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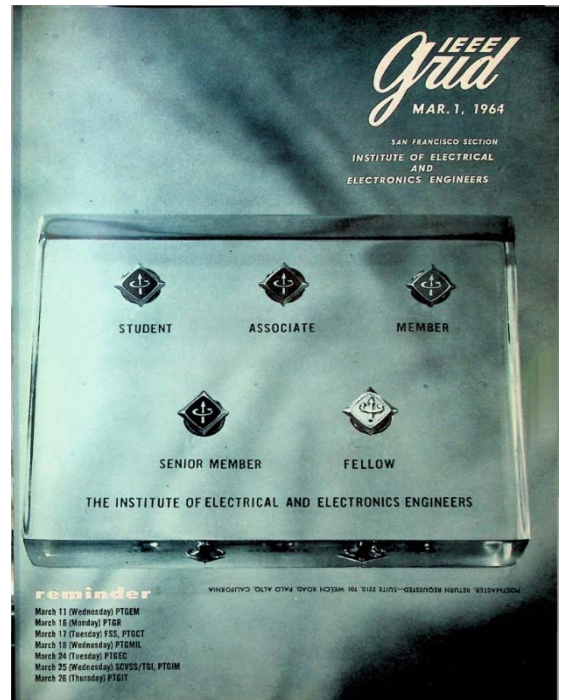
from a historical perspective ...

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

March, 1964:

Cover: While IEEE has many lapel pins on hand, very few are showing up on the jackets of members at meetings. So, the GRID publicizes the availability of pins for various grades of membership, from Fellow to Member to Student. They're all US\$4.40, except the gold-plated Fellow pin which is \$5.50.

Page 2: The speaker for the Information Theory chapter is Andrew Viterbi of UCLA, who got his PhD a year earlier from USC. He later develops the phase-locked loop. In 1967 he proposes the Viterbi algorithm for decoding data, and later developed the CDMA protocol. He co-founded Qualcomm in 1985 in San Diego. The school of engineering at his alma mater USC is named for him. He received the IEEE James Clerk Maxwell Award in 2007, and the USA National Medal of Science the following year.



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

https://ethw.org/IEEE_San_Francisco_Bay_Area_Council_History

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

July, 2021

Contact p.wesling@ieee.org

IEEE Grad

MAR. 1, 1964

SAN FRANCISCO SECTION
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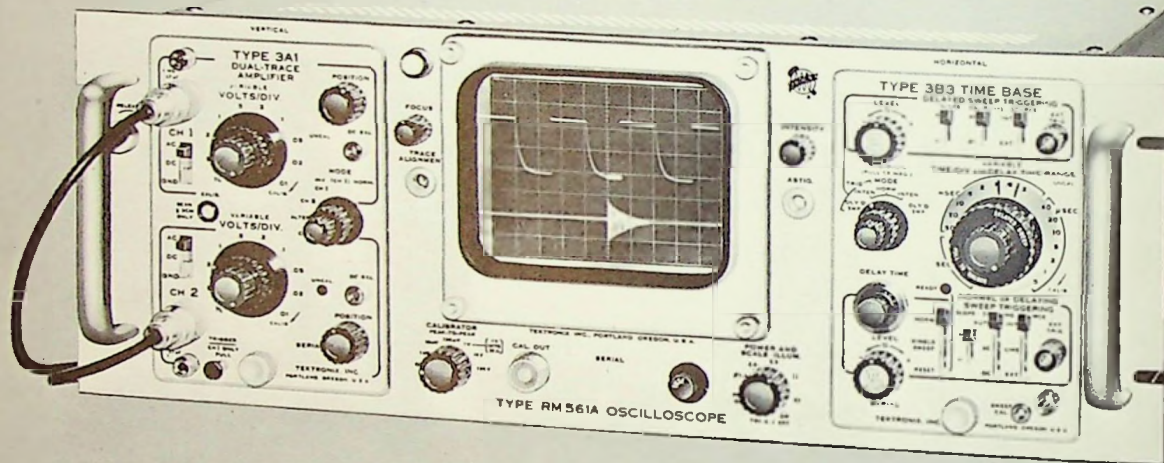
THE INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS

reminder

- March 11 (Wednesday) PTGEM
- March 16 (Monday) PTGR
- March 17 (Tuesday) FSS, PTGCT
- March 18 (Wednesday) PTGMIL
- March 24 (Tuesday) PTGEC
- March 25 (Wednesday) SCVSS/TGI, PTGIM
- March 26 (Thursday) PTGIT

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contents

Meeting Calendar 2, 3
Events of Interest—IEEE 2, 3
Meeting Reviews (PTGCT, EBSS) 3, 4
Events of Interest—Papers Calls 4
Manufacturers/Representative Index, Representative Directory 6, 7
The Section—Membership 8
Classified Advertising 8
Advertisers Index 8

cover

A paucity of IEEE emblems in lapels at meetings and a plethora at headquarters motivate the cover. Shown are the emblems for all grades, all costing \$4.40, including tax, except

the Fellow emblem, which is \$5.50. Send your check, membership number, and grade to headquarters, or obtain a form from the section office. Photo courtesy of Henry Kappelhof.

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MEETING CALENDAR



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events of interest

IEEE

April 20-24—Reliability Training Course, Westbury Hotel, Toronto, Canada, PTGR/ASQC. Leonard C. Thomas, RCA Victor Co., Ltd., 1001 Lenoir St., Montreal 30, Que.

April 21-23—Underground Residential Distribution Conf., Chase-Park Plaza Hotel, St. Louis, Mo., IEEE. R. C. Graham, Rome Cable Div., ALCOA, Rome, N.Y.

May 4-6—Packaging Industry Conference, Nassau Inn, Princeton, N.J., IEEE. E. W. Macoy, Amer. Can Co., 100 Park Ave., N.Y. 17.

May 4-6—Region III Technical Conference, Clearwater, Fla., Florida W.C. Sec. Paul G. Hansel, Elect. Comm. Inc., 1501 - 72 St. N., St. Petersburg, Fla.

May 5-6—5th Annual Symposium on Human Factors in Electronics, San Diego, PTGHFE. Dr. Mel Freitag, 1910 Shire Dr., El Cajon, Calif.

May 5-7—Electronic Components Conference (ECC), Marriott Twin Bridges Motor Hotel, Washington, D.C., IEEE/EIA. John Bohrer, IRC, 401 N. Broad St., Philadelphia 8, Pa.

May 7-8—S.E. Textile Industry Conference, Atlanta, Ga., IEEE. Ben Thompson, The Russell Mfg. Co., Alexander City, Ala.

May 11-13—NAECON (Nat'l Aerospace Electronics Conference), Biltmore Hotel, Dayton, Ohio, PTGANE/Dayton Sec./AIAA. Yale Jacobs, 1917 Burbank Dr., Dayton, Ohio.



Prof. Calahan

FRESNO SUBSECTION

8:00 P.M. • Tuesday, March 17

Engineering at Fresno State College

Thomas H. Evans, head, engineering division, Fresno State College

Place: 10th floor, PG&E Building, Fresno

Dinner for officers and speaker

SANTA CLARA VALLEY SUBSECTION

6:00 P.M. • Wednesday, March 25

(Joint with Technical Group Industrial, see below)

Inspection trip of General Motors Buick, Oldsmobile, and Pontiac assembly plant, Fremont

Dinner: 6:00 P.M., General Motors cafeteria, Fremont

Information: Art Wells, JU 6-4074

TECHNICAL GROUP

Industrial

6:00 P.M. • Wednesday, March 25

(Joint with Santa Clara Valley Subsection, see above)

PROFESSIONAL TECHNICAL GROUP CHAPTERS

Circuit Theory

8:00 P.M. • Tuesday, March 17

Recent developments in applications of the computer to network theory

Prof. D. Calahan, visiting assistant professor, University of California, Berkeley

Place: Ampex Cafeteria, 401 Broadway, Redwood City

Dinner: 6:30 P.M., Villa D'Este, 3401 El Camino Real, Atherton

Reservations: Jan Mulvihill, 367-3169 or 367-3168

Electronic Computers

8:00 P.M. • Tuesday, March 24

The impact of integrated circuits on system design

Rex Rice, manager, digital systems research, Fairchild Semiconductor

Place: General Electric Computer Lab, 310 De Guigne Drive, Sunnyvale

Dinner: 6:30 P.M., Old Plantation, El Camino and Bernardo, Sunnyvale

Reservations: none required

Engineering Management

8:00 P.M. • Wednesday, March 11

Management of military sciences

Capt. Harry C. Mason, Commanding Officer and director, U.S. Naval Electronics Laboratory, San Diego

Place: Lockheed Palo Alto Auditorium, Building 202

No dinner

Information Theory

8:00 P.M. • Thursday, March 26

Effect of sequential decision feedback on communication over the Gaussian Channel

Prof. Andrew J. Viterbi, Dept. of Engineering, UCLA

Place: Stanford Research Institute, Bldg. 1, 333 Ravenswood Ave., Menlo Park

Dinner: 6:00 P.M., Villa d'Este, 3401 El Camino Real, Atherton

Reservations: Mrs. Kelly, 326-6200, Ext. 2945, by March 25

Instrumentation and Measurement

8:15 P.M. • Wednesday, March 25

Instrumentation for nuclear measurements—a detailed discussion of the instrumentation for measurements relating to nuclear explosives

Marcus McCraven and Gordon Longerbeam, Lawrence Radiation Laboratory, Livermore

Place: Hewlett-Packard Auditorium, 1501 Page Mill Road, Palo Alto

Dinner: 6:00 P.M., Dinah's Shack

Reservations and information: Mrs. Renda Blackler, 948-0571

MEETING CALENDAR

Military Electronics

8:00 P.M. • Wednesday, March 18

Overseas electronics—an opportunity

S. V. Hart, director, Electronic Engineers International

Place: Lockheed Auditorium, Bldg. 202, Palo Alto

Dinner: 6:30 P.M., Rick's Swiss Chalet, 4085 El Camino Way, Palo Alto

Reservations: Victor Conrad, 326-4000, Ext. 2212 by March 17

Reliability

8:00 P.M. • Monday, March 16

Action to attain reliability in Air Force space systems

Col. James R. Golden, Space Systems Division, Air Force Command Systems

Place: Room 100, Physics Lecture Hall, Stanford University

Dinner: 6:30 P.M., Ed's Chuck Wagon, El Camino Real, Mountain View

Reservations: Tom King, 739-4321, Ext. 24211, by March 16



Peter Lacy, junior past chairman of the section (IRE), Professor Van Valkenburg, and William A. Edson, section chairman, after the PTGCT chapter meeting. More than 50 members attended.



Nicholas Kovalersky, chairman of the PTGCT chapter organizing committee, with Ivan Frisch, University of California, and Daniel Nemirov, Ampex, members of the committee.

meeting review

BRIDGE STRUCTURES

Professor M. E. Van Valkenburg, associate director of the coordinated science laboratory of the University of Illinois and vice chairman of the PTC on Circuit Theory of the IEEE, presented a talk at the January meeting of the newly reactivated PTC on Circuit Theory chapter.

One of the outstanding unsolved problems in network theory is the realization of driving point functions with a minimum number of resistors, capacitors, and inductors or even more generally with a controllable number of resistors, capacitors, and inductors. The first general synthesis scheme using only resistors, inductors, and capacitors was derived in 1949 by Bott and Duffin, however, using many more elements than the previously available schemes using ideal transformers. In 1956 Kim and Van Valkenburg used a basic bridge network consisting of only inductors, capacitors, and resistors, and a minimum number of them, in order to realize driving point functions. Of course, these networks could only realize a class of driving point functions. More recently this class of functions has been extended by Irani and Womack, and by Lee and Frisch who considered a cascade of the Kim and Van Valkenburg bridges. Within the past year a number of other papers have appeared either using bridge structures to realize networks with a minimum number of elements or trying to find all possible networks that can realize driving point functions of a given order.

These two approaches seem to lead to two general problems requiring a good deal of work, namely:

- find a general synthesis scheme unifying the known minimal synthesis schemes using a bridge structure;
- construct a catalog of all possible network structures that can realize driving point functions of a given order.

IVAN T. FRISCH

events of interest

IEEE

May 19-20—15th Annual Appliance Technical Conf., Ben Franklin Hotel, Philadelphia, Pa., IEEE. Charles Rodden, Philco Co., Tioga & "C" Sts., Philadelphia 34, Pa.

May 19-21—Int'l Symp. on Microwave Theory and Techniques, International Inn, Kennedy Airport, Idlewild, N.Y., PTGMIT. Dr. Leonard Swern, Sperry Gyroscope Co., 3 T 105, Great Neck, N.Y.



Cecil H. Hayes describing borehole TV camera to James B. Wright, left, and Jack W. Savage, chairman and vice chairman of the East Bay Subsection.

meeting review

INCORRUPTIBLE OBSERVER

Cecil H. Hayes of the Lawrence Radiation Laboratory at Livermore discussed closed circuit television developments in a nuclear research laboratory at the January meeting of the East Bay Subsection.

The laboratory uses some 60 closed circuit television systems as conveniences and necessities in conducting its work. Mr. Hayes discussed the use of television in such varied roles as an incorruptible observer in high-degree security surveillance, a safe extension of operators' and observers' eyes in explosive and other hazardous atmospheres, and the indispensable observer for safety and control during the operation of water-cooled reactors.

Feature display of the evening was a vidicon television camera of 2½-inch diameter used in geological surveys. This device is a solid-state camera capable of operation in a small-diameter bore hole in the earth to depths of 2,000 feet. It features a self-contained light source, focusing and zoom capabilities, and transmits picture information to the surface on coaxial cable. Two models are in current use and differ in the following manner: one model looks straight

down the hole (3-inch diameter and larger) and can report on a view of about three feet radially from the camera, while the other model looks normal to the hole axis through a mirror, simultaneously viewing a compass for directional bearing.

The imagination-tickler of the presentation was a description of an experimental system for viewing and recording a high-speed transient event in a hazardous area. The desired capability is to obtain a photograph, actually a radiograph, of some event during a less-than-one-microsecond interval. The system under evaluation presently comprises a radiographic orthicon having a gated photocathode that is told to see only one frame of the high-speed event, then transmits its stored information on to a monitor which is photographed by conventional techniques. Mr. Hayes chose as an example application for such a device a manufacturer of explosively driven studs who was experiencing failures of his product. The man can observe the performance of the stud at each stage of being driven home by choosing the appropriate waiting and viewing period for successive shots, and

events of interest

IEEE PAPERS CALLS

March 15—Conference on Precision Electromagnetic Measurements, Boulder, Colo., June 23-25. IEEE/NBS Boulder Labs. Charles F. Hempstead, Bell Tel. Labs, Murray Hill, N.J.

March 25—San Diego Symp. for Biomedical Engineering, Ocean House, San Diego, June 23-25. IEEE/US Naval Hosp. Dean L. Franklin, Scripps Clinic and Res. Found., La Jolla, Calif. Proceedings.

March 31—International Conference on Microwaves, Circuit Theory and Inf. Theory, Tokyo, Sept. 7-11. IECE of Japan et al. Dr. K. Morita, c/o IECE of Japan, 2-8 Fujimicho Chiyoda-Ku, Tokyo.

April 15—1964 WESCON and IEEE Summer General Meeting, Los Angeles, Aug. 25-28. Region 6/AVEMA/All PTC's. WESCON, 3600 Wilshire Blvd., Los Angeles 5.

gaining enough information to correct his deficient product.

The speaker is responsible for the installation, maintenance, and operation of industrial television equipment at the lab, and acts as consultant for applications at Berkeley and afield.

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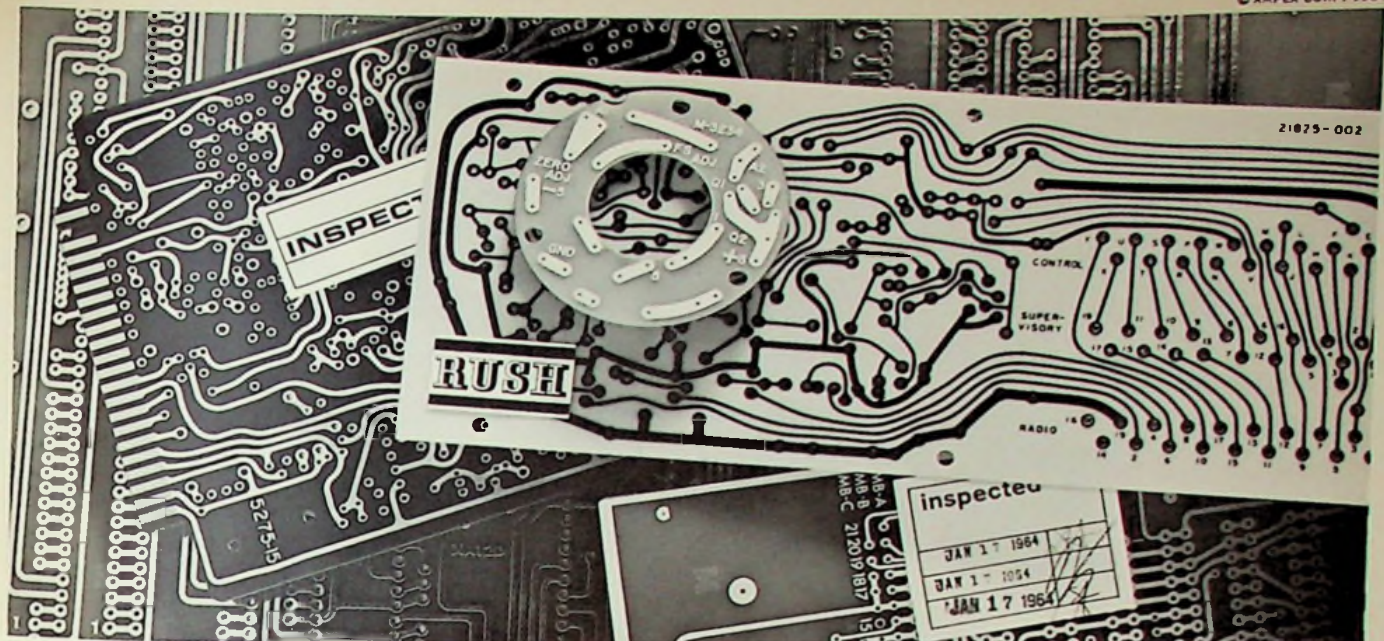
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- My company has group benefits..... (only while I'm there)
- Our parents would help my family..... (with their life savings?)
- I can't afford more insurance..... (or to die, either!)

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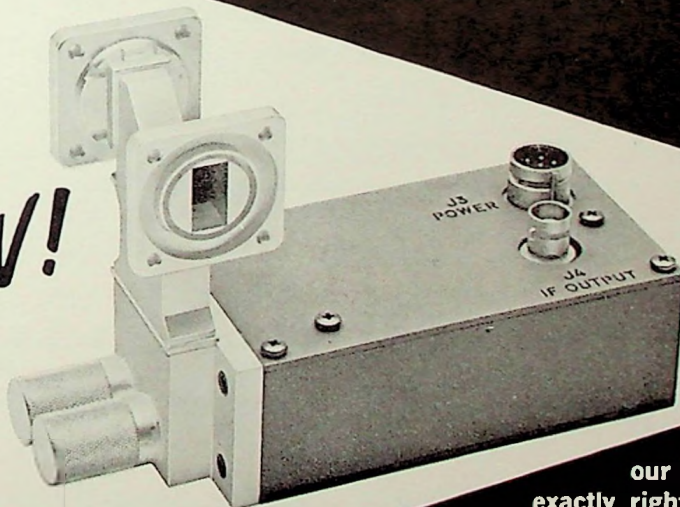
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- | | |
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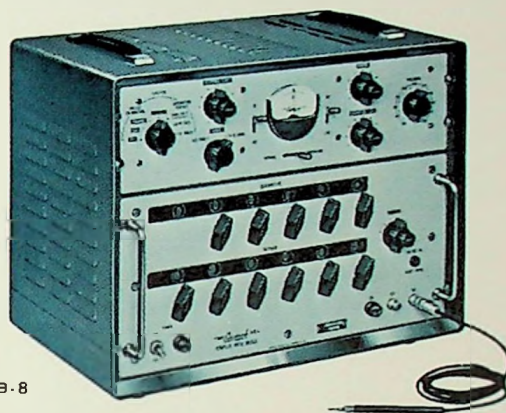
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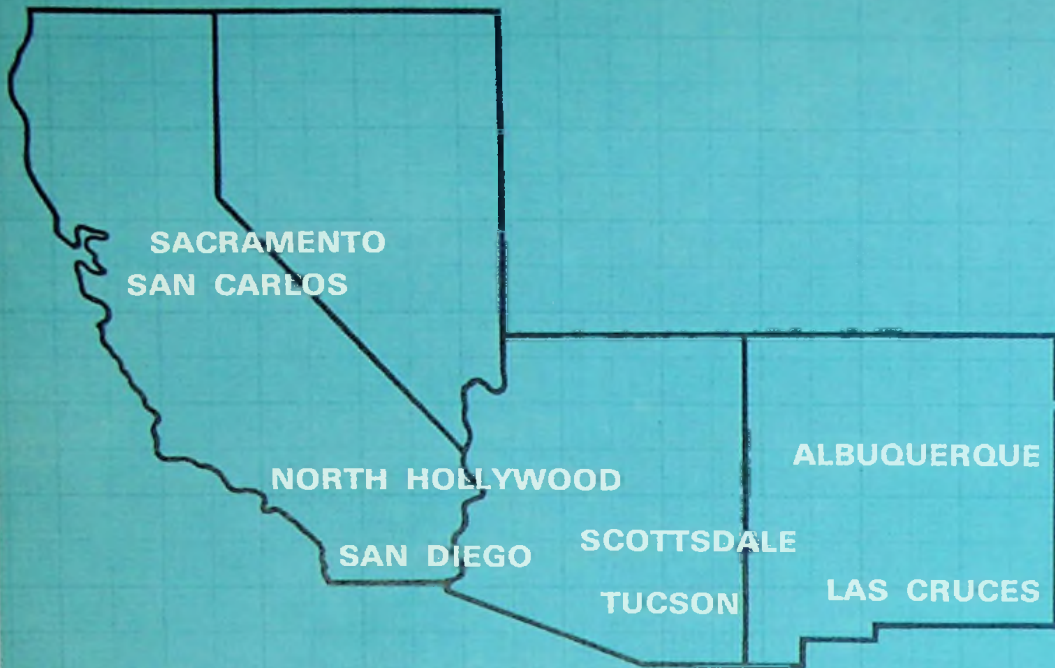
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