

## EDITOR'S PROFILE of this issue

*from a historical perspective ...*

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

September, 1971:

Cover: Seeing through the eyes of a child: reviewing the prospects for computer-aided instruction. More on page 2.

Page 4-7: The complete roster of Section, Subsection and Chapter officers.



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)

# *Grid*

SEPT. 1971



SAN FRANCISCO SECTION • THE INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS, INC.



SEPTEMBER 1971

Published monthly except July and August  
by San Francisco Section  
Institute of Electrical and Electronics Engineers

#### EDITORIAL BOARD

Larry G. Fitzsimmons, PTT Co  
Charles A. Eldon, Consultant  
Dalton W. Martin, Vidar Corp.  
E. D. Jackson, PTT Co.

#### EDITOR

E. W. Morris

Address all mail except address changes to  
San Francisco Section Office, IEEE  
Suite 2210, 701 Welch Road  
Palo Alto, California 94304  
Telephone: (415) 327-6622

Jean Heimke, Office Manager

1971-72 San Francisco Section Officers  
Chairman Larry G. Fitzsimmons  
Vice Chairman Charles A. Eldon  
Secretary Dalton W. Martin  
Treasurer E. D. Jackson

Members send address changes promptly to  
IEEE, 345 East 47th St., New York, N.Y. 10017  
Telephone (212) 752-6800

Second Class postage paid at Palo Alto, Calif.

#### Subscriptions:

\$4.00 (members), \$6.00 (others)  
overseas, \$7.00 per annum

## NEW EDITOR FOR GRID

E. W. Morris (M'29-SM'35-F'48) has been appointed Editor of the San Francisco Section's GRID for the 1971-1972 Section year. He is a graduate in Electrical Engineering from the University of Nebraska, and retired in 1968 after 43 years with Westinghouse. His positions with Westinghouse included those of Manager, District Eng. & Service, South Pacific District, Los Angeles, and later for the entire Pacific Coast Region, San Francisco.

Mr. Morris has been active in AIEE and IEEE affairs since 1929. He was Chairman, Los Angeles Section, (1946) Secretary District 8 (1955-1957), and National Director (1957-1961). Early in 1969 the IEEE Power Engineering Society contracted with Mr. Morris to edit their monthly national Newsletter, and Transactions on Power Apparatus and Systems.

4050 Valente Court  
Lafayette Calif. 94549  
(415) 283-8260

## THE COVER STORY

### Future prospects for computer aided instruction



Getting children to participate as equal partners in a dialogue with the computer can be a richly rewarding experience (as the cover photograph on this month's GRID illustrates). However, overcoming the rigid qualities traditionally associated with computer output requires creative

programming not normally called for in other applications. Dr. H. Dean Brown of Stanford Research Institute will discuss the present status and future goals of Computer Aided Education both in this country and in Europe, where he has helped to establish a computer education network in Spain under the auspices of UNESCO. A demonstration is planned for the conclusion of the talk.

Dr. Brown is currently a Senior Research Scientist with the Information Science Laboratory at SRI. In addition to his work on computer-aided teaching of elementary school children, he is concerned with educational policy and planning. His background also includes considerable experience in the field of nuclear physics.

The meeting will be held jointly with the Special Interest Group on Artificial Intelligence of the ACM.

## Orphan Computers

The MASCOR/132 and the TENET/210 Computer Systems will be described by their designers at the September Meeting of the Computer Society chapter

Combination of circumstances, one of them being the economic, have made it impossible for these two systems, as for many others, to pull through the difficult battle and emerge successfully in the highly competitive computer market. As a result, the groups that spearheaded their design have disbanded, leaving the machines orphans. However, some of the technological concepts of these machines are still of great interest to computer designers.

Dr. Richard J. Chueh, currently staff architect at Memorex Corporation and formerly associated with MASCOR, RCA, Bell Labs, University of California and National Taiwan University, will present the MASCOR/132 system which is a general-purpose data processing system designed to achieve optimum cost/performance in a wide range of diversified environments; i.e., environments where a variety of applications (commercial, engineering, scientific, etc.) and variety of operational modes (interactive, remote batch, local batch, etc.) are simultaneously present.

The unique features of the system include:

- Multi-processor system
- High-speed buffer storage
- Total segmented Address Organization
- Segmentation and Paging Hardware Structure
- Data Interlocking for Multi-Access Environment

Mr. D. Masters and Mr. C. Runge are both currently project managers at National Semi-conductor and formerly directors and co-founders of TENET.

Mr. Masters has in the past been associated with General Electric, SRI and Fairchild Semiconductor. Mr. Runge has previously been associated with the AEC and Fairchild Semiconductor.

The Title of their talk will be "An Expose on TENET timesharing" and they will present an overview of the hardware and software comprising the TENET timesharing system.

Meeting Tuesday, September 28, 1971, 8:00 p.m., Skilling Auditorium, Stanford. Dinner preceding the meeting 6:15 p.m. at Rick's Swiss Chalet. Reservations call Rita Pulver—321-3300 by September 27.

# MEETING CALENDAR

## Display device technology

ANTENNAS & PROPAGATION  
SEPT 9

STORY ON  
PAGE 6

FREQUENCY-SCANNING ANTENNAS. Dr. A.G. Jennetti, ESL Inc., Sunnyvale

SEPT. 9, Thursday, 8:00 PM. Lockheed Research Lab Auditorium, Bldg. 202, 3251 Hanover St., Palo Alto. Cocktails 5:30 PM, dinner 6:15 PM. Rick's Swiss Chalet, 4085 El Camino Way, Palo Alto. No reservations.

COMMUNICATION TECHNOLOGY/VEHICULAR TECHNOLOGY  
SEPT. 24

STORY ON  
PAGE 8

JOINT MEETING. ANNUAL KICKOFF MEETING. Tour of Novitate Winery

SEPT. 24, Friday. Tours 5:30-6:00 PM, wine tasting 7:00 PM, dinner 8:00 PM. Novitate Winery, Los Galos. (See directions with story). Reservations: Ed Carr (415) 399-5550 in S.F.; Bob Howard (408) 291-4039 in San Jose; Don Kidder (415) 591-8461 x525 in San Carlos; Ben Wright (415) 588-5315 in So. S.F. by Sept. 17th.

COMPUTER SOCIETY  
SEPT 28

STORY ON  
PAGE 2

THE MASCOR/132 COMPUTER SYSTEM AND THE TENET/210 TIMESHARING SYSTEM. Dr. R.J. Chugh, system architect, Memorex Corp.; D. Masters and C. Runge, National Semiconductor.

SEPT. 28, Tuesday, 8:00 PM. Skilling Auditorium, Stanford. Dinner 6:15 PM. Rick's Swiss Chalet, 4085 El Camino Way, Palo Alto. Reservations: Rita Pulver, (415) 321-3300.

ELECTRON DEVICES  
SEPT. 14

STORY ON  
PAGE 6

THE IMPACT OF ISPOLANAR. Bill Baker, Director of Bipolar Memory Operations, Fairchild Semiconductor, Mt. View.

SEPT. 14, 8:00 PM, Tuesday. Rickey's Hyatt House, 4219 El Camino, Palo Alto. Cocktails at 6:00 PM, dinner at 7:00 PM. Reservations: Section Office (415) 327-6622.

GOLDEN GATE SUBSECTION  
SEPT. 23

STORY ON  
PAGE 6

TOUR OF TELEVISION STATION KPIX IN SAN FRANCISCO. Host and speaker: Ray Holtz, Chief Engineer. Subject: THE HISTORICAL AND TECHNICAL EVOLUTION OF KPIX.

SEPT. 23, Thursday. Dinner at 6:00 PM. House of Prime Rib, 1906 Van Ness Ave., S.F. Tour begins 7:30 PM at KPIX Studios, 2655 Van Ness (within walking distance). Ladies invited. Reservations: San Francisco: Martin McLaren (415) 764-5294. Peninsula: Jack Shulman (415) 327-8919.

INDUSTRY & GENERAL APPLICATIONS  
SEPT. 16

STORY ON  
PAGE 8

HIGH AND LOW VOLTAGE SAFETY PROBLEMS. E.E. Carlton, Supervising Engineer, State Dept. of Industrial Safety.

SEPT. 16, Thursday. Marconi's Restaurant, 122 Battery St., San Francisco. Gather at 6:00 PM, dinner at 6:30, meeting at 7:30. Reservations: Blinn (415) 391-3286; Poynter (415) 697-7040; Trayer (415) 431-7701; Bubb (415) 781-1177.

MAGNETICS  
SEPT. 30

STORY ON  
PAGE 8

FIRST ANNUAL KICKOFF MEETING—TOUR OF MIRASSOU WINERY. LADIES WELCOME.

SEPT. 30, Thursday, 7:00 PM for wine tasting and dinner at 8:00 PM. Total cost \$6.60 per person. Mirassou Winery in San Jose. (See directions with story). Reservations: John Newman, (408) 987-0174 by Sept. 24th.

SYSTEMS MAN & CYBERNETICS  
SEPT. 13

STORY ON  
PAGE 2

SPECIAL INTEREST GROUP ON ARTIFICIAL INTELLIGENCE OF THE ACM. FUTURE PROSPECTS FOR COMPUTER-AIDED INSTRUCTION. Dr. H. Dean Brown, Senior Research Scientist, Information Science Lab, SRI.

SEPT. 13, Conference Room B, Bldg. 1, SRI, 333 Ravenswood Ave., Menlo Park. Dinner 6:00 PM, Red Cottage, 1706 El Camino, Menlo Park. Reservations: Section Office. (415) 327-6622 by noon, Sept. 10th.

The PARTS HYBRIDS & PACKAGING Group of IEEE is sponsoring a course this fall titled "Display Device Technology". The sessions will be held each Tuesday evening October 12 through November 16 at the Hewlett Packard-Santa Clara Division Auditorium. Registration fee is \$15.00 per person.

The first session will cover "Display Technology Overview". This session will focus on the interrelationships in the design of displays. Tradeoffs relating to device processing and physics, manufacturing for low cost and high reliability, along with interaction of package, peripheral circuits and system operation will be considered.

Session 2 will cover "Light Emitting Diode Physics and Processes". The III-V compounds currently being used in solid state displays will be reviewed to cover operating theory and processes with attention to comparison of advantages and disadvantages in manufacturability.

Session 3 will include "Light Emitting Diode Display Applications". A discussion aimed at developing definite criteria for evaluating display access circuitry and packaging in view of end user applications. Considerations of military and commercial requirements and economics will be reviewed.

Session 4 will discuss "Light Emitting Diode Display Packaging." The effects of device characteristics and peripheral circuitry upon the package specifications and reliability will be covered. Thermal characteristics, interconnection density and optical characteristics will be discussed.

Session 5: "Liquid Crystal Displays: Technology and Applications". The chemistry and physics of the liquid crystal technology will be presented, and applications discussed. Attention to manufacturing economics and low power capabilities will be given.

Session 6: "A Panel Discussion: Displays for the Future." Selected leaders representing the various disciplines involved in future displays will contrast advantages and disadvantages of the technologies as they affect the end user, and seek to define trends for future displays.

For information regarding the course, contact: John Barrett 264-4300 x2277

## Other Meetings of Interest

Joint Engineering Management Conf. International Hotel, Los Angeles, October 4-5, 1971—Fees \$50/\$60; For information, R.W. Sampson, McDonnell-Douglas Astronautics A3-830-BFGO-14, 5301 Bolsa Ave. Huntington Beach, Calif. 92647

IEEE Nuclear Science Symposium, Shera-

ton-Palace Hotel, San Francisco, Nov. 3-5, 1971; For information, John F. Osborne, General Electric Company, MC-135, 175 Curtner Ave, San Jose, 95125

Joint Conference on Sensing of Environmental Pollutants, Cabana Hyatt House, Palo Alto, November 8-10, 1971.

## DISPLAY DEVICE TECHNOLOGY

The PHP Group of IEEE is sponsoring a course this Fall entitled DISPLAY DEVICE TECHNOLOGY. The sessions will be held each Tuesday evening starting October 12 through November 16 at the Hewlett-Packard Company, Santa Clara Division (AUDITORIUM), 5301 Stevens Creek Blvd., Santa Clara. There will be a Registration Fee of \$15.00 per person.

SAN FRANCISCO SECTION DIRECTORY 1971-1972

SECTION OFFICERS



C.A. ELDON



L.G. FITZSIMMONS

Chairman: *L.G. FitzSimmons*, Pacific Telephone, Room 711, 111 No. Market St., San Jose 95113; (408) 291-4006

Vice Chairman: *C.A. Eldon*, 1504 Redwood Drive, Los Altos 94022, 967-6490



ED JACKSON



D.W. MARTIN

Secretary: *D.W. Martin*, Vidar Corp., 77 Ortega Ave., Mt. View 94040; (415) 961-1000

Treasurer: *E.D. Jackson*, Pacific Telephone, Room 906, 111 No. Market St., San Jose 95113; (408) 291-4586

EXECUTIVE COMMITTEE

Those above and:



S.J. KAISEL



F.J. MacKENZIE

Section/WESCON Director: *F.J. MacKenzie*, SRI, 333 Ravenswood Ave., Menlo Park 94025; (415) 326-6200 x2147

Section/WESCON Director: *S.F. Kaisal*, 2600 El Camino Real, Suite 600, Palo Alto 94306; (415) 327-5252.



CHARLES H. SEDAM



J.E. BARKLE

Section Director: *J.E. Barkle*, Bechtel Corp., P.O. Box 3965, San Francisco 94119; (415) 764-5837.

Section Director: *Charles H. Sedam*, PG&E Co., 124 Beale St., San Francisco 94106; (415) 781-4211 x2270.



FRED G. DOELL



D.O. PEDERSON

Junior Past Chairman: *D.O. Pederson*, EE Dept., University of California, Berkeley 94720; (415) 642-3539.

East Bay Subsection Chairman: *Fred G. Doell*, Pacific Telephone, 666 Folsom St., Room 932B, San Francisco 94107; (415) 399-4974.



O.T. PURL



J. M. SHULMAN

Golden Gate Subsection Chairman: *Jack M. Shulman*, Westinghouse Electric Corp., One Maritime Plaza, San Francisco 94111; (415) 445-2246.

Santa Clara Valley Subsection Chairman: *O. Thomas Purl*, Watkins Johnson Co., 3333 Hillview Ave., Palo Alto 94304; (415) 326-8830 x238.



J. CIVELLO

Membership Chairman: *J.R. Civello*, Western Electric Co., 898 Stewart Dr., Dept. 80817, Sunnyvale 94086; (408) 739-8340 x238.

Membership Group Chapter Coordinator: *D. Thomas Magill*, SRI, 333 Ravenswood Ave., Menlo Park 94025; (415) 326-6200 x2664.



DR. D.T. MAGILL



T. J. HEALY

Student Activities: *Timothy Healy*, University of Santa Clara, EE Dept., Santa Clara 95053; (408) 984-4482.

STANDING COMMITTEES

Awards & Nominations: *D.O. Pederson*, Section Jr. Past Chairman.

Bylaws: *C.H. Sedam*, Section Director.

Fellow: To be announced

Financial Policy: *E.D. Jackson*, Section Treasurer.



THOMAS SCHATZEL



E. GODDARD

Historical: *Earl Goddard*, 2522 Webster St., Palo Alto 94301; (415) 325-2522.

Legal Counsel: *Tom Schatzel*, 505 W. Olive, Sunnyvale 94086; (408) 736-8300.

Publications Advisor: *C.A. Eldon*, Section Vice Chairman.



HOWARD TURNER

Publicity & Public Relations: *Howard Turner*, Pacific Telephone, 111 No. Market St., Rm 403, San Jose 95113; 291-4433.

*(List omitted)*

SUBSECTIONS

*(Chairman: See Executive Committee)*

East Bay: Vice Chairman: *Hadi Mons*, Bechtel Corp., P.O. Box 3965, San Francisco 94119; (415) 764-9535. Secretary: *James A. St. Arnaud Jr.*, Pacific Telephone, 666 Folsom, Room 932B, San Francisco 94107; (415) 399-4974. Treasurer: *J.H. Parket*, PG&E Co., 1625 C St., Oakland 94612; (415) 835-8500 x3.

Golden Gate: Vice Chairman: *Bryan R. Baarts*, PG&E Co., 245 Market St., San Francisco 94106; (415) 781-4211. Secretary: *J.A. Wells*, Artwell Electric Inc., 1485 Bayshore Blvd San Francisco 94124; (415) 467-1880. Treasurer: *Leon C. Glahn*, Bechtel Corp., P.O. Box 3965, San Francisco 94119, (415) 764-7757.

Santa Clara Valley: Vice Chairman: *R.A. Power*, IBM Dept. H87 Bldg. 026, Monterey & Cottle Rds., San Jose 95114; (408) 227-7100 x6574. Secretary: *R.A. Martin*, Pacific Telephone, 111 No. Market St., Rm 812, San Jose 95113; (408) 291-4836. Treasurer: *P.H. Simpson*, Pacific Telephone, 111 No. Market St., Rm 704, San Jose 95113; (408) 291-4694.

### GROUP CHAPTERS



JAMES M. ELAM



WILFRED WHALLEY

**AEROSPACE & ELECTRONIC SYSTEMS:** Chairman: *Wilfrid B. Whalley*, Philco-Ford, 3939 Fabian Way, Palo Alto 94303; (415) 326-4350 x4384. Vice Chairman: *John F. Mullen*, Philco-Ford, Palo Alto; 326-4350 x5168. Secretary-Treasurer: *Philip S. Steinberg*, Philco-Ford, Palo Alto; 326-4350 x5087.

**ANTENNAS & PROPAGATION:** Chairman: *James M. Elam*, Lockheed M & S Co., Sunnyvale, 94088 (408) 742-2920. Vice Chairman: *J.D. Bruce*, Probe Systems Inc., 655 N. Pastoria, Sunnyvale 94086, (408) 732-6550. Secretary-Treasurer: *K.K. Mei*, University of California, EE Dept. Berkeley 94720; (415) 642-3528.



P.E. MANTEY



JAMES WOOD

**AUDIO & ELECTROACOUSTICS:** Chairman: *James B. Wood*, Audio Tek, 972 Newhall St., San Jose 95126; (408) 244-1776. (Other officers to be announced.)

**AUTOMATIC CONTROL:** Chairman: *P.E. Mantey*, IBM Research, KO8/028, Monterey & Cottle Rds., San Jose 95114; (408) 227-7100 x3043. Vice Chairman: *Frank Eynon*, Lockheed M & S Co., Sunnyvale 94088; (408) 742-0829. Secretary-Treasurer: *Arthur Wagner*, San Jose State College, EE Dept., San Jose 95114 (408) 294-6414 x2191.



DON KIDDER



ALAN GREBENE

**CIRCUIT THEORY:** Chairman: *Alan B. Grebene*, EXAR Integrated Systems, Inc., 733 No. Pastoria Ave., Sunnyvale 94086; (408) 732-7970. Vice Chairman (Administration): *Les Besser*, Fairchild Microwave & Optoelectronics, 3500 Deer Creek Dr., Palo Alto 94304; (415) 493-3100. Vice Chairman (Program): *Leon Chua*, EE Dept., University of California, Berkeley 94720, (415) 642-0253. Secretary: *Dale Nielsen*, 15810 West Rd., Los Gatos 95030; (408) 354-7129. Treasurer: *W.R. Dunn, Jr.*, EE Dept., University of Santa Clara, Santa Clara 95053, (408) 984-4482.

**COMMUNICATION TECHNOLOGY:** Chairman: *Don Kidder*, Lenkurt Electric Co., 1105 Old County Rd., San Carlos 94070, (415) 591-8461 x525. Vice Chairman: *E.F. Carr*, Pacific Telephone, 140 New Montgomery St., Rm 407, San Francisco 94105; (415) 399-5550. Secretary-Treasurer: *R.J. Sherman*, Philco-Ford, 3939 Fabian Way, Palo Alto 94303; (415) 326-4350 x4104.



PAUL BOLANDER



JAMES SUTHERLAND

**COMPUTER:** Chairman: *James Sutherland*, ElectroPrint, Inc., 3262 Hillview Ave., Palo Alto 94304; (415) 493-3262. Vice Chairman: *Harold Stone*, ERL, Stanford University, Stanford 94305; (415) 321-3300 x469. Secretary: *T.A. Laliotis*, Fairchild Memory Systems, 4001 Miranda Ave., Palo Alto 94304; (415) 321-7250. Treasurer: *E.D. Crockett*, Memorex Corp., MS 14-03, San Tomas at Central Expressway, Santa Clara 95051; (408) 987-1220. Arrangements: *Thomas Bredt*, ERL, Stanford 94305; (415) 321-3300 x448.

**EDUCATION** (Officers to be announced.)

**ELECTROMAGNETIC COMPATIBILITY:** Chairman: *P.E. Bolander*, Lockheed M & S Co., Dept. 62-25, Bldg. 151, Sunnyvale 94088; (408) 742-4371. Vice Chairman: *R.E. Amrine*, Philco Ford, MSC59, 3939 Fabian Way, Palo Alto 94303; (415) 326-4350 x5591. Secretary-Treasurer: *Ray Magnuson*, Hewlett-Packard Co., 5301 Stevens Creek Blvd., Santa Clara 95050; (408) 246-4300 x2241.



E.O. AMMANN

**ELECTRON DEVICES:** Chairman: *Eugene Ammann*, Sylvania, P.O. Box 188, Mt. View 94040; 966-2635. Vice Chairman for Integrated Electronics: *Willard Kauffman*, Intel, 365 Middlefield Rd., Mt. View 94040; (415) 246-7501 x243. Vice Chairman for Microwave Devices: *Don Parker*, SRI, 333 Ravenswood Ave., BLDG 406b Menlo Park 94025; (415) 326-6200 x3903. Vice Chairman for Quantum Electronics: *Richard Wallace*, Chromatix, 1145 Terra Bella Ave., Mt. View 94040; (415) 969-1070. Secretary: *Charles Bittman*, Hewlett-Packard Co., 1501 Page Mill Rd., BLDG 1U 4001 Miranda Ave., Palo Alto 94304; (415) 321-7250 x2084.



R.E. SILLIGMAN



JACK WOHL

**ENGINEERING MANAGEMENT:** Chairman: *Jack Wohl*, Lockheed M & S Co., Sunnyvale 94088; (408) 742-2160. Vice Chairman: *Phil Steinberg*, Philco-Ford, 3939 Fabian Way, Palo Alto 94303; (415) 326-4350 x5087. Secretary: *Martin Grushkin*, 401 Durand Bldg., Stanford 94305; (415) 321-2300 x3618. Treasurer: *Gene Bockmier*, Underwriters Labs, 1655 Scott Blvd., Santa Clara 95050; (408) 253-3600.

**ENGINEERING IN MEDICINE & BIOLOGY:** Chairman: *Robert Silligman*, Smith Kline Instruments, 3400 Hillview Ave., Palo Alto 94304; (415) 326-4030. Vice Chairman: *Emanuel Furst*, Electronics Research Lab, Hewlett-Packard Co., 1501 Page Mill Rd., Palo Alto 94304; (415) 493-1501. Secretary: *Harry Silcocks*, Lawrence Radiation Lab, P.O. Box 808, L-371, Livermore 94550; (415) 447-1100 x7433. Treasurer: *Paul Griffith*, Varian Associates, Corporate Research Bldg., #7, 611 Hansen Way, Palo Alto 94303; (415) 326-4000 x2943.

## Frequency scanning antennas



quires only a frequency-programmable source. A review of frequency-scanning antenna techniques will be given and a novel frequency-scanning antenna developed at ESL will be presented, followed by examples of frequency-scanning radar and DF systems.

A.G. Jennetti was born in Lebanon, Pennsylvania, August 1942, received the BSEE from Penn State (1964), the MS from Ohio State (1965) and the Ph.D. from Ohio State (1970), where he was a Research Associate at the Electroscience Laboratory (formerly the Antenna Laboratory). Since 1970 he has been with ESL, Inc., Sunnyvale. Dr. Jennetti is a member of Sigma Xi, Tau Beta Pi, and Eta Kappa Nu.

The use of frequency-scanning antennas can sometimes result in significant software simplifications in radar and DF applications for which a scanning beam is required. For example, a beam scanning array normally requires computer control to steer the beam through digitally-controlled phase shifters. Beam steering with frequency-scanning antennas requires ~~computer control to steer the beam through digitally~~ beam through digitally.



## Golden Gate subsection will tour KPIX

Ray Holtz, Chief Engineer of television station KPIX, will host the Golden Gate Subsection on a tour of the KPIX studios September 23, and will give a talk on the historical and technical evolution of the station.

Mr. Holtz started his career in the early days of radio broadcasting as engineer for radio station KTAB owned by the Tenth Avenue Baptist Church in Oakland. KTAB later became KSFO in San Francisco. In 1949 its owners started up KPIX, the first television station in the Bay area. In 1954 KPIX was sold to the Westinghouse Broadcasting Company.

Color television on a mass scale as we know it today has been deemed a technical accomplishment comparable in its sophistication to that of our space program. The technical evolution can be especially appreciated if you were among those who watched the first snowy black and white pictures from the KPIX downtown transmitter in the early 1950's.

If you have never been close to a color TV camera, a video tape recorder or a color TV control room, don't miss this program.

A dinner at House of Prime Rib near the studios will precede the meeting. Ladies are cordially invited to both dinner and tour. See calendar for details.



## The impact of isoplanar



The Impact of Isoplanar

On September 14, 1971, Bill Baker of Fairchild Semiconductor will address the Electron Device Group on "The Impact of Isoplanar". Much has been written over the past five years relative to the virtues of MOS and its associated technologies to satisfy semiconductor component needs for the seventies. In 1969 Bell Labs disclosed the CDI process starting a series of disclosures, especially in the memory area, of very dense bipolar circuits.

In February, 1971 Fairchild announced the Isoplanar process, in the Bipolar Memory area. Today Fairchild is characterizing fully decoded 256 bit Isoplanar Memories.

The Isoplanar process offers a structure with a smaller transistor, relatively insensitive to isolation defects; easier masking and additional degrees of freedom of interconnection. These advantages allow the Bipolar process to produce 1024 bit and larger RAM's within the next few years with packing densities comparable to those of MOS. In addition to memories Isoplanar can be applied to other digital and linear circuits as well as discrete devices.

Bill Baker is the Director of Bipolar Memory Operations at Fairchild Semiconductor, Mountain View, California.

Since getting his M.S. in Materials Science at Stanford in 1960, Bill has spent his entire career in Silicon Valley. He has worked on advanced packages, hot carrier devices, hybrids, transistors, an MOS devices prior to joining Fairchild in 1969 to manufacture the Bipolar Memory components for the Illiac IV.

The meeting will take place in Rickey's, Palo Alto: Cocktails at 6:00 PM; Dinner at 7:00 PM and meeting at 8:00 PM on September 14, 1971. For reservations, please contact ? *Section office*



BILL POYNTER



A. ARMONI

**INDUSTRIAL ELECTRONICS & CONTROL INSTRUMENTATION:** Chairman: *Abraham Armoni*, Digital Equipment Corp., 560 San Antonio Rd., Palo Alto 94306; (415) 326-5640. Vice Chairman: *Robert Begun*, FMC Corp., 1185 Coleman Ave., Santa Clara 95052; (408) 289-2069. Secretary: *Leslie T. Jackson*, Lawrence Radiation Lab, Berkeley, 94720; (415) 843-2740 x5831. Treasurer: *C.S. Spencer*, IBM Corp., Monterey & Cottle Rds., San Jose 95114; (408) 227-7100 x6740; (Bldg 100 Dept. 783).

**INDUSTRY & GENERAL APPLICATIONS:** Chairman: *W.F. Poynter*, Federal Pacific Electric Co., 1872 Rollins Rd., Burlingame 94010; (415) 697-7040. Vice Chairman: *Frank C. Trayer*, Trayer Engineering Corp., 1177 Harrison St., San Francisco 94103; (415) 431-7701. Secretary-Treasurer: *E.J. Bubb*, ITE Imperial, 101 Howard St., San Francisco 94105; (415) 781-1177.



P.M. LATOURRETTE



HERB HECHLER

**MAGNETICS:** Chairman: *C.H. Heckler*, Ampex Corp. MS 3-21, 401 Broadway, Redwood City 94063; (415) 367-3132. Vice Chairman: *James R. Eaton, Jr.*, Hewlett-Packard Co., 1501 Page Mill Rd., Palo Alto 94304; (415) 493-1501 x3220. Secretary: *John J. Newman*, Memorex Corp., 1200 Memorex Drive, Santa Clara 95052; (408) 987-0174. Treasurer: *Kenneth Lee*, IBM Corp, Dept. K 05, Bldg. 28, Monterey & Cottle Rds., San Jose 95114; (408) 227-7100 x7348.

**MICROWAVE THEORY & TECHNIQUES:** Chairman: *Peter M. LaTourrette*, Peninsula Microwave Labs, 875 Maude Ave., Mt. View 94040; (415) 969-3303. Vice Chairman: *Douglas A. Gray*, Hewlett-Packard Co., 1501 Page Mill Rd., Palo Alto 94304; (415) 493-1501 x2647. Secretary: *Don E. Messner*, Applied Technology, 525 Almanor, Sunnyvale 94086; (408) 732-2710. Treasurer: *Donald R. Chambers*, SRI, 333 Ravenswood Ave., Menlo Park 94025; (415) 326-6200 x3181.



P.D. SHAFT



R.E. CHOPE



JOEL KITCHENS



LEW FINCH

**INSTRUMENTATION MEASUREMENT:** Chairman: *Rudolf E. Choep*, Lockheed M & S Co., Dept. 85-85, Bldg. 153, Sunnyvale 94088; (408) 742-6868. Secretary-Treasurer: *Dewayne B. Sharpe*, IBM, Systems Mfg. Div., Monterey & Cottle Rds., San Jose 95114 (Dept. 313/012-4); (408) 227-7100 x3656.

**INFORMATION THEORY:** Chairman: *Paul D. Shaft*, ESL Inc., 495 Java Drive, Sunnyvale 94086; (408) 734-2244. Vice Chairman: *Robert M. Gray*, EE Dept., Stanford 94305; (415) 321-3300 x425. Secretary-Treasurer: *Dennis Wilson*, Sylvania Electronic Systems, Box 205, Mt. View; (415) 966-2595.



J.H. TESKE



L. MOON

**NUCLEAR SCIENCE:** Chairman: *Laurence L. Moon*, Lawrence Radiation Lab, P.O. Box 808, L-49, Livermore 94550; (415) 447-1100 x8963. Vice Chairman: *George C. Tyler, Jr.*, Lawrence Radiation Lab, P.O. Box 808, L-728, Livermore 94550; 447-1100 x8936. Secretary-Treasurer: *Ray S. Larson*, SLAC, P.O. Box 4349, Stanford 94305; (415) 854-3300 x2726.

**PARTS HYBRIDS & PACKAGING:** Chairman: *James H. Teske*, Lockheed M & S Co., Dept. 75-01, Bldg. 104, Sunnyvale 94088; (408) 742-6259. Vice Chairman: *Jeffrey M. Schlageter*, Fairchild Semiconductor, M.D. 20-2811 464 Ellis St., Mt. View 94040; (415) 962-3393. Secretary-Treasurer: *John C. Barrett*, Hewlett-Packard Co., 5301 Stevens Creek Blvd., Santa Clara 95050; (408) 246-4300 x2277.

**POWER:** Chairman: *Joel Kitchens*, Bechtel Corp., 50 Beale St., San Francisco 94119; (415) 764-7551. Vice Chairman: *Elwyn G. Lambert*, PG&E Co., 77 Beale St., San Francisco 94106; (415) 781-4211 x2382. Secretary-Treasurer: *Edgar L. Bledsoe*, Kaiser Aluminum & Chemical Sales Inc., 1943 Davis St., San Leandro 94577; (415) 569-2012. Membership Committee Chairman: *John B. Ruzek*, Bechtel Corp., 50 Beale St., San Francisco 94119; (415) 764-7513. Nominations & Personnel Chairman: *Ivan H. Landes*, GE Co., P.O. Box 3736, San Francisco 94119; (415) 434-2211 x376. Professional Development: *Stanley V. Lyon*, GE Co., San Francisco 94119; (415) 434-2211 x261. Program & Arrangements: *Wm. J. Slimak*, PG&E Co., 77 Beale St., San Francisco 94106; (415) 781-4211; Publicity & Attendance: *Kon G. Zaharoff*, PG&E Co., 77 Beale St., San Francisco 94106; (415) 781-4211.



G.L. GODWIN



L. S. COLES

**RELIABILITY:** Chairman: *W.L. Finch*, Lockheed M & S Co., Sunnyvale 94088; (408) 743-1577. Vice Chairman: *G. Bowers*, Advanced Micro Devices Inc., 901 Thompson Place, Sunnyvale 94086; (408) 732-2400. Secretary-Treasurer: *P.J. Guillot*, Lockheed M & S Co., Sunnyvale 94088; (408) 742-7026. Program Chairman: *R.C. Cornwell*, Sylvania Electronic Systems, Box 188, Mt. View 94040; (415) 966-3988.

**SYSTEMS MAN & CYBERNETICS:** Chairman: *L.S. Coles*, SRI, 333 Ravenswood Ave., Menlo Park 94025; (415) 326-6200 x4601. Vice Chairman: *Oscar Firschein*, 52/50 Bldg. 201, Lockheed Research Lab, 3251 Hanover St., Palo Alto 94304; (415) 324-3311 x45436. Secretary-Treasurer: *Claude L. Fennema*, SRI, 333 Ravenswood Ave., Menlo Park 94025; (415) 326-6200 x4167.

**VEHICULAR TECHNOLOGY:** Chairman: *G.L. Godwin*, Standard Oil Co., 555 Market St., Rm. 629 San Francisco 94120; (415) 894-4675. Vice Chairman: *Ben K. Wright*, KONEL Corp., 271 Harbor Way, So. San Francisco 94080; (415) 588-5315. Secretary-Treasurer: *Philip M. Kane*, Federal Com. Comm 550 Battery St., Rm 323A, Custom House, San Francisco 94111; (415) 556-7700.

### STUDENT BRANCH COUNSELORS 1971-1972

Cogswell Polytechnical College, 3000 Folsom St., San Francisco 94110; 647-1474, Counselor: *Denis J. Kriely*

Fresno State College, EE Dept., Fresno 93710; (209) 786-2500; Counselor: *James H. Smith*

Heald Engineering College, 1215 Van Ness Ave., San Francisco 94109; 771-9192; Counselor: *M.A. Tzytovitch*

San Francisco State College, 1600 Holloway Ave., San Francisco 94132; 469-1174; Counselor: *Rene B. Marxheimer*

San Jose State College, San Jose 95114; 294-6414 x2612; Counselor: *L.D. Jones*

Stanford University, EE Dept., Stanford 94305; 321-3300 x244; Counselor: *L. Padulo*

University of California, EE Dept., Berkeley 94720; 642-3306; Counselor: *A.R. Neureuther*

University of Santa Clara, Santa Clara 95053; (408) 984-4482; Counselor: *F. Clegg*

U.S. Naval Postgraduate School, Monterey 93940; (408) 646-2254; Counselor: *J.M. Bouldry*

## Tech chapters sponsor winery event

**K** Com Tech and Vehicular Tech Chapters will co-sponsor a Wine Tasting Dinner and Kickoff Meeting Sept. 24th at the Novitiate Winery. This will be the seventh annual event for Com Tech, and the second annual for Vehicular Tech.

This meeting is primarily a social event to bring together regular members, new members, and prospective members of the Tech Groups. Ladies are especially invited. Activities start at 5:30 PM; the last interesting and informative tour of the facilities will start at 6:00 PM; wine tasting is scheduled at 7:00 PM; and barbecued New York steak will be served at 8:00 PM. Following the dinner, new officers of both groups will be introduced; and an outline of programs for the year will be presented. The wine cellars are cool; and dinner will be under the stars—so bring warm clothes.

Time stands still at the Novitiate Winery located high above Los Gatos in the green foothills of the Santa Cruz Mountains. On the steep slopes, workmen with horse-drawn plows still furrow the vineyards where no tractor can ever reach. Each year the grapes are carefully harvested by hand. After crushing, the young wine is stored in

the dimly lit fermentation cellars. There, under careful watch of the wine master, the wine ages slowly to maturity.

We will be looking forward to seeing you on September 24th. Reservations are limited to 120 people, so call early. Reservations must be in by September 22nd. The cost is \$7.00 per person, payable in advance or at the winery.

To get to the Novitiate, follow Highway 17 south to the Los Gatos/Saratoga turnoff to Highway 9. At first signal light turn left to University Ave. Follow University to the end and turn left onto Main St. Turn right at the first street (a big white apartment house on corner with gold letters "El Gato Penthouse.") This is on College Ave. Turn and keep to the right on College Ave., follow it to the end and there is the entrance to the winery.



## Electrical safety problems to be discussed by IGA group



E.E. Carlton, Supervising Engineer, Electrical, State Department of Industrial Safety, will speak to the IGA group of IEEE on High and Low Voltage Safety Problems. The talk will be illustrated with selected slides to show the reasons for some disapproved types of construction, and to illustrate the growing idea of safety in California. The present state of the art will be discussed.

The meeting will be held at Marconi's Restaurant, 122 Battery St., San Francisco. Cocktails at 6, dinner at 6:30, the meeting at 7:30 p.m. Call for reservations: Blinn—391-3286; Poynter—697-7040; Trayer—431-7701; Bubb—781-1177.

## IEEE Magnetics group will tour MIRRASSOU WINERY

The Mirassou Winery will be the location of the Magnetics Chapter's Kickoff Dinner Meeting on Thursday, September 30th.

This dinner is planned as a social event for old and new members of the Magnetics Chapter, prospective members, and their guests. The ladies are especially invited. Members of other IEEE Group Chapters are also welcome.

Socializing will begin at 7:00 PM with wine tasting and a tour of the winery. A sitdown dinner will be served at 8:30 PM in the winery. The menu includes a seafood salad, a barbecued 14 oz. New York cut steak, a vegetable, French bread, and dessert.

Mirassou Vineyards are recognized as one of the oldest winemaking concerns in the country, having been established in Santa Clara County soon after the California Gold Rush. Today the heritage is carried on by the fifth generation of the Mirassou Family with vineyards in both Santa Clara and Monterey Counties.

Reservations must be made by September 24th. The total cost is \$6.60 per person, payable in advance.

Mirassou Winery is located in the Evergreen section of San Jose on Aborn Road. Take Highway 101 south to the Capitol Expressway. Go northeast on the Capitol Expressway to Aborn Road. Turn right onto Aborn Road. The winery is on the south side of Aborn Road a short distance beyond White Road.

