hirsch, missile design project engineer; Dr. J. R. Burnett, in charge of guidance and control development; R. C. Anderson, who had responsibility for solid engine development; K. A.

(Continued on Page Eight)

Large Turnout Seen For CC Engineers' Lunch 21 Feb.

A large turnout is expected for the Los Angeles Chamber of Commerce National Engineers' Week luncheon set for 21 February at the Chamber Building, according to James Rector of the STL Public Relations Department, STL Coordinator for the event. He urges MTS planning to attend to make reservations with him now to avoid disappointment in the event of a sellout.

"Staff members should contact me for reservations on Ext. 177, OR. 2-0161, by 15 February and then purchase and receive their

Vol. 3, No. 4

F. W. Hesse, D. G. Fladlien To Head New Company Unit 'STL Products'

Formation of STL Products, a new division of the Company which will commercially market scientific and technical devices developed from STL research in space and missile technology, was announced last week. Frederick W. Hesse, Vice President for Administration and Finance, will take the additional post of Director of STL Products, and David G. Fladlien has been named Director of Marketing.

New Contract For STL With WADD, ARDC

The award of STL's first direct study contract with ARDC's Wright Air Development Division, located at Wright-Patterson Air Force Base, Ohio, was announced late last week by STL Director of Contracts Don Pitts.

The contract is for study of techniques for analysis of non-linear control systems for space vehicles.

Principal investigator on the study will be Dr. Erdem I. Ergin, Controls Systems Department, Electromechanical Laboratory, Flight Control Laboratory of WADD will technically monitor the contract.

NASA To Give Shot Data Prior To Launch Under New Policy

In the future NASA will release full information for publication in advance of its shots, National Aeronautics and Space Administration Administrator T. Keith Glennan announced recently. Such information has been published only after launches in the past.



monthly newspaper for employees

SPACE TECHNOLOGY LABORATORIES, INC.

FTO EDITION

STL Flight Test Operations Cape Canaveral, Patrick AFB

6 February 1961

TASK FORCE FORMED:

OGO Project Personnel, Organization Described

Organizational arrangements, including personnel and responsibilities, for the STL task force to guide the Company's new NASA Orbiting Geophysical Observatory (OGO) contract were announced last week by Dr. Adolf K. Thiel, Director of Space Systems Management and Dr. George J. Gleghorn, Program Director for OGO.

Gleghorn will direct the operations of about 18 staff members and appropriate support personnel. The task force is divided into four sections, each to be directed by an Assistant Program Director. The sections are:

Design and Development - Paul F. Glaser, Assistant Program Director.

Project Control - Howard Y. Wong, Assistant Program Director.

Fabrication, Integration, and Test - E. Thomas Wiggins, Assistant (Continued on Page Five)

STL Policies Pay \$886,616 Claims To STLites In '60

A record sum of more than three-quarters of a million dollars in Group Insurance claims was paid to STLites and their dependents during the 1960 policy year, according to the Personnel Benefits Office.

The combined claims were up 50% over the 1959 total.

Largest single portion of the \$886,616 total in the figures for 1960 consisted of payments for hospitalization. This was the breakdown -

Hospitalization: \$374,454
Maternity, accident, and major medical including surgery: \$236,986
Life and accident: \$145,000
Weekly disability: \$130,176

The jump in claims, particularly in the Group Hospital-Medical program was attributed to several factors: (1) The rapid growth of STL; more employees and their dependents utilized the program; (Continued on Page Six)

Insurance Report Continued

A detailed three-part report of STL's Group Medical Insurance Plan is continued on Page Two of this issue in "Know Your Benefits." Also, for further information regarding the most recent changes in the Plan, please refer to the 30 January Readout.

FTO Plans Valentine's Dinner-Dance Friday

STLites at Flight Test Operations are lining up baby-sitters, shining shoes, and otherwise getting ready for the big all-FTO Valentine Dinner-Dance set for next Friday night at the Bahama Beach Club in Indiatlantic.

Jim Appledorn, over-all chairman of the affair said the cocktail hour will begin at 6:30 p.m. and buffet dinner will be served from 7:30 to 11. John Bolen and his orchestra will play until 1 a.m.

Dinner will be \$2.75, and tickets are available from Jack Carney, Judy Wright, Diane Smith, Helen Layman, Nadine Phillips, Bob Herring, and still others since press time. Decorations and door prizes will add spark to the evening. Dress: semi-formal.

TRW VP To Remain On USAF Scientific Advisory Board

Dr. Burton F. Miller, TRW's Vice President and Director of Advanced Technical Planning, has received a three-year extension of his appointment to the U.S.A.F. Scientific Advisory Board.

141 STLites At R&D Center Lunch

New five-year STLites, 141 of 180 eligible, were honored 11 January at a luncheon at the R&D Center cafeteria for having completed five years of service with the Company.

The complete story of the luncheon was published in the 16 January Readout, but a photo of all but eight of those at the (Continued on Page Six)

EDITORIAL

Fighting Home Front

Public service commercials on radio and television in behalf of Radio Free Europe remind us daily that Khrushchev predicts that the American children of this generation will live under Communism. They suggest that to help win the battle against Communism we must strike behind the iron curtain with contributions to keep RFE in operation, beaming its messages to the people of Russia and the captive nations.

Let us pause for a closer look at the battle against Communism, and a determination of where the front line — the battle front — is today. The answer is, *it is everywhere in the world; it is right here.*

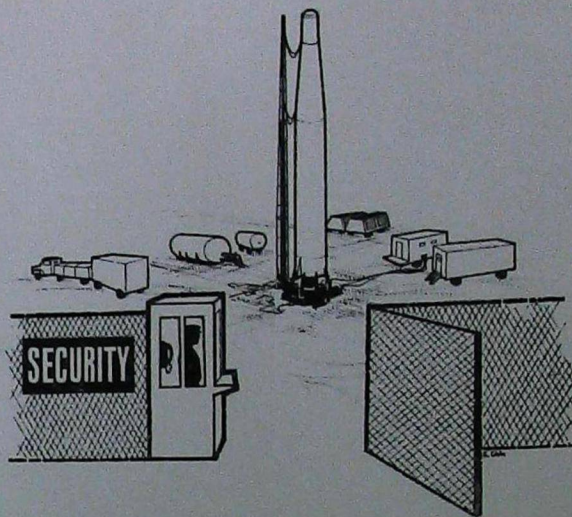
The penetrating strategic attack in depth is important, but today we must not overlook the necessity of a fighting home front. Our operations here can begin to thwart the interests of those who weaken and destroy democracy wherever possible, just as the truths broadcast by RFE hamper Communism's grip on the people it has enslaved.

Pseudo-sophisticates attempt to belittle the threat of Communism. They ridicule our security programs, and they tend to stifle any direct, any overt effort to stimulate the counter-offensive against the "vanguard forces of Communism," as they were called by Marx and Lenin.

The steady advance of the "vanguard" depends on just such a casual and condescending attitude within the group it would penetrate. The cold calculation of purpose with which the Communists enlarge their web must be opposed with equally determined fervor on all fronts in the Free World.

As Radio Free Europe cuts into Communism in its stronghold, let us strive to make our stronghold impenetrable. This calls for a vigorous support of our democratic freedom, and a realistic acceptance of the threat we face.

It calls for action by all U.S. citizens nationally, locally, in the home, in the schools, and in business. We can start at STL with each of us supporting the theme, "Security is your responsibility at STL."



SECURITY — KEY GROUND SUPPORT



Joan Maeda (OSER) married Peter Smith (Guidance Research Laboratory) on 14 January in Hawthorne.

KNOW YOUR BENEFITS:

STL Group Medical Insurance Plan

As discussed in last month's Sentinel, the Company-sponsored Group Hospital Medical Insurance Program, designed to provide maximum coverage to employees and their dependents, is divided into two parts:

A Basic Plan provides initial coverage on accidents, up to \$300 (per accident), maternity coverage to a maximum of \$200 (if pregnancy begins after insurance is in force), hospital benefits consisting of room and board coverage of \$18 per day for as long as 70 days, and \$360 for miscellaneous hospital expenses.

A Major Medical Plan, commonly known as catastrophic loss coverage, provides protection up to \$7,500 for injured persons insured under the group plan.

Supplemental Accident Benefits

STL personnel and their dependents are covered for expenses up to \$300 each for bodily injuries sustained in non-occupational accidents. This protection reimburses up to \$300 for all injuries sustained in connection with any one accident for hospital, surgical, medical services, or registered graduate nurse services. Under provisions of the contract, benefits are not payable for services rendered more than 90 days after the date of the accident.

Any expenses in excess of those

reimbursable under the Supplemental Accident Plan will be considered as a covered medical expense under the Major Medical Plan and are subject to the annual contract's deductible and the co-insurance provisions (insurance company pays 80%; employee 20% of the medical expenses incurred).

Maternity Benefits

Reimbursement for maternity

benefits are applicable to a female employee or the wife of a male employee for all hospital, surgical, and medical expenses up to \$200 for each pregnancy commencing while insurance is in force. This includes normal delivery, miscarriage, and Caesarean section.

Major-Medical Plan

The Major Medical Plan reimburses 80% of covered medical

rolled in the V-12 Program at the University of Colorado, entering as a freshman in the summer of 1944. He studied electrical engineering and played what he calls "third to fourth string" football.

He received his bachelor's degree with special honors in June, 1947, and was commissioned an Ensign, but was not ordered to active duty. Then he went to Cal Tech and studied another year in EE to receive his Master's in June 1948.

At a University dance in 1945 he had met Barbara Joy Meadows, now Mrs. Gleghorn. They were married in Pasadena 12 June 1948, and by now number five instead of just two. The children are Beth, 8; Brian, almost 3; and Alice, 9 months. The family lives in Palos Verdes.

He somehow finds spare time for a little fishing, woodworking, and folk guitar playing ("... a most relaxing and enjoyable experience").

George decided in mid-1948 to accept an offer from Hughes Aircraft Company where he worked until 1950 on a simulator for the Falcon missile and a digital computer guidance system for manned bombers. It was at Hughes that he first met Dr. Dean Woodriddle, now TRW President, and Harper North, now president of Pacific Semiconductors. He served North as first assistant for two months.

In September '50 he was back at Cal Tech, working on his doctorate. Jet Propulsion Laboratory had his services the following summer — in airborne digital computers — but by the fall of 1951 the Korean war and the U. S. Navy conspired to put a temporary end to Gleghorn's

(Continued on Page Five)



DR. GEORGE J. GLEGHORN

Profile

The Program Director of STL's new Orbiting Geophysical Observatory (OGO) contract is Dr. George J. Gleghorn, age 33, quiet, imperturbable, possessed of a friendly manner, and the ability to organize and accomplish things fast.

If you search for traits which characterize George Gleghorn, one that becomes apparent is steady permanency. It shows up in the fact that he has been prominent in the Able Program virtually from its outset. He's been with STL since before separate incorporation and on back into the early R-W days.

Maintaining the pattern, he's a native Californian, born in San Francisco (27 May 1927), and his father is California-born as well. The elder Gleghorn was originally an electrician but is now in the real estate business in the Bay City.

George attended public schools there, developing an early interest in mathematics and physics, but enjoying football and basketball in his off-hours.

On graduation from George Washington High School he en-

STLite Dr. Phillip Karr In Duo Piano Benefit Concert

STL Electronics Division Physicist Dr. Philip Karr, by avocation an accomplished pianist, performed in a duo piano concert with Miss Collette Nance 15 January at her home in Hollywood Riviera. The event was for the benefit of the Harbor District Mental Health Service and the South Bay Mental Health Committee.

In addition to many selections for two pianos, each artist performed solos. Dr. Karr chose a group of 18th century pieces by Mozart, D. Scarlatti, and Paradis.

expenses (other than those reimbursed under the Basic Plan) after the first \$75 of such expenses for each insured family member during the calendar year.

If part of the deductible is established during the last three months of a calendar year, the next year's deductible is reduced by this amount.

Following are some of the charges included as a covered medical expense:

1. Charges of a physician or surgeon (M.D. or D.O.).
2. Charges of a registered graduate nurse, provided she is not an immediate relative or one who normally resides with the insured.
3. Hospital out-patient charges.
4. Charges for—
 - a. Drugs and medicines requiring a physician's prescription.
 - b. Diagnostic X-rays and laboratory examinations.
 - c. X-ray, radium and radio-active isotope therapy.
 - d. Anesthesia and oxygen.
 - e. Rental of durable equipment for therapy.
 - f. Artificial limbs and eyes, but not hearing aids, eye glasses, or eye examinations.
 - g. Extraction of impacted wisdom teeth.
 - h. Professional ambulance service from the place where injured or stricken to the first hospital where treated, but no other charges for transportation or travel.

Maximum Benefits

Lifetime maximum benefits payable under the Major Medical Plan are \$7,500 for each individual, and separately to each insured member of the family. Under new provisions of the contract which became effective 1 February, 1961 the amount reimbursed during the calendar year against the \$7,500 Major Medical maximum benefit of an insured family member will be automatically reinstated on 1 January of the following year to a maximum of \$1,000 annually. (Claim filing, doctor's charges, and conversion privileges will be discussed next issue.)

Professional Papers

Professional papers cleared for possible publication:

- A. N. Baxter
"A consumable case solid rocket," also cleared for oral presentation at ARS Solid Propellant Conference, Salt Lake City, Utah, February.
- C. F. Brett
"Hybrid transformers."
- J. A. Develet, Jr.
"Fundamental sensitivity limitations for second-order phase-lock loops."
- D. G. Douglas
"Vibration, shock, and acoustic noise associated with space vehicles."
- D. Douthett and I. Kaufman
"The unloaded Q of a YIG resonator from X-band to 4 mm."
- L. D. Ely
"Space Technology."
- R. P. Felgar
"Plastic analysis of the instability of pressure vessels subjected to internal pressure and axial load."
- S. N. Lehr and V. J. Tronolone
"The space environment and its effect on materials and component parts," also cleared for oral presentation at Professional Groups on Component Parts IRE, Los Angeles, California, December 1960.
- A. J. McMahon
"Space exploration, a continuing effort," also cleared for oral presentation at 30th annual meeting of the Society of Exploration Geophysicists, Galveston, Texas, 8 November 1960.
- Julius Miklowitz
"Transient compressional waves in an infinite elastic layer overlying a rigid half-space."
- C. T. Morrow
"Effect of detuning in coupled systems excited by single-frequency sweeps."
- L. W. Neustadt
"Time optimal control systems with position and integral limits," also "Simulating money allocation problems on an analog computer."
- J. L. Rogers
"A study of the thin film superconducting flip flop," also cleared for oral presentation at Western Joint Computer Conference, Los Angeles, California, May.

Professional papers cleared for possible presentation:

- A. V. Balakrishnan
"Sphere packing problem," Mathematics Teachers of the Los Angeles District, Los Angeles, California, 11 January.
- Paul Dergarabedian
"Missile performance," Long Beach Unified School District, Long Beach, California, 7 December 1960; also presented at General Leonard E. Thomas Squadron Air Force Association, Northridge, California, 14 December 1960.
- Nan Glennon
"Our concern with space," Theta Sigma Phi Regional Convention, Seattle, Washington, 5 November 1960.
- S. T. Nelson
"The plasma core reactor," Second Symposium on Engineering Aspects of Magnetohydrodynamics, Philadelphia, Pennsylvania, 8-9 March.
- J. E. Rittersbacher
"Steps into space," Knox Presbyterian Church Men's Group, Inglewood, California, 3 December 1960.
- Paul Seide
"On the buckling of truncated (Continued on Page Three)

SenTinel

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Editorial Offices: Bldg. 55, Rm. 5111 ORchard 2-0161; ORegion 8-0311 Extension 193

Terryl Dougherty, Manager Employee Communication Department

William Hincley

Managing Editor

Robert Crowe

Associate Editor

CORRESPONDENTS — Los Angeles: Marie Joyce, Jo Anne Schafer, Yvonne Hull, Sue Willard, Pat Bourdieu, Bob Wentworth, Elaine Olivera, Florence Conot, and Eleanor Rosenbaum. Canoga Park: Audrey Joyce. Cape Canaveral-Patrick AFB: Frederick Jay.

CIRCULATION: Earl Peters

PHOTOGRAPHY: Ed Killpack

Bill Ramey

ART: STL Graphic Design Group

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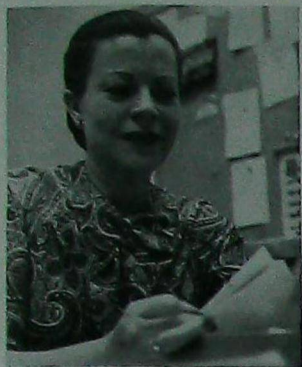
try this for NO. 28 A LOGICAL ANSWER

A college president, a professor, an instructor, and a janitor are named Mr. Brown, Mr. Green, Mr. White, and Mr. Black, but not respectively. Four students with the same names will be designated here as Brown, Green, White, and Black. The student with the same name as the professor belongs to Black's fraternity. Mr. Green's daughter-in-law lives in Philadelphia. The father of one of the students always confuses White and Green in class, but is not absent-minded. The janitor's wife has never seen Mr. Black. Mr. White is the instructor's father-in-law, and has no grandchildren. The president's oldest son is seven. What are the true names of the president, professor, instructor, and janitor? (Answer On Page Six)



T. I. C. Sets High Goals In Widening, Adding Services

"To meet today's needs, and to anticipate tomorrow's needs." This is the aim of STL's Technical Information Center (T.I.C.) as expressed to SenTinel last week by George Holmes, Manager of Technical Services. The ever-widening, ever-changing field of available technical literature turns this statement of ordinary efficiency into a challenge to test the mettle of the most competent librarian.



MARGARET SLOANE

3 USC Management Courses Announced

Three new evening courses in the USC "Training For Industry" program, two beginning this month and the other in May, have been announced by the University.

"Written Communication," taught by Henry E. Francis, will meet weekly, beginning tonight, for 12 weeks at the USC Civic Center location in the Mirror Building. "Effective reading" will have 12 weekly meetings also, taught by Warren Linville, beginning 17 February on the USC campus.

An "Advanced Leadership Workshop," co-sponsored by the National Management Association, will be conducted by Frank Shinner for 10 weeks beginning 3 May. It will meet in three sections: on the USC campus, in the San Fernando Valley, and in Orange County.

Further information on any of the courses is available from STL College Relations, Room 1362, Building C, Ext. 3446 R&D.

Professional Papers

(Continued from Page Two)

conical shells in torsion," Journal of Applied Mechanics, Los Angeles, California, 22 December 1960.

Dwight Weber
"Spectral emittance measurements near room temperature," Radiative Transfer from Solid Materials, Boston, Massachusetts, 13 December 1960.

New reprints available:
(No. 250) A. V. Balakrishnan
"On a characterization of processes for which optimal mean-square systems are of specified form," reprinted from IRE Transactions on Information Theory, September 1960.

(No. 248) B. D. Fried, M. Gellmann, J. D. Jackson, and H. W. Wylid

"Longitudinal plasma oscillations in an electric field," reprinted from Plasma Physics, 1960.

(No. 251) B. L. Hammon

"An application of random process theory to gyro drift analysis," reprinted from IRE Transactions on Aeronautical and Navigational Electronics, September 1960.

(No. 252) J. D. Jackson
"Longitudinal plasma oscillations," reprinted from Plasma Physics, 1960.

(No. 249) Vernal Josephson
"Instability mechanisms in transverse pinches," reprinted from Physical Review of Letters, November 1960.

(No. 247) J. W. Miles
"Low-frequency motion of bodies in an elastic wave field," reprinted from The Journal of the Acoustical Society of America, November, 1960.

Reprints available at Ext. 1477, Building F, Room 1406. For other papers listed, contact author.

Supporting the quiet atmosphere of the circulation and reading rooms on the second floor of Building C is a complex of unseen functions: acquisition, cataloging, retrieval, research, and translation relating to the material in T.I.C. Coordination of this activity is the business of a professional librarian.

Supervising Librarian, Margaret Sloane, her professional staff, and carefully trained support personnel constantly strive to meet the growing needs of STL's technical staff. "We are in the process of streamlining functions and planning a program for the expansion of materials and service which will lead to our goal of more complete informational support," reports Mrs. Sloane.

To aid in the planning and to help formulate policies most responsive to the needs of the Company, the STL Library Committee, composed of key members of the technical staff, has recently been re-activated. The members of the Committee, chosen to represent as wide a variety of interests as possible, meet monthly to discuss ways in which the Library can better serve its patrons.

Mrs. Sloane points out that one of the most pressing problems facing T.I.C. is to rapidly locate all available information on a given subject. "We will eventually put our subject information on computer tapes," she said. "It's still in the future, but we are working toward this goal."

In the meantime, members of the Subject Analysis Group are compiling a subject recall guide titled, *Guide to Subject Cataloging*. "When this guide becomes available, it will greatly aid members of the technical staff in their research efforts," Mrs. Sloane says. "Many members of the technical staff have found that the literature of the fields in which they are working is just too new to be properly presented in current popular indices and catalogs. We believe this guide will ease that condition."

Another phase of the current effort to streamline the functions of the Center is the recent reorganization of the Specifications and Standards service within the Restricted Literature Group. Its new name, "Government Directives," more accurately describes the material handled because, in addition to specifications and standards pertinent to the Company's needs, this group is in the process of adding Technical Orders, which are instructions from a contracting agency to a contractor on a production item.

Irene Pepper, head of the Restricted Literature Group sees these government directives as one of the most important kinds of information which the Technical Information Center will be able to furnish to STL personnel. These new Technical Orders are

McClintock Speaker at ASTD

"New Frontiers In Training" was the topic of Darwin McClintock, OSER, as he spoke 26 January before the Los Angeles Chapter of the American Society of Training Directors at Rodger Young Auditorium.



SPACIOUS AND COMFORTABLE, Technical Information Center stands ready to support STL projects with wealth of facts and with highly trained library staff to locate them among numerous stacks.

in addition to the more than 30,000 technical documents and all current specifications and standards now being handled by this group.

The problem of finding scattered but pertinent information in support of proposals and active contracts often presents a formidable obstacle to STL staff members. T.I.C.'s Advanced Research Group, headed by Lee R. Magnolia, offers search services to meet this need. A recent addition to the staff, Magnolia was engaged in a high-temperature research project before joining STL.

Another recent addition to the staff is Zbigniew Jakubski, in charge of Foreign Translations. Jakubski's background and command of Russian, French, German, and Polish makes him a vital member of the T.I.C. staff. His group actively supports all the Center's research projects through

translation of foreign literature, in addition to the translation service offered to members of the technical staff.

To help anticipate future needs, J. R. Trew, Assistant Supervisor of T.I.C., maintains an active liaison with the STL Contracts Department and its contracting agencies, determining what new information may soon be called for at the Center. Information obtained by Trew is correlated with the recommendations of the Library Committee, and with the requests being made by MTS to the Circulation Library and the Reports Groups. From this combined data a decision is made to strengthen the collection in certain fields. The library staff then makes a search of available material in these fields and places orders for that which is best adapted to expressed needs.

This same method is being used

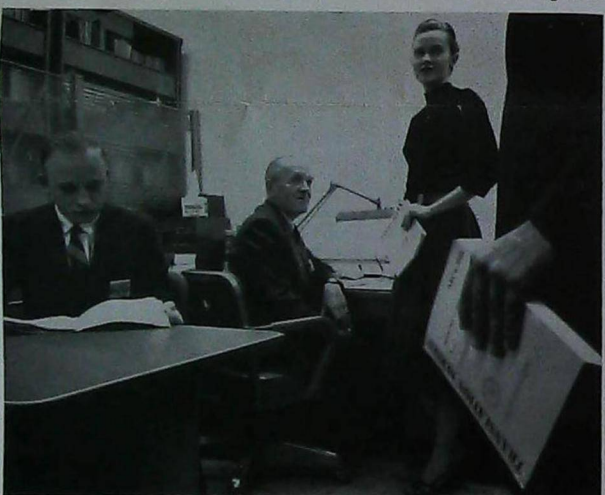
to broaden the collection in fields of general interest. In addition to strengthening the technical collection, material of interest to MAS in the fields of Administrative Management, Personnel Relations, Advertising, Publicity, and allied fields is being added.

Smaller local technical libraries rely heavily on the use of T.I.C.'s resources, and help is always extended wherever security regulations allow. Classified visits are often arranged by companies for the purpose of searching STL's restricted literature collection.

The Information Center is also furnishing, on a contractual basis, information service to Aerospace personnel in the area, as well as books, periodicals, and technical reprints.

T.I.C.'s accession lists are requested by many research organizations, both local and out-of-state. These publications, issued on the first and 15th of each month, list the new books, periodicals, and translations added to the collection, and are guidelines for other libraries in their selection of new materials.

Mrs. Sloane feels that the Technical Information Center, repository of STL's information resources, must keep pace professionally with all of STL's scientific growth. "We'll keep doing our best to match the quality of our service with the quality of STL's professional staff," she says.



TRANSLATING ABILITY is provided as Mrs. Pat Murphy, head of Open Literature Group, introduces STLite to T.I.C. Translator Z. Jakubski. Lee Magnolia, head of Advanced Research Group, is at left.

5 TRW Units Move To Canoga; Personnel Involved Total 200

Nearly 200 Thompson Ramo Wooldridge personnel are moving this month from various offices in the L.A. area and elsewhere to the Canoga Park complex, according to an announcement issued last month by TRW President Dr. Dean E. Wooldridge.

The TRW Computers Company, marketing and applications engineering organization for the RW-300 process control computer, formerly headquartered in Beverly Hills, will move to the valley location with about 120 people. Also moving from Beverly Hills will be approximately 12 members of the Electronic Components Group.

Some eastern elements of TRW's Educational Electronics Division have been transferred to Canoga Park, including several representatives of the wholly owned subsidiary Magnetic Recording Industries and Dage Television Division West Coast operations.

From Denver, Colo., about 50 R-W Division information display and Data Systems Laboratory personnel will transfer their functions to the valley headquarters, as will the TRW Microwave Division, located at Cleveland, O.

The show is seen at 6:30 p.m., local time, at most STL locations, except Vandenberg, where it is seen at 8:30 p.m. Consult local listings for channel.

Minuteman ICBM Featured On 19 Feb. 'Twentieth Century' Show, Partly Shot At STL

"Minuteman" is the title of the show to be presented Sunday, 19 February, on the CBS-TV news documentary "The Twentieth Century," according to a network announcement.

Film shot at STL and Associate Contractors' facilities will be shown in telling the story of the solid-fuel ICBM for which the Company provides system engineering and technical direction.

The show is seen at 6:30 p.m., local time, at most STL locations, except Vandenberg, where it is seen at 8:30 p.m. Consult local listings for channel.

Safety Pins



MR. AND MRS. REGGIE JONKERS (FTO), a boy, Craig Kenneth, 8 lbs., 9 ozs., born 2 January.

MR. AND MRS. JOHN L. PREKUP (Electromechanical Laboratory), a girl, Vicki Lin, 6 lbs., 15 ozs., born 30 January. First child.

MR. AND MRS. LEE H. ROTHMAN (Industrial Relations), a boy, Mitchell Alan, 6 lbs., 13 ozs., born 17 January. First child.

Pioneer V Model Has Busy Stay In Fresno

A scale model of the world's "travelingest" object, Pioneer V, just completed an exhaustive period of traveling entirely within the city limits of Fresno, Calif., according to James R. Rector, Public Relations Department.

It was displayed at all the city's schools and in the Fresno Museum between 10 and 31 January, Rector said. The planetoid model was a central feature of the Museum's "opening night" following a period during which the display center was extensively remodeled and its policy up-dated to more accurately reflect the space age.

Following the opening it was shown at the schools during the day hours and in the Museum at night. STL's cooperation with the Museum management was handled by Rector and William Trott of PR. They also provided photos of STL activities used by the Museum in conjunction with the model.

Cooperative Fellowship Program Applications Invited From MTS

MTS' applications will be accepted until 1 April for this year's grants under the STL Cooperative Fellowship Program for Graduate Study (CFPGS), the Educational Assistance Committee announced last month. Applications are available in the College Relations Office, Room 1362, Building G; Ext. 3446 R&D according to Gerald H. Backer, College Relations.

Plans Ready For Engineers' Week

(Continued from Page One)
South Bixel Street, downtown.
Dean Llewellyn M. K. Boelter of the UCLA School of Engineering, the main speaker at the luncheon, will have the topic "Academic Aspects of Engineering."

The opening speech will be followed by an afternoon presentation in Union Oil Center, 526 South Bixel Street, in which speakers will be NASA's Dr. Hugh Dryden, with the topic "Engineering Aspects of Space and Missiles," and Samuel Bowlby of Shell Oil Company, speaking on "The Application of Engineering To Natural Resources."

Rector stressed that admission to the afternoon session, although free, is by ticket only, so those planning only to attend the presentation should make reservations by 15 February also.

National Engineer's Week, sponsored by the National Society of Professional Engineers, is celebrated annually during the week of Washington's Birthday, in cooperation with industry, schools, and other engineering societies.

Its purpose is to create public recognition of the vital functions of engineers in the nation's business and industrial economy and defense.

Rubel Speaker At Engineers' Week Event At Statler Hotel

Engineers' Week will be climaxed in Los Angeles by a banquet Friday, 24 February, which will be addressed by John H. Rubel, Deputy Director of Defense Research and Engineering, Department of Defense.

The banquet will begin at 7:30 p.m. with cocktails from 6, in the Pacific Ballroom of the Statler Hotel. Reservations for dinner at \$6, available to all engineers, their ladies, and guests, may be obtained by contacting Frank Reeves, Automatic Switch Company, 1233 Goodrich Boulevard, Los Angeles 22; RA. 3-3668.

MTS Instructors In Space Logistics Class

Three of 17 lecturers are members of the STL technical staff in a new course on Space Logistics to begin today under the auspices of the University of California Extension, the University has announced.

The MTS are Dr. Paul Dergarabedian, Director of Systems Research Laboratory, who will lecture on "Space Vehicle Design"; Harry R. Powell, Reliability Manager, Atlas Program Office, with the topic, "Reliability and Environmental Testing"; and CDRC Administrative Manager Dr. Robert W. Rector, whose topic is "Information Processing For Space Flight."

The course is intended to create an understanding of the space environment and the necessary steps to maintain an operational activity on the moon, planets, or space platforms, according to Dr. Henry Tallman, Course Coordinator at the UCLA Campus.

The lectures will be given weekly on alternating days in Los Angeles, San Diego, Corona, and Palo Alto. Further information may be obtained from the College Relations Office, Room 1362, Building G; Ext. 3446 R&D.

CFPGS provides awards each year to as many as five members of the technical staff on a competitive basis, Backer explained. They will pursue part-time graduate studies at educational institutions of their choice and, as a part of the program, will continue employment on a part-time basis.

University costs and a part of the loss in salary are borne by the Company under CFPGS.

Awards cover a period of two academic years for costs of tuition, books, university gifts and stipends of \$2400 at a rate of \$600 per semester. This year's recipients will be announced by 1 June 1961.

Participants work 24 hours per week at STL during the academic year while attending the university, and full time during the other periods. Weekly pay rates are based on hours actually worked, but all participants are eligible for normal merit reviews and increases, the same as any MTS who are working full time.

Participants may choose any accredited, degree-granting institution offering graduate studies in the sciences or engineering, as long as it offers — or will arrange — part-time graduate studies, and

RESERVE NOW For Engineers' Week

For Chamber of Commerce Luncheon and afternoon presentation at Union Oil Company, 21 February, make reservations with James Rector, Ext. 177, OR. 2-0161, by 15 February. (Luncheon, \$2; presentation free—ticket required.) Pick up and pay for reservations at Chamber Building. For Banquet at Statler-Hilton, 24 February, make reservations with Frank Reeves, Automatic Switch Company, 1233 Goodrich Boulevard, L. A. 22; RA. 3-3668. (Banquet, \$6 per person.)

Engineering Growth Matches That Of U. S. Economy Since 1900

This year's National Engineers' Week has the theme, "Engineering: A Career of Opportunity." In supporting this theme, the National Society of Professional Engineers points out that the history of the profession since the turn of the century has been one in which the engineer assumes an even greater responsibility for the nation's productive efforts.

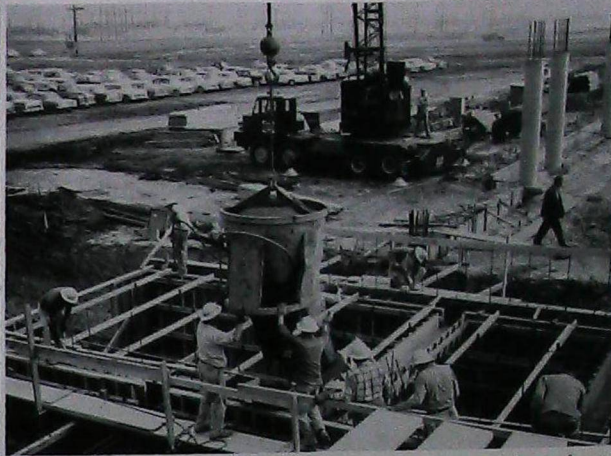
In 1900 there were 255 industrial workers for each engineer. By 1955 the number of industrial workers per engineer had shrunk to 55.

With the increases of engineers employed by industry, the purchasing power of the individual worker has shown a striking increase due to the increased utilization of process and product engineering.

It can be seen that the growth of the engineering profession is one measure of the overall growth of 20th century technology and achievement.

C. A. Richardson To Supervise Material Group at Canaveral

C. A. Richardson has been named supervisor of the FTO Material Group, according to A. L. Milford, Manager, Administration. He will exercise general supervision over procurement property control, office services and Hangar AA support.



BIG BUCKET of cement is guided by construction men to chute above wall form at site of new STL Space Center in Redondo Beach, Calif.



BILLBOARD explains bustle of activity at Aviation and Compton.

is near enough to STL that the 24-hours-per-week work requirement is feasible. Arrangements are presently established with UCLA and USC.

All full time members of the technical staff with at least one year of continuous service with the Company by 1 September of the year in which the award becomes effective are eligible to apply. Applicants must be qualified for admission to full graduate status at their chosen university and must be recommended by their immediate supervisors.

SCIEA HONOR: Dougherty 1960 'Editor of Year'

STL Employee Communication Manager Terryll Dougherty was named "1960 Editor of the Year" by the Southern California Industrial Editors Association at the annual January "Awards Night" meeting.

With the award, Dougherty received a citation for "superior editorial ability, creative and technical contributions to the profession of industrial editing, and outstanding service to the Southern California Industrial Editors Association and the International Council of Industrial Editors."

SCIEA President Al Thomas of Firestone Tire and Rubber Company announced the honor and presented him with an engraved desk pen and a check for \$75 in addition to the framed certificate.

Dougherty's department at STL publishes SenTinel, Readout, employee brochures, and handles other responsibilities relating to internal employee communication.

Currently a vice president of the International Council of Industrial Editors, Dougherty is nationally prominent within the industrial editing field. He directed the international awards program in 1959-60 and has served the local association in a number of capacities.

He has been an STLite since separate incorporation and received his five-year emblem at the Five Year Luncheon reported in this issue of SenTinel.

Dougherty and his wife, Alma, live in San Pedro with their children, Pam, 14; Tad, 12; and Page, 11.



CAROL ANN KURMAN

Carol Ann Kurman, STLite's Daughter, On Valentine Recording

Carol Ann Kurman, 14-year-old daughter of Steve Kurman, Building D Reproduction, has a special type of valentine for her friends this year — a 45 rpm record featuring her in a lilting vocal entitled "Valentine Rock."

She is accompanied on the record by the Gino Sisters, Linda, Nancy, and Colleen, daughters of former STL Security Guard Sam Gino, and on the guitar by "Rocky" Rhodes, former STL Electrician.

This is a "first" for Carol Ann, a student at Horace Mann Junior High School, but the Gino Sisters have made two records before.

STLEA COMING EVENTS

- Tuesday 7
Sculpture Club — Meeting, 7 p.m., Rm. 1223 Bldg. G.
- Teammasters — Meeting, 6:30 p.m., Carolina Pines, Century and Aviation. Contact Bud Weisenberg, R&D Ext. 2775 for details.
- Wednesday 8
Chess Club — 7:30 p.m., Rm. 1232 Bldg. E. Open play, tournaments, lessons for beginners.
- Friday 10
Bridge Club — Monthly Master Point, 7:30 p.m., Bldg. 2 Auditorium.
- Tuesday 14
Sports Car Club — Meeting, 7:30 p.m., Rm. 246 Bldg. 3.

3 Buildings Under Way At New Site

(Continued from Page One)
E, which will be a full basement, going up now. The basement of is also being worked on now."

The Research and Engineering Center is being erected on the southeast corner of Aviation and Compton Boulevards, about three miles south of International Airport.

The site was acquired by STL from the Santa Fe Land Development Company. Ground was broken and construction began on 7 December.

Albert C. Martin and Associates, Architects and Engineers, designed the buildings being constructed by Twaits Wittenberg Construction Company. Approximately 300 men are at work on the site presently, and the first building is scheduled to be ready for occupancy by next November.

A sign was erected last month at the Compton-Aviation intersection to explain the bustling construction activity to the public.

It shows a picture of the new center as it will be when completed, and bears the wording: "Here soon—New Home of Space Technology Leadership — Space Technology Laboratories, Inc."

City officials of Redondo Beach indicate that when STL moves to the new site it will become the city's biggest business in numbers of persons employed.



Twenty-nine STLites will complete five years of service with the Company (including employment prior to STL incorporation) this month. They are:

- Richard Blenck
- Mildred F. Burkett
- Charles E. Carroll
- Louis E. Diehl
- Sylvia Elias
- Ray J. Flynn
- Friedrich P. Forster
- Edward G. Froegel
- Robert S. Gaylord
- Samuel F. Clatz
- Wolf J. Gruen
- Audrey W. Hedding
- Laura Lee Hicks
- Chuck F. Hoppe
- Yoshio Ideta
- Fredrick H. Kaufman
- Ethleen M. Labac
- Martin Mintz
- Albert Mirakentz
- C. D. Moore
- Lynn V. Orbeck
- Roland A. Philleo
- Mary A. Renfeldt
- *Stuart Ridgeway
- Darwin L. Salisbury
- Helen V. Sutor
- Edward F. Vampola
- Ruth E. Wood
- Donald W. Wristen
- Robert L. Yoes
- *completed five years of service in January



EDITOR OF YEAR Terryll Dougherty receives congratulations and prizes from SCIEA President Al Thomas at Association's award night.



PAUL F. GLASER



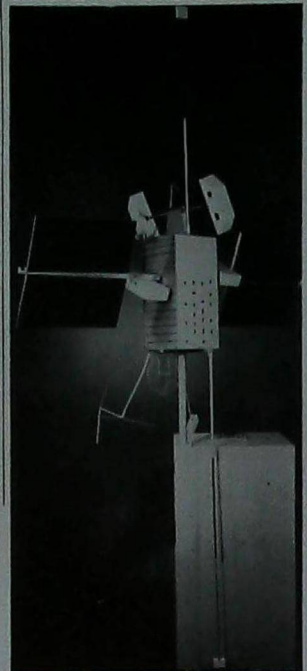
HOWARD Y. WONG



E. THOMAS WIGGINS



JOHN W. LINDNER



Small scale model of NASA Orbiting Geophysical Observatory.

AT INGLEWOOD CC.

Gen. Doolittle Tells Value of Space Programs

"Why should we spend so much money on space?"

A four part answer to this question was supplied by STL Chairman of the Board Gen. James H. Doolittle as speaker of the evening before an audience of 300 at the Inglewood Chamber of Commerce Installation Banquet 12 January at the Mayflower Ballroom.

In his speech, titled "Stepping Stones Into Space," he cited military requirements, space travel, scientific space exploration, and national and international prestige as reasons why today's space expenditures are a good investment.

In the area of military requirements, General Doolittle said the only effective deterrent power against aggression is one which is adequate and capable of instantaneous reaction. "Should deterrence fail," he added, "our missile force must be capable of decisive retaliation in the event of aggression."

He also pointed out the work being done toward a manned space weapon system and the advantages of unmanned and manned military satellites.

Of space travel the Board Chairman said, "I have no question in my mind that people will some day fly to, and land on, the moon and Mars and return . . . This year one or more of the astronauts will make the first exploratory trip into space . . . Next year an astronaut will orbit the earth."

"To leave space for a moment . . . A commercial adaptation of the beforementioned military space plane is technically possible . . . The importance of the use of nearby space in travelling from one point on the earth's surface to another is obvious."

The General continued, "The reason for scientific space exploration is threefold: First, to increase our knowledge of our universe, our galaxy, and our solar system . . . second, because space is the medium in which we will one day travel . . . and finally - and fortunately - the scientific information obtained in space exploration is directly or indirectly applicable in most of the other scientific disciplines."

Concluding with comments on the national and international prestige aspects of space programs, he pointed out, "The Soviets have selected space as one of the major arenas in which to joust for world recognition, world leadership, and - they hope - world domination."

"We must realize that if we are successful in avoiding nuclear war - and pray God we will be - then the conflict with Communism will continue to be waged on the propaganda, the ideological, the scientific, the technological, and the economic battle

OGO Program Responsibilities Explained

(Continued from Page One)
Program Director.

Experiments - John W. Lindner, Assistant Program Director.

Other staff members are Edward W. Banios, Richard E. Gleason, and Paul W. Woodson in Design and Development; Charles A. McCallieck, Ronald A. Sherod, Alan P. Willman, Robert Hornidge, and possibly one other man in Project Control; Richard B. Davis, Ralph C. Turkolou, Martin Schulmeister, and Edmund M. Israel in Fabrication, Integration and Test; and Allen J. McMahon in Experiments.

Dr. Gleghorn said the basic responsibilities of each task force section for the development of OGO will be the following:

Design and Development will have responsibility for direction of

over-all project and system engineering relating to design and development; insurance of compatibility between sub-systems and the over-all system; broad responsibilities relating to specifications; approval and distribution of weights, performance, and error budgets; maintenance of over-all staging and sequencing documents; conduct of major system and design reviews; over-all approval of design, design changes, and measurements; preparation of reliability budgets; appropriate management of space-flight operations, and review of flight test results.

Project Control will monitor budgets and schedules, prepare cost analyses and budgets, maintain official project files, conduct program status evaluation, and maintain appropriate liaison with the Atlantic and Pacific Missile Ranges.

Fabrication, Integration and Test section of Project OGO will direct transition from the system design-development stage to the production - checkout - launch phase. It will have responsibility for quality control, insurance of

reliability, conduct of launch operations, and will otherwise see to the satisfaction of program requirements, and production and launch of the payload in such a way as to satisfy mission requirements.

Experiments section will be responsible for determination of the requirements of the experiments and dissemination of such information to the responsible engineers; liaison with NASA's Goddard Space Flight Center on all matters pertaining to scientific experiments; coordination of all special test and calibration requirements of the experiments with appropriate engineers at STL; and serving as a representative for the experimenters throughout the project.

Answer To Puzzle On Page Two

Seven-year-olds don't have wices in Philadelphia, and fathers never confuse children's names. This kind of logic plus an amount of digging reveals that Mr. White is the president, Mr. Brown is the professor, Mr. Black the instructor, and Mr. Green the janitor.



SQUEAKY, many-toed mascot of STL hangar facility, displays paws with help of Pat Bourdieu.

Multi-Toed 'Squeaky' Finds Home In Hangar

A female cat named "Squeaky," with a grand total of 22 toes—six on each front paw, is the new mascot of STLites at Building 50, the Company's flight test hangar facility at International Airport.

Pat Bourdieu, Secretary to R. E. Moulton, head of Vehicle Assembly, and one of the few women at the hangar, keeps a motherly eye on Squeaky. "She's really made herself at home here," she says. "She's even the first one out to the lunch wagon when it shows up."

Hangar personnel hope Squeaky stays on with them until warmer weather. It seems field mice become numerous then and the STLites hope the cat will put her out-sized paws to work nabbing those that steal into the facility.

fronts . . .
"I am satisfied that we are capable of beating the Soviets in any line of endeavor - including space exploration. We can, and if we are to retain our way of life and freedom, we must."

ARS Meets 23rd; Dr. Getting Will Speak; Dr. Thiel New Officer

An opportunity for old and new members of the Southern California Section of the American Rocket Society to meet their newly installed officers, and hear Dr. Ivan Getting, Aerospace Corporation president, will be afforded 23 February at the ARS meeting at the Institute of Aeronautical Sciences Building in Los Angeles. Dr. Getting will describe his company's role in the nation's space program.

Dr. Adolph K. Thiel, Director of Space Program Management (OGO), Vice President of the ARS group, will be among the new officers present.

The dinner meeting will begin with cocktails at 6 p.m., dinner at 7, and main speaker at 8. The meeting will be open to interested members and non-members alike.

For reservations, call Dr. Thiel's office - 2571 R&D.

Profile

status as a private citizen.

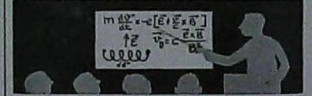
He was activated in the rank of Lieutenant, junior grade, and sent to electronics school at Treasure Island in familiar San Francisco. There followed a year as communication officer aboard the U.S.S. Shields (DD596), and another as communication officer for the squadron which included the Shields. He was released in June, 1953, and was promoted to Lieutenant at the same time.

George again returned to Cal Tech, working part time at JPL and pushing onward to his Ph.D., which he received *cum laude* in June, 1955. His JPL work was of a more general nature during that period, but was partly concerned with the ground-to-ground Sergeant missile, a solid propellant, single stage system.

The growing new Ramo-Wooldridge Corporation, less than a year old, invited the doctoral student to join its technical staff and he accepted in August, 1954. Some indication of how early George arrived is his badge number: 55.

His work here, he recalls, has been mainly concerned with two areas. The first was attitude controls, in which he collaborated with Dr. Robert R. Bennett, now director of the Minuteman Pro-

TECHNICAL MEETINGS and FILM REPORTS



*Colloquium - Thursday, 3:15 p.m., Rm. 1240 Bldg. D.

John M. Kelso, Applied Physics Department, "The Measurement of Geomagnetic and Interplanetary Magnetic Fields." (Unclassified)

(Continued from Page Two)

gram, and Dr. Robert K. Whitford, now manager of the Controls and Simulation Department of Electromechanical Laboratory.

The second, of course, was the Able Program, except for the Able Star portion in which he had little direct participation. He has been at Cape Canaveral for 10 Able shots in all, missing the first launch when Brian was born. He was in charge of launch operations for the fifth and all subsequent Able launches through Able-4, and was named Assistant Program Director under Dr. Adolf Thiel for the Able-5 program.

With this fund of experience behind him, including a rightful portion of the credit for such space probe successes Pioneer I, Explorer VI, and Pioneer V, George has embarked on the OGO Program, now just a month old, as its Director.

Of OGO he says, "In terms of the potential for scientific contribution, the program should even exceed Able, since it will have the capability of carrying 20 to 50 experiments into earth orbit with each launch."

Actually, those who know George Gleghorn well will add several points to the potential of any project with which he is associated.



OPERATIONS SAFETY COMMITTEE, first of three Safety committees to be formed, pictured at recent meeting. From left, seated: J. E. Wright, Engineering Mechanics Laboratory; James Olson, Electromechanical Laboratory; J. E. Dalton, Propulsion Laboratory; Carole DeCapito, Eva Bailey, R.N., Donal L. Cousins, all of Health and Safety; and Robert B. Lowrey, Facilities. Standing, from left: John M. Gordon, Guidance Laboratory; R. F. Kuechenberg, Instrument Center; James P. McGaha, Transportation; W. W. Patton, Facilities; J. L. Bryant, Security; Hal A. Souris, Facilities; Carl D. Pearson, Electromechanical Laboratory; C. M. Furman, Stores and Warehousing; Clay W. Lowrey, Health and Safety Supervisor; W. Edward Holstein, Model Services; Clarence R. Bigham, Machine Shop; William H. Thomas, Sheet Metal Shop; and Joseph J. Klep, CDCR. Committee has "front line" health and safety responsibility of inspection and implementation.

Claims Rise On STL Group Policy

(Continued from Page One)

(2) higher dollar costs per claim filed, which includes some excessive fees for professional services and hospitalization. (The incidence of illness and injury among STL employees and their dependents, as measured by the volume of claims filed has remained relatively unchanged); and (3) overall rising costs of hospital-medical care. New medical techniques, new drugs, more elaborate facilities for medical care, and higher hospital rates have increased over-all costs of group medical insurance programs.

Record Group Of 5-Year STLites Receive Diamond Pins

Camera Captures 133 At Luncheon

(Continued from Page One)

observance is presented here.

To obtain the big picture, STL photographers had the group pose on the grass between Buildings C and D after the luncheon and look up at a camera placed on the second floor ledge of C.

In addition to those present, as named in the picture caption, 39 eligible STLites were unable to attend due to conflicting obligations and/or out-of-town locations. They will receive plaques and five-year emblems in the mail.

The 39 not present included Paul W. Albro, Stan Antell, David Belcastro, Oscar Bennett, Carl W. Besserer, Robert N. Bird, W. A. Burk, Thomas Concannon, B. C. DeSarzana, Behrend J. Duwaldt, Winfield H. Edwards, David G. Fladlien, Michael J. Galanos, Ross E. Graves, and Marilyn M. Greene.

William M. Harrison, Vernon M. Haywood, E. K. Heist, Robert R. Irwin, Galand C. Knox, Jr., Thomas W. Layton, Nori Mallon, Seldon P. McCabe, Jr., Robert B. McNeil, Stephen C. Morrison, Edward D. Patterson, Richard O. Pick, and Dennis C. Pidhany.

Henry P. Roberts, Vladimir Rojansky, Henry A. Samulon, John D. Sorrels, Robert L. Thurmond, Joseph J. Ventura, Dale Vrabeck, Robert L. Walquist, Theodore R. Whitney, Edward P. Wickham, and Robert L. Younklin.

Arrangements for the luncheon and service emblem presentation were under the direction of Personnel Services.



133 FIVE-YEAR STLITES, of 141 attending luncheon last month as guests of Dr. Dunn, paused for photographer after receiving emblems, plaques, and congratulations from the President, Dr. Dunn. Those honored who were unable to be present at luncheon are named in adjacent story; attending the event were the following STLites.

First row, from left: Mrs. Mary Pistey, Harold S. Brown, Mrs. Martha Faulkner, N. William Gradwohl, Robert M. Paige, Renny E. Berton, Mrs. Mildred Raynelle Snell, Bernard M. Willett, Raymond W. Wolverton, Howard Y. Wong, Bernard Mintz.

Second row: Robert K. Whitford, Richard L. Brukwick, Arnold I. Hoffman, James R. Dunn, Rendall M. McKechnie, Gerald M. Bystrom, William C. Whiteside, Earl R. Collins, Homer R. McPherson, Wilbur C. Hagan, John Stratman, Claude J. Monroe, Charles F. Brett.

Third row: Hugh Hamilton, Delfina Stankoven, Edith L. Roth, Leola C. Denney, Frances Flock, Donna Roop, Wallace G. Aitchison, Ivar M. Holliday, Bernard T. Haffey, Leonard Kalish, Jack C. Beck, James A. Puschall, Herbert D. Cohen.

Fourth row: Berval Arneson, James M. Richardson, Dorothy Burkhardt, Jane E. Gregory, Norman Avrech, Raymond Stewart, Rupert C. Bowdin, Richard D. Young, Robert E. Callan, Philip R. Harding, William Burroughs, Marcella M. Paulson, Harry H. Pfeiffer, Junne L. Hayes, George W. Starnes.

Fifth row: Lucretia E. Blome, George L. Eckert, Harold A. Souris, Emmett L. King, Robert E. Palmer, Frank S. Gardner, W. John Beil, Richard D. Gloor, Virginia A. Haldeman, Lee A. Greenway, Florence

A. Hnatko, George D. Bagley, Loretta H. Bocast, JoAnne Poitz.

Sixth row: Albert J. Laurie, Milton Ruderman, Clifton T. Council, Lawrence H. Bayer, Howard E. Williams, Arthur R. Kraiman, Vernon R. Briggs, Bernard J. O'Brien, James G. Berry, Frank B. Meek, Richard H. Balmeyer, Helen McGuire, Harriet T. Kubian, Shirley Escher, Ann Bidner, Robert C. Danta, Duane Cousins.

Seventh row: Irene Dufel, John R. Sellars, Kathryn Gerber, Wilbur A. Garber, Baldwin R. Curtis, Reed P. Berry, John E. Doner, John F. Mandrow, Charles O. Mallinckrodt, Waldo G. Hodson, Avard F. Fairbanks, Erle Howell, Allen R. Sims, Adrian N. Sumie, John M. Kelso.

Eighth row: Wayne E. Holm, John S. Piech, Norman Martin, Edward Hardeste, Forrest A. Barger, Frank D. Bales, John E. Donnelly, James R. Fleury, Oscar N. Paaske, Eugene C. Hoy, George F. Najemnik, Martin H. Banzet, Charles C. Gardner, Jr., Detroit Hix, W. Stewart Hotchkiss.

Ninth row: Terry Dougherty, Helen J. Petran, Mary L. Scott, Marjorie Logan, Josh Bason, Charles R. Allen, Arvid S. Peterson, Stanley W. Slaback, Robert E. Hollander, Roger R. Trapp, W. Stewart Thompson, James A. Keenan, Robert Wesley Kitto, Andy Imrie, Florence M. Shaffer, Robert F. Kemp, Frances Menechios, John M. Degnon, Kenneth M. Stanfill, Dwight E. Hefner.

Attending luncheon, but not present for picture: A. R. Anchoroguy, George W. Carter, Alexander B. Chieffo, E. B. Doll, David B. Langmuir, Don N. Pitts, Barbara A. Towers, and Alice T. Vaccio.



PHOTO CORNER

(Tips for amateur photographers by STL professionals — members of Photo Services.)

Backgrounds

Backgrounds can make or break your photograph. Look beyond your subject matter: If you're shooting a person, is there a tree branch, or other object "growing" from the person's head? In a still life subject are textures clashing? Here are some rules to keep in mind.

1. Keep your background as plain as possible. Use a high angle or low angle in shooting. This will often help eliminate a distracting background. On the other hand, the back-

ground can be used to help tell the story of the picture. It may tell where a person is or what he is doing and add interest and story-telling quality. Check some leading magazines and see how backgrounds help tell the story of an individual. Remember, though, that your subject should always hold the center of interest. At times a large lens opening will help blur and de-emphasize background.

2. Watch out for textures! (Textures in this meaning are the structural qualities of surface.) They can spoil a photo, too, by distracting from your center of interest. Never combine two elements of the same texture in your photograph without carefully planning the lighting. Better yet, stay away from like textures.

The best rule of all when selecting a background—keep it plain and simple

—Bob Young



A CAREFULLY SELECTED BACKGROUND lifts this picture out of the ordinary. See "Photo Corner," at left, new SenTinel feature.

STLite Takes Top Prize For Slogan

Six well chosen words put together by STLite Sam W. Simons and his wife, Bette, last November have resulted in his winning a five-day Mexico vacation for two as sweepstakes winner of the annual Los Angeles area Community Chest Slogan Contest.

His prize consists of a five-day vacation at the Cristobal Colon Hotel in Mexico City and round trip air transportation via Western Airlines.

The contest, an annual event, was conducted through SenTinel and Readout, plus many other local industrial publications.

Downgraded Documents List New Monthly SenTinel Service

Beginning with this issue of SenTinel, Records Administration will publish a list of documents which have been downgraded during the previous month. The purpose of this list is to provide classified document holders with a double check on any of their documents which should be downgraded.

It is suggested that document holders review this list monthly and take any required downgrading action necessary.

The correct procedure for marking re-graded documents is outlined in Standard Practice 4.4. Questions which arise on the authority for downgrading specific documents should be referred to Ext. 2197 R&D.

Records Administration states that the following documents were downgraded during the month of January:

THE FOLLOWING DOCUMENTS HAVE BEEN DOWNGRADED FROM SECRET TO UNCLASSIFIED DURING THE MONTH OF JANUARY

CMCC-0167-04457
Letter from ACSP 20 June 1955 to Commander Western Development Division, "Monthly Technical Report," Contract AF04(645)-19.
GM00-0122-00123
Cost Savings Report with Work Sheet Attached.
GM00-0124-00051
"WS 315A R&D GSE-GFP Requirements Contractual 3-15-57."

GM00-0130-00079
Re: Systems Simulation Laboratory.

GM00-0410-00218
Titan GSE Committee Minutes.

GM00-0500-00153
Copy of Letter to ACSP 2 August 1956 from R. F. Mettler, Re: GM43.6-24.

GM00-0520-00039
"WS 315A IOC Squadron Tech Training Facility Design Criteria" Dec. 3, 1956.

GM00-0530-00036
IOC from W. A. Burk 3 Dec. 1956 to Control Room "WS-315A Monthly Progress Summary."

GM00-3030-00164
IOC from R. F. Mettler 2 April 1957 to Col. Terhune "WS-315A Captive Test Schedule" (Enclosures).

GM00-4360-00008
IOC from J. M. Cahn 15 June 1956 to W. T. Russell, "Minutes of Meeting Held at ACSP in Milwaukee 7 and 8 June 1956."

GM00-4480-00029
Initial QPRU Report for Radio Inertial Guidance System (WS 107A-2).

GM00-5000-00044
STL/A Review of the Re-entry Problem 9 Aug. 56 Copy 25D3 60-1591 C.I.

GM58-0165-00412
Joint Message from H. Yost (R-W) to ACSP.

GM58-0165-00443
IOC from S. P. McCabe 4 April 1958 to K. Patt "Thor Guidance Produce Improvement."

GM58-0165-02264
IOC from WS-315A Program Office (H. A. Roberts) 3-26-58 to W. R. Hughes/H. Yost "Trajectories and Flight Tables, Basic Thor Flight."

GM58-0165-02434
From W. A. Bush to WDTWI 25 Aug. 1958 "WS 315A Summary Program Milestones and Requirement Schedules."

GM58-0165-02485
Letter to DAC from A. K. Thiel 13 Aug. 1958 "Allocations and Missions of Able-Phase II Program."

GM58-0165-05179
GSE-IOC-ACSP 4-14-58

GM58-0165-06003
PDM/FM Missile 120 Test 33 Broad Coverage Sanborn Records Pages one thru 17.

GM58-0165-09519
Letter from H. Yost 28 Oct. 1958 to W. A. Burk "Change in Guidance System Configuration Due to Missile Allocation Changes."

GM58-0205-00001
Meeting between R-W and NOTS Personnel held 17 April 1958 at R-W dtd. 22 April 1958 from H. J. Wintroub.

GM58-0205-00003
"Doppler Receiver Requirements and Schedules" by H. A. Samulon dtd. 14 May 1958.

GM59-0000-04467
"GSE Allocation and Contract Schedule 2-5-59"

GM59-0000-05353
IOC from ACPE Office (H. Brady) 28 April 1959 to J. E. Rittersbacher "Status of Steering Problem Investigations."

GM59-0000-07494
"Summary of Telephone Conversation from H. Yost to W. Russell at R-W on 11 April 1956, per information (Preliminary) received from B. Schwarze of ACSP."

LN00-0000-12432
GE - Memm, Re: Plan for Interference and Jamming Study in Accordance with TD56-0223 (rough draft) dtd. 5 Sept. 1956. (Thermofax GE No. IP3-35X-2075).

LN00-0000-13033
Letter from ACSP 28 Sept. 1956 to Dr. Dunn.

LN00-0000-16907
Memo from J. McPhail 18 Dec. 1956 to W. T. Gahan "Summary of Activities at AFMTC for Period 6 Dec. thru 12 Dec."

LN00-0000-23761
WDD-M-S-8 SCN-1 Martin Doc. Env. Test Spec. for Airborne Equip. Mar. Copy 25. Pages 4, 5, 6, 7, 8, 11.

LN00-0000-24945
Spec. No. WDD-M-S-8 Martin Document.

LN00-0000-25702
Martin SCG No. 2 dtd. 5-15-57 to Spec. WDD-M-S-8.

LN00-0000-31049
Replacement Page for Flight Test Report Thor No. 105.

LN58-0000-13893
Letter from ACSP to H. Yost 18 Aug. 1958 "Calculation of Position and Velocity from Telemetered Vg."

LN59-0000-11995
Technical Manual "Operation-Maintenance USAF Model SM-75 - Job Manual Guidance System, Checkout and Inspections" to 21 SM-75-3J-2 (9-30-58 and 2-2-59).

LN59-0000-15189
ACSP "WS-315A Equipment Personnel Correlation Data Index Issue No. 3 Inertial Guidance System" 3-31-59 Rev. A 30 April 1959.

LN59-0000-26525
TWX from ACSP to N. Christensen "CLN Apparent Power Disturbance During Flight of Missile 198 at AFTMC."

LN59-0000-36959
Martin WDD-M-S-8 Rev. 2 Spec. Model XSM-68 Environmental Requirements and Test dtd. Feb. 1957.

THE FOLLOWING DOCUMENTS HAVE BEEN DOWNGRADED FROM SECRET TO UNCLASSIFIED DURING THE MONTH OF JANUARY

GM00-0553-00043
Attachment A - Notes on Figures I and II 10-2-57.

GM00-4200-00077
Ionospheric Guidance Noise.

GM55-0000-01362
Measurement of Electron Densities in the Ionosphere with Equipment now available in the WS-107A.

GM60-0000-30734
Manual Constants for Atlas 91D.

GM60-0000-33793
Analysis of Silo Explosion (Cannon Ball Problem).

LN00-0000-32077
Description, Operation and Performance of the WS 107A-2 Rocket Engine.

LN60-0000-38448
Hercules: WS-133A Minuteman General Test Plan, Rev. 3 STL Reference GM59-R003-07535 dtd. 7 Dec. 60.

THE FOLLOWING DOCUMENTS HAVE BEEN DOWNGRADED FROM CONFIDENTIAL TO UNCLASSIFIED DURING THE MONTH OF JANUARY

45.3-479
Telemetry Transmitter Procurement Investigation.

44.7-114
Television Views of Earth from a Space Vehicle.

45-239
Magnetic Field.

44.7-117
Linear Magnetic Field.

44.7-122
Request for Micrometeorite Equipment.

45-246
Able-1, Microlock Receiving Equipment, PR 95625.

44.4-489
Notes taken at Meeting Between JPL and STL at JPL on 1 April 1958.

44.4-492
Able-1 Payload Configuration.

45-248
Meeting Between R-W and NOTS Personnel held 8 April 1958 at Naval Ordnance Test Station, China Lake, Calif.

45-3-487
Meeting Between R-W and NOTS Personnel held 24 April 1958 at NOTS.

45-261
Doppler Extraction Circuitry for Able-1.

44.3-435
Able-1 "Doppler" Schedule and Responsibilities.

45-282
Doppler Receiver.

45-269
Revised Command Specification for Able-1.

45.3-498
Meeting at NOTS 22 May 1958 attended by R. G. McCarty and W. F. Cartwright of NOTS, H. A. Samulon and H. J. Wintroub of Ramo-Woolridge (STL).

5.4-361
"Toniter" Fuel Pump Inlet Leakage.

5.4-569
General History of Engine 4052 (Missile 171).

5.4-583
Review of Damages to No. 6 Turbopump Bearing in Missile 171 Engine 4052.

GOLF ROUND-UP

Van Nort Named Golf Secretary; Club Drives To Increase Members

Rosemary Van Nort is the newly appointed Secretary of the STLEA Golf Club, President Jo Halliday announced last week. Mrs. Halliday also took the opportunity to encourage more women employees and wives of men in the Club to take an interest in the activities.

San Clemente Links Tested In Season's 1st Tournament

First tournament of the STLEA Golf Club's new season was played yesterday at San Clemente Golf Course with 17 foursomes playing. Watch next Monday's *Readout* for names of winners and other tournament information to be released by Club Tournament Vice President Larue Jubelt.

Sports Car Clubbers Take Rally's 4th Prize

STLEA Sports Car Clubbers Sharon Coulter and Meurisse Durree placed fourth over all in a recent Four Cylinder Club of America Open Rally, sponsored by the FCCA San Gabriel Valley Chapter, STLEA Club Vice President H. K. Gilbert told SenTimeL last week.

Other teams of members participating were Dick Coulter and Ron Going, Louise Ross and Gene May, Don Nickells and H. K. Gilbert.

The rally course began in Temple City and followed various scenic routes, stopping in San Juan Capistrano for lunch. The return led through El Toro, Brea, and La Puente to West Covina. Over-all time was approximately six hours counting allowances for stops.

A Club membership drive will begin the middle of this month.

"I want the ladies to understand that Club membership is open to them, too. Any STL employee or spouse - husband or wife - needs only to pay the membership fee to enjoy full privileges of membership," she explained.

Club dues are \$2 per year, up one dollar over last year. The president explained that the additional income will help the Club defray costs of an annual installation and awards banquet held annually at the close of the playing season. As in the past, greens fees and prize money shares will be extra.

Tournament League Vice President Hal Solomon reports that negotiations are still under way with several nearby courses for Twilight League play. He expects to be able to announce the course selected by next month.

Prospective player questionnaires have been mailed to past Golf Club members and many others in an effort to determine what kind of Twilight League events and scheduling, and locations the group should plan, Miss Van Nort reports.

Not an application for membership, the questionnaire is intended to let all interested STLites express their wishes in golfing activities. The forms are available on coffee shop bulletin boards and by calling President Halliday, Ext. 3455 R&D.



TOASTMASTERS GATHER to see text for Speechcraft Course, now being taught by STLEA group. From left, Earl Rossmore, District Lt. Gov. Arthur Lester, Al Hallquist, local chapter President Joe Earnest, and Dick Peterson. The course is still open for new enrollments.

Annual Dinner Honors Old, New STLEA Executive Council Members

Incoming and outgoing STLEA Executive Councils were guests at a 26 January dinner at the Thunderbird Hotel, hosted by Director of Industrial Relations James E. Dunlap and Personnel Relations Manager E. B. Gilroy. The STLEA dinner is an annual event.

Highlight of the evening was the presentation of an engraved gavel to outgoing STLEA President Capt. Robert Mason for his services to the organization. In making the presentation, Dunlap lauded Mason for his efforts "during a rather trying time for the organization."

Others in attendance were outgoing officers Jim Gibson, John Carlson, Bob Giles, and Sharon Burlage. Unable to be present were Joyce Martin and Jesse Hunter.

Newly elected officers welcomed at the dinner included Bob Palmer, Wayne Holm, Con Carver, Erle Howell, and Gary Lehman. Other 1961 officers unable to attend were Libby Champion, Jo Anne Schaffer, and Ed Barry.

Rounding out the guest list were STLEA Advisor Marie Joyce, M/Sgt. Carl Johnston, and Terryll Dougherty and R. V. Crowe, Employee Communication.

Two STLites Win Prizes In Swim Contest At 'Y'

Lorene Nelson of Atlas Program Office was winner of a Fourth Place, Women's Division, certificate in the Westchester YMCA's Swim-O-Lette contest recently, and Al Linquiti, Telecommunications Laboratory, won a Third Place trophy in Men's Division.

About 100 STLites currently hold membership in the Westchester YMCA - "California's only family YMCA," according to Carl Olson of the "Y" staff. Last month during National YMCA Week SenTimeL checked with Olson to learn why the "Y" is so popular.

One of the big attractions at the Westchester "Y," located at 80th and Sepulveda, is aquatics, Olson reported. STL personnel are among those competing in "Swim-O-Lette," "a competition more for fun and exercise than the trophies involved," he said. Contestant spin a roulette-type wheel marked off with swimming "assignments" which must be performed to receive points in the game.

Olson explained that swimmers can also come to the "Y" for classes in learning to swim, in life-saving, and skin diving.

There is always a reason for anger, but never a good one.

Space Center Toastmasters Begin Speechcraft Course

An eight-week Speechcraft Course, open to members or non-members was introduced 17 January by the Space Center Toastmasters Club at the Carolina Pines Restaurant, according to Club President Joseph Earnest. Toastmasters District Lt. Governor Arthur Lester was guest speaker at the opening session.

"We must be prepared to sell our ideas if we wish to control the future," Lester told the group. "Speechcraft provides the technique and Toastmasters develops the confidence to make us proper salesmen of our ideas."

A total of 27 members and guests attended the first session, titled, "Introduction To Public Speaking." The topic was "What To Talk About" on the 24th, and "Confidence Is Power" on the 31st.

Topics for the remaining weeks, starting with tomorrow night, will be "Building a Speech," "Evaluation or Constructive Criticism," "Delivering a Speech - Visible Expression," "Delivering a Speech - Audible Expression," and "Chairmanship."

Interested STLites may still join the course, delivered by members of Toastmasters International, for the last five meetings, Earnest said. Course notes for the meetings missed will be provided, and the course tuition, \$8, will be prorated.

The Club meets every Tuesday night at the Carolina Pines, Century and Aviation Boulevards. A buffet dinner, at \$2.25, is served at 6 p.m. and the meeting begins at 6:30. Those interested in Speechcraft or other Club activities should contact Bob McCutcheon, FR. 5-2409; Bob Webster, FR. 5-8829; or C. J. Wang, EA. 2-0806.

Travel Club Reorganization Meeting Wednesday 8 Feb.

The STLEA Travel Club will be newly organized and new officers elected at a meeting to be held next Wednesday, 8 February, from noon to 12:45 in Room 1232, Building E.

Dance Luau Features Sarongs, Leis, Food

The STLEA Dance Club's special event night Luau Party was attended 25 January by 200 enthusiastic STLites, spouses, and dates attired in Hawaiian costumes from sarongs to muumuis. The affair took place in the Building 11 Cafeteria.

The group danced to the music of the Leon Guide Combo until midnight. Activities during the evening ranged from group chacha instructions to a buffet dinner of island dishes.

STLEA Car Club Schedules March Rallying Classes

The STLEA Sports Car Club is offering a free course of instruction to STLites interested in rallying, President Herb Morgan announced last week.

The course is designed to acquaint people with the sport of rallying and will include such topics as navigation, driving, equipment, check point operation, and timing, as well as participation in a simple navigational type rally, if desired.

"Arrangements can be made to satisfy the requirements of all, those who already have some knowledge of rallying as well as those who are beginners," Morgan said.

The Club has tentative plans to conduct a series of four classes, one per week during the month of March with definite dates and times to be established depending on the desires of those who express an interest in attending.

Interested persons should call either H. K. Gilbert, Ext. 1487 AV, or Morgan, Ext. 1664 AV as soon as possible.



ALOHA! — Dance Club members prepare to display South Seas finery.

Leatherman Wins Trophy In STLEA Bridge Individual Championship

Bob Leatherman was winner of the STLEA Bridge Club's Individual Championship, played 27 January in the Club's regular meeting place, Building 2 Auditorium. He received a trophy for the feat.

In a field of 44 players, each participant played each of the others during the evening for a total of 22 bridge hands.

The Research Fund of the Mental Health Foundation will be the

beneficiary of a Charity Game the Club has scheduled for 24 February. All STLites and their partners are invited to attend the game set to begin 7:30 p.m.

Member Dick Cheng, who officially became a Life Master last month, has been conducting forum discussions on various phases of the game at the meetings. The topic on the 27th was "Opening Bids, With Emphasis on Preparedness."



SCULPTURE CLUB Instructor William Green advises JoAnne Falotico during Club session, working from live model, in session at R&D Center.

STLEA Sculptors Will Have Spring Exhibit

STLEA Sculpture Club is planning a spring exhibit of members' work, Jeanne Thompson, President, reported last week.

The show will be comprised of sculptures from life, the field which has occupied the group for the past few months, she said.

The Club uses terra cotta clay, and fires finished sculpture. All

necessary supplies are available at all meetings which take place Tuesdays, from 7 to 9:30 p.m. in Room 1223 in Building G.

STLites, whether beginners or advanced sculptors, are welcome to contact Miss Thompson, Ext. 1588 R&D; Loreeta Lorah, Ext. 2110 AV; or William L. Greene, Ext. 1505 R&D on membership.

8 Candidates Vie For 4 ECHO Posts In Vote 9 Feb.

Eight STLites have been nominated for four open positions on the 1961 Governing Committee of STL's Employee Charity Organization, according to John Newberger, Chairman



ROUSE GRAYBILL



GRAHAM HILL



TAYLOR KIMBLE



HUNTER DOUGHERTY

of the Nominating Committee. Ballots containing pictures and biographical sketches of candidates will be distributed to all STL Employees on 9 February. Each STLite will be requested to vote for four of the eight candidates and return the ballot to Personnel Services before 15 February. Following the election, the Governing Committee will elect its own chairman, vice-chairman, secretary, treasurer, and other officers. Candidates for the four open positions are:

Bill Rouse, Mechanics Division; Arthur Graybill, Electronics Division; Thomas Graham, Finance; Marge Hill, CDRC; Richard Taylor, Administrative Services; Lois Kimble, CDRC; Les Hunter, Facilities Department; and Terryl Dougherty, Employee Communication.

Outgoing committee members include Nan Glennon, Contracts; Charles Allen, Finance; Millie Snell, Systems Design and Analysis Department, VDL; and John Newberger, Administrative Services.

Members with a year remaining in their two-year terms are Shirley Fletcher, Technical Documentation; Louis Jensen, Inertial Guidance Department, E L; and Leonard Kalish, CDRC.

First responsibility of the new Committee members will be to handle the annual spring drive among STL employees for contributions to charities through ECHO. Another immediate duty will be the disbursement of funds donated by ECHO members during the first quarter of 1961.

Purpose of ECHO is to provide a convenient means and organizational method by which STL employees may voluntarily contribute to a single fund through payroll deductions or cash contributions.

Of the money received, 100% is transmitted intact to recognized charitable welfare organizations. All administrative expenses are borne by the Company.

16 February at the invitation of Dr. Detlev W. Bronk, President of the National Research Council. Applications being reviewed will be for NAS Cooperative Graduate Fellowships and Summer Fellowships For Graduate Teaching Assistants.

Dr. Potter Helps Pick Fellowship Winner

A place on a National Research Council panel evaluating National Academy of Sciences fellowship applications this month will be filled by Dr. Richard C. Potter, Manager of Professional Placement and Development.

Dr. Potter will be in Washington, D.C., for the task 14 through

STL Group Aiding Warren AFB Atlas Activation Lauded By Air Force

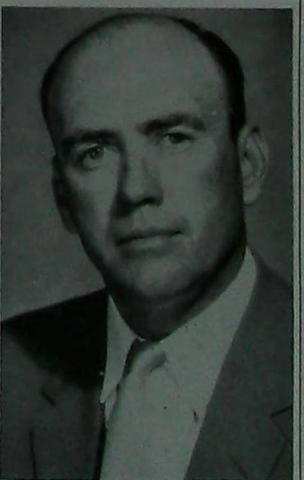
Praise and appreciation was accorded last month to Win H. Edwards and other STLites who served under him in the construction phase of Atlas activation operations at Warren Air Force Base, Cheyenne, Wyo., in a letter from Col. E. A. Swanke, Site Activation Commander.

Edwards, now associated with Space Systems Program Management, under Dr. Adolph K. Thiel, headed a group at Warren which included Robert W. Fuller, Sidney J. Cole, Emory F. Grass, all of Atlas Program Office; and William Hussey, now of Contracts Department.

Colonel Swanke's letter read, in part, "This STL contingent was integrated into a joint AFBMD/STL Field Office and provided the necessary engineering function for the activation of the 564th SMS until mid Summer of 1960.

"The named personnel were all highly qualified Weapon Systems engineers and contributed immensely toward the complicated task of organizing, managing, and engineering the first operational squadron.

were being assigned to the Field Office in the Fall of 1959, and early part of 1960, had not had any opportunity for schooling or training on this Weapon System, much of the task of pinpointing the problems of activation was accomplished by the STL contingent. This assistance was readily provided by the highly motivated STL group . . ."



WINFIELD H. EDWARDS



STL IMAGE CONVERTER CAMERA

STL Image Converter, Rubidium Frequency Standard Go On Sale

(Continued from Page One)

quency standard. In other cases we will enter into agreements for manufacture by licensees.

"From our research we have developed devices and components having wide scientific and industrial application in accelerating technological progress," the Vice-President continued. "STL Products has been formed to make those products commercially available." He stated that other new products are in the design stage, and will be on the market during 1961.

The STL Image Converter Camera is a complete diagnostic tool for instrumentation of high speed luminous transient events encountered in plasma physics, chemical kinetics, and hypervelocity experiments. Its high speed, combined with a fifty-times light gain and time resolution capabilities, makes it possible to record photographically data not previously available.

The STL Rubidium Frequency Standard supplies in portable form a new time base for terrestrial and space navigation, and also provides industry with the first readily portable, independent frequency standard as a tool for calibration of instruments for advanced technology. Possessing stability of two parts in 10 billion, it maintains its accuracy with less than one second of error in 750 years. Completely portable, it is unaffected by vibration, shock, and other environmental conditions encountered in normal use.



STL RUBIDIUM FREQUENCY STANDARD

SECURITY NOTE: New Sequence Number Added To Form 1084

All STL Forms 1084 - the long form of the Secret Information Receipt - have been withdrawn from Stores for addition of a sequence number, the Classified Information Center announced today. This number will appear in the Sequence Number Block and will be a six-digit number.

Pre-printing of sequence numbers will expedite Secret document inventory checking since the number will appear in the sequence number column of inventory listings and serve as a reference to the Form 1084.

The new procedure also will facilitate filing Forms 1084 since they can be filed by sequence rather than by date.

Effective immediately, Classified Information Center requests that all offices using Form 1084 draw a new supply from Stores and destroy any obsolete forms which they might have.

1st Minuteman Shot Bullseye

(Continued from Page One)

Hall, responsible for instrumentation development; and Miles Ross for Florida operations.

Major Associate Contractors in the program are Aerojet-General, Autonetics, Avco, Boeing, Hercules, and Thiokol.

CU Announces 5.5% Dividend Rate, Elects Peterson, Cauthen, Grant

A 5 1/2% annual dividend rate for the six-month period ending 31 December was officially announced and three members were elected to the Board of Directors at the annual meeting of the STL Employees Credit Union on 31 January, according to CU Vice President, Dr. Robert Rector, who presided at the meeting.

The board members elected include John E. Peterson, presently serving as Treasurer, who was re-elected for a three-year term, and Ivan O. Cauthen, also elected for a three-year term. Col. E. M. Grant, USAF, BMD, was elected to complete the unexpired term of Col. H. A. Arnold, USAF.

Taking vacant positions on the Credit Committee were Edward W. Shimko and Donald R. McDowell, while Fred E. Leslie and A. A. Levi were selected for posts on the Supervisory Committee.

CU's expanding financial activities during the past year boosted the organization's total assets to \$4,398,500, up from \$3,039,753 one year ago, according to Peterson. Of this amount, \$3,929,507 is on loan to members, \$55,000 on loan to other credit unions, cash on hand is \$354,421, and \$50,000 is invested in savings and loan shares. Also, this marks the fifth consecutive time a dividend of 5% or more has been paid to member accounts.

Total membership of STLECU for 1960 was 5600, including Aerospace and Air Force personnel until such time as they can form their own credit union.

The Credit Committee report was given by Robert O. Shepard. Preparation of the slate of candidates was directed by James Chalmers, Chairman of the Nominating Committee.

During the meeting a plaque in recognition of his service was presented to Thomas C. Sharp, President of the STL Credit Union from its founding in 1958 until his resignation from STL last November.

Blessed is the man who is too busy to worry in the day-time and too tired to lie awake at night.

Classified Ads

Free Service to STL Personnel. Mail ads to Bldg. 35, Rm. 1117.

FOR SALE: AUTOMOBILES

- '50 CHEV bus cpe, gd cond. George, FR 4-7526 days only.
- '50 OLDS, runs & lks gd, '61 lic, \$100. Holly, AV 2181.
- '51 DODGE, gd trns, Rand H, \$100. Jody, R&D 3061, FR 7-3553 p.m.
- '51 HUDSON, 2-dr conv, r&h, aut trns, xint cond, \$275. Sue, R&D 3785.
- '52 PLYM 2-dr, r&h, ww, ctn, \$200. Dick or Joyce, FR 6-0933.
- '53 FORD cpe, 2-dr, stk, mk offer. R&D 3888.
- '53 OLDS spr Holiday, full pwr, r&h, immac, \$375. Riez, R&D 2561.
- '54 BUICK conv, nw pnt, top cond, orig owner, \$500. Terry, AV 1655.
- '54 CAD, r&h, ww, full pwr, xint cond, Jack, DA 4-4671.
- '54 HILLMAN, nw top, uphol recently, o/h, gd tires, \$325. Johnson, R&D 2136.
- '57 BIRD, 1/2 blu, full pwr, r&h, xint cond, must sell, AX 5-8744, a.m./p.m.
- '57 BIRD, blu, fully equip, nw tires, top cond. Gen, R&D 1041.
- '57 VOLVO, gd cond, nw tires, r&h, bk \$800. Fray, R&D 2218.
- '58 DODGE, \$400 dn, t/o pymts \$62.50. Jo, OR 1-1046 aft 6.
- '59 CAD cpe de ville, wht, full pwr. Jack, AV 1185.
- '59 CHEV Impala htdp, contrl kit, r&h, 250 hspwr, red. Greayer, R&D 2306.

FOR SALE: MISCELLANEOUS

- SQUARE TABLE, modrn Danish, wal, 4 padded chrs, \$60. Edna, OR 1-1045.
- MOBILE HOME, '58 Skyline, 8'x45', 40' alum awning. Anders, DA 6-8468.
- BOW, Ben Frn, 45 lb, '59 modl, Palomino, \$75 new, sac \$40. Briggs, R&D 1726.
- BABY CRIB, hardwood, plast cov mattress, \$20. OS 5-3586.
- ROAD & TRACK MAGAZINES, approx 60 iss, mk offer. Burns, PL 7-2400.
- '55 AJS MOTORCYCLE, 500 cc sngl, recently overhd, \$450. FR 5-9225.
- ENCYCLOPEDIA Britannica, '54 ed. ST 9-2802.
- BC-221 with Calibration bk & cabinet, \$50. Bill, R&D 1976.
- CHIHUAHUA PUPPIES for Valentine gifts. FR 6-4540.
- '59 GLASSPAR LIDO BOAT, 35 Evinrude elec & ltrc, \$1300. FR 1-3739.
- HOME BREWER TOOLS, 10 gal crock & capper both \$10. Hazen, R&D 2715.
- SUITSACE lge Samelite; 3/4x10' fibreglass; car luggage rack, \$5 ea. VE 8-6743.
- VACUUM CLNR, Universal, \$15; fireplace screen, grate, tools, \$5. Bldg 55, ext. 193.
- FRIGIDAIRE WASHER, \$75 dryer (req. 220 V outlet), \$50 or both \$100. PL 5-9266.

PROJECTOR, Leitz Pradovit, 300 watt, f 2.5 lens, aut remot contrl, \$89. Krakau, R&D 2473.

MOVIE CAMERA, Revere #99, 8mm turret w/3 lenses, light bar, \$30. Morgan, AV 1996.

RANGE & REFRIG, mge xint cond, frig gd, both \$75. Tonies, R&D 2243.

ADDING MACHINE, Rem Rand, gd cond, manual operatn, \$65. Doug, OS 5-5893.

STEREO SET, ptble, 3 spkr, records, my equity free T.O.P. Bill, DA 3-4129.

FOR RENT: FURNISHED

BACHELOR APT, Santa Monica, htd pool, nw bldg, Buss, EX 8-340, EX 9-0917.

ROOM, \$45/mo, util pd, priv entr, bth, nr trnspl. OS 5-2686, aft 4:30.

1-B.R. APT, 2179 Sepulveda, Torrance, nw, childrn OK. TA 0-2289.

2-B.R. APT, nr STL, dlx, ww, drps, gar, dsspl, R&D 1402.

FOR RENT: UNFURNISHED

1-B.R. APT, htd pool, ww, drps, gar. Mrs. Paul, EX 7-7481.

1-B.R., dlx, \$70, 1-story, gar, see to apprec. Tripp, PL 7-5433.

2-B.R. APT, El Segundo, dlx, bltins, cpt, drps, laundry, EA 2-5180.

2-B.R. HOUSE, Torrance, den, stov, refrig, water, \$130. Dan, AV 3008, OR 1-0659, TE 5-7524.

3-B.R., Canog Pl, cpt, drps, air cond, 2 bth, bltins, \$160. R&D 2429, EX 9-0917.

3-B.R. HOUSE, Man Bch, \$120/mo, avail immed. Peterson, FR 3-1206 aft 6.

4-B.R. HOUSE, P.V., 3 bth, bltins, new, lease, \$275. FR 7-4089.

FOR RENT: MISCELLANEOUS

ROOM, priv home, kitch privlges, twin beds, lge closets. AX 3-5805.

SINGLE, on Sunset in Pacific Palisades, lovely front B.R. GL 4-4063.

2-B.R. DUPLEX, Playa Del Rey, dlx, ptio spac, nr bch, \$120/mo. Welther, R&D 2142.

2-B.R. APT, Man Bch, triplex, vw, sundeck, bltins, cpts, drps, gar, \$125/mo. Leon, R&D 1179.

2-B.R., Man Bch, cpt, gar, fncd yd, free area, \$115/mo. John, R&D 1546.

3-B.R. APT, Playa Del Rey, cpt, drps, bltin, stov, dsspl, 2 bth. Combs, OR 0-2026.

FOR SALE: REAL ESTATE

LOT, P.V. Est, unimprvd, ocn vw, Lunada Bay, level, reas. DI 6-6066.