

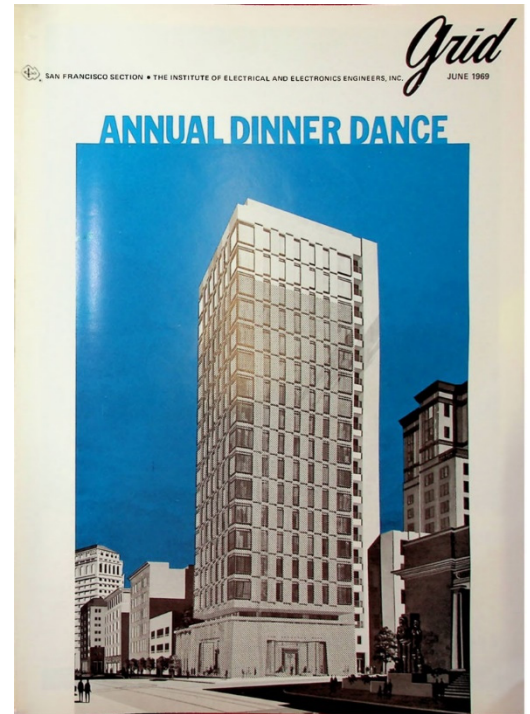
## EDITOR'S PROFILE of this issue

*from a historical perspective ...*

with Paul Wesling, SF Bay Area Council GRID editor (2004-2014)

June, 1969:

Cover: The Engineers Club of San Francisco is in this Hong Kong Bank building, site for the Section's dinner-dance.



Archive of available SF Bay Area GRID Magazines is at this location:

[https://ethw.org/IEEE\\_San\\_Francisco\\_Bay\\_Area\\_Council\\_History](https://ethw.org/IEEE_San_Francisco_Bay_Area_Council_History)

At time of scanning, the bound volumes are held by Paul Wesling.

April, 2025

Contact [p.wesling@ieee.org](mailto:p.wesling@ieee.org)



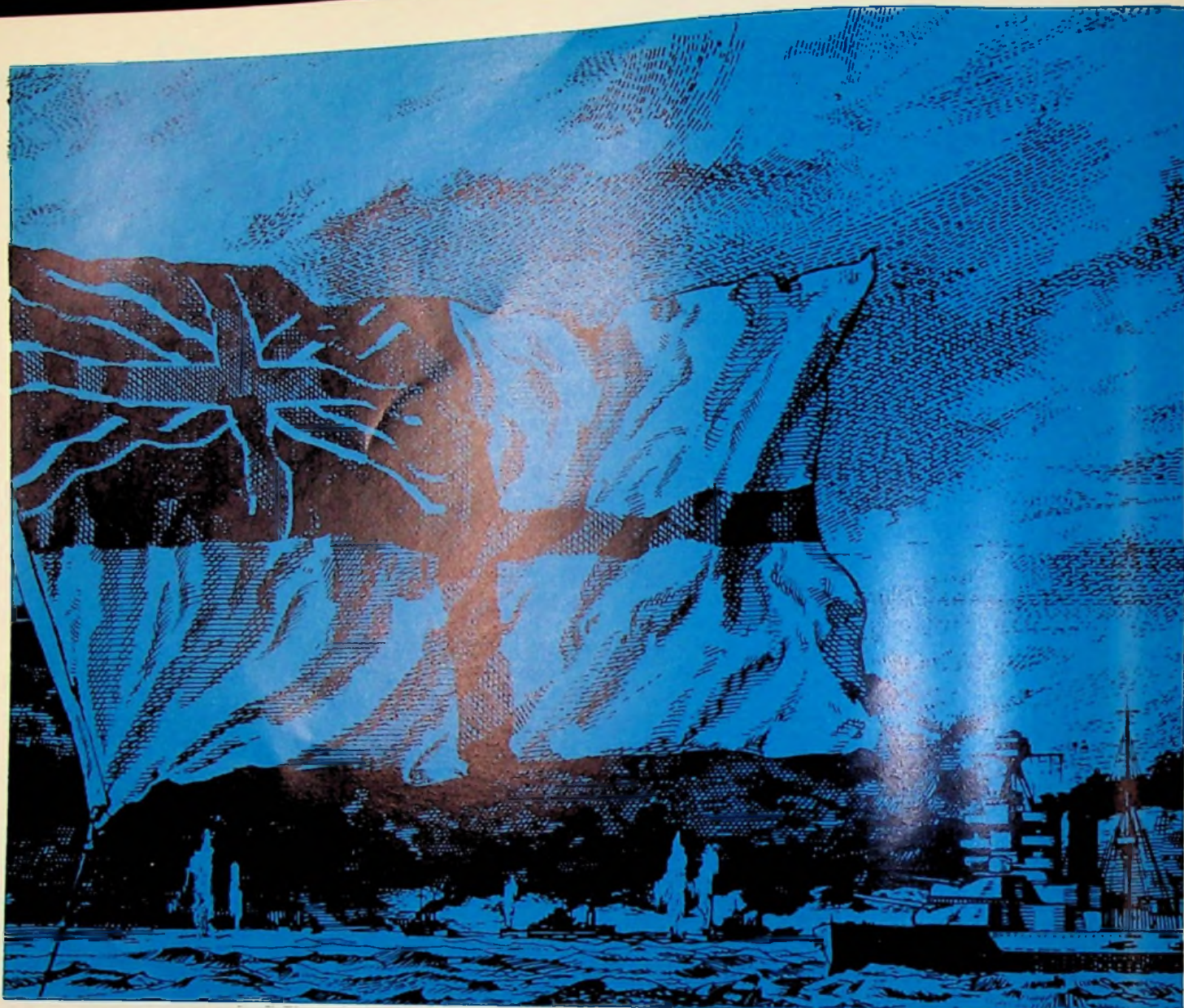
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*Grid*

JUNE 1969

# ANNUAL DINNER DANCE





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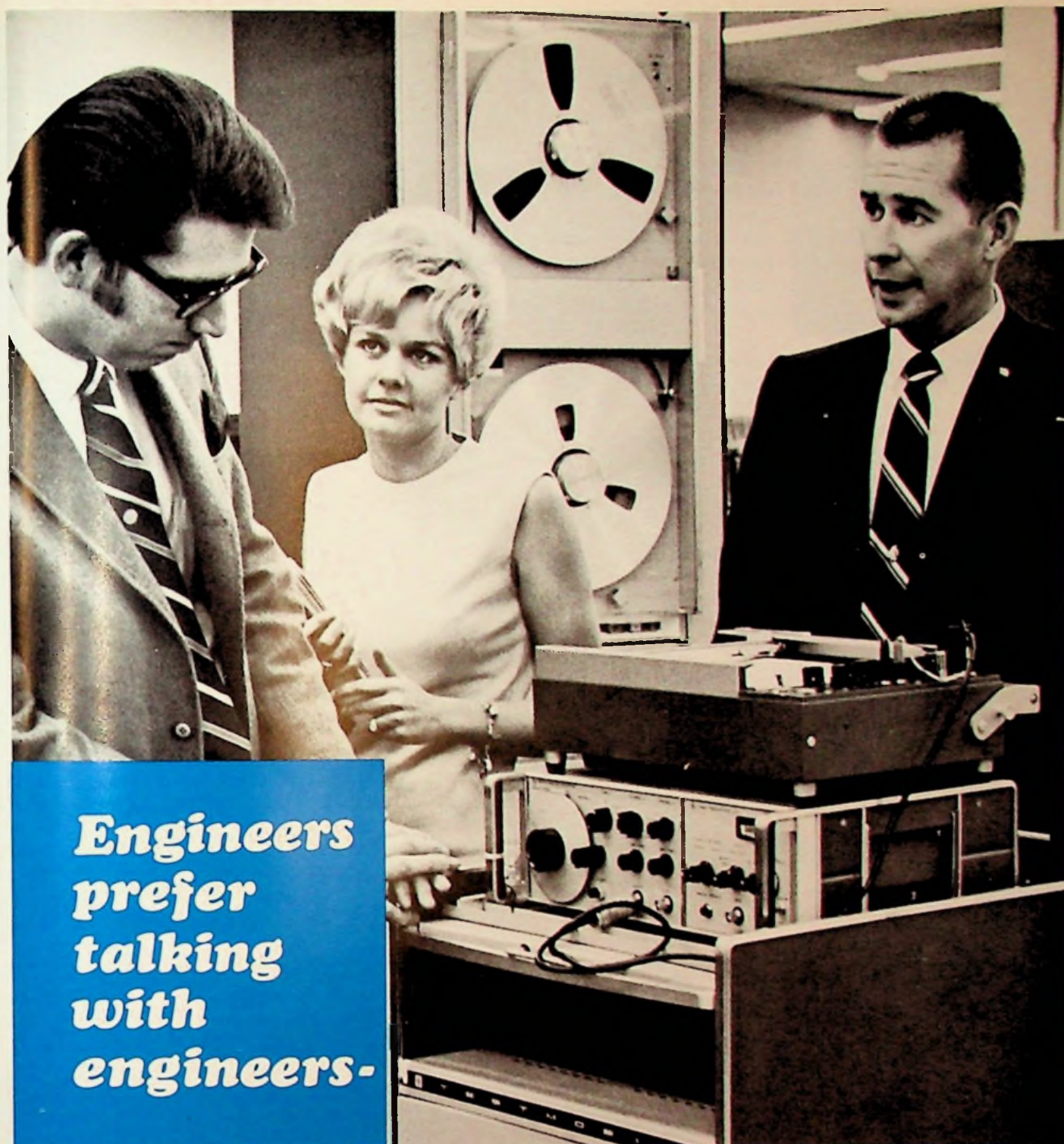
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## ON THE COVER

The Hong Kong Bank Building houses the beautiful Engineers' Club. The Club will be the scene of the Section's Annual Dinner Dance on Friday, June 13. It will also be the location for some meetings and activities of the newly-formed Golden Gate Subsection. The Engineers' Club is the center of activity and meeting place for Bay Area Engineers. Our Section Chairman, Jack Barkle, whose message appears as the feature article, is one of the ardent supporters of the Club.

*Grid*

volume 15  
number 10

JUNE, 1969

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Institute of Electrical and Electronics Engineers

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# Calendar Meeting

AUDIO &  
ELECTROACOUSTICS  
JUNE 19

Story on  
page 10

HIGH VOLUME TAPE DUPLICATION. James  
Wood, Product Engineer, GRT Corp., Sunnyvale.

JUNE 19, Thursday, 8:00 PM, Ampex Cafeteria, 401 Broadway, Redwood  
City. No dinner.

COMMUNICATION  
TECHNOLOGY  
JUNE 5

Story on  
page 11

THE CONCEPT OF NECESSARY AND OC-  
CUPIED BANDWIDTH IN MICROWAVE SPEC-  
TRUM MANAGEMENT. Jorgen H. Bistrup, Fari-  
non Electric Co., San Carlos.

JUNE 5, Thursday, 8:00 PM, Pacific Telephone Auditorium, 140 New Mont-  
gomery St., San Francisco. Cocktails: 5:45 PM; Dinner: 6:15 PM at "The  
Leopard," 140 Front St., San Francisco. Reservations: Milt Seymour,  
593-8491 or Paul Ahern (408) 291-4415 by June 4th.

MAGNETICS  
JUNE 10

Story on  
page 5

VIEWS ON INTERMAG 1969: A panel discussion.  
O. Kornei and C. D. Mee, IBM Corp., San Jose; J.  
Mallinson and I. Wolf, AMPEX Corp., Redwood  
City; P. Smaller, Memorex, Santa Clara.

JUNE 10, Tuesday, 8:00 PM; University of Santa Clara, Engineering Center,  
Room 551. No dinner.

RELIABILITY  
JUNE 19

Story on  
page 11

FAILURE MECHANISM OF INTEGRATED CIR-  
CUITS. G. W. Young, Quality Assurance and Reli-  
ability Manager, American Microsystems, Inc.,  
Cupertino.

JUNE 19, Thursday, 8:00 PM, Bold Knight, 769 No. Mathilda Ave., Sunnys-  
vale (Squire Room). Meet the speaker at 6:00 PM. Dinner: 7:00 PM. Choice  
of roast sirloin of beef or beef brochettes, \$4.50 including tax & tip.  
Reservations: W. L. Finch or Fran Hamada, 743-1577 by June 17th. (Specify  
dinner preference).

SAN FRANCISCO  
SECTION  
JUNE 13

Story on  
page 4

ANNUAL MEETING — DINNER DANCE, hon-  
oring 1969 Fellows and Award Winners from S.F.  
Section.

JUNE 13, Friday, 6:30 PM, Engineers Club of San Francisco, 160 Sansome  
St., S.F., Corner of Pine St. Cocktails: 6:30 PM; dinner: 8:00 PM and dancing  
from 8:30 PM. Reservations by ticket at \$7.50 per person. Palo Alto: Section  
Office, 327-6622. San Francisco: 764-7715 by June 7th.

# SECTION CHAIRMAN'S MESSAGE

The Annual Meeting of the San Francisco Section on Friday, June 13, 1969, will be an opportunity to recognize several of our members who have received outstanding awards during the year. Ten of our Section members were elected to the grade of Fellow and we will be honored to present Fellow Certificates to:

Morton M. Astrahan	Burton J. McMurtry
William E. Ayer	John P. Nash
Thomas A. Bettersworth	Rex Rice
David R. Brown	Bob H. Smith
Thomas E. Everhart	Ralph J. Smith

We will also honor Dr. Edward L. Ginzton, who was elected to receive the IEEE Medal of Honor, the highest award bestowed by the Institute; E. Finley Carter, recipient of the 1969 Founders Award; Dr. Donald O. Pederson, recipient of the 1969 Education Medal and David Packard, recipient of the Region 6 Community Service Award. It is a source of great satisfaction to those who work so hard preparing nominations for these awards to have their candidates selected and these people deserve recognition for the effectiveness of their work.

As the 1968-69 operating year of the Section closes, it seems appropriate to report on some areas of progress, but more importantly to discuss some of the problems that still exist and must be faced by next year's administration.

From a financial standpoint, the year will show a completely satisfactory result. We should be within the budget established last July and will record a reasonable increase in our reserve funds, as was anticipated. We now have under study a possible revision of our procedure for providing funds from the Section to the Group Chapters and Subsections. While we are not expecting an increase in income, there are areas where efficiency can be improved and costs reduced so that the new plan should provide increased funds to meet increasing costs.

The GRID continues to be the main channel of communications in the Section. We feel that the quality of the magazine has improved greatly, and the continuing interest and support of our advertisers seems to confirm this. It is, however, a marginal operation requiring close control of costs. Our publication schedule now is such that you should receive your copy on or about the first of each publication month. The value of the GRID is in the news it carries of interest to our members. We badly need newsworthy items, preferably of local interest or editorial in nature. These items should come from the Group Chapters, the Subsections and the Student Branches. The chairmen of these organizations need to recognize the value of these news items and form public relations committees to produce them.

The 1968-69 technical program of the Section has been very effective. Data are not available at this time regarding the number of meetings and attendance, but results to date indicate that we will approach a total of about 125 meetings. Our aim is not to hold as many meetings as possible but to have a reasonable number of effective, interesting and consequently well-attended meetings. In these days of many demands on one's time, this is essential to the success of our kind of professional organization, and we feel we are achieving success.

Along this line, we are making a concerted effort to draw our 9 Student Branches into a closer relationship with the Section and its activities. In early March, the Executive Com-

mittee met with officers and counselors from 8 of the Student Branches to explore mutual problems. Early in our discussions it became clear that the students are extremely eager for the opportunity to meet with practicing engineers and to hear from them just what engineering is all about. The engineering curricula is so full of basic courses that there is little time for students to explore the practical function of the engineer in industry.

This is a challenge that cannot be overlooked. The Subsections need to organize joint meetings with the Student Branches in their areas. This year the Santa Clara Valley Subsection held such a joint meeting with the University of Santa Clara and San Jose State Student Branches. The program was excellent and inspired lengthy discussion, the attendance from the Student Branches was good, but the attendance by Subsection members was disappointingly small. In spite of this, the meeting ended in small discussion groups of students quizzing the few practicing engineers as to just what the engineering profession is all about.

We need to expose ourselves to more of this type of interchange. Consequently, we will encourage more meetings of a similar nature, and above all, will encourage greater participation by you who are already practicing and with whom these students want to talk. Secondly, we will encourage each Group Chapter to organize at least one joint technical meeting with one or more Student Branches during the year. This will give the students an exposure to several of the technical branches of the Institute.

We need to expand our program of continuing education for engineers. President F. Karl Willenbrock recently said in a presentation to the Institute Board of Directors, "The Institute has a great potential for service in this area (educational activities), which I feel is relatively poorly exploited at present. The educational business needs innovative thinking; its use of technology — which our profession helped to create — is fantastically slow. The major technological aid for instruction used in universities, the blackboard, is not the newest thing on the market. I hope IEEE can give the educational world some help, which it badly needs."

This statement coming from a leading educator bears great weight. We must innovate and exploit to fill the need that exists. This will involve closer cooperation with the universities and industry to develop techniques and courses for continuing education. Television is a lecture medium that we have not developed as we should, and that offers endless opportunities.

Closely related is the matter of public relations, which is an increasingly important function, and our goal must be a more effective job on the daily and weekly press. Other scientific societies do a far more effective job of producing significant news items than we do. We need to develop our news channels and to improve the public image of our profession. This can be a powerful factor in influencing the younger generation to choose engineering as a career; and we need to attract more students.

All Sections of the Institute have problems of communication among members and of organization to create a strong, effective working group involving a large number of the Section members. The San Francisco Section is unique in this

*(Continued on page 4)*

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## Annual Dinner at Engineers' Club

Enjoy yourself at the 1969 Annual Meeting Friday, June 13, at the Engineers' Club of San Francisco. Dining and dancing with time in between to greet old friends and make new ones, will be features of the meeting. Music will be provided by the Jack Fisher Quartet with songs by Sylvia Gaylord.

IEEE Award Winners and the 1969 Fellows will be honored and the incoming officers will be introduced.

Tables will be organized for Subsections and Group Chapters. Also, tables for individual parties of 6 or more may be reserved. See calendar for all details.



Jack Fisher



Sylvia Gaylord

## Section Chairman's Message *(Continued from page 3)*

respect because of its size and number of members and geographical area. We are still the largest Section in the Institute, with 7938 members as of last December 31.

There are strong opinions that the Section could accomplish its many tasks far more forcefully if we were divided into smaller sets of members and geographical areas. The Groups and Group Chapters have accomplished this and filled the need in the technical program. We need to divide the area in an administrative sense to increase our attention to most of the problems discussed above, but particularly to Student Activities, both high school and college; public relations; nominations for Recognition Awards; encouragement of new members and upgrading of existing members; and educational activities.

The problem is of a long-range nature and an Ad Hoc Committee has been formed to study it and recommend a mode of reorganization for the Section. One step in the direction of regrouping was accomplished this year by the for-

mation of the Golden Gate Subsection, encompassing the area of the City and County of San Francisco. This is the third Subsection within the Section and creates greater opportunities for members in that area to become involved in the administrative work as well as the technical work of the Institute.

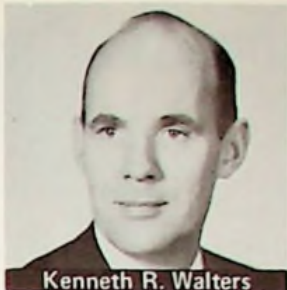
The new administration of the Section, under incoming Chairman John Damonte, will face these problems and move ahead toward solving them. Help is needed from our members, and I encourage each of you to find some way that you might become involved. You will find your membership much more satisfying through involvement and closer association with fellow members. I know Mr. Damonte shares my enthusiasm in looking forward to the challenging period ahead. The Institute has great potentialities for usefulness and service to its members, the profession, and the public-at-large. We must find and develop ways of exploiting these potentialities more effectively.

— John E. Barkle.

## new sub- section formed



Roland K. Grannis



Kenneth R. Walters



Jack M. Shulman



Bryan R. Baarts

A new subsection, to be known as the Golden Gate Subsection, has been organized to serve the interests of all IEEE members in the City and County of San Francisco. A steering committee, headed by Charles Dick, has been at work since last fall to bring the new group into being. The first meeting was held Tuesday, April 22. Mr. Allan Jacobs, Director of Planning for the City of San Francisco was the speaker. He gave a challenging, well received address on "San Francisco in the 1970's." The following officers were elected: Chairman, Roland Grannis; Vice Chairman, Kenneth Walters; Secretary, Jack Shulman; Treasurer, Bryan Baarts.

### ROLAND K. GRANNIS

President of K. M. Ryals Co., Manufacturers Representatives. He was formerly employed by the Pacific Telephone & Telegraph Co. and Pacific Electric Manufacturing Co. He has a BSEE Degree from the University of California. Mr. Grannis joined AIEE in 1953 and served on various committees. He is a past Chairman of the S.F. Chapter of the Power Group and current Chairman of the Power Group Professional Education Committee.

### KENNETH R. WALTERS

Engineer with the Bell System for 14 years at Western Electric in Chicago and Columbus, Bell Telephone Laboratories in New York, and Pacific Telephone in San Francisco. He is presently Staff Engineer, Quality and Protection Group of the Chief Engineer's Department. He graduated from the University of Nebraska with a B.A. in Radio and Television Communications. Mr. Walters is Secretary of the Executive Committee of the 1970 International Communications Conference.

### JACK M. SHULMAN

Fellow District Engineer, Power Systems, in the San Francisco Field Sales Office of Westinghouse. Prior to his present assignment he was Engineering Manager for Electrical Products at the Sunnyvale plant of Westinghouse. A graduate of Ohio State University, he received the MSEE Degree at the University of California in Berkeley. He joined AIEE in 1940 and has served as Secretary and Chairman of the Santa Clara Valley Subsection, and as a member of the national Switchgear Committee and Subcommittee on assembled Switchgear. Mr. Shulman is a Senior Member of IEEE.

### BRYAN R. BAARTS

Engineering Department at P.G. and E., the last three years in transmission substation design. He graduated from Stanford with a BSEE and served two years with the U.S. Army on a missile test project. He is a member of the Power and Insulation Groups and has served as an assistant coordinator for the Insulated Conductors course offered by the Professional Education Committee of the Power Group. Mr. Baarts is also a member of the Pacific Coast Electric Association and the Electric Club.

Any IEEE member whose mailing address is in San Francisco is a member of the Golden Gate Subsection. If you now receive your IEEE mailings outside of San Francisco, but wish to affiliate with the Golden Gate Subsection or change your mailing address, call or write Jean Helmke at the Section office, Suite 2210, 701 Welch Road, Palo Alto, 94304; phone 327-6622.

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## Continuing Education; Results of our February Survey

The February 1969 issue of the Grid carried a survey card asking the IEEE members of the San Francisco Section to state their preferences with regard to the course material to be covered in future Continuing Education Programs. Of the 7900 members who regularly receive the Grid, 73 (less than 1%) responded with comments and suggestions. While this small sample cannot be considered representative of our total membership, the tabulation of interest may be worth reviewing.

1. ACADEMIC COURSES LEADING TO MS OR PhD ON EE - 1st choice: 19; 2nd choice: 4.
2. PRACTICAL DESIGN COURSES - 1st choice: 11; 2nd choice: 14.
3. STATE OF THE ART COURSES - 1st choice: 14; 2nd choice: 12.
4. NEW TECHNOLOGY COURSES - 1st choice: 15; 2nd choice: 19.
5. PROFESSIONAL DEVELOPMENT COURSES - 1st choice: 10; 2nd choice: 15.
6. INTERESTED IN ALL CATEGORIES WITH NO SPECIFIC PREFERENCE - 3.

There seems to be a slightly stronger 1st choice preference for Academic Courses leading to advanced degrees with a 2nd choice preference for New Technology Courses.

The small response to this survey may in large part be due to the satisfaction of the members with the excellent job being done by the University of California, Stanford, Santa Clara, San Jose and the other colleges in the San Francisco Bay Area. In addition to the academic and new technology courses offered by these schools, many industrial concerns, such as IBM, Lockheed and Hewlett-Packard offer their employees courses in practical design, state of the art and professional development. Add to this, the technical meetings of three subsections, 24 technical Group Chapters and nine Student Branches, and one begins to appreciate the vast spectrum of educational opportunities that are available to us in the San Francisco Section.

At the present time, it does not appear to be necessary nor desirable to further augment the courses being offered in our Section. The Continuing Education Committee will continue to monitor and encourage the efforts of our Universities, Colleges and industrial firms. The Grid will publicize those courses that may be of special interest to you. Our goal is to provide you with the opportunities for a viable and virile technical future.

John B. Damonte, Vice Chairman  
San Francisco Section, IEEE

## NEW MEMBERS

The Section

welcomes these new members

M. M. Atalla	R. F. Pruter
T. E. Bibbens	J. D. Quinley
J. W. Carlson	S. M. Seltzer
A. Carneiro	Y. P. Stamenov
G. J. Enyedi	T. B. Swanson
M. A. Gray	J. E. Thompson
J. E. Hogan	J. H. Willett

E. J. Murphy

Congratulations to these members  
recently advanced to the grade of Senior Member

J. M. Elam	E. D. Jackson
H. R. Hoving	E. G. Lebre

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Through the continual refining and developing of our engineers' special skills and methods, Kaiser Aerospace & Electronics has grown with the industries it serves. Our staff as well has grown in recognition and personal achievements. There's no better time than now to check us out and find your own place in the sun. There's always space for the professional on the way up. Our present needs include:

**Avionics Display Systems Engineers**—Background in radar, infrared, TV displays and other aircraft sensors and subsystems. Development from concept through proposal: Degree and three years' experience.

**Electronic Design Engineers** — *Linear Circuits*—Circuit design experience using operational amplifiers, MOS FET switches, circuit design through testing of initial prototype: BSEE with two years' experience.

*Digital Logic Circuits*—Systems, logic, and/or circuit design, laboratory verification of performance. Application of integrated circuits to high speed digital timing, memory, encoding, decoding and TV video circuits. BSEE with two years' experience.

*CRT Excitation and Deflection Circuits*—Design experience in all types of CRT related circuits, including deflection circuits and very high frequency video amplifiers. BSEE and two years' experience.

**Mechanical Engineers** — Product design and packaging of military and commercial aircraft instrumentation; carry through engineering assignments from conception to completion on projects which involve disciplines in analytical and experimental structural-thermal analysis and design.

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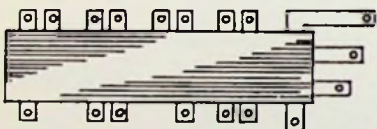
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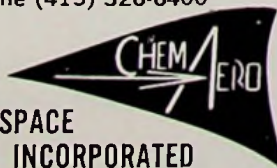
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## Region 6 Community Service Award

Once each year the Sixth Region of the IEEE honors one of its members by presentation of the "Community Service Award," in recognition of outstanding contribution to his community. The award for 1969 was presented to David Packard at the Region Six Banquet in Phoenix on April 17th, for contributions to the local, state, and national communities, as well as those to the educational community. Mr. Packard was nominated for this honor by the San Francisco Section previous to his selection by President Nixon to serve as Assistant Secretary of Defense.

Mr. Packard received a B.A. Degree from Stanford in 1934 and an E.E. Degree in 1939. With Mr. William R. Hewlett, a former classmate at Stanford University, he founded Hewlett-Packard. The firm was incorporated in 1947 and Mr. Packard was elected President. In 1964 he became Chairman of the Board and Chief Executive Officer.

Throughout his career, Mr. Packard has been a tireless worker for community betterment. He is particularly

interested in, and concerned with, the problems of minority groups, particularly the disadvantaged, and served as co-chairman of the Stanford-Midpeninsula Urban Coalition.

Mr. Packard's broad interest in education and his assistance to various educational institutions manifests itself in many ways. He has served on the Palo Alto School Board, including a term as president; on the Board of Trustees of Stanford University since 1954, including a term as President of the Board from 1958 to 1960. He has also been a member of the Advisory Board of the Hoover Institution at Stanford and the Board of Trustees of Colorado College.

Mr. Packard has been the recipient of many national awards and honors. In 1966 he received the Herbert Hoover Medal, the highest honor awarded by the Stanford University Alumni Association. He is one of only a dozen or so industrial and scientific leaders to have been bestowed with an honorary lifetime membership in the Instrument Society of America. He is a fellow of the IEEE.

## Upgrade Your Membership Status!

Every member is entitled to IEEE membership grade at the highest level for which he is qualified, no matter what the grade of entering IEEE. You are reminded that recognition of "experience or attainment reflecting professional maturity" after 10 years of active practice of the profession is through application for Senior Member grade. With three years of professional experience after college, you may qualify for Member grade. There is no transfer fee whatever, but the form II application must be filled out by the individual and submitted to IEEE New York headquarters. Forms are available in the Section office, from members of Jim McCann's

committee on Members and Transfers, and from Group and Subsection officers.

The incentive to make this transfer is in personal recognition at the highest IEEE grade to which you are eligible; an added incentive for Senior Member transfers is that the quota for Fellow awards nationally is now based on 1/2 of 1% of the number in Senior Member grade, and so for every 200 new Senior Members, there can be one more Fellow. Anyone, especially those who have been in Member grade for 7 years or more, should consider if his qualifications match the requirements for Senior Member.

## INTERMAG Impressions

A panel discussion of impressions of the 1969 INTERMAG conference held in Amsterdam in April will be presented at the Magnetics Chapter meeting on June 10. Particular emphasis will be placed on the recording workshop. The panel will include some of the following persons: O. Kornei; C. D. Mee of I.B.M., San Jose; J. Mallinson of Ampex, Redwood City; P. Smaller of Memorex, Santa Clara; and I. Wolf of Ampex, Redwood City.

See calendar for complete details.

## Wood Describes High Quality Tape Production

At the June 19th meeting of the Audio & Electroacoustics Chapter, James Wood will describe methods of production of high quality cartridge and cassette tapes in high volume. Special equalization of master tapes to tailor the product to suit its application, and quality controls necessary to assure satisfactory cartridge will be discussed.

Mr. Wood is Product Engineer at GRT Corporation in Sunnyvale. See calendar for details.

## Bistrup Clarifies "Necessary Bandwidth"

The concepts of "Necessary Bandwidth" and "Occupied Bandwidth" as they apply to FCC Regulations of multi-channel (F9) type of emission will be discussed by Jorgen H. Bistrup at the Thursday, June 5 meeting of the Communication Technology Chapter. In particular, the concept of "Necessary Bandwidth" will be clarified, and proposed amendments relating to the determination of this parameter now before the FCC will be discussed. Mr. Bistrup, as a member of the Electronic Industries As-

Joseph Bistrup



sociation Committee which prepared these recommendations for clarification and amendment, is well qualified to discuss this subject.

Mr. Bistrup was educated in his native Denmark with a B.S. in physics. Prior to joining Farion Electric in San Carlos in 1966, he was Manager of Systems Engineering for Westrex Communications Division of Litton Systems, Inc. Mr. Bistrup has also held executive positions with several other major communications equipment firms. For six years, he was with Page Communication Engineers in Washington, D.C. As Assistant Director of the Telecommunications Division, he was responsible for the planning and design of numerous tropospheric scatter systems throughout the world. Previously he had been with Collins Radio Company, Dallas, as a group head in Research and Development, and with the RCA International Division as Assistant Marketing Manager of Industrial and Scientific Products.

Cocktails and a no-host dinner are scheduled in advance of the meeting. See calendar for details.

## Hall Joins Friden



Gerald E. Hall

Gerald E. Hall has joined the Friden Division of The Singer Company as Division Manager of Recruitment. Hall will be responsible for filling present and projected division openings at Friden headquarters in San Leandro. He came to the Friden Division from Sylvania, where for seven years he was Employment Supervisor for the Western Division's Electronic Systems Group in Mountain View.

A native of Dearborn, Michigan, Hall served four years in the U.S. Navy and received his BS degree at the University of California at Los Angeles. His business affiliations include the Peninsula Personnel Group, the Northern and Southern California Personnel Committees, and the Western College Placement Association.

## Reliability Chapter to Hear Mr. Young

On June 19th, Mr. G. W. Young, Quality Assurance and Reliability Manager at American Microsystems, Inc. in Cupertino, will address the Reliability Chapter on Failure Mechanism of Integrated Circuits. He will cover the subject by starting with observable failure modes, external to the integrated circuit package. Reasons for the failure modes will be examined by traversing the intermediate procedural steps and underlying methods of dissection analysis necessary to open the package to permit the thorough examination required to assure disclosure of the failure mechanism.

Where product improvements are indicated, and such changes implemented, methods of screening future products are generated to assure that such improvements are maintained. Mr. Young will discuss several ways to screen integrated circuits, primarily those applicable to MOS devices.

Mr. Young is credited with setting up an excellent failure analysis laboratory at AMI and all the attendant procedures for analyzing IC failures to effect product improvement, in addition to his other managerial duties during his three years at AMI. See calendar for details.

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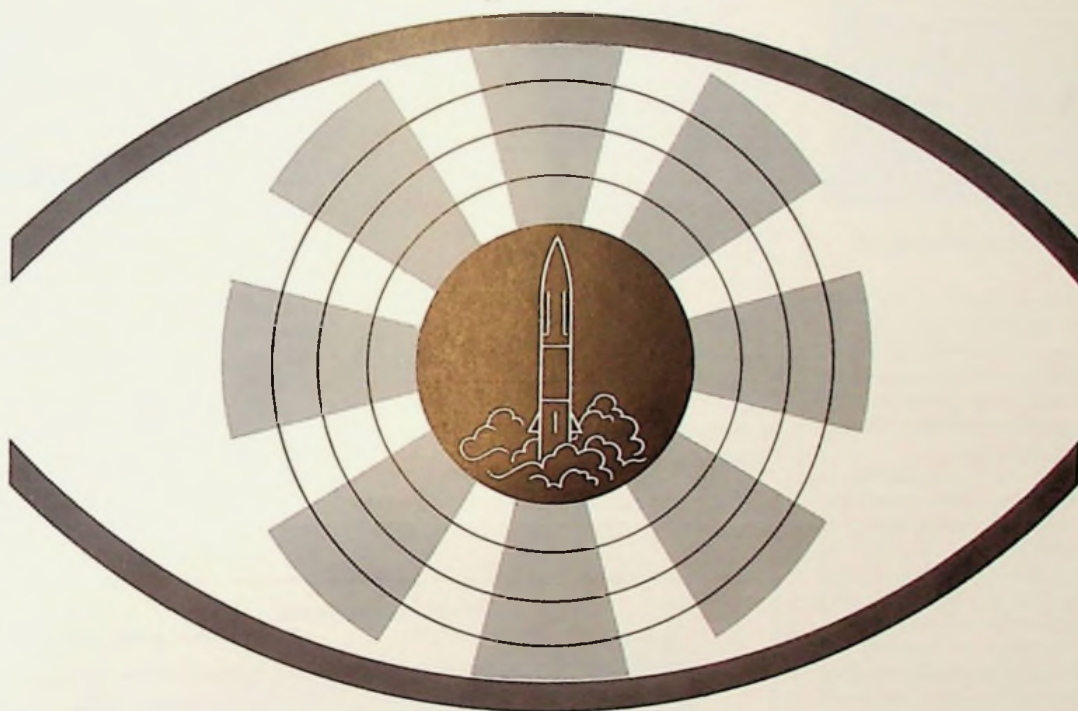
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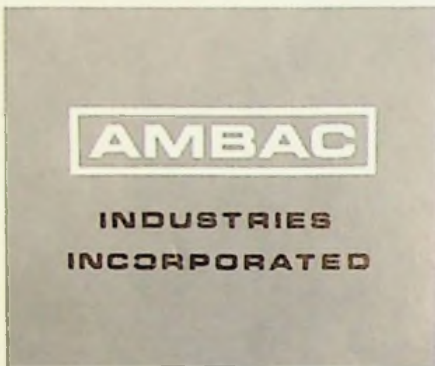
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First, we would like to announce that the Wanlass Industrial/Distributor Products Division has appointed Avnet Electronics nationwide distributors for its extensive line of standard OEM DC Power Supplies and AC Line Conditioners.

This marks the first time Wanlass standard units have been carried in stock by a "limited-line" distributor . . . and the first time Avnet has inventoried an equipment line in addition to the component lines they have specialized in for years.

For the first time, all 15 Avnet locations shown below will stock more than 40 standard configurations utilizing the exclusive Wanlass PARAX™, VARAX™ and CLIP-AC™ technologies . . . the first new concepts in electrical power conditioning in more than 30 years.

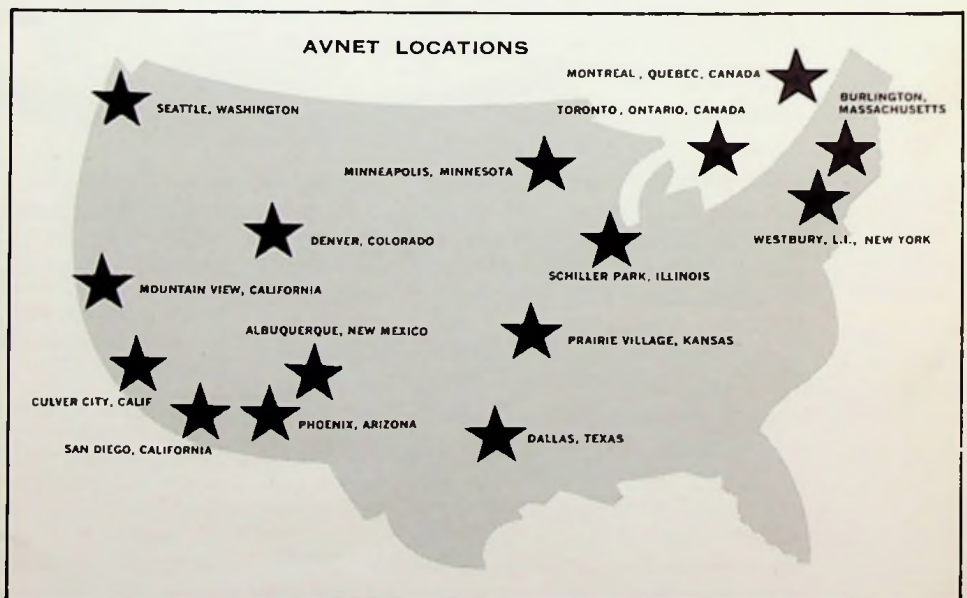
Whatever your requirements, from Economy to precision IC/MOS DC power supplies, Variable Inductor AC power regulators, or CLIP-AC™ AC voltage regulators, you'll find them stocked in depth at Avnet . . . ready for shipment.

One of the first comments made by Ed Kaniger, Sales Manager for Avnet Electronics at their Culver City offices, was: "The Wan-

lass line ideally complements our present lines for the aircraft, missile and aerospace companies we serve. The scope of the line lends itself to distributor needs and complies with our criteria for in-depth stock that enables us to live up to our 'In by 5 . . . out the same day' policy of service."

George W. Mousel, Wanlass Vice President and General Manager of the Industrial/Distributor Products Division, summed it up this way: "This will be the first time Avnet customers can obtain precision regulated power supplies specifically designed for IC/MOS circuits from the same source that supplies the integrated circuits". He also wanted to be the first to point out that while Avnet is the first "limited-line" distributor organization, Wanlass standard units have been available through more than 40 "broad-line" distributors for some time, bringing the total number of nationwide locations to 55 . . . for the first time!

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