# EDITOR'S PROFILE of this issue

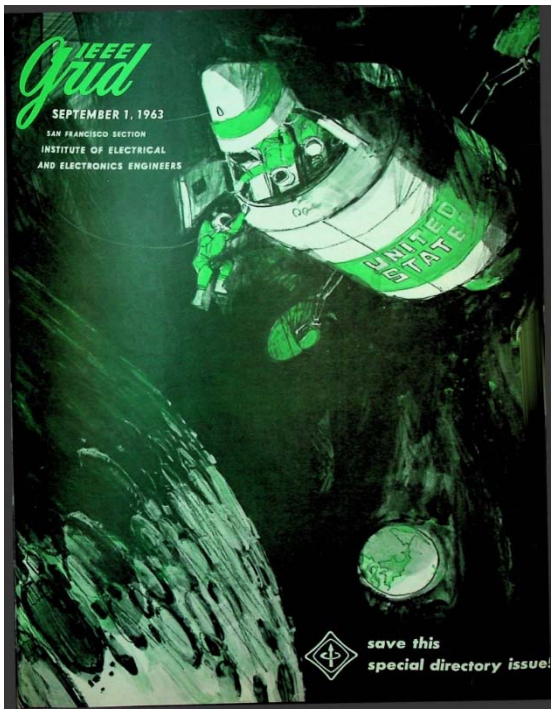
*from a historical perspective …*

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

September, 1963:

Cover: An artist's rendition of the Apollo spacecraft approaching the Moon.

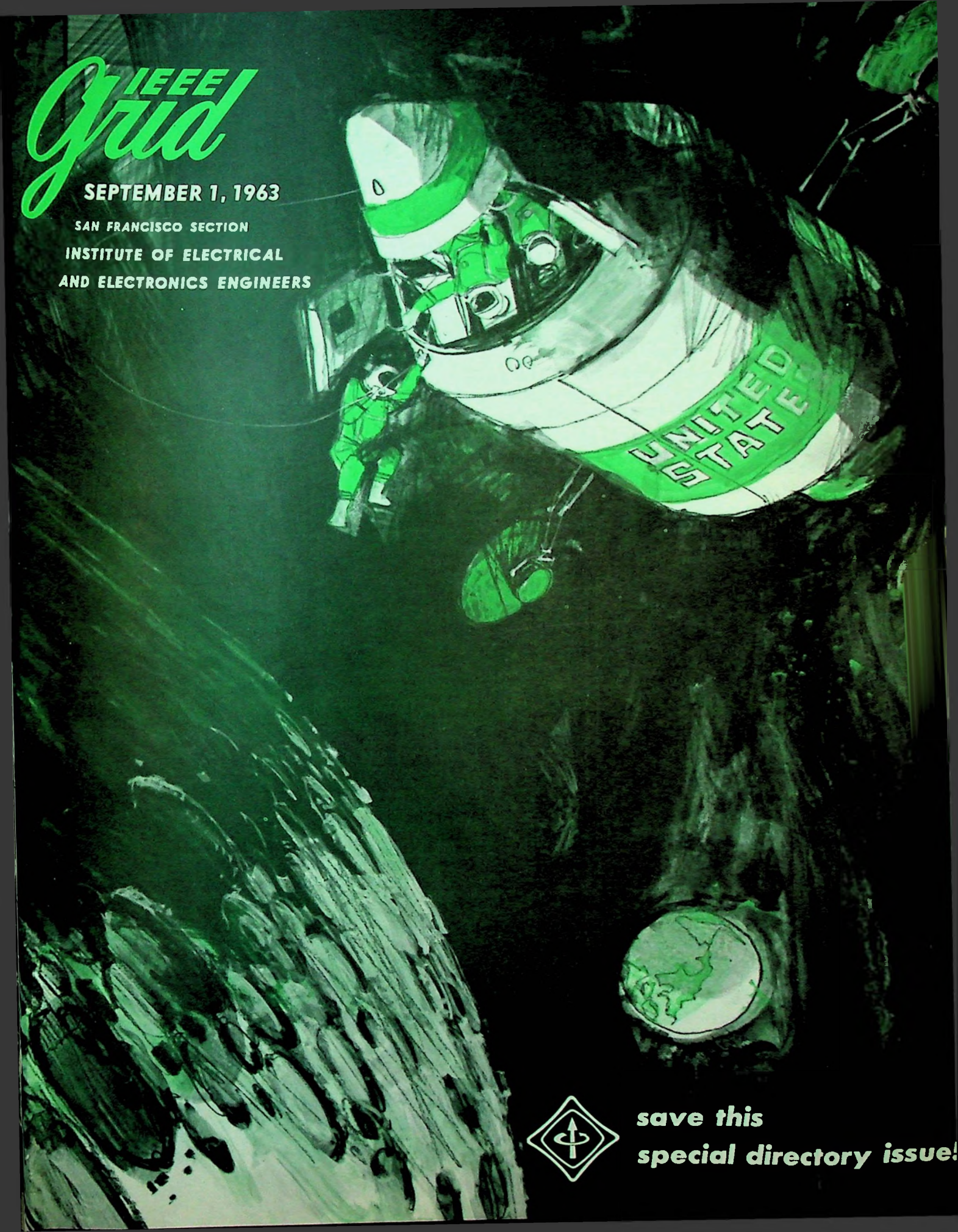
Page 16: IRE member Bernard S (Bernie) Siegal moves to the SF Bay Area, to begin work at Varian Associates. He founds Thermal Engineering Associates in Mountain View, starts the IEEE SEMI-THERM Symposium, and remains a member of my EPS chapter AdCom. See photo below.




2021 EPS Chapter volunteers: Clockwise from front: Wendham Beyene, Gnyan Ramakrishnan, Ravi Agarwal, **Bernie Siegal**, Annette Teng (chair), Gail and Paul Wesling, Tiwei Wei, Chandan Bhat, Azmat Malik, Ed Stoneham, Sandy Chew

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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NEEDLESS TO say, the GI Multichip is not a panacea. We make monoliths as well, and expect to continue making them for many years to come. Each type has its place; each has certain advantages over the other, depending on the application, the requirements, the specific problem. Our best advice is: when in doubt, please call on *us*. Our experts will be happy to give you their unbiased, experienced advice.

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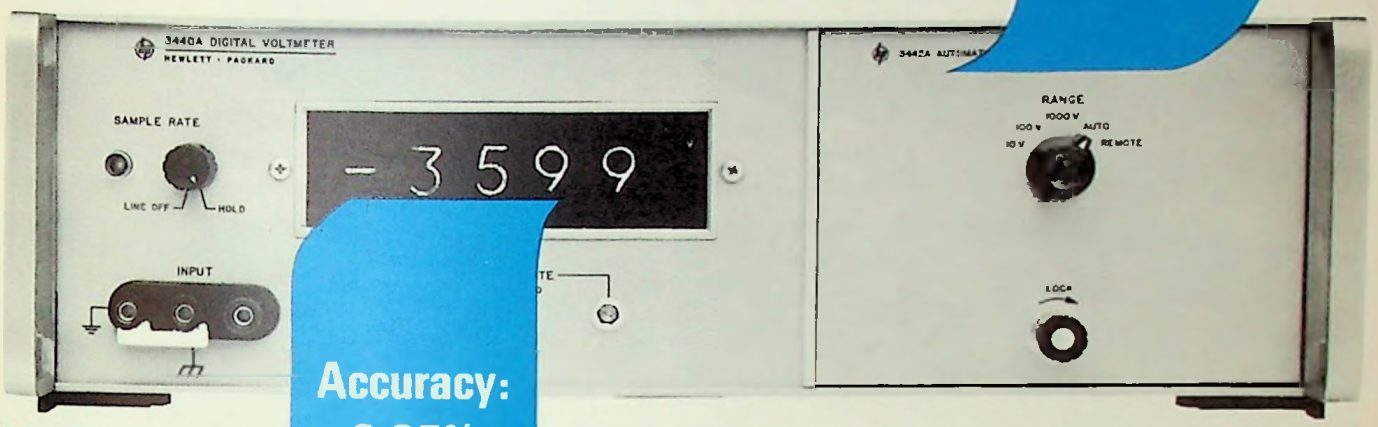


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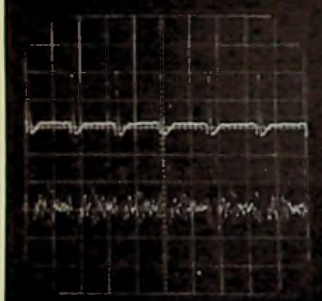

**BIO-MEDICAL APPLICATION.**
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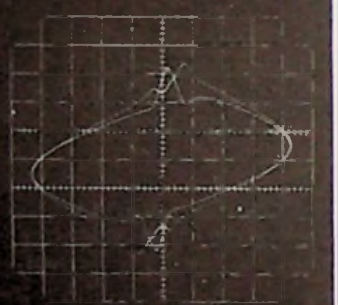

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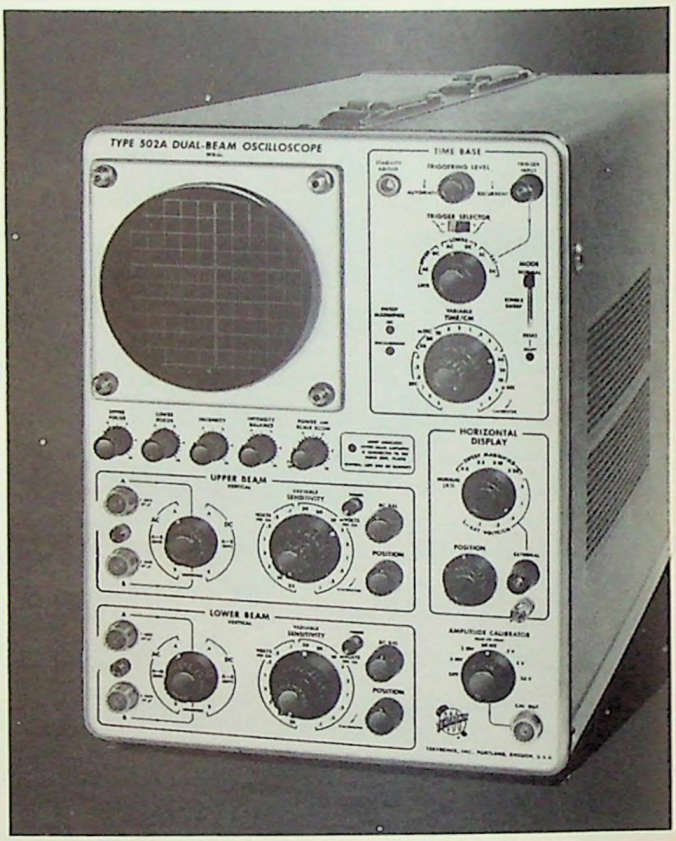


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*cover*

Launching the tenth year of **Grid** publication is this special issue containing the directory of officers of the section, the standing committees, the subsections, the technical divisions, and the San Francisco chapters of the professional technical groups. During the first fully merged year ahead, twenty issues will endeavor to keep the members informed about the technical program, news of the section and the groups that make it up, and developments in the profession and the industry it serves. The **Grid** is indebted to WEMA, Ed Ferrey, executive vice president, and Larry Bishop, public relations director, for making available the dramatic cover art.

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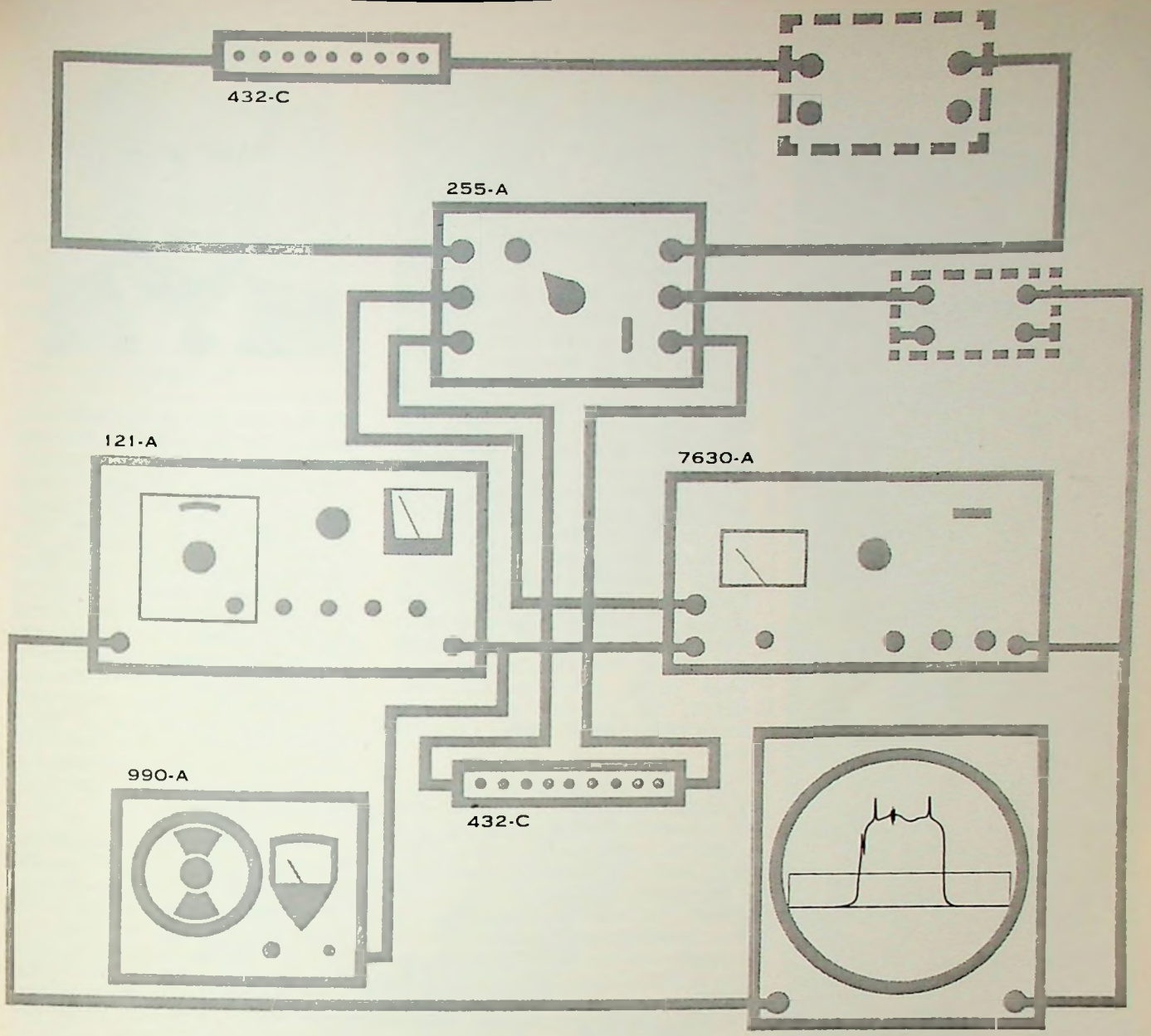
*(Continued on page 10)*

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*remarks from the chairs*

## REGION 6 MOVES AHEAD

*Bruce Angwin, long a diligent and outstanding leader in IRE, WESCON, and IEEE affairs, played a key role in the regional meeting in August as chairman of the bylaws and districting committees. He is a nominee for Region 6 Director on the ballot received a short time ago.*

*Bruce Angwin*

The Sixth Region came of age last month in San Francisco. During Wescon, the region's new bylaws were adopted upon which our future operation will be based. In addition, the organizational pattern of the region was formulated and fundamental decisions were made to clarify and initiate programs involving student affairs, awards, and regional meetings. That Sixth Region meeting, therefore, became a major milestone in fusing together the strengths of its parents, the AIEE and the IRE, into a new and virile giant within the IEEE, to better serve its members and their profession.

Under the IEEE a new organizational level, the district, is identified. In contrast to the AIEE's previous "district," this level is optional and falls between the section and region. It offers the opportunity to contiguous sections to support joint activities, such as publications, Wescon, student programs, and PTG activities, and still maintain the many advantages of local fraternal cohesiveness by bringing into critical focus the geographic centers of professional activity that define the ideal section. Also, the district offers much as a solution to the problem of regional committee procedures and regional communications between the 32 sections bounded by Hawaii, the Rockies, Alaska, and Mexico.

The region has, wisely, decided that the districting of sections will be used only where distinct advantage and need exist. Initially, the giant and cumbersome Los Angeles Section has been dissolved and 10 completely independent sections have replaced it. The districting of these ten sections has been approved to provide the opportunity for Wescon participation, single "Bulletin" publication, business office operation, and PTG chapter participation to the entire membership. Otherwise each section operates with complete autonomy. Other districting opportunities are being explored by a regional planning committee to afford the advantages of long range and consistent planning where rash action may compromise the more solid organizational structure or even confuse communications.

The region has identified Wescon and the IEEE Region 6 Annual Conference as the two technical and organizational meetings of regional scope. Within these activities the broad base of the IEEE both technically and organizationally will be covered. The first conference will convene for the first time in Salt Lake City in April and should prove to be an outstanding event.

As has always been the traditional role of the West, the Sixth Region, IEEE, through its progressive and far-sighted activities, seems destined to lead the institute in its exciting and profitable journey into the future. It now falls on every member to carefully select their representatives at section and region level, demand efficient and effective leadership from them, and wholeheartedly support them in the interesting era before us.

Bruce Angwin

## INFLATABLE ANTENNAS

*Typical of the reviews of technical meetings submitted by reporters from each of the 19 PTG's active within the San Francisco Section is the following:*

Glen Fisher, supervisor of the microwave application dept., Lockheed Missiles and Space Co., Sunnyvale, addressed the June meeting of PTGAP on the subject, "Inflatable Mechanisms for Space Antennas."

Electronics engineers and physicists seldom give adequate credit to the mechanical engineer who converts their broad specifications into workable structures. Specifically, a variety of large antennas is required for deployment from space vehicles. The lack of gravity, inclement weather, and extraneous torques impose less mechanical strain. However, light weight and compactness are required as well as resistance to the space environment, such as disintegration of materials, wide temperature possibilities, and "cold welding" because of the low pressure.

These problems have not proven severe by using inflatable antennas of laminated mylar and aluminum foil. Considerable care is required to avoid premature inflation by trapped gas inside the antenna, snarling of the antenna as it inflates, torque forces which would disturb satellite orientation and leakage of undesired gases where sensitive measurements are being made.

—*LMSC photo*

*Broadband conical inflatable antenna for use in space*

Inflating is generally accomplished with a small bottle of carbon dioxide. After the antenna pressure equals the bottle pressure the antenna pressure is relieved as completely as possible by opening valves directly to the ambient vacuum. Seldom does the internal vacuum approach within two orders of magnitude of the surrounding medium, even on extended satellite flights due to the slow molecular flow behavior of the remaining gas.

Many various antenna types have been constructed, tested, and proven in satellite operation. It would appear that any conceivable antenna could now be constructed for space missions in this manner with assurance of success.

ROLF B. DYCE

# MEETING CALENDAR

## PROFESSIONAL TECHNICAL GROUPS

**Electronic Computers**

8:15 P.M. • Tuesday, September 17, 1963

(Joint meeting with PTGSET, see below)

**Space Electronics & Telemetry**

8:15 P.M. • Tuesday, September 17, 1963

(Joint meeting with PTGEC)

*"Vehicle-Borne Telemetry Data Compression"*

Speakers: Richard Schomburg and Harvey Massey
Lockheed Missiles & Space Company, Sunnyvale

Place: Lockheed Auditorium, Bldg. 202, 3251 Hanover St., Palo Alto

Dinner: 6:15 P.M., El Camino Bowl, 2025 El Camino Real, Mountain View

Reservations: Robert Light, 968-6211, Ext. 2024

MORE DIRECTORY

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Advisor: **William J. Welch**

University of Santa Clara,
Santa Clara, AX 6-3360
Advisor: **Dolan Jones**

U.S. Naval Postgraduate School,
Monterey, FR 2-7171
Advisor: **G. Robert Giet**

*grid returns*

## LETTER TO THE EDITOR

Palo Alto

Editor, the Grid:

There are two very fine candidates up for election as Director of the Sixth Region of the IEEE. They are Bruce Angwin and Robert W. Illman.

The purpose of this letter is to say something about Bruce Angwin's unique qualifications for this job at this time, qualifications which cannot be inferred from a simple review of his biography.

In 1955, when I was chairman of the San Francisco Section of the IRE, Bruce Angwin was chairman of the Los Angeles Section. Prior to that time, the relations between the two groups left much to be desired. By a simple handshake with Bruce, all differences between the two sections were resolved, and in the succeeding eight years his continuing participation in IRE affairs in Los Angeles has been a most significant factor in maintaining amiable relations between the sections.

Since 1955, I have served with Bruce on the Seventh Region IRE committee, on the Wescon board, and have consulted with him many times on IRE and IEEE matters. I know of no person who has been more dedicated to the welfare of the IRE and IEEE, who has spent more time, and who has been more effective than Bruce Angwin. For this first year of the new joint society, Bruce's experience, dedication, and personality make him, in my opinion, the ideal man to serve all of us as Director of the Sixth Region of the IEEE.

ALBERT J. MORRIS
PRESIDENT
RADIATION AT STANFORD

*section notes*

## REGULAR TUESDAY LUNCHEON

A special luncheon table is reserved every Tuesday at the San Francisco Engineers Club for members of IEEE. Club membership is not required and a cash ticket may be purchased from the cashier for $2.00, including tax. No reservations are required.

IEEE members are invited to drop in for lunch whenever they are in the San Francisco area on Tuesdays. The club occupies the 15th floor at 206 Sansome St., San Francisco.

*lecture series notes*

## INFORMATION/COMMAND-CONTROL

A statewide series of 15 lectures on information sciences in command and control will be presented by University of California Extension at Moffett Field, Los Angeles, Fullerton, and San Diego beginning September 23.

*Bendat* *Evans*

*Helgesson* *van Hees*

*Sommers* *Beckers*

*grid swings*

## IT IS REPORTED:

**Dr. Julius S. Bendat** has announced formation of Measurement Analysis Corp., Los Angeles, to conduct research in fields involving mathematical and engineering analysis of physical problems, particularly those requiring measurement and analysis of random phenomena.

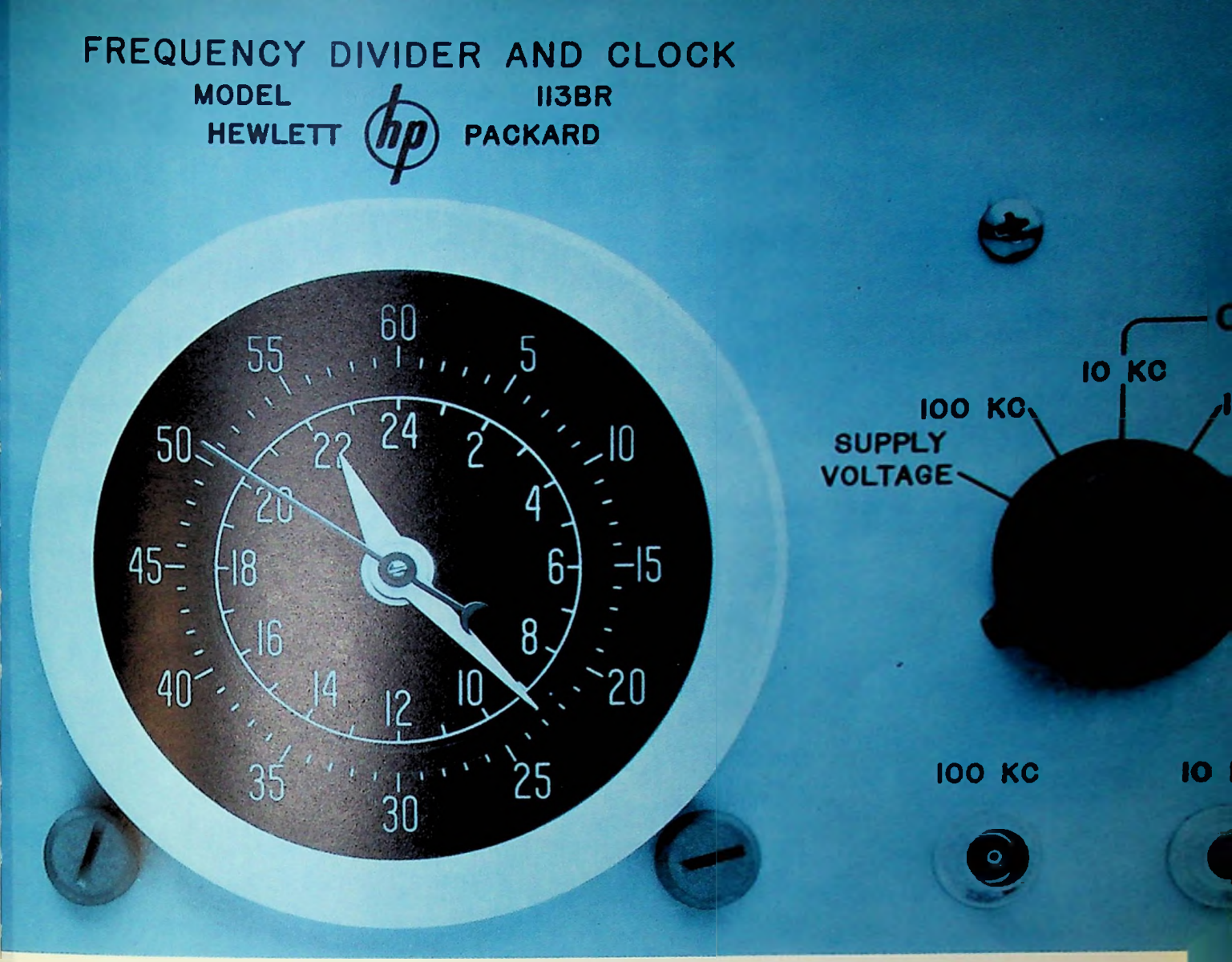
**William E. Evans, Jr.,** has been named head of a new data systems dept. at Granger Associates, Palo Alto, reporting to E. W. Pappenfus, vice president for engineering, and dealing broadly in the electronic signal processing and display field. Evans has been manager of A. B. Dick Company's laboratory in Palo Alto since 1959.

**Dr. Alan L. Helgesson** is a new engineering specialist with Melabs, Palo Alto, and will be engaged in research and development on parametric amplifier devices in the semiconductor devices branch of the microwave dept. to further advance the company's capabilities in the parametric amplifier field.

**Robert van Hees** has been promoted to the newly created post of director of engineering, and Richard Elsworth has been named chief engineer at Kelvin Electric Co., according to W. I. Elliott, president of the Van Nuys, Calif., manufacturer of precision wire-wound resistors and networks.

**Raymond J. Senger,** president of Develop - Amatic Engineering, Palo Alto, has announced the appointments of George R. Sommers, as senior vice president-marketing, and Leonard F. Beckers, as senior vice president-finance. They have also been elected directors and members of the executive committee.

**Kenneth T. Larkin,** associated with the Lockheed Missiles & Space Company since 1956, has been named director of engineering, filling the vacancy created by the death of F. J. Bednarz. Dr. H. Potter Kerfott will serve as assistant director of engineering, and Dr. Roger E. Gaumer as acting laboratory director of the division's mechanical and mathematical sciences laboratory.

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*the section*

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*Kebby*

*Thaler*

Following are the names of members who have recently been transferred to a higher grade of membership as noted:

### Senior Member

Maurice H. Kebby
George J. Thaler

### Member

Otho Lawrence
J. P. Mantey
R. J. Paoli
C. K. Rushforth
R. S. Woodbury, Jr.

Following are the names of individuals who have been elected to current membership:

G. A. Beckstrom
E. S. Calhoun
W. W. Chorske
K. H. Eaton
M. W. Moberg
F. Nardell
S. Nyuha
J. S. Ogle
R. L. Podevyn
D. G. Reesor
J. R. Thompson

Following are the names of IEEE members who have recently entered our area, thereby becoming members of the San Francisco Section:

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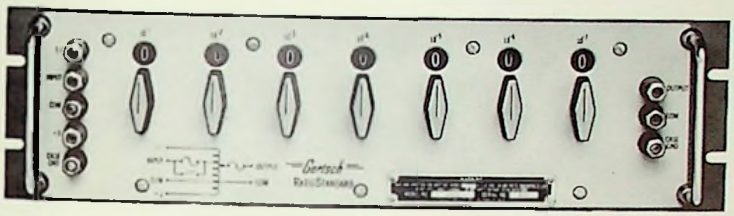

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