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TIME SENSITIVE MATERIAL

CALENDAR OF EVENTS

For reservations call the IEEE office 236-4609
(unless otherwise indicated)

Copy Deadline for June Scanfax is April 28, 1986
Cont. on page 11

May 7	"Applica. of Enclosures for Hazardous Loca."	Power Engrng. Soc.	Carson Pirie Scott Wabash & Monroe Sts. Highland Rm., 8th Fl.	Social 11:30 AM Lunch 12 Noon Meeting 12:30 PM
10	Tour - Argonne Natl. Laboratory	Northwest Subsection	(See article in this issue)	1:30 PM 5:00 PM
13	Monthly Meeting ALL WELCOME	IEEE Executive Cte.	Allen-Bradley Company 910 Pasquinelli Dr. Westmont, IL	Meeting 7:30 PM
14	"Mini Microwave Expo"	Antennas & Prop./ Microwave Theory & Techniques Soc.	Arlington Park Hilton Route 53 & Euclid Ave. Arlington Heights, IL	Exhibits 3:30 PM Dinner 6:30 PM Meeting 7:30 PM
14	"Energy Savings with Adjustable Speed Drives"	Industry Appls./ Industrial Electronics Society	Mr. Peter's Restaurant 1018 Mount Prospect Rd. Mount Prospect, IL	Social 5:30 PM Dinner 6:15 PM Meeting 7:15 PM
14	"The FCC and You"	Electromagnetic Compatibility Society	D.L.S. Electronics 10350 Dearlove Ave. Glenview, IL	Meeting 7:30 PM
18	Annual Awards Banquet & Election	Reliability Society	Midway Motor Lodge 1600 Oakton St. Elk Grove Vil., IL	Social 6:00 PM Dinner 7:00 PM Meeting 8:00 PM
28	"The Integrated Services Digital Network"	Fox Valley Sub.	Wilton Manor 2200 Main St. Wheaton, IL	Social 6:00 PM Dinner 7:00 PM Meeting 8:00 PM
JUNE 4-6	International Conference on Con- sumer Electronics	(Conference Chmn., Michael Ross, 609: 734-2975)	Westin Hotel O'Hare 6100 River Rd. Rosemont, IL	(Program Chmn., Dave Lewis, 716: 477-7558)

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979-3627

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979-5824

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(312) 236-4609

Change of Address

Send change of address to Roseann Schultz, Member Services, IEEE Service Center, 445 Hoes Lane, Piscataway, NJ 08854. Include your SPECTRUM mailing label if possible. We cannot forward this information for you, so please do not send it to the local office.



THE INSTITUTE OF
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FOX VALLEY SUBSECTION

WEDNESDAY, MAY 28, 1986
WILTON MANOR

The 5ESS™ SWITCH - GATEWAY TO ISDN

On Wednesday, May 28, 1986, the Fox Valley Subsection will hold a dinner meeting at which Dr. Lester F. Eastwood, Jr. will speak on the 5ESS™ switch as a gateway to ISDN. The Integrated Services Digital Network (ISDN) will support a wide range of both voice and data applications in the same network. An ISDN will provide end-to-end digital connectivity (including customer loops). A wide variety of network capabilities will be allowed using a limited set of multipurpose user-network interface arrangements. *ISDN is expected to be the international telecommunications network of the future.*

Dr. Eastwood's presentation will touch on ISDN issues as follows. Digital telephone switching system manufacturers that hope to compete in today's market must offer switches with extremely advanced features and architectures. Switches for simultaneous voice and data now compete with local area data networks. Central-office and digital private branch exchange (PBX) switches with similar features and line sizes vie for the same customers. Demands for new services and for a smarter network have led to new switches that mate computer advances with modern data communications techniques. AT&T's premier digital switching system, the 5ESS™ switch, employs such new technology. It includes distributed intelligence, process-oriented software, coordinated autonomous computing elements and digital transmission.

Lester F. Eastwood, Jr., is Department Chief of ISDN Applications at AT&T Network Systems, Lisle, Illinois. Mr. Eastwood joined AT&T Network Systems in June of 1985. He joined AT&T Bell Laboratories in January, 1983, where he was one of the original designers of the ISDN feature on the 5ESS™ Switch. From 1973 to 1983, Mr. Eastwood was Professor of Electrical Engineering and Director of a research center at Washington University in St. Louis, Missouri. He was also an independent telecommunications consultant during this time. Mr. Eastwood holds a Ph.D. in Electrical Engineering from Princeton University and B.S. and M.S. degrees from M.I.T.

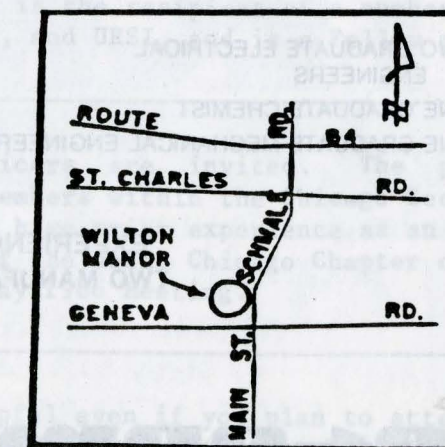
Place: Wilton Manor

Location: 2200 Main Street
Wheaton, IL
(See Map)

Time: Cocktails - 6:00 p.m.
(Cash Bar)

Dinner - 7:00 p.m.

Meeting - 8:00 p.m.



Please call (312) 236-4609 for dinner reservations no later than Friday, May 23 due to the Memorial Day holiday. If you cannot attend the dinner, please feel free to come to the meeting.

CHAIRMAN'S MESSAGE

by Henry Korman

The Process to select new leaders for the Section during 1986-87 is now well underway. Why be a leader in the IEEE?

There are a multitude of reasons why members step forward and assume a leadership position. Major reasons are wanting to contribute to the professional society and building professional credentials. Members also take on leadership roles desiring to improve personally and to develop and sharpen leadership skills, such as planning, interpersonal relations, communications, team building, etc.

As a volunteer you cannot fail while developing such skills. The pay is low and the hours can be long, but where else would you have an opportunity to work with 6600 fellow engineers. Think about it!

If you aspire to a management position or plan to be an entrepreneur in the future, you must have the ability to work successfully with people. So become an IEEE leader and get some free in-laboratory experience.

Chapter officers and committee chairman positions are available. Step forward. The IEEE needs you, and you cannot afford to pass up the opportunity.

Deadlines

June Issue	April 28	Mailed May 15
Sept. Issue	July 28	Mailed Aug. 15
Oct. Issue	Aug. 25	Mailed Sept. 15
Nov. Issue	Sept. 29	Mailed Oct. 15
Dec. Issue	Oct. 27	Mailed Nov. 15



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& TECHNIQUES SOCIETY

IEEE

THE INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS, INC.

MAY 1986 MEETING NOTICE

MICROSTRIP ANTENNAS: THEORY, EXPERIMENTS
& APPLICATIONS

BY: DR. Y.T. LO
1985/1986 AP-S DISTINGUISHED LECTURER

Date: Monday, May 12, 1986

Place: Louis Restaurant, 351 E. Lake Street,
Addison, Illinois
(First traffic light west of Route 83)

Time: Social - 5:30 p.m.
Dinner - 6:30 p.m.
Meeting - 7:30 p.m.

ABSTRACT

Despite the narrow bandwidth, microstrip antennas have many unique and attractive features. Theory for both thin and thick substrates will be reviewed, with emphasis on applications. A single-patch element designed to operate for dual frequencies and dual polarizations (LP or CP) will be chosen as an illustrative example. Design procedure for a CP microstrip antenna with prescribed CP bandwidth will be described.

SPEAKER

Dr. Yuen T. Lo received the B.S. degree in Electrical Engineering from the National Southwest Associate University (Kunming, China) in 1942 and the M.S. and Ph.D. degrees from the University of Illinois in 1949 and 1952 respectively. Since 1956 he has been with the Electromagnetics Laboratory, University of Illinois, where he is now a Professor of Electrical Engineering. He has made numerous contributions in the areas of antennas and electromagnetics, and is the recipient of a number of awards. Dr. Lo is a member of Sigma Xi, Phi Kappa Phi, and URSI, and is a Fellow of the IEEE.

Nominations for the 1986/1987 Chapter Officers are invited. The position of Secretary/Treasurer is open to all AP/MTT-S members within the Chicago Section. Candidates for Chairman and Vice-Chairman should have prior experience as an IEEE professional society officer, and are members of the Joint Chicago Chapter of AP/MTT-S. Nomination forms will be distributed at the May 1986 Meeting.

The dinner is optional. A reservation is helpful even if you plan to attend the talk only. Reservations may be made by calling 236-4609 before noon on Friday, May 9, 1986. Non-IEEE members are welcome.

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Bill Wade, Senior Systems Engineer

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WEDNESDAY, MAY 14, 1986 MEETING NOTICE

Andrew J. Gasiorowski

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Mr. Andrew J. Gasiorowski, received his B.S. in Mechanical Engineering from Marquette University.

Upon graduation he joined Allen-Bradley as a Sales Engineer. He is presently Area Manager for Solid State Power Devices in Allen-Bradley's Industrial Automation Controls Group. Mr. Gasiorowski is currently IEEE Student Activities Committee Chairman and is a member of the IEEE Recognition Dinner Committee.

Schedule: 5:30 Cash Bar
6:15 Dinner
7:15 Technical Program

Location: Mr. Peter's Banquets
1018 Mt. Prospect Ave. (Rand & Central Rds.)
Mt. Prospect Shopping Plaza
Mount Prospect, IL

Reservations: Call Eleanore at IEEE - 312-236-4609 to make dinner reservations by noon Monday May 12, 1986.

The cost for dinner for IEEE members is \$12, for non-members, \$13.

There is no charge for anyone wishing to attend only the technical program portion of the meetings.

PLACEMENT SERVICE

The Chicago Section is now offering a Placement Service for it members free of charge. The program is intended for those who are Member Grade and above and is a positive step to help our members who are unemployed. If interested in any of the applicants listed below, call the IEEE office (236-4609) for their name and phone number. If marked "confidential," the applicant will be contacted by the IEEE office so that he/she may contact the prospective employer.

If you are an IEEE member and unemployed, call or write for the necessary form. Direct your request to: IEEE Placement Service • 125 S. Clark Street - Room 1545 • Chicago, Illinois 60603.

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- B22 — Entry level posi.-exp. hdwe. digital analog control sys., look. for sales eng.
- B23 — Sr. Electrl. Proj. Engr. - industrial and commerical pwr. distr. and lgt. systems.
- B24 — Senior programmer analyst - telecommunications, real-time, machine control.
- B25 — Entry level posi. - exp. in electl. mat'l's., hybrid circuits - thick and thin.
- B26 — Entry level in control systems and related areas for EET.

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IEEE EMC SOCIETY - CHICAGO CHAPTER

WEDNESDAY - MAY 14, 1986

TIME - 7:30 P.M.

SPEAKER - RUSSELL MONIE - ENGINEER IN CHARGE
CHICAGO DISTRICT OFFICE OF THE FCC

TOPIC - THE FCC AND YOU - WHAT THE FCC DOES IN CHICAGO
ORGANIZATION, ENFORCEMENT, ETC

LOCATION - DLS. ELECTRONICS
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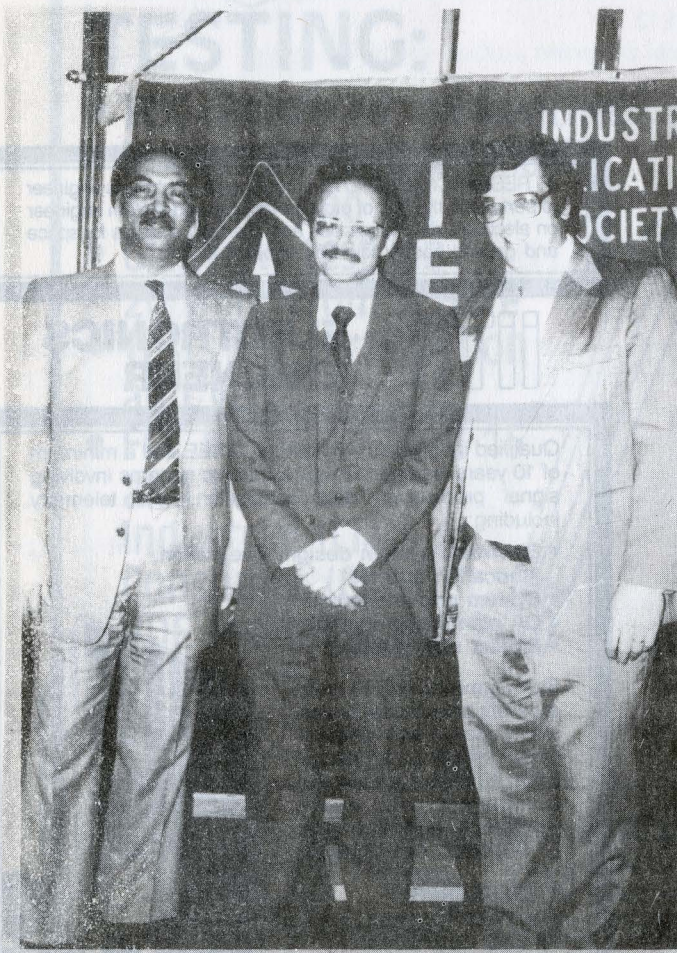
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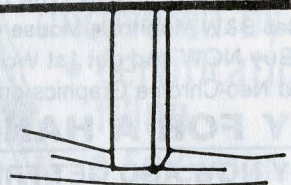
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Nagi Akhter, left, of DeVry Institute, and Henry Dwyer, right, Chairman of the Chicago chapter of the IAS/IES, meet with Dr. Noshir Khory of Motorola Research during the March 12 meeting of the IAS/IES. Dr. Khory spoke on "Reliability Considerations in Semiconductor Technology."

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CALENDAR OF EVENTS

Continued from page one

9	"Advanced Develop. in Waveguide Components & Networks"	Antennas & Prop./Microwave Theory & Techniques Soc.	Louis Restaurant 351 E. Lake St Addison, IL	Social Dinner Meeting	5:30 PM 6:30 PM 7:30 PM
10	Monthly Meeting ALL WELCOME	IEEE Executive Cte.	Allen-Bradley Company 910 Pasquelli Dr. Westmont, IL	Meeting	7:30 PM

ENTRY FORM



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NORTHWEST SUBSECTION TO TOUR ARGONNE NATIONAL LABORATORY

The Northwest Subsection will tour Argonne National Laboratory on Saturday - May 10, 1986. Tour time will be from 1:30 to 5:00 P.M. and is for IEEE members only and their guests (16 years of age and over). Reservations are limited and will be handled on a first-come/first-served basis. Call the IEEE office at 236-4609 for reservations.

NCF TO PRESENT 86 COMFORUM AWARDS Industry Leaders Judge Best New Telecommunications Products

For Further Information:
ComForum Awards, 312-828-0008

Industry leaders will honor the most unique and innovative telecommunications products and services developed and marketed in 1985 at the National Communications Forum in Chicago, September 29, 30 and October 1, 1986. The awards, called the 1986 ComForum Awards, will be judged and presented by a committee of industry leaders, academicians and journalists in the telecommunications field. The committee is chaired by AMERITECH Services, Inc., President Bruce R. DeMaeyer.

The purpose of the ComForum Awards is to give special recognition to organizations and individuals that have achieved outstanding excellence and success in the development and commercialization of telecommunications and computer products. Product is defined as a telecommunications or computer component, product, software, system or service. Additionally, product may be one or a combination of hardware, software, components, systems or services.

The Awards Committee will evaluate the following four criteria in selecting the Award winners:

- (1) Innovation
- (2) Uniqueness
- (3) Market impact
- (4) Customer benefits

Each entry must be completed on an official entry form or facsimile. Official entry forms and instructions can be ordered by calling 312-828-0008 or writing:

1986 ComForum Awards
National Communications Forum
505 North Lake Shore Drive
Chicago, Illinois 60611

**All entries must be received
no later than May 15, 1986.**

There is no limit to the number of entries that a corporation may submit provided each is accompanied by the official entry form or a facsimile. Further information may be obtained by calling 1986 ComForum Awards Program, National Communications Forum, 312-828-0008.

**1986
ComForum
Awards**

CALL FOR ENTRIES

The National Communications Forum proudly introduces the 1986 ComForum Awards... to give significant recognition to those organizations and individuals who successfully develop and market superior, unique and innovative telecommunications and computer products and services. Submit your entry per instructions below.

ENTRY FORM

Product Brand, Generic Name and Model _____

Company _____ Div. _____

Address _____ City _____ State _____ Zip _____

I am authorized to submit this application and represent that information submitted is accurate and nonproprietary.

Name _____ Position _____

Office Phone () _____ Signature _____

Describe product's primary function, application and customer _____

First date of sale _____ Basic customer price/range _____

Estimated annual sales of product _____

1986 _____ 1990 _____

List in order of importance 1, 2, 3, 4.

IDENTIFICATION & DATA	A	Innovative features of product	1	_____
			2	_____
			3	_____
			4	_____
	B	Value of product to your customers	1	_____
			2	_____
			3	_____
			4	_____
	C	Unique applications of technologies used	1	_____
			2	_____
			3	_____
			4	_____
	D	Unique design features	1	_____
			2	_____
			3	_____
			4	_____
	E	Benefits to communications, technology and society	1	_____
			2	_____
			3	_____
			4	_____

ENTRY INSTRUCTIONS

Use this entry form to nominate a product for a 1986 ComForum Award. A product is defined as a telecommunications or computer component, product, software, system or service. The product must have been first marketed and the first sale made between January 1, 1985 and December 31, 1985. Submit this entry form typewritten and signed with a brochure or a description and pictures to: National Communications Forum, 505 North Lake Shore Drive, Chicago, IL 60611. Deadline for receipt of entry is May 15, 1986. Finalists for a 1986 ComForum Award will be required to submit a detailed Finalist Entry. Direct questions to NCF ComForum Award Program Director, (312) 828-0008.

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IEEE ALPHABET SOUP

RAB, TAB, USAB, EAB, PB, AB, CB, STB: how many of you know what these acronyms mean and their relevance to IEEE? The breadth of the IEEE has lead to the formation of eight major boards responsible to the Board of Directors for formulating and recommending broad policies, procedures, and criteria in their fields of competence. These are the prime subjects of this article. But first a few words on the basic organization of the Institute.

The IEEE is the largest professional organization in the world with over 250,000 members worldwide. The Institute is made up of ten geographic regions, of which six are in the USA. As you know, we are in Region 3, which is composed of the southeastern states. The Institute is governed by an elected Board of Directors, and day-to-day operations are carried out by staffs in New York, Piscataway, N.J. and Washington, D.C.

RAB, the Regional Activities Board, is responsible for the geographically organized activities of the Institute, including those of the Regions, Sections, Subsections, and even the student branches. The Board Vice President, Regional Activities, is the RAB chairman. RAB appoints committees on finance, membership, planning, and student activities. They formulate and recommend policies to assure excellence of local programs, co-operation among local units and adequate allocation of Institute volunteer and staff personnel. The by-laws have established a deep commitment to the interests of the regions and local organizations through the instrument of the RAB.

TAB, the Technical Activities Board, has as a major function the recommendations of policies affecting management and operation of the Societies and General Committees. Since IEEE is foremost an outstanding technical society, one would expect that heritage in one of the boards. TAB is chaired by the IEEE Vice President for Technical Activities, who is a director. TAB Opcom is a working group that helps develop policy relating to the IEEE program of technical activities, and monitors operations of the individual societies. Finally, TAB has a number of standing committees on Development, Operations, and Technology. In a few words, TAB is the technical conscience of the Institute.

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USAB, The United States Activities Board, recommends policies and implements programs to serve United States members in non-technical professional areas — economic, ethical, legislative, and social. Supported by funds provided by Regional assessment, USAB appoints standing and ad hoc committees to carry out such programs. Among the major responsibilities of USAB are appointment of the Political Activities Committee for Engineers (PACE) and maintenance of standing committees on Admission and Advancement, Fellows, Finance and Awards.

EAB, The Educational Activities Board, provides to the Board of Directors policy recommendations on educational matters as well as broad planning of the Institute educational activities. These include continuing education, monitoring of accreditation activities and development of guidelines for Institute representatives to accreditation committees. The EAB chairman is a director and executive committee member, and is the Institute Vice President, Educational Activities. Major activities are carried out by establishing committees and task forces.

Originally printed by Norm Laschever, Chairman Broward (Ft. Lauderdale) Florida, Section Chairman.

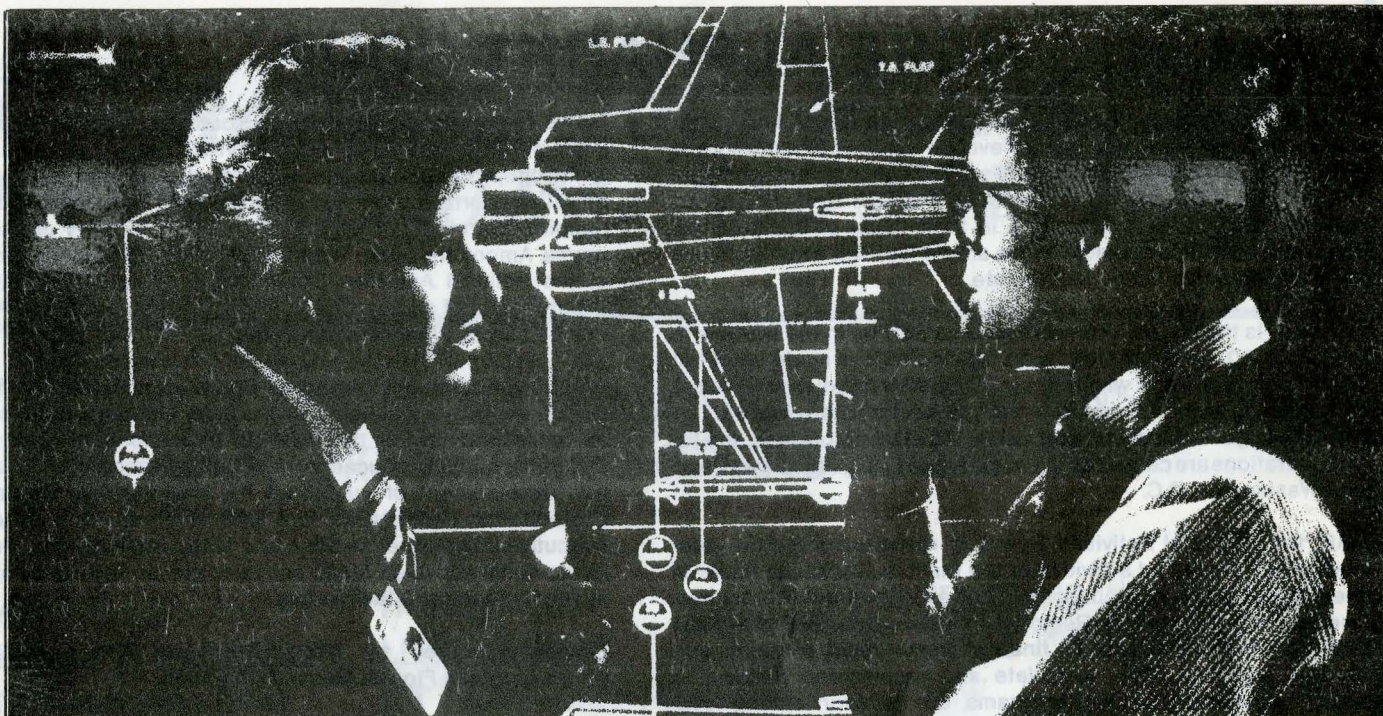
...Certainly one of the crown jewels of the IEEE is its variety of publications. PB, the Publication Board, is responsible for formulating and recommending policies to ensure that adequate publication standards and procedures are established and maintained. The VP, Publication Activities, is Chairman of the PB, which also includes representatives from EAB, RAB, USAB, and editors of IEEE PROCEEDINGS and PRESS, among others. Among the purview of PB are SPECTRUM, PROCEEDINGS, PRESS and society publications.

AW, the Awards Board, is responsible to the Board for administrating the numerous IEEE awards, for monitoring all other awards excluding Fellow grade elections, for recommending candidates for IEEE Honorary membership and for developing an adequate awards structure for recognizing excellence in activities in fields of interest to the Institute. The Awards Board consists of the Chairman, Vice Chairman, four members at large and the Chairmen of the committees of the Awards Board. Among the awards activities reviewed by the AB are the Medal of Honor, the major Annual Medals, The Field awards, and prize papers.

The Conference Board, CB, has been set up to develop policies, procedures and guidelines relative to the resolution of disagreements in matters related to IEEE sponsored and co-sponsored meetings, conferences, conventions conducted primarily for the exchange of information among participants. CB will cease to exist at the end of 1986.

Finally, the IEEE has a Standards Board, STB, which is responsible for encouraging and coordinating standards-related activities in fields of interest to the Institute. STB is the IEEE standards interface with outside organizations, including government regulatory agencies, the American National Standards Institute (ANSI), the International Electrotechnical Commission (IEC), the International Organization for Standardization (ISO), and other professional societies.

As can be seen from the preceding material, the Institute is well organized at the national and international levels. However, the strength and raison d'être of IEEE are manifested at the Section level and in the technical societies/groups/councils. Activities abound in the executive committee of the Chicago Section and local groups/societies/chapters. The Institute is your professional society. To the extent that you participate in IEEE activities, it will mirror your needs and desires.



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George Sarton, Science Historian

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