



# LIBRAZETTE

AN EXCHANGE OF NEWS AND KNOWLEDGE

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SEPTEMBER-OCTOBER, 1963

## Appoint F. J. Alterman President of CCD

(Burbank) Francis J. Alterman has been named president of the Commercial Computer Division of the Information Systems Group. His appointment was announced by R. W. Lee, ISG President.

Alterman has a 20-year background in the computer and instrumentation fields. Before joining CCD he was manager of Hughes Aircraft's computer division at Fullerton.



Alterman

Alterman previously was president of Advanced Scientific Instruments of Minneapolis, a firm he helped found. Earlier he held engineering and management positions with General Mills, Inc., W. L. Maxson Corp., New York, and Reeves Instrument Corp., New York, and was chief engineer for the Courant Institute of Mathematical Sciences at New York University.

He holds a BSEE degree from the University of Pennsylvania and took gradu-

## W. E. Bratton Resigns Post; R. W. Lee Named Successor

### Communications Speedup

Overnight delivery of interbranch correspondence, operations reports, payroll checks, small parts and other lightweight manufacturing items, is now in effect in both directions between the San Marcos branch and the Glendale-Burbank complex.

Materials to be shipped are packed in a single container in the central mailrooms and are transported by commercial buslines. Deadline for acceptance at either end: 4:00 PM. This service is available to all departments.

ate work at New York University. He is a member of the IEEE and the Association for Computing Machinery.

Alterman is 42, married and makes his home in Westwood Village section of Los Angeles.

(GLENDALE) Richard W. Lee, Executive Vice President and General Manager since March 1, has assumed the presidency of the Information Systems Group.

Lee succeeds William E. Bratton, who announced his resignation Oct. 23. Bratton, who joined the company in 1947, had been president since Sept 15, 1960. Earlier, two other major changes in the ISG management structure were announced. They are:



Lee



Bratton

**Appointment** of Don C. Webster, who has been president of the Librascope Division, to the newly established post of ISG Vice President, Engineering and Production. Lee assumed the presidency of the Division.

**Appointment** of Fred A. Darwin as Manager, San Marcos branch. Darwin succeeds Dr. Donald L. Farr, resigned, who had headed the branch since Oct 24, 1962.

**Darwin** was Manager, Electronic Equipment Division, of the McDonnell Aircraft Corp., St. Louis, for the past two years. Previously, for five years, he was Manager of McDonnell's Electronic Missile Engineering division.

The new San Marcos manager is a 1935 graduate of the U.S. Naval Academy and was awarded an SM degree from Harvard in 1936. He was head of the IFF and radar beacon design section of the Navy's BuShips from 1941-46.

Darwin is a senior member of the IEEE. He is married and the father of two teenagers, Hope, 17, and Fred, 16.



THESE SMILING FACES reflect the relief felt by all members of the EX-10 proposal team, that one of the most demanding efforts in the company's history had been completed—on time. From left, Craig Hammill, Tech'l Program Coordinator, Len Bellin, publications production supvr, Chet Koski, production publication liaison and Roy Bartlome, program manager. (Story on page 7.)



# Three Veteran Employees Join Ranks of ISG Retirees

## Moved?

If you've moved lately, or have changed your telephone number, your Personnel Dept would like to know—to make sure that your records are up to date. Faulty addresses can result in delay of important communications and emergency contact is difficult without a correct telephone number. Fill out a Change of Address form and give it to your department clerk.

(GLENDALE) Charles V. Snavelly, first time study analyst in the Glendale branch, Mike Andruchowski, whose "green thumb" made company lawns and plantings flourish, and Ilene B. Morton, whose colorful accounts of Washington life enlivened many a Patents section coffee break, have joined the rank of ISG retirees.

Snavelly, who celebrated his 68th birthday earlier this year, joined the company 16 years ago, when the entire organization was housed in one small building in Burbank. He had "sort of retired" from another company shortly before, but "couldn't stand the inactivity. But I didn't really expect to work 16 years more, either!"

A Senior Time Study Analyst at the time he decided to cover his desk, Snavelly made many of the original time and motion work studies which helped establish shop pay rates.

All three will receive payments from the ISG hourly employees retirement income plan, as well as from Social Security. A portion of Snavelly's payments will come from the GPE salaried employees retirement plan, because he had been both an hourly and salaried employee.

His departure from Glendale was the occasion for a party in his honor at the Grand Central Bowl, given by his associates in Glendale Manufacturing's methods improvement group. Guests included M. L. "Marsh" Cowan, who hired Charlie and Art R. Pederson, his first Supervisor.

For a going-away gift Charlie's friends presented him with a new golf bag, which should see plenty of use on a course which is practically next door to the new home Charlie and his wife, Verna, are building near Hemet.

For Mike Andruchowski and his wife, Eva, retirement doesn't mean moving away, for their home long has been at 1618 Flower street, across the street from Bldg. A02. Mike, who joined the company June 25, 1952, was born in Poland 66 years ago, came to the United States before World War I.

After a three-year hitch in the peacetime U.S. Army, from 1919 to 1922, Mike became a farmer near Utica, N.Y., raising garden vegetables, strawberries and chickens. The Depression put an end to that and Mike spent the next 10 years in cotton mill work in Utica.

First employed here in general maintenance, Mike shifted to gardening, taking care of the lawns and plantings around Bldgs I03, A01 and A02. His skillful hands made them much admired by employees and visitors. Many an employee received tips on how to make things grow from Mike.

Now recovering from a heart attack suffered several months ago, Mike plans



THE LIFE of the retirement party given for veteran Glendale time study analyst Charles V. Snavelly, was pert and vivacious wife Verna Snavelly. The couple are shown here with the golf club bag presented by Charlie's friends as a going-away present.



THERE'LL BE more time for coffee breaks like this for Eva and Mike Andruchowski, now that Mike has retired from his Glendale branch maintenance job on an ISG pension. Mike ended 10 years service with the company on Sept 30.

to take things easy for awhile, he says.

Ilene B. Morton, patent aide to Patents Attorney George Seevers, is going to be "plenty busy" doing things she hasn't had time to do before, she says, such as taking a more active role in politics.

Left a widow at an early age in her native Texas, Ilene raised three sons and a daughter by operating such businesses as a gasoline filling station, a bookshop,

an antique shop and a cleaning and dyeing firm. Later she moved to Washington and spent 15 years with various Federal agencies. She was in the Patent Counsel's office of the Navy's Bureau of Ships before joining ISG four years ago.

Visiting her children, who have presented her with eight grandchildren, also is going to take up a lot of Ilene's spare time, she says.



## Burroughs To Capitol

Rear-Adm S. E. "Ev" Burroughs, USN (Ret), Vice President, Military Relations, Librascope division, is shifting his operations to Washington, effective Nov. 1. He will headquarter in the Washington Regional Office.

## Ex-RCAF Flyer Is Now San Marcosan

(SAN MARCOS) Norman W. Emmott, the former Royal Canadian Air Force navigation expert whose laboratory and flying tests of the ASN/24 digital computer led to the computer's acceptance for the C-141 jet transport program, has doffed his uniform to become a civilian member of San Marcos' advanced technology group.

Emmott, who joined the RCAF in 1937, retired in August after 20 years service, which included combat duty as navigator of a Halifax bomber squadron based in England during World War II.



Emmott

Emmott has been assigned to the staff of Dr. Graham Murray, Director of Advanced Technology. He will be concerned with the design and development of navigation and flight-management computers for use in sonic and supersonic speed manned aircraft.

For the past three years Emmott had been posted as an exchange officer at Wright-Patterson Air Force Base in Ohio, under terms of an agreement between the U.S., Great Britain, Canada and Australia. Purpose of the agreement was to acquaint members of the various services with their allies' techniques and operational procedures.

Emmott, like many British and Canadians who serve their countries in uniform or other government posts, has a flair for writing. He is the author of a book of juvenile fiction entitled "Salvador," which is "about a horse," he says, "a very noble horse, and if you'd like to read it the book can be had for \$1.75 from British Book Services in Toronto. I recommend it highly."

Emmott, the father of four daughters ranging from 14 to 17, makes his home in Escondido.

## Scientists M. V. Cross, H. A. Keit Join Research & Systems Center

(GLENDALE) Appointment of Dr. Myrle V. Cross, Jr., as Director, Space Information Systems, and Harold A. Keit, as Director, Ground Information Systems, is announced by James R. Weiner, Director of the ISG Research and Systems Center.

## Lewis Gladser Is New Systems & RC Administrator

(GLENDALE) Lewis Gladser, previously Administrator of company-sponsored research and development programs in Hughes Aircraft Corp's Research and Development division, has been appointed staff administrator in the ISG Systems and Research Center.

Gladser is responsible for all administrative functions in the Center. He reports to Dr. John Salzer, associate director.

Gladser is a 1950 BS graduate in Marketing and Management from Cal-Berkeley, expects to receive his MBA from USC next year. He also holds a BS in Nautical Science from the California Maritime Academy and is a Lieutenant (JG) in the Naval Reserve.

Married and the father of four, Gladser makes his home in Canoga Park.

## Project Planning Names T. E. Ross Supervisor

(GLENDALE) Thomas E. Ross, who joined the company as an adjuster nine years ago, has been named Supvr, Project Planning, in Glendale Branch engineering.

Ross was chosen for the post by Howard Applegate, director of project management, after appearing before the Supervisory Selection committee. He was one of three candidates for the position, which is concerned with the planning and management control of engineering projects.

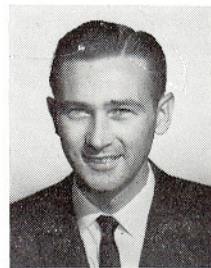
In his career with the company Ross moved from adjuster to instrument technician, instrument maker, senior technician, engineering planner, staff assistant in engineering management and, just prior to his new appointment, was Supvr, Budgets and Reports, in Glendale Branch accounting.



Cross



Keit



Ross



Gladser

Dr. Cross formerly was Manager, Simulation, Trainers and Computer Programming, of the Space and Information Systems Division of North American Aviation. In his R&SC assignment he will be concerned primarily with data processing and data handling requirements for manned and unmanned aircraft, spacecraft and missiles.

Keit, formerly Director, Systems Design and Programming of the International Electric Corp., division of Int'l Tel & Tel Corp., also was corporate Program Manager of the STRICOM proposal team. His responsibilities include command and control systems, logistics systems, check-out, data gathering and on-line data reduction systems.

Dr. Cross, prior to joining North American, was a Senior Staff Physicist with the Advanced Projects Laboratory of Hughes Aircraft Corp., and a Senior Scientist with the Lockheed Aircraft Corp's Missile Systems division.

In addition to his doctorate in mathematics (Univ of Mich, 1961) Dr. Cross holds MS-Math and BS-Physics degrees from the University of Miami. He was a teaching fellow at the University of Michigan from 1951-1953 and held an Office of Naval Research scholarship in 1953-54.

Previous to his service with ITT, Keit spent five years with the RW division of Thompson-Ramo-Wooldridge, was Manager of its Special Projects Office when he left. Earlier he was a Project Manager for Lincoln Laboratories of MIT, in charge of design, analysis and implementation of a major air defense system.

Keit earned his BS Math-Physics degree at St. Francis College, Brooklyn, N.Y., has taken graduate work at MIT and UCLA in mathematics, electrical engineering, analog and digital computer design and management and operations research.

Keit is the author of numerous technical papers delivered before such organizations as the American Management Association, the Institute of Radio Engineers, WESCON and various MIT symposiums.





PATENT INCENTIVE awards of \$100 each have been paid to Glendale Staff Engineer John A. Felts, (L) and ISG research aide Gerry McTeague (R). ISG Vice-pres, Administration, S. L. Briggs discusses patent applications on which awards were paid, with the inventors.

### Executive Training

Executive development training at UCLA's graduate school of business administration is being taken this Fall by W. J. Flanagan, Manager of Glendale branch procurement, and Jerry L. Deitz, Assistant Chief Engineer, Glen-Eng.

## Promote Dave Hackett To Design Supervisor

(GLENDALE) Glendale's systems design section has a new Supervisor—David W. Hackett—who joined the branch eight years ago as a 22 year old junior engineer.

Hackett was promoted from Staff Engineer to his new post by Ass't Chief Engineer Jerry L. Deitz, Manager of Design Engineering. Previously Hackett was systems project engineer on the SUBROC program.

Married and the father of two daughters, Hackett is a graduate of Rose Polytechnic Institute, Terre Haute, Ind. He currently is working toward his MSEE degree at UCLA.

## Two Switch Jobs In Glendale Personnel

(GLENDALE) Two members of the Glendale Branch personnel department staff have switched jobs in a move which Pers-Mgr Ray R. McDonald says will further the department's aim of developing generalists out of specialists.

Charles E. Talbot, previously Employment Supervisor, is now Wage and Salary Supervisor, and Frank H. Yapp, previously Wage and Salary Supervisor, is now Employment Supervisor.

Talbot has been with the branch since July, 1959, Yapp since December of the same year.

"The shift will provide each employee with broader experience and, at the same time, bring a fresh point of view to the management of each function," McDonald told LIBRAZETTE.

## Two Win \$100 Each In Patent Awards

(GLENDALE) Patent incentive awards of \$100 each have been awarded to an ISG Research and Systems Center research aide and a Glendale branch staff engineer, reports George Seevers, ISG patent attorney.

Gerry McTeague, research aide to Dr. Herman Graff of Applied Research, received his award when a patent application was filed on his masking process for fabricating photosensitizer mosaics.

John Felts, staff engineer in the Glendale Command and Control Engineering department, received his award when a patent application was filed on his design of a high packing density magnetic head for a computer memory. Felts' patent application is his fourth and he has a fifth in process.

McTeague's process, already in use, has substantially contributed toward the award of three contracts in the Research and Systems Center.

## Kirklin Joins San Marcos

(SAN MARCOS) William R. Kirklin, previously supervisor of industrial engineering for the Phaestron Instrument and Electronics Co., has joined the manufacturing management staff of the San Marcos branch. He reports to Dick Sak, supervisor of methods and estimating.

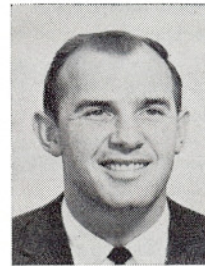
Kirklin has been assigned to the coordination of the work-factor program, will also develop new methods and standards.



Hackett



Talbot



Yapp



Kirklin

# 73 Brave Heat In Precisioneer Golf

by Bob Megee

(PALM SPRINGS) Three score and thirteen Librascope Division employees and guests battled 120 degree heat and a new course for a host of prizes Sept 28, in the Annual Precisioneers Golf Tournament at Indian Wells Country Club here.

All survived the desert's searing challenge and the hazards of sand traps, flying divots and golf clubs, water hazards and the rough, to take part in the pleasurable aftermath of swimming, dining and liquid refreshments that followed the jousts on the fairways.

Once again Carl Culver displayed his mastery over Precisioneer swingers by walking off with the Low Gross trophy, carding a neat 81. Bud Loisel took the Low Net trophy with a 64.

Jim Hachtel was in and out of so many sand traps he thought he was at the beach, but managed to lose the Duffer's Trophy to A. J. Pankratz, who ran up a horrendous 129 to cop the award.

Erma Brown won the Girls Low Net trophy and Ann Keenan won the Low Gross trophy by one stroke. Harriet (Pillsbury) Burg's amazing total of strokes won her the Girls Duffer Trophy hands down.

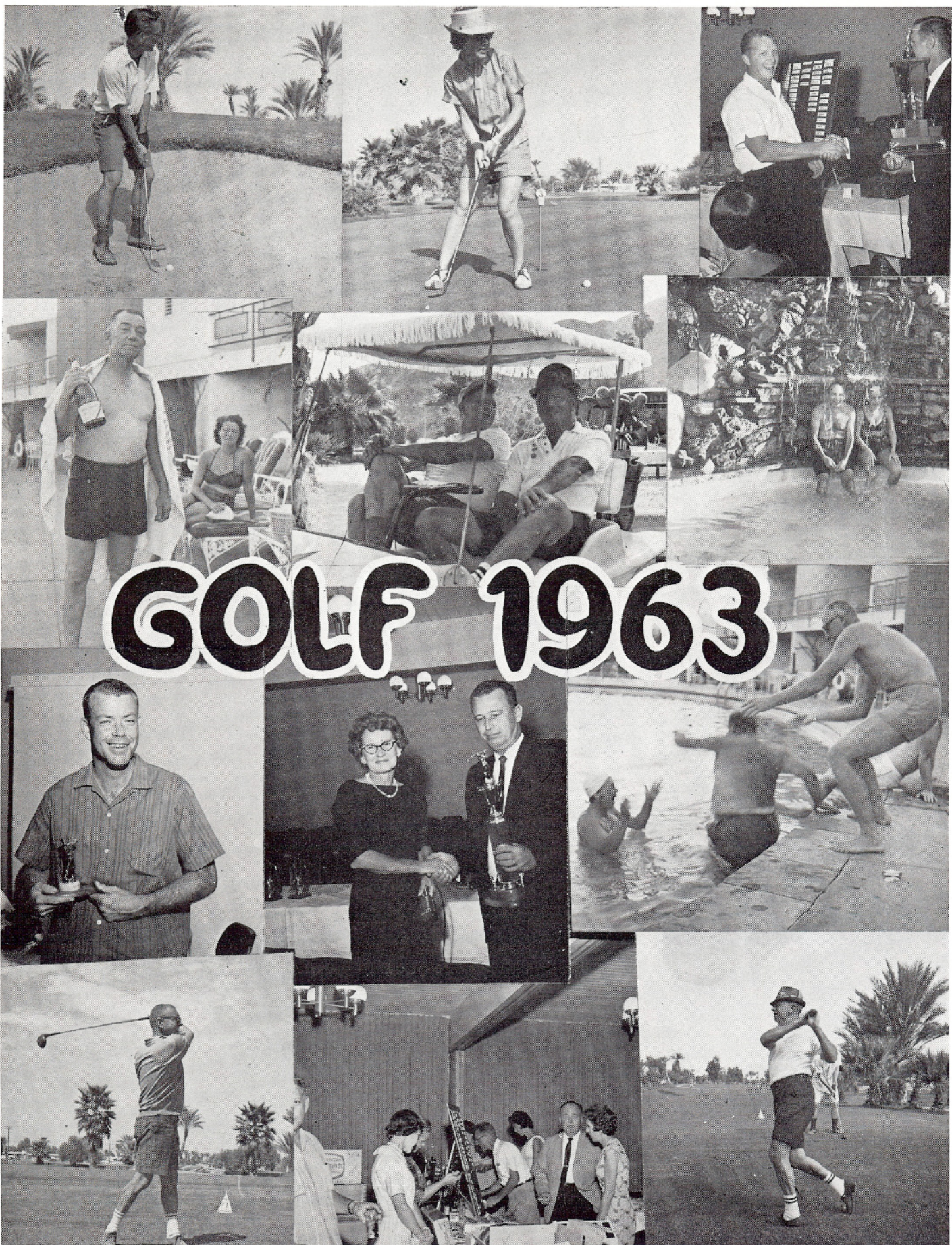
Players, wives and friends, 114 in all, sat down to a sumptuous roast squab dinner in the clubhouse in the evening, which was followed by many speeches and the presentation of awards.

The Ed Sullivan award, named in honor of the man who did so much to establish golf at Librascope, was presented by Isabel Sullivan, Ed's widow. It is awarded annually to the Precisioneer golfer who best displays good sportsmanship and is judged to have worked hard for the success of the club. The award went to this writer; I am greatly honored by the committee's decision.

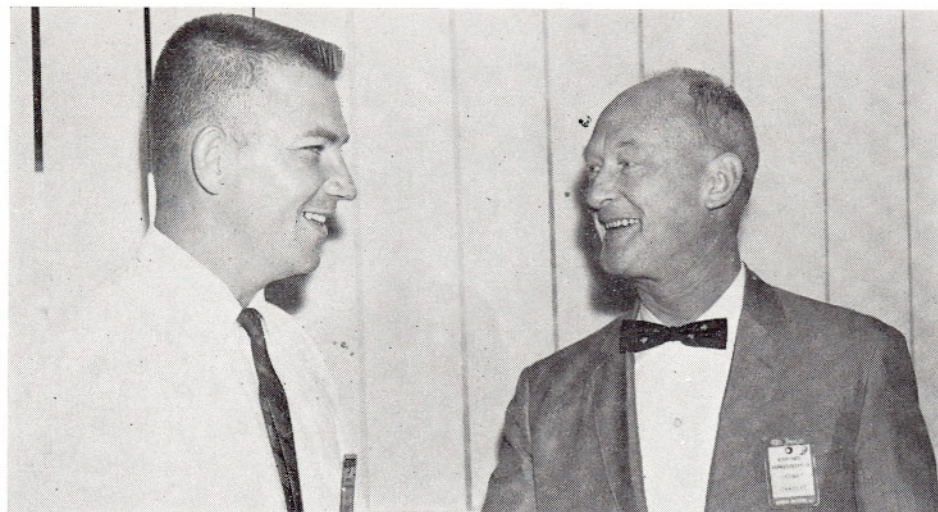
In match play, the winners were:

Group	1st	2nd
1A	Hugh Smith	Carl Culver
1B	Clyde Malin	Bill Tackaberry
2A	Nick Chiapel	Dave Hackett
2B	Stan Ericsson	Lloyd Somerfield
3A	Chas Cardea	Bill Flanagan
3B	Mark Ferry	Stan Williams
4A	Bud Linsley	Bernie Peskin
4B	Pete Iwakami	Bud Loisel
5A	Phil Marsik	Dan Bowden
5B	Stan Piskowicz	Cliff Choccol
6	Jim Rushing	Wally Winstead









**JOHN W. NESSEN, (L)** Navy quality assurance representative at the Glendale branch, receives Navy Outstanding Performance citation from his chief, **George deWolfe**, INSMAT western division supervisor. The citation, from INSMAT headquarters, Los Angeles, carried with it a \$200 award.

## Navy PA Inspector Wins \$200 Job Award

(GLENDALE) A young Navy civilian quality assurance representative in the Glendale branch office of the Inspector of Naval Material, has just received a Navy Outstanding Performance citation, carrying with it a \$200 award.

John W. Nessen, who has been assigned to the Bldg A17 office since March, 1960, received his citation and award from George deWolfe, INSMAT western division supervisor. Nessen has been assigned to the Mk 113 FCS program since its beginnings.

A Glendale native, Nessen graduated from Hoover High, and is the father of three youngsters, Mike, 5, Kelly, 3 and Steven, 1. Before joining the Navy's civilian staff he was an Air Force radar technician for four years.

## E. J. Gruen New Head, Sunnyvale Marketing

(SUNNYVALE) Appointment of Ernie J. Gruen as Manager of Marketing for the Sunnyvale branch of the Commercial Computer Division, is announced by A. R. Vallarino, branch manager.

Austrian-born Gruen is a BS-Chem graduate of New York University (1943), spent seven years with the General Electric company at Kearney, N. J., as a development engineer. Later, also for seven years, he was a group chief in the munitions section of the Army's Chemical Warfare department in Maryland.

Prior to joining Sunnyvale, Gruen was sales manager of the Flare Northern Division of Altantic Research Corp., for a four year period.

## John Notas Reports As S/M Contracts Mgr.

(SAN MARCOS) John Notas, long-time member of the General Precision organization, has been named Contracts Manager of the San Marcos branch.



Notas

Immediately preceding his new assignment, Notas was assistant manager, contract operations, for GPI's Aerospace Group at Little Falls, N.J. Earlier he was Contracts Manager for GPI's Air Traffic and Aviation Services Group and senior contracts administrator for General Precision Laboratories.

An Air Force veteran of World War II, Notas is a Major in the Air Force Reserve. He is a graduate in accounting and business administration of the University of Buffalo (1950).

# Glendale's Study Work Measurement

(GLENDALE) Twenty-nine members of the Glendale Branch organization and one member of the ISG staff are enrolled in a special college-level course in Design and Measurement of Work, being taught by ISG Director of Industrial Engineering W. F. Girouard.

The course, identical with one taught by Girouard when he was Associate Professor of Industrial Engineering at USC, is offered on Monday, Tuesday and Wednesday afternoons, starting at 4:00 and ending at 5:00 PM. The only cost is for the textbook.

"We were overwhelmed with applicants for this course," W. P. Strong, Training Director, told LIBRAZETTE. "It's first-rate training for anybody in supervision, for those working in job-planning and in job-cost estimating."

The course was set up following a request from Charles Palmer, Jr., Supvr of Manufacturing Estimate, that the training be provided for his estimating staff. Inquiry by Strong revealed that many others were interested, too.

Those enrolled are:

Inspection Foremen Dave Barnt, W. T. Giles and D. L. Dowling; Assembly Foremen Jeanette Calley, R. L. Gruber, G. R. Henshaw, Jim Phillips, and R. G. Peterson; Assembly General Foreman W. T. Holmes; Methods Analysts R. E. Laugh-ton, Joe Vigil, G. M. Nichols, Phil Poirier, Virgil Clark, Glenn Shearer, Don Day, Bill Tyson and Tony Schneider.

Also, Manufacturing Estimators Andy Lee, Don Sloan, C. M. Watson, Howard Sims and John Briggs; Timekeepers Bob Gonzalez and V. J. Orlando; W. O. Kerr, production project coordinator; R. B. Rousseau, parts mover, Charles Kelly, assembly leadman, M. L. DeLongfield, general assembler and P. J. Kennedy, ISG procedures specialist.



GIROUARD AND STUDENTS



# Call EX-10 Proposal Task A "Most Demanding" Effort

(GLENDALE) Glendale's proposal for system design and manufacture of the fire control system for the Navy's EX-10 project, has been completed and turned over to the Bureau of Weapons for evaluation.

In the words of T. D. Bryant, Vice-Pres. and Branch Manager, it was "one of the most demanding jobs ever faced by the company."

Glendale's competitor for the contract is Sperry Gyroscope who, says Bryant, have undoubtedly "been working just as hard as we have, spurred on by the same competitive pressures."

Price tag on the EX-10 project has not yet been determined, but if Glendale is successful in winning the contract it will have a definite influence on jobs in all areas.

Originally, two other companies, American Bosch-ARMA and Vitro Corp of America, also were in the running. They lost out in the initial go-round, which called for a broad technical proposal, plus a quotation on cost.

Sperry Gyroscope and Glendale were each so acceptable technically and on costs, that the Navy called for a second competition—for program definition—to decide which company was to get the design and production contract.

## Four Months Work

Four months of intense work, \$250,000 of Navy money, plus an undisclosed amount of Glendale funds, went into the effort. It took the time of scores of engineers, designers, technicians, manufacturing planners and estimators, plus the consultant contributions of specialists from other ISG branches and units of General Precision.

The demanding requirements of the EX-10 program effort, which carried the highest priorities on men, material and facilities, created considerable tension and wonderment throughout the Glendale complex. What was this all about, this project which pushed everything else aside?

## Answering Question

To some degree this question can now be answered, but only in broad, general terms, because EX-10 is a classified project.

Some idea as to the complexity of the project can be gathered by consideration of the physical dimensions of the proposal; stacked together the 35 volumes on the technical aspects stand two feet high. The pricing volumes are only five in number, standing nine inches high, but each is even more crammed with data than the technical volumes.

Then, let's consider the scope of the project, which, say the engineers, is not



**MOVIE STAR Janet Blair presents Glen Seltzer, ISG employment manager, with a citation in recognition of his efforts in behalf of finding employment for the physically handicapped. Occasion was the kickoff luncheon launching the Annual National Employee the Physically Handicapped Week. (Hughes AC photo)**

really just one project, but eight projects, because the goal was to design a system which would utilize eight existing fire control systems now in use in the Fleet.

Meeting these requirements created a proposal which calls for the fulfillment of 38 tasks; of these, 13 involve definition of system design, 20 are concerned with "how we will do the job" and five with program management, special tooling and costs.

The latter, reflecting today's cost-consciousness of the Federal government, called for a triple-header effort, consisting of cost estimates based on:

- 1) A Firm Fixed Price
- 2) A Firm Fixed Price, plus incentive fee
- 3) Cost Plus Incentive Fee.

Glendale is not anticipating a cost-plus award.

The proposal team assigned by Manager Bryant and Chief Engineer Arnold D. Larson, was headed by Project Manager Roy D. Bartlome, with Craig Hamill as Program Coordinator of the technical portion of the effort.

With the proposal completed and in the hands of the customer, members of the proposal team have turned to other efforts. But, in various areas of the Glendale organization, plans are going forward so that everything will be in readiness—should the Navy award Glendale the contract.

# Blood Bank Date Is October 30th

(GLENDALE) The Librascope Blood Bank, sponsored by the Precisioneers, will receive on-site donations to the bank on Oct 30, according to Precisioneer President Bill Cawthra, Glen-Eng.

The Bloodmobile of the Glendale chapter, American Red Cross, which provides collection and storage facilities for the Librascope bank, will be at the Griffith Park Manor fieldhouse, on Flower street, from 12:30 to 5:00 PM.

Up to Oct 1, 20 employees and members of their families had called upon the Librascope Blood Bank for blood in 23 cases of illness and surgery. A total of 98 pints were issued, with three cases of major surgery calling for 48 pints. Largest single requirement was for 21 pints.

The Red Cross will staff the collection center with nurses, doctors and technicians.

Chairman of the drive to recruit donors is Fred Killips, Glen-Shipping, who will be assisted by Eileen Brown, Precisioneer treasurer.

Building chairmen will call on each employee with registration cards prior to the Bloodmobile's visit. Cards will be collected several days in advance of the 30th, and Glendale nurse Margery Makaloni will schedule times for donors to visit the collection center.



**RAY G. JOHNSON, ISG Vice-Pres., Finance, was kickoff speaker at the first session of Division and Branch ImpAct cost reduction committee members.**

Johnson told about similar campaigns in which he had taken part with other companies, emphasized that "it is the simple ideas that save money." "Management," Johnson said, "is solidly behind ImpAct." (Detailed story on Page 12.)



# Salute Libravets At Gay Dance Party

(GLENDALE) The people who retiring president Bill Bratton calls the "old gang," the veterans of 10, 15, 20 and more years of service with the company, turned out in full force Oct 19, for the 12th Annual Libravet Party.

It was a gala affair that packed the Versailles Room of Pike's Verdugo Oaks restaurant with 238 Libravets, their spouses and friends. It was a record turnout for the annual event.

"The only people who weren't there were a few of those who have transferred to San Marcos and Sunnyvale, and just couldn't make it," says Chairman David H. Harrison.

A lively band which played generously both the old and the new, kept the dance floor filled throughout the evening. It seemed not to faze even the "senior Libravets" if the music was cha-cha, waltz, fox trot, Lindy Hop or what have you—they danced just the same.

Vince Nahrstedt, "the noblest Toastmaster of all," served as master of ceremonies, and should win another club prize for his skillful handling of the assignment.

Nahrstedt called upon Chuck Baumgard, Ted Lassagne and Bud Linsley for assistance in introducing the 15-year Libravets and to present them with their certificates and service pins. His assistant for the 20-year Libravet presentation was Bill Bratton, who used the occasion to pay tribute to all Libravets.

"The heart of any organization is in its veterans, you people of the 'old gang'," Bratton declared.

"I don't think this has ever been better demonstrated than during the recent period when we were getting out the EX-10 proposal.

"Many of you were on that team that worked 24, 48 hours at a crack—and some worked four days without going home—to get that proposal out on time and I had many people, not on the team, call and volunteer to help after hours. This is the kind of organization spirit we have come to expect from the 'old gang' over the years. It's a wonderful thing and it's great to be a part of such a group of fine people."

Bratton observed that, of late, there had been a certain amount of unrest and concern over the company's future, and observed:

"We have been in business for 26 years and there's nothing to stop us from being here 26 years from now. Times have changed, it's true, but they always have. Competition is tougher, but our backlog is bigger than it has ever been.

"We must expect change, because the world doesn't stand still. Our work may change, your jobs may change, your management and the company may change—but the organization goes on!"

Among Libravets attending the party were:

# Washington D. C. Engineering Office Adds 3 to Staff

(WASHINGTON) Warren D. Kleis, former systems, design and development engineer with Rocketdyne division of North American Aviation, has been selected to fill the newly established post of Administrative Engineer in the Washington Engineering branch. He reports to Manager H. A. Timken, Jr.

Kleis, a 1957 ME graduate of Michigan State University, also holds an MBA ('61) from the same institution and took graduate work in nuclear physics at UCLA. Prior to joining the Washington branch Kleis was a systems engineer with the Vitro Laboratories, Silver Spring, Md.

\* \* \*

(WASHINGTON) Appointment of a new Senior Engineer and a Supervisor of the Mechanical Laboratory are announced by H. A. Timken, Jr., Manager of the Washington Engineering Office.

Newest member of the engineering staff is Richard A. Clark, previously a senior engineer with Farrington Electronics, Inc., Alexandria, Va., and a development engineer with the Eastman Kodak Company, Rochester, N.Y.

Clark, a BSME graduate of the University of Rochester (1957) is the co-designer of a demand sweep drive unit to control mirror motion of a document scanning device.

Marshall T. Wulf, previously Manager of the Experimental Shop of the Pneumo-Dynamics Corp, Bethesda, Md., supervises the Washington Lab. He is a senior member of the American Society of Tool and Manufacturing Engineers, and a veteran of 30 years' experience in machine shop operation.

## 20 Years Service

Keith Kinnaird

Cesar C. Goldstein

## 15 Years Service

Wilbur H. Mayclin, Urban H. Kemme, Chester Brandon, Andrew L. Lee, Frank X. Kramer, Verle M. McClure, Joseph S. Wilson, Elmer W. Lehman, Jeannette D. Calley, Carl Culver, Jr., Orville R. Oliver, Elbert M. Sharpe, Jr., Thomas D. Bryant, Charles J. Baumgard, Charles R. Ahrens, Eloy A. Barrios, Richard W. Lee.

## 10 Years Service

Theodore H. Lassagne, Ida Tripoli, Robert D. Geno, Dorothy R. Brand, Frank A. Olson, Charles F. White, Wayne H. Kirby, Robert C. Thompson, Don Derrington, Rosemary Reuter, Dallas Martin, Curtis E. Gittings, Earle D. Tempesta, William T. Giles, Larry G. Lemery.

Linal B. Castle, John E. Traut, Hercy G. Sales, Arnold D. Larson, Thaddeus Manley, Robert E. Greer, George T. Erhardt, Clarence J. Kress, Byron B. Hayworth, Charles J. Cardea, John V. Grieshaber, Rupert M. Vertin, Howard A. Miller, Edward J. Douke, Walter C. Matueski.

Edwin A. Thorpe, Albert J. Akins, Elmer H. Prell, Philip Cohen, David L. Henshaw, Donna D. Snyder, Edward J. Wirtz, Leo J. Heinz, Andre J. Huot, Clifford S. Godwin, Roger R. Perraglio, Leon L. Gabel, Manuel Salvador, Jr., Otto E. Golder.

Henry F. Sanders, Jean P. Emond, Robert E. Laperle, Raymond A. Carbons, Russell H. Hofgren, Harold G. Odland, Harold E. Richardson, Paul J. Smith, James Brain, Ralph E. Riley.

Carl R. Neighbors, Iva M. Pate, Lois V. Freeman, Peter J. Maimone, James R. Kay, Arthur A. Olson, Albert H. Fonseca, Josephine Hernandez, Harriet C. Tourtillotte, Raymond G. Johnson.

## Correction!

The list of ZIP code numbers published in the July-August issue contains one error. The correct number for the Dayton Regional Office is 45414, NOT 45420. We apologize.

# Plan "Ops" Procedures For S/M Cleanroom

(SAN MARCOS) San Marcos' new assembly cleanroom is now in limited operation, while operating procedures to meet the stringent requirements of NASA and the Air Force are being developed by A. L. Thompson, of Mfg Supt A. E. Davis' industrial engineering staff.



Thompson

Thompson, an IE graduate from Stanford ('52), joined the San Marcos branch in June. He previously served as facilities planning and chief industrial engineer for Perkin Electronics Corp., El Segundo, and Lytle & Johnson Engineering Co., Alhambra.

## Fred S. McMullin

Fred S. McMullin, one of the best known men in engineering and professional talent recruiting, and a member of the ISG personnel staff since July, 1959, died Sept 17 in a Fullerton hospital, following a series of operations for cancer.

Fred was an Air Force navigator in World War II, entered the industrial world in the engineering field. Before shifting to talent recruitment for West Coast industry, he served as a quality control, test facilities and systems and process engineer. Before joining ISG he had been a recruiter for Lockheed and Hughes Aircraft.

Survivors are his widow, Joyce, and his daughter, Debbie, 14.

## 15-Plus Years Service

Melvin L. Lindahl, Roy I. Case, Jr., Jerome P. Snella, Andrew C. Krein, Jr., Charles C. Cole, Galen S. Mannan, Jr., David H. Harrison, Paul Glass, Herbert J. Darby, Willard J. Opocensky, Clayton Gary, Leonard Branvold, Clifford E. Dahl, Roy B. Pedigo, Harlan Buseth, Donald C. Webster, William K. McAboy.

Mildred L. Huggins, M. Edward Forgey, Lester H. Bentley, Marshall L. Cowan, David F. Pobst, Clarice H. Flynn, Loy B. Thompson, Harry L. Plunkett, Vincent J. Nahrstedt, Ivan G. Franklin, Joseph E. Riddle, Walter M. Lebert, J. Fred Merkel, Clarence R. Linsley, Dean R. Frederick, Ray E. Setty, Paul J. Metzger.

C. Dana Nixon, Muriel S. Brown, Edwin A. Jackson, George P. Markham, Arthur L. Vicenti, William G. Bietsch, Harold C. Nylan, Carroll A. Schramling, Glenn L. Reymann, Forrest G. McColl, Maurice W. Kurdjie, Clem M. Abbott, Roy W. VanHolm, Charles H. Bertrand, Ralph A. Metz, Roy W. Gombert, Elmer B. Blake, Jr.

Robert D. McFarlin, Marion W. Williamson, William E. Pollock, Ralph Woodward, George D. Henderhan, Lloyd C. Comexfield, Evelyn M. Bergman, Roy M. Dimon, Charles W. Buckley, William E. Bratton, Leonard E. Ludvigsen, Frederick Lenz, Bill L. Singleton, Charles V. Snaveley, Charles S. Hilgert.





# LIBRAVETS

## 1963 PARTY



# Bryant Announces New Eng Section

(GLENDALE) A new organizational unit in the Glendale Branch—Command and Logistics Systems Applications—was established Sept 30 by T. D. Bryant, Vice-Pres and Branch Manager. Bryant named L. H. Bentley to head the group.

Purpose of the move, Bryant said, is to strengthen the branch's support of Librascope Division marketing effort in behalf of large-scale data processing systems.

The new group's responsibilities include providing necessary technical support to Marketing, the management and coordination of technical and cost proposals, and providing guidance and assistance to the Command and Logistics Systems department functional units.

Bentley reports directly to Bryant. Current assignments to Bentley's staff include Ralph Singman, consultant, Staff Engineers H. M. Anderson, H. J. Pinczower, L. M. Schmidt and G. D. Chesley, Senior Mathematician Wm. Beck and J. G. Day, engineering writer.



Bryant



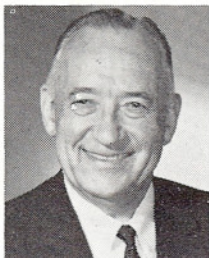
Bentley

## New Security Manual Issued to ISG Units

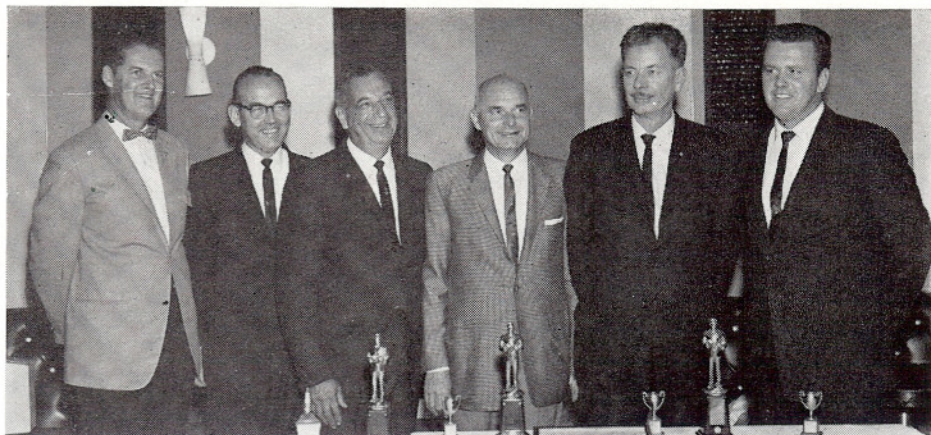
(GLENDALE) General Precision's new Security Manual, copies of which have been distributed to all units of the Information Systems Group, is the work of Vergil H. Herald, new Security Director of the Librascope Division.

The work, which fills a handsome blue three-ring binder, was completed while Herald was Security Director of GPI's Aerospace Group at Little Falls, N.J.

"I'd like everybody who has been issued one of the new manuals to look upon it as a working tool," Herald said. "It's written for the user—not the Security Officer."



Herald



AWARD WINNERS are these six members of the Librascope Toastmasters, tapped for recognition at the recent annual installation of officers. Judged "Outstanding Toastmasters of the Year" were, from left, Harry Pace, Scott Dwire and Joe Freiburg. Winners for the evening's meeting were, at right, Vince Nahrstedt, best speech, Charles Ahrens, best speech runnerup, and Don Hersch, best table topics.

## GP NEWS BRIEFS

Kearfott Division of GPI's Aerospace Group, has just received a \$1.8 million sub-contract for follow-on production on the STAFFUS system for the TALOS missile. STAFFUS is a portion of the guidance and control system of TALOS. The contract was awarded by the Bendix Corp., Mishawaka, Ind., prime contractors for TALOS.

Link Division, of GPI's Simulation and Control Group, has been awarded contracts from the French government, Trans World Air Lines and the U. S. Navy to design and build various flight simulation devices for jet-flight training.

For the French Link will turn out two flight simulators for the Brequet 1150 "Atlantic," a twin-jet ASW plane to be produced for NATO. For TWA, under a 1-million-dollar plus contract, Link will build an all-digital Boeing 727 transport simulator; for the Navy it will build an \$800,000 flight simulator for the F-8E (FN) "Crusader" system trainer.

Lloyd L. Kelly, President of Link Division, has been named to succeed W. W. Wood, Jr., recently resigned, as president of the Simulation and Control Group, GPI. An 18-year GPI veteran, Kelly started his Link career as education director. His appointment is effective Nov. 1.

## Fellowship Students

(GLENDALE) ISG's Fellowship and Advanced Degree programs are sending four engineers to UCLA and USC this year for study toward Masters and PhD degrees.

Richard M. Bird, ISG Systems & Research Center, is studying for a PhD in electrical engineering at UCLA, as is James R. Drugan, Glendale Reliability.

C. Walter Johnson, Glen-Eng, is studying for an MSEE degree at UCLA and Frank A. Campbell also seeks the MSEE, at USC.

## Toastmasters Elect 1963-64 Officers

(GLENDALE) New officers of the Librascope Toastmasters club were installed at a recent meeting of the organization, which also featured the presentation of awards for achievement to three members.

C. P. McKeague, ISG Director of Employee Relations and a charter member of the club, was a special guest and made presentation of the awards.

President for the 1963-64 year is Lyle Crawford, Scott Dwire is Educational Vice-Pres, Herb Steinitz is Administrative Vice-Pres. The new Secretary is Harry Pace, Bob Kurfurst is Treasurer and George Manus is Sergeant-at-Arms. The sextet was installed by veteran Toastmaster Art Pederson.

New Secretary Pace was singled out for a special award in recognition of never having missed a meeting, despite a heavy personal education schedule.

Pace also was the recipient of an Outstanding Toastmaster award, as were Dwire and outgoing Treasurer Joe Freiburg. The award is given in recognition of personal attainment as a speaker and for service to the organization.

Membership rolls in the club are still open and applications may be made to Steinitz, whose office is in Bldg 103.

## Stone, Uno, to Japan

(GLENDALE) Staff Engineer Grey E. Stone and Senior Mathematician Michio Uno, of Glendale Engineering, were sent to Tokyo in October, for demonstrations and conferences on the L-2010 digital computer.

Stone, Uno and Herbert Zieboltz, GPI resident representative, met with members of Mitsubishi Precision, Ltd., then demonstrated the computer to Japanese military personnel.



# Educational Aid Plan Helps

## 119 ISG Employee Students

(GLENDALE) With all the pleasure of a proud father, the information Systems Group is footing the educational bill for 126 members of the family during the 1963-64 school year, says Wayne P. Strong, ISG training director.

Strong's figures are included in a report on the ISG Educational Assistance Plan, for which he is administrator.

Those attending colleges, universities and vocational schools represent better than 4% of the almost 3,000 ISG employees, but the total number of ISG people improving their work skills and general fund of knowledge is no doubt appreciably higher, Strong said.



Strong

"Many of our people are attending tuition-free classes in local high school adult education programs," Strong pointed out. "Just how many there are we don't know, but the traffic was heavy in counselling prior to enrollment time."

Glendale branch of the Librascope division leads all ISG units in the number of employees enrolled under the assistance plan with an even 100. Of these 13 are working toward Bachelor's degrees in engineering and business and 13 toward Master's degrees in the same areas and in law. Three Glendalers are pursuing the PhD in engineering and MSEE degrees under the Fellowship section of the Educational Assistance Plan, which provides tuition plus required time off to attend classes.

Three of the 15 CCD employees receiving educational assistance are seeking BS, MS and MA degrees; at San Marcos, seven employees are enrolled; two are seeking BS degrees and one an MS-Math degree.

There is one candidate for the PhD in Electrical Engineering and one candidate for the MBA in the ISG staff offices.

"We are proud of all these members of the organization," says Strong, "proud that they are making themselves more valuable to the company and proud that they are willing to make the sacrifice in time and effort to achieve their goals."

"It is no easy thing to work full-time and carry an educational burden, too."

"I did not find the world desolate when I entered it, and as my fathers planted for me, so do I plant for my children."  
—The Talmud

## EAP In Wide Use By All ISG Units

(GLENDALE) Virtually every segment of the ISG organization is represented among the 119 employees who are attending school this Fall under the ISG Educational Assistance Plan.

Included in the representation are engineering, machine shop, model shop, assembly, reliability, adjusting, methods, production offices, marketing, metrology and accounting.

Also, field service, general clerical, quality control, employee relations, data processing, purchasing, budget, technical library, reproduction, customer training and legal.

Here are the names of all students available as LIBRAZETTE went to press:

Robert Alvidrez, Georgine Archer, James Arena, J. T. Ator, R. E. Awbrey, A. M. Benjamin, D. J. Beushausen, Hannes Boehm, Richard Bird, E. F. Browning, D. T. Bowden, James Brain, Frederick Bunch, G. N. Burtzell, C. C. Buterbaugh.

Frank Campbell, L. B. Castle, G. D. Chesley, Carl Cisco, Robert M. Curran, Jerry Clem, H. E. Compton, Lyle Crawford, W. K. Dahmer, L. D. Darrett, W. K. Davis, R. E. Dosch, J. H. Dickson, J. R. Dragan.

W. K. Emery, R. A. Endara, Eileen Epperson, J. A. Felts, E. T. Flaherty, A. M. Forman, I. L. Furman, R. W. Furtney, D. D. Gardner, Jr., J. S. Grimaldi, Joanne Guarino, Margaret Gueringer, W. W. Hargis, Patrick Henry, Ed Hill, L. D. Hill, R. D. Hill.

R. J. Hoffman, J. R. Honaker, C. W. Johnson, W. K. Keith, P. E. Kerry, W. O. Kerr, F. A. Klein, T. E. Kolb, R. E. Laperle, J. B. LaPorte, C. E. LeFevre, E. E. LeFevre, A. J. Levine, M. L. Loos, John McDonald, R. D. McFarlin.

G. E. McTeague, H. G. Martin, Jr., Aaron Mendoza, Jr., Joe Merchasin, Herbert Meyer, T. A. Miller, Eugene Monsive, L. L. Moore, William Murray, C. R. Noble, F. A. Oishi, M. M. Olson, Alice E. Opolak, D. J. Orr.

B. C. Perkin, R. J. Perry, Frank Piedad, R. S. Portugal, R. B. Prager, Robert Premas, R. K. Ray, Larry Rieker, R. L. Robinson, Collins Roe, J. T. Rosdorff, T. E. Ross, C. F. St. John, P. M. Salomon, D. L. Simon, H. W. Smith, M. I. Smokler.

W. C. Teele, J. D. Thomas, Richard Tichenor, R. B. Tilden, J. P. Tuggle, Hank Van Der Velden, W. J. Walker, D. L. Williams, S. E. Williams, Roe D. Wilson, R. M. Worthy, Yet Wong and Richard Yee, Marilyn Beirle, Leo Christian.



IN COMMUNITY SERVICE

Sidney L. Briggs, ISG Vice-Pres, Administration, has been elected to the Verdugo Hills Area Board of United Way, Inc. United Way combines Community Chests and United Funds in 38 Los Angeles County communities and cooperates with such in-plant fund-raising organizations as the Aid Clubs in ISG's Librascope and Commercial Computer divisions.

## Student Register

The ISG training section would like to have a complete roster of all employees who are currently attending school. W. P. Strong, training director, asks all employees, whether enrolled under EAP or not, to inform him of the training they are taking, so that the information may be included in their personnel records.

## UCLA Is Leader With ISG Students

(GLENDALE) UCLA leads all other colleges and universities in the number of ISG educational assistance plan students this school year, with 47 enrollees. USC, with 16 students, is second. Other schools selected by ISG students, are:

West Coast University—5; University of Santa Clara—4; L.A. State—4; Southwestern Law School—2; San Diego State College—3; Valley Junior College—3.

Other schools with one or more enrollees:

San Fernando Valley State—1; Mount Palomar College—1; San Jose State College—1; Illinois Institute of Technology—1; Los Angeles Art Center—1; Woodbury Business College—1; Valley Institute of Technology—1; and Valley Electronics School—1.



FRIDAY, OCT 4, was retirement day for Ilene B. Morton, ISG patent aide. Here, in forefront, she clocks out for last time at the Bldg 103 timeclock. Waiting in line to bid her farewell are (L-R) Barbara Peglau, Helen Mattison and Jeanette Carter.



# ImpAct Slogan of Company-Wide GPI Cost Reduction Campaign

(GLENDALE) General Precision, Inc., has launched a major cost reduction effort, in which all groups in the corporation are taking part.

The campaign is called IMPACT—A Campaign for IMProved ACTION. It aims at bringing down the cost of operation by seeking out and improving major areas where cost reductions can be made.

Chairman of the Information Systems Group IMPACT campaign is Clifford S. Godwin, Director of Contracts. Other member of the group are:

Librascope Division, contracts administrator Paul G. Gudal; Glendale Branch, Finance Manager N. J. Cronk and Management Engineering supervisor R. E. Awbrey; Burbank Branch, Systems & Procedures supvr Cloyd Hoover; San Marcos Branch, Projects Administrator; R. H. Horton, Sunnyvale Branch, Finance Manager W. E. Burns.

Kickoff action of the IMPACT campaign came at a meeting of the ISG committee, at which ISG Vice-Pres, Finance R. G. Johnson told the members that "management is 100% behind this effort."

As planned, IMPACT will consist of a series of cost-reducing campaigns, each a month long. The initial effort, Operation X-S Paperwork, is intended to examine ISG written communications, reports and records retention, with the aim of drastically reducing unnecessary publication and reducing local record storage as much as possible.

"Key to the success of the IMPACT campaign is the whole-hearted participation of all levels of management and of every ISG employee," President R. W. Lee told LIBRAZETTE.

"Each of us must examine what we do and how we do it, and try to find better and more economical ways of accomplishing our work.

"The economic health of our company and the security of our jobs depends upon the total efficiency of our collective effort. Cutting costs is a vital part of the whole picture."

Following Operation X-S, IMPACT will turn its attention to "Good Housekeeping." Additional themes will be announced shortly.

## Ernest Hebert

(BURBANK) Ernest Hebert, an employee of the Commercial Computer Division and predecessor organizations since Oct 1, 1954, died at his home in Burbank Aug 10, following a heart attack. At the time of his death Mr. Hebert was electrical module inspector in the components manufacturing department. Funeral services were held Aug 12 and interment was in Forest Lawn cemetery.

## Aid Club To Vote On Charity Donations

(GLENDALE) Annual election of directors and balloting for employee charity donations, has been set for Nov. 21 by the Librascope Aid Club, according to Chairman Dick Wilson.

Five vacancies exist on the seven-member board. Two are for three-year terms, two for two-year terms and one for a one-year term. Building representatives, whose term is limited to one year, also are up for election.

Nominations open Nov 4 and close Nov 15. Forms for filing will be posted on all bulletin boards.

Ballots listing the candidates and punched cards on which employees may list their charity allocations for payroll deductions, will be distributed with payroll checks on Nov 21.

Currently, the Aid Club board, with an authorized strength of seven members, is operating with four because of resignations. In addition to Wilson they are:

William S. Ryan, Evelyn Robideau and Harry Newbanks. Wilson and Newbanks' terms expire this December; both have announced they will be candidates for reelection.

## William D. Knox

William D. "Don" Knox, a member of the Information Systems Group organization since July 12, 1955, died Sept 18, following surgery to correct a heart condition.

Don was one of the best known men in the company and well liked by all who knew him. He began his career with the company as an outside manufacturing buyer, became Supervisor of Production Followup. He was appointed Security Officer in August, 1959.

He was Vice President of the American Society for Industrial Security, and Chairman of the Council of Industrial Security Executives. He was a charter member of the Librascope Toastmasters and a past president of that organization. He is survived by his widow, Dorothy, and two sons, W. D. Knox, Jr., and Don A. Knox.

## 665A Computers

(SAN MARCOS) The second of two special configuration ASN-24 digital computers designed and built for the Air Force 665A reconnaissance-strike program, has been delivered to the Air Force Systems Division, according to Dr. Don Farr, manager of the San Marcos branch.



Computer and Data System Designers:

## ROTATING MAGNETIC MEMORY DEVICES FROM GENERAL PRECISION

DISCS—Many computer and data system designers are turning to the high storage capacity of magnetic discs. For example, General Precision Random Access Magnetic Discs furnish storage up to 7,680,000 bits per disc. "Flying" heads permit high packing density of 400 bits/inch. Exclusive GP-produced plated-cobalt disc coating gives exceptionally high resolution. Excellent thermal shock resistance. Heads replaceable without special tools or danger of disc surface damage. Ultra-precision Grade 9 bearings give a service life of 10 years at 3600 rpm. Meets MIL-E-4970A. DRUMS—Pick the magnetic drums with a proved history of reliable performance in electronic computing systems designed for Navy, Air Force, NASA, business, engineering, and educational applications. Send for full information on drums and discs, from Commercial Computer Division, Information Systems Group (Librascope Division/Commercial Computer Division) General Precision, Inc., 100 East Tujunga Avenue, Burbank, California. TWX BRB 9884, Phone 849-6061.

### For Series L100 and L200 discs (all models):

Maximum bits per inch: 400. Head inductance: 25 to 150 microhenries. Type of recording: phase modulation. Recording surface: plated cobalt coating. Playback: 50 millivolts (under most conditions). Write currents: 40 to 100 milliamperes. Ambient temperature: 32°F to 149°F limits. Thermal shock: ΔT ambient in 10 seconds. Vibration: 15 to 55 cps (0.015 db amp, 3 directions). Mechanical shock: 4-inch edge test (4 drops).

### SERIES L100 SINGLE DISCS (ONE-SIDE MAGNETIC MEMORY)

Model No.	Disc Diameter	Maximum Tracks	Max. Bits per Track	Total Bit Capacity	Rotational Speed (rpm)
L104	4"	8	2400	19,200	3600-12,000
L106	6"	16	3600	45,600	1800-12,000
L108	8"	32	4800	153,600	1800-12,000
L111	11"	64	6600	422,400	1200- 8000
L116	16"	128	10,000	1,280,000	900- 3600
L124	24"	256	15,000	3,840,000	900- 3600

SERIES L200 DOUBLE DISCS SIZES 8" TO 24", 307,200 TO 7,680,000 TOTAL BIT CAPACITY ALSO AVAILABLE.

### COMMERCIAL COMPUTER DIVISION

**GP GENERAL PRECISION**

INFORMATION SYSTEMS GROUP  
100 E. TUJUNGA AVE., BURBANK, CALIF. • VI 9-6061