

EDITOR'S PROFILE of this issue

from a historical perspective ...

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

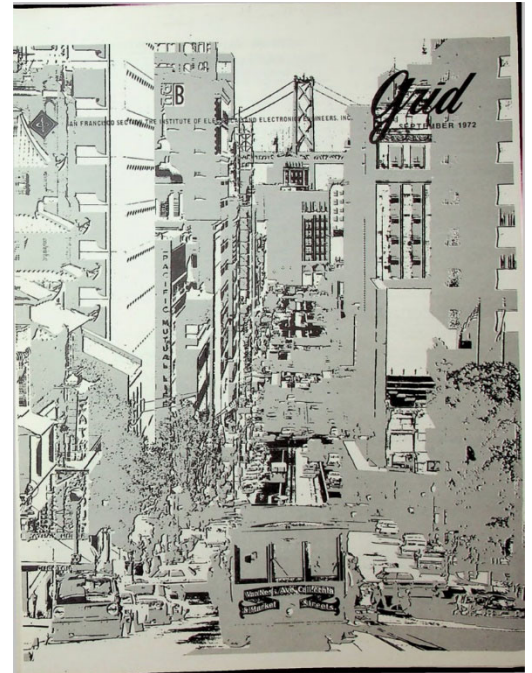
September, 1972:

Cover: The San Francisco scene foretells COMPCON. Keynote speaker is Bob Noyce, a co-founder of Intel, who would have shared the Nobel Prize in physics with Jack Kilby in 2000 for the invention of the IC, had he lived. More on page 2.

Page 2: Byron Thinger is the new advisor for the student chapter at SF State; he becomes quite active in administering our Section (and the SF Bay Area Council).

Pages 4, 5, 7: The roster for our Section, Subsection, and group (chapter) officers for the year.

Page 7: Ari (Harry) Kurtzig is serving as secretary of the Magnetics Group. We hired him from Bell Labs to head up bubble memory development at ISS. His wife Sandra goes on to start one of the first woman-founded high-tech companies: ASK Computer. "ASK" stands for Ari and Sandra Kurtzig.



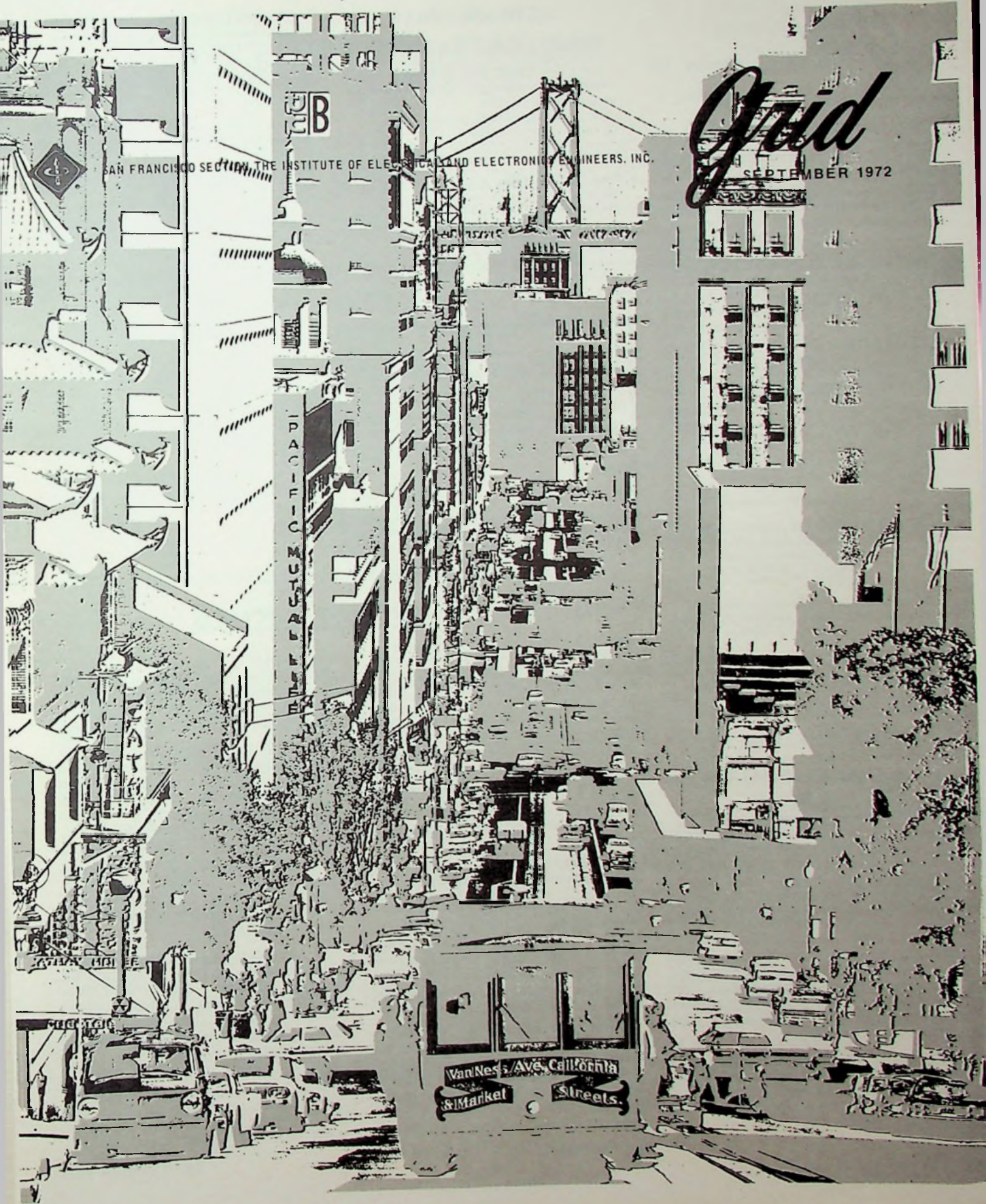
Archive of available SF Bay Area GRID Magazines is at this location:

https://ethw.org/IEEE_San_Francisco_Bay_Area_Council_History

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

April, 2025

Contact p.wesling@ieee.org



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

Grid

SEPTEMBER 1972

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& Market Streets

September 1972

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A THANKS FROM THE EDITOR

Your editor appreciated the opportunity to meet with Section officers and Chapter representatives on July 19. The "GRID Editor's Instruction Sheet", passed out at the meeting, will simplify our communications greatly this coming year.

Thanks, too, for your already evident cooperation in double spacing copy, doing some editing yourselves, and even sending copy with the suggested 37 characters and/or spaces per line. (This helps the Varitypist).

Remember, we are looking for seven interesting cover pictures to use this year. Get these in early in the month so we will have an opportunity to compare and select.

SIXTH ASILOMAR

CONFERENCE ON CIRCUITS AND SYSTEMS

November 15-17, 1972
Asilomar Conference Grounds
Pacific Grove, California

For information, contact either:

Professor S. G. Chan
Naval Postgraduate School
Monterey, Calif. 93940

Professor W. Dunn
University of Santa Clara
Department of Electrical Engineering
Santa Clara, Calif. 95053

S.O.S.

Copy for the October GRID should be sent early, if possible, to help the editor complete layout by Sept. 7, so that he may keep his scheduled vacation trip to Europe beginning Sept. 9.

Thank You
E. W. Morris

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THE COVER STORY - COMPCON 72

"Innovative Computer Architecture" is the theme of COMPCON 72, which returns to the West Coast this year at San Francisco's Jack Tar Hotel, on September 12-14. Approximately 1200 professionals are expected at the 18 sessions which are organized into four sub-topics:

- Case Studies of Major Computer Systems.
- Computer Subsystems and Technology.
- System Analysis, Design Tools and Performance Measurement.
- Evolving Computer Architecture.

The net effect of this arrangement is to give participants the equivalent of four conferences for the price of one. The registrant can pursue his interests in depth and breadth, depending on his need.

The keynote address on the effects of integrated functional elements on computer architecture will be delivered by Dr. Robert N. Noyce, considered by many to be the father of the integrated circuit industry. A novel post-conference tutorial chaired by

the University of California's Dr. Dave Hodge will analyze semiconductor memories, packaging interconnection and economics, reliability and maintainability and performance limits.

The Case Studies include a group of papers on the structure of the CDC-STAR-100 computer, a pipeline processor structured around a 4-billion byte high band width memory.

In the Subsystems and Technology area, the problems of designing a pocket-sized 'computer-on-a-chip' will be described. Latest techniques of micro-programmed computer design will be described.

The Analysis, Design Tool and Measurement area includes a session on system analysis and optimization techniques. In the Computer Architecture area, a session examining basic changes in computer design principles will be held.

Registration fee is \$40 for members, and \$50 for non-members. Registration information available from Ms. Jan Saindon, IBM Systems Development Div. San Jose, Calif. 95114.

MEETING CALENDAR

EMB - ELECTRONIC INSTRUMENTATION IN MEDICINE

ANTENNAS & PROPAGATION SEPTEMBER 14

Story on
page 8

AEROSPACE TECHNOLOGY SPINOFF. H. A. Lorenzen, Program Controller, LMSC, Sunnyvale.

SEP. 14, Thursday, 8:00 PM, Ming's of Palo Alto, 1700 Embarcadero Rd., East Palo Alto. Cocktails at 5:45 and dinner at 6:30 PM. Reservations: Dr. Frank B. Harris (415) 981-9180. Tickets \$5.90 per person - must be purchased in advance. Chinese 9-course delight.

COMMUNICATIONS SOCIETY/ VEHICULAR TECHNOLOGY SEPTEMBER 12

Story on
page 8

WINE TASTING, STEAK DINNER AND KICKOFF MEETING JOINT MEETING.

SEP. 12, Tuesday, 6:30 PM for wine tasting - 7:30 dinner. Paul Masson Mountain Winery, Pierce Road, Saratoga. Reservations by check (\$7.50 per person) must be received by Friday, Sept. 8th. Contact: Dick Sherman (415) 326-4350 x 4104 or Ed Carr (415) 399-4189 or Dick Moore (408) 277-4000 x 4533.

COMPUTER SOCIETY SEPTEMBER 26

Story on
page 8

A 20-MEGABIT MOS MEMORY SYSTEM. Charles Thacker; Xerox, Palo Alto Research Center.

SEP. 26, Tuesday, 8:00 PM, Skilling Auditorium, Stanford. Dinner: 6:00 PM, Rick's Swiss Chalet, 4085 El Camino Way, Palo Alto. Reservations: Neil Sullivan, (408) 257-8550 x 320 by noon Sep. 26th.

CONTROL SYSTEMS SOCIETY SEPTEMBER 27

Story on
page 3

AUTOMATIC LANDING FOR STOL - A USER'S LOOK AT MODERN CONTROL. Dr. G. Allan Smith, Jr., Assistant Chief, Systems Analysis Branch, NASA Ames Research Center.

SEP. 27, Wednesday, 8:00 PM, Engineering Center Room 551, University of Santa Clara. Dinner: 6:15 PM, Mariani's, 2500 El Camino (near San Tomas Expressway,) Santa Clara. No reservations.

ELECTROMAGNETIC COMPATIBILITY SEPTEMBER 18

Story on
page 6

TRENDS IN RFI INSTRUMENTATION. William Becher, Director of Marketing, Singer Instrumentation, Los Angeles.

SEP. 18, Monday, 8:00 PM, Rick's Swiss Chalet, 4085 El Camino Way, Palo Alto. Cocktails: 5:00 PM, dinner at 6:45 PM. Reservations: Sue Davis (415) 493-3231 x 243 by Sep. 12th.

ELECTRON DEVICES SEPTEMBER 26

Story on
page 6

CMOS-A TTL REPLACEMENT? Clark Davis, Manager of MOS Circuit Design, National Semiconductor Corp.

SEP. 26, Tuesday, 8:00 PM, Rick's Swiss Chalet, 4085 El Camino Way, Palo Alto. Cocktails at 6:00 and dinner at 7:00 PM. Reservations: Section office (415) 327-6822.

ENGINEERING IN MEDICINE & BIOLOGY SEPTEMBER 12

Story on
page 3

ELECTRONIC INSTRUMENTATION IN MEDICINE. Norm Austin, Technical Operations Manager, Gould, Inc.

SEP. 12, Tuesday, 8:00 PM, Gould, Inc. Cafeteria (Corner of Hillview & Foothill Expressway, Palo Alto). No host dinner at 6:00 PM. Rick's Swiss Chalet, 4085 El Camino Way, Palo Alto. (Meeting same place.) Reservations: Mrs. A. L. Swenson (408) 292-4794 by Sep. 8th.

MAGNETICS SEPTEMBER 28

Story on
page 8

SECOND ANNUAL KICKOFF MEETING. Tour of Mirassou Winery in Jan Jose. Ladies Welcome.

SEP. 28, Thursday, 7:00 PM, for winetasting. Dinner at 8:00 PM. Total cost \$7.50 per person, payable in advance. See directions with story. Reservations: John Newman, (408) 987-2218 by Sep. 22nd.

MICROWAVE THEORY & TECHNIQUES SEPTEMBER 28

Story on
page 6

IEEE ON THE ROAD TO PROFESSIONALISM. Dr. Leo Young, Manager, Microwave Techniques Program, SRI, Menlo Park.

SEP. 28, Thursday, 8:00 PM, SRI Bldg. 44 (Laurel St., Menlo Park). Dinner: 6:00 PM, Red Cottage, 1706 El Camino, Menlo Park. Reservations: Don Chambers (415) 326-6200 x 3181.

SYSTEMS, MAN & CYBERNETICS SEPTEMBER 28

Story on
page 8

TECHNOLOGY FORECASTING. Roy Amara, Pres. Institute for the Future, Menlo Park.

SEP. 28, Thursday, 8:00 PM, SRI Conference Room B (Bldg. 1), 333 Ravenswood Ave., Menlo Park. Dinner: 6:30 PM, Red Cottage, 1706 El Camino, Menlo Park. Reservations: Section office (415) 327-6822.

Today, one of the fastest growing applications of Electronic Instrumentation is in the Biomedical field. More and more of these instruments are becoming "standard" tools in the hands of Medical personnel after years of being classified as an "accessory".

Mr. Norm Austin - Technical Operations Manager, Instruments Systems Division of Gould Inc., will explore this interesting subject of "Electronic Instruments in Medicine", followed by a tour of the Gould facilities located at 3400 Hillview Avenue, Palo Alto (Corner of Hillview and Foothill Expressway). Demonstrations of Monitoring and Resuscitation Equipment will follow the plant tour.

A discussion of the Fetal Heart Rate Monitoring Equipment will conclude this initial meeting of the Fall Season for our chapter.

Mr. Huey Lee - Secretary E-MB group, and Design Engineer for Gould Inc. will be the tour guide.



CSS - AUTOMATIC LANDING FOR STOL - A USER'S LOOK AT MODERN CONTROL

Dr. G. Allan Smith, Jr., Assistant Chief, Systems Analysis Branch NASA Ames Research Center, will discuss this subject before the Control Systems Society on September 27. To improve transportation services while decreasing noise and alleviating congestion, STOL aircraft may be called upon to fly precisely timed approach and landing maneuvers along carefully controlled trajectories in the neighborhood of airports.

NASA's Ames Research Center has undertaken the task of applying modern control theory to the design of automatic flight control for STOL to determine the efficacy of the new techniques for generating a system of the required performance. The speaker will show the flexibility of design allowed within the framework of optimization theory.

WESCON

West'n Electronic Show & Convention
September 19-22, 1972
Los Angeles Convention Center
Information: Don Larson
WESCON General Manager
3600 Wilshire Blvd., Suite 1920
Los Angeles, Calif. 90010

EXPO ELECTRONEX

Los Angeles, Sept. 27-Oct. 1, 1972
Los Angeles Convention Center
Home and office electronics exposition
for trade and public.
Information: Don Larsen, Manager
EXPO ELECTRONEX
3600 Wilshire Blvd., Suite 1920
Los Angeles, Calif. 90010

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MTT — IEEE ON THE ROAD TO PROFESSIONALISM (A Review of Recent Developments)



by Dr. Leo Young
Stanford Research Institute

During the past two years there has occurred a remarkable change in the visible actions and stated purposes of the IEEE. It has been my privilege and good fortune to serve on the IEEE Board of Directors during this period, both as actor and spectator. IEEE has been fortunate to have had two strong leaders in Jim Mulligan (in 1971) and Bob Tanner (in 1972).

Their "style" is very different, but they have both taken IEEE farther on the road to professionalism than most of us thought possible two years ago, in response to the wishes of rank-and-file members and with the support of most Board members. Legally, this has culminated in the proposed constitutional amendment drafted by the Constitution Committee and approved by the Board 18-to-5, which will be voted on by all eligible IEEE members before November 1972. This amendment has been drafted very carefully so as to be beneficial to all IEEE members and injurious to none, whether employer or employee, tenured or retired. Practically, IEEE has to order the priorities and raise the money to become effective in the profes-

sional as well as in the technical arena. This process is now under way. The talk will sketch the history of developments over the past two years, followed by a question-and-answer period.

Dr. Leo Young received B.A. and M.A. degrees from the University of Cambridge, England, and M.S. and Dr. Eng. degrees from the Johns Hopkins. He joined Stanford Research Institute in 1960 where he is Manager of the Microwave Techniques Program. He has made many technical contributions in microwave filters and components, antennas and phased arrays, acoustic transducers, and optical interference filters. He was awarded the IEEE Microwave Prize in 1963.

Dr. Young is a Fellow of the Institute of Electrical and Electronics Engineers. He was Chairman of the Administrative Committee of the IEEE Microwave Theory and Techniques Group for 1969. He is past chairman of the San Francisco Chapter of the G-MTT. Dr. Young is now Director of IEEE Division 4.



GET THE FACTS

THEN VOTE

THINK ABOUT IT.

ED - CMOS - ATTL REPLACEMENT?

Ask any systems designer what the characteristics of an ideal logic family should be and he'll probably list three main items:

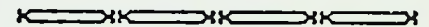
1. No Power Dissipation
2. Noise Immunity of at least 40% of the Supply Voltage
3. No Propagation Delay, but Controlled Use and Fall Times to Minimize Noise Generation.

Recently, manufactures have been introducing families of CMOS devices which, while not completely fulfilling all of these requirements, come closer than any other family to meeting these needs. In addition, a family of devices is now being manufactured which is completely compatible with the industry TTL. It is the first attempt in MOS to directly intrude into an area previously considered the domain of bipolar technology.

Clark Davis, Manager of MOS Circuit Design National Semiconductor Corp., will discuss some of these items.

Specific areas to be discussed will include:

1. AC characteristics as a function of power supply voltage and capacitive loading.
2. Voltage transfer characteristics as a function of power supply voltage, temperature, and the number of inputs.
3. T²L, DTL and Low Power T²L compatibility.
4. A comparison of these characteristics to T²L characteristics.



EMC — TRENDS IN RFI INSTRUMENTATION

William E. Becher, Director of Marketing, Singer Instrumentation, Los Angeles, will review the history of development of RFI/EML measurement methods and instrumentation from Medieval Times till now.

Present techniques will be discussed with reasonable detail. He will then "stick his neck out" with predictions for the future and how we will get there.

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NOTE: STUDENT BRANCH
COUNSELLORS ON PAGE 2.

CS-VT TO VISIT PAUL MASSON WINERY

The picturesque Paul Masson Mountain Winery in the hills of Saratoga will be the scene of the joint kickoff meeting of the Communications Society and the Vehicular Technology Group on Tuesday evening, September 12. Wine tasting followed by a catered steak dinner with complimentary wines will highlight the evening. The ladies are especially invited to this affair as business will be limited to an introduction of officers and a brief outline of the programs planned for the respective groups.

The wine tasting will start at 6:30 with dinner to follow at 7:30. Reservations are required and must be confirmed by a check payable to the Communications Society (7.50 per person) by Friday, September 8. Mail checks to Lee Stephens, c/o Vicom, 77 Ortega Avenue, Mountain View, CA. 94040. For further information see this month's calendar.

SMC—TECHNOLOGY FORECASTS

Roy Amara, President of the Institute for the Future, will address the SMC Chapter on the subject of Technology Forecasting on Thursday, September 28, at 8 p.m. in Conference Room B of the Main Building at Stanford Research Institute. Dr. Amara participated in numerous pioneering explorations exploiting new and developing technologies at Stanford Research Institute prior to joining the Institute for the Future, where his activities have included work on national goals, technology forecasting and assessment, methodologies for long-range planning and forecasting, decision analysis, and the social impact of information generating, processing, and disseminating systems. Among his recent papers is "A Framework for National Science Policy Analysis," in the January 1972 issue of the SMC Transactions. His talk will deal with forecasting techniques, the state-of-the-art of useful methods, and examples of specific forecasts.

MAG - SECOND ANNUAL KICKOFF MEETING AT MIRRASSOU WINERY

The Mirassou Winery will be the location of the Magnetics Chapter's Kickoff Dinner Meeting on Thursday, September 28th.

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 desert.

Reservations must be made by September 22th. The total cost is \$7.50 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.



AP - AEROSPACE TECHNOLOGY SPINOFF

The group on Antennas and Propagation will hold their September meeting at Ming's Chinese Restaurant in East Palo Alto. It will be a combined dinner and speaker event featuring Mr. H.A. (Hi) Lorenzen, Lockheed Missile and Space Company, Sunnyvale. The subject will be "Aerospace Technology Spinoff." Questions which will be addressed include: Are we shooting your money to the moon?; Do Aerospace salaries, taxes, etc. have any effect on the local/national economy?; What effect, if any, do these products have on the national economy? Specific products will be selected from the fields of agriculture, construction material, medical tools, electronics, and pharmaceutical.

The dinner will be a nine-course Chinese delight including desert. Reservations will be by ticket purchase from Dr. Frank B. Harris, Jr. at TCI, Inc, telephone 961-9180. Dinner \$5.90. Cocktails at 6:30, and the meeting at 8 p.m. Thursday Sept. 14.

SC - S A 20-MEGABIT MOS MEMORY SYSTEM

This talk will describe a large MOS memory system currently under construction at Xerox, Palo Alto Research Center. It will focus on the implementation problems encountered in using dynamic MOS memory devices as well as the reliability results obtained to date. Included will be an overview of the computer system which utilizes the memory.

Following the talk will be a panel discussion with major MOS memory device semiconductor manufacturers participating in analyzing some of the problems and discussing solutions and future plans.

Charles Thacker received his BA degree in Physics from U.C. Berkeley in 1967. He was associated with the "Genie" project at U.S. Berkeley and was project leader at Berkeley Computer Corporation. He is currently Associate Scientist at Xerox, Palo Alto Research Center.

