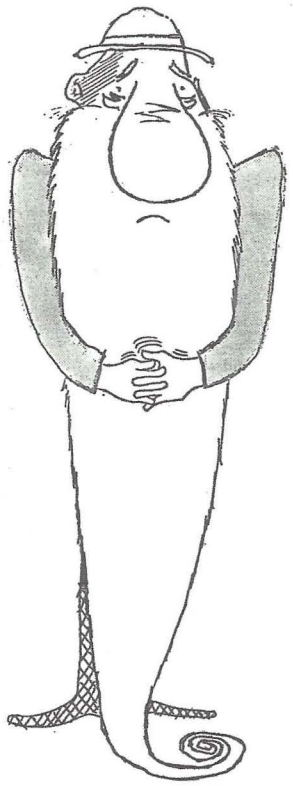
IEEE NEWSLETTER

ELECTROMAGNETIC COMPATIBILITY GROUP

Issue no. 65—JULY·1970

EDITOR: Robert D. Goldblum
Re-entry Systems Division
General Electric Co.
608 Gawain Rd.
Plymouth Meeting, Pa. 19462



Retirement and Pension

Retirement at age 65 is becoming increasingly standard. Concern about an adequate retirement income is growing. For example, the Summary Minutes of the Engineering Management Group AdCom December 10, 1969 Meeting, appearing in the January/February 1970 G-EM Newsletter includes the following paragraph:

"PORTABLE ANNUITIES -- Dr. Goldsmith advised that we have been asked by TAB to set up a committee to do a preliminary feasibility study on the possibility of setting up a pension plan for engineers that could move with the man if he changed jobs. It was the consensus of the AdCom that this subject not be handled by the Engineering Management AdCom but rather should be handled by the staff offices of IEEE."

A different point of view is expressed by the Editor, Alvin Clavin, in the Microwave Theory and Techniques January 1970 Newsletter as follows:

"How does an engineer build an equity for himself so that he can properly retire or have investment capital? Most engineers are somewhat like nomads; that is, they change jobs frequently. This causes a particular problem with most retirement plans presently offered by many corporations. These plans generally involve a contribution by the engineer plus a matching or more than matching contribution by the company. Most plans require at least 10 year tenure with the company before the engineer is entitled to the company's contribution."

An Editorial about an IEEE-sponsored Pension Plan appeared in the January 1970 REFLECTOR, published by the IEEE Boston Section. The Editor of the REFLECTOR, Harold S. Goldberg, wrote in part, "A few years ago, in response to pressure from its members, the IEEE inaugurated its own life insurance program, at a cost about as low, or lower, than other group programs. We also made available to members our health program, again at an excellent price. An IEEE sponsored pension seems like a natural expansion."

Your comments are invited. Make your views known through letters to the editor.

the E-x-p-a-n-d-i-n-g Science of EMC

EVENT: 12th Annual International Symposium on on Electromagnetic Compatibility.

THEME: "The Expanding Science of EMC"

SPONSOR: The Institute of Electrical and Electronics Engineers, Inc., a non-profit professional organization.

DATES: July 14, 15, 16, 1970.

LOCATION: Anaheim Convention Center and Grand Hotel, Anaheim, California

MAIN SPEAKERS:

Mr. Ralph Nader, Luncheon Speaker, 12:30 p.m., July 15;

Mr. Wilfred Dean, Office of Telecommunications Management, Office of the President, Keynote Speaker, 10:00 a.m., July 14.

EXHIBITS: Over 60 displays of modern electronic instruments, components, materials, special aerospace exhibits, spacecraft and missiles.

TECHNICAL DISCUSSIONS:

Three days . . . covering allied problems of electrical interference, pollution, shocks, radiation and monitoring in the engineering, medical, governmental, biological and related fields, and as affecting the public in general.

SPECIAL EVENTS:

Awards Luncheon, July 15, 12:30 p.m
Keynote Speech, July 14, 10:00 a.m.
Reception, July 14, 6:00 - 8:00p.m.
Ladies Activities, July 14 & 16
Exhibits, July 14 - 16, 10:00 a.m. to 5:30 p.m.
Papers and Discussions, July 14 to 16.

PARTICIPANTS:

Students, government and military personnel, doctors, engineers and the "silent majority".

NEWSLETTER STAFF

ASSOCIATE EDITOR (Chapter Chatter)

Ira M. Berman
1169 S. Country Club Dr.
Miskayuna, N.Y. 12309

ASSOCIATE EDITOR

(Steering Committee Reports)

William G. Duff
Atlantic Research Corp.
8601 Greeley Blvd.
Springfield, Va. 22150

CONSULTING EDITOR

Rexford Daniels
Interference Consultants, Inc.
150 Causeway Street
Boston, Ma. 02114

Bridges announces new Chairman Standards Committee

The following announcement was made by J. E. Bridges, Chairman of Committee 27 on Standards:

"This is to announce the appointment of Mr. Leonard W. Thomas, 1604 Buchanan Street, N.E., Washington, D.C. 20017, as Vice-Chairman of IEEE Committee 27.0. In my absence, he will be the alternate liaison representative for 27.0 to the IEEE Standards Committee.

Because of my new responsibility as Chairman of 27.0, it is necessary for me to resign my Chairmanship of the Industrial Electronics Subcommittee 27.5. Mr. James Klouda, Elite Electronic Company, 5100 South Ashland, Chicago, Illinois, has agreed to become Chairman of Subcommittee 27.5.

As a note of general interest, all of Committee 27.0 standards activities are being reviewed in the light of today's environmental problem areas. New standard activity will probably be initiated in areas involving medical electronics, consumer safeguards, and similar areas.

Those who have any suggestions or an interest in standards activities and, particularly, those related to the general electromagnetic pollution problem areas should contact the Chairman."

Standards

Dr. B. B. Barrow spoke at the Operating Committee of the Technical Activities Board (TAB/OpCom) Meeting of the immediate problems concerning the IEEE Standards Committee. He stated that "new procedures must be developed to work more effectively with the Groups and the Group divisional structure. Also, the progression from the American Standards Association (ASA) through the U. S. American Institute (USASI)to the American National Standards Institute (ANSI) represents some fundamental changes in philosophy that would require IEEE to review its working relationships with ANSI." Dr. Barrow pointed out that a majority of the IEEE Groups have not been doing any noticeable Standards work. In other cases, there have been no systematic procedures for reviewing and updating Standards. With respect to our relationships with ANSI and other organizations, there are frequent examples of poor internal coordination, with the result that sometimes the official IEEE representatives do not speak with one voice, or that interested IEEE members, not holding any official capacity, submit views conflicting with those submitted by the official representatives.

At the July 16, 1969 OpCom meeting, Op/Com formally voted to endorse the concept that IEEE, as a scientific, engineering and education Society encourages and supports the development and publication of Standards in such categories as definitions and terminology; methods of measurement and test; and technical reports on recommended practices and safety. IEEE does not, and will not, develop Standards on specific devices or hardware which characterize their commercial sizes, ratings, usage, requirements, or performance associated with warranties.

EMC Proceedings- august '70

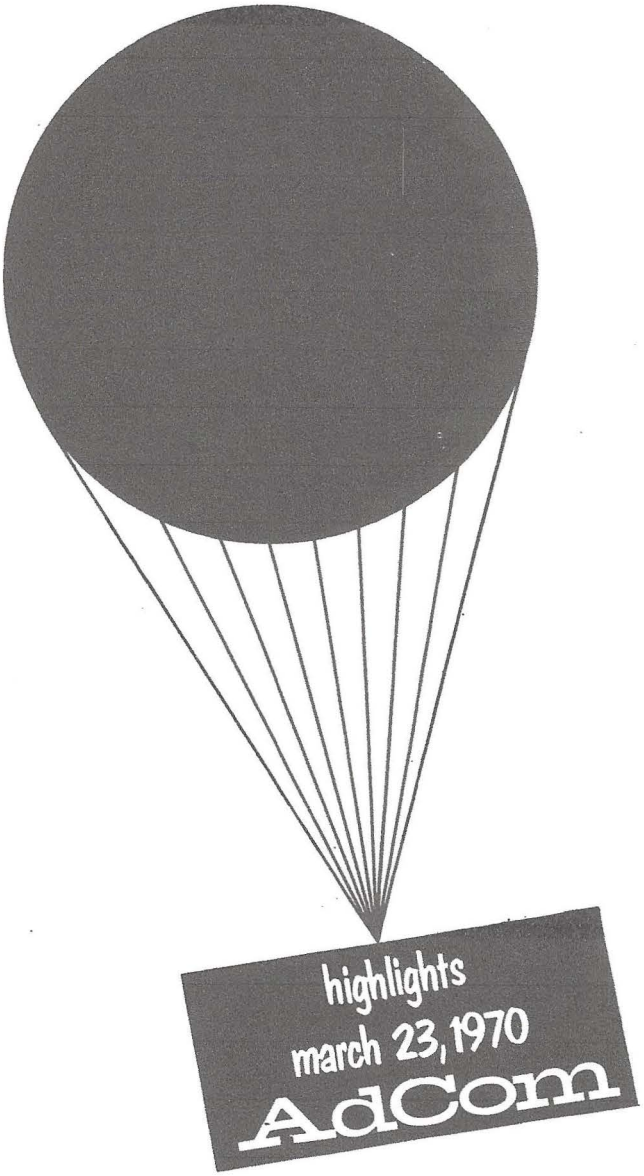
The following is the table of contents for the August issue of the G-EMC Proceedings:

Triangle to produce Taped Series

The taped discussion programs are designed to keep IEEE members abreast of current developments in the electronics and electrical fields by listening to experts discuss current problems and developments on topics of immediate importance to them. The content will be compiled under the direction of IEEE's Dr. Walter Beam. The cassettes will be distributed under the name of "SOUNDINGS" for IEEE members.

Format for IEEE "SOUNDINGS" will follow a pattern designed to adequately cover a specific topic while retaining the ability to touch on other areas of interest. For example, the initial offering will provide a penetrating look at "Systems Engineering Today", in addition to a short interview with a leading pioneer in electronics and electrical engineering as a special feature in a continuing series of vignettes designed to provide IEEE members with a permanent "living" record of historical achievements as described by the men who accomplished them.

The Educational Services Division of Triangle Publications has been named producer for a new series of cassettes which will be part of the continuing education programs of the IEEE. Commencing in 1970, Triangle will produce, on monaural two-track cassette tapes, quarterly round table discussions among leading electrical and electronic experts for sale and distribution to the members of the IEEE.



Mr. Fred J. Nichols, President of LMI has agreed to replace Mr. Ben Weinbaum as Western Chapter Activities Chairman.

Members of the G-EMC who have reached their 65th birthday and who have held membership in the G-EMC continuously since 1959, or for not less than 20 years, shall automatically be eligible for Honorary Life Membership.

Senator Barry Goldwater has been made an Honorary Member of G-EMC in recognition of his interest in interference-free communications as a member of the Senate Armed Services Committee and Senate Space Committee.

Two year complementary G-EMC memberships will be awarded to non-USA authors participating in the 1970 International EMC Symposium.

Mr. Howard L. Wolfman, Teletype Corporation, has been elected Chairman of the 1972 IEEE International EMC Symposium which will be held in Chicago.

Mr. Albert H. Cohen, METEX Corporation, was elected Chairman of the 1974 IEEE International EMC Symposium to be held in New York City.

(Your editor, Bob Goldblum, GE-RESD, is the Chairman of the 1971 Symposium to be held in Philadelphia. A chairman has not yet been selected for the 1973 Symposium which is scheduled for San Francisco.)

Recent Government actions, including the disestablishment of the Office of Telecommunications Management (in the Executive Office of the President) were noted.

The trend of reduced EMC effort in the military was noted. The EMC effort in the non-military agencies (HEW, FCC, etc.) should be on the increase.

The establishment of a Committee on Public Relations to advance the aims of the G-EMC was approved. Dr. Schlicke was appointed Chairman.

Dr. Schlicke reported on steps underway to improve the engineers' stature. Discussions within the IEEE TAB concerning "Portable Pensions", and work within other national societies were covered.

The next AdCom meeting will be held in Anaheim on Monday, July 13th, 1970, prior to the 1970 EMC Symposium.

Miscellany

HOW HAZARDOUS IS "HERO UNSAFE ORDNANCE"?

The following item has been extracted from the May 1970 issue of Explosives and Pyrotechnics, the newsletter published by The Franklin Institute Research Laboratories, Philadelphia, Pa.

"Any Ordnance Item Is Defined As Being HERO UNSAFE ORDNANCE When (1) Its Internal Wiring Is Physically Exposed; (2) Tests Are Being Conducted On The Item That Result In Additional Electrical Connections To The Item; (3) EEDs Having Exposed Wire Leads Are Present, Handled, Or Loaded; (4) The Item Is Being Assembled Or Disassembled; Or (5) The Item Is In A Disassembled Condition." (Radio Frequency Hazards Manual, NAVORD OP 3575/NAVAIR 16-1-529, Confidential report).

"Our readers know that if such unsafe ordnance is exposed to rf fields above a certain amplitude level, sufficient rf energy can be induced into the firing circuits to explode the electroexplosive devices (EEDs). Therefore, for the handling of HERO UNSAFE ORDNANCE, restrictions of field intensities to certain levels such as the 0.2 volts per meter maximum for the 2 to 32 MHz range have been established to ensure safe operations. These criteria levels are specified in the Radio Frequency Hazards Manual. These presently used criteria levels are based on the best engineering judgment and test information available at the time they were established." HERO stands for Hazards of Electromagnetic Radiation to Ordnance." Excerpt from HERO Newsletter #30, January 1970. Commander, U.S. Naval Weapons Center, Attn: Mr. Robert M. Price, Code TE-2, Dahlgren, Va. 22448.

STATIC ELECTRICITY FILM

The following is extracted from the April, 1970 issue of Explosives and Pyrotechnics, published by The Franklin Institute Research Laboratories:

This safety film points out the hazards and control of static electricity. Major portion of the movie is based on a series of demonstrations developed by BuMines, which cooperated on the movie. Film makes these points:

It's not necessary to rub to generate static; mere contact and separation of materials will do.

Static is generated by streams of falling liquids, including non-conducting liquids like water.

Static can be generated in one place and then induced in another area: a sensitive cap is set off when tossing the shorted wires through a static electricity field.

When nature generates static electricity and discharges it in a spark, it does so on a grand scale: lightning.

Static is generally controlled by bonding and grounding all surfaces.

"Static Electricity" 16mm, sound, color, 22 minutes. Catalog #J10110, Order Dept., American Gas Assoc., Inc., 605 Third Ave., New York, N.Y. 10016; $203. or rent $33. per week.

LINDER ELECTED PRESIDENT OF NAE

Clarence H. Linder has been elected president of the National Academy of Engineering. A retired vice president and group executive of the General Electric Company, he will serve a term of one year as the Academy's first full-time president. He succeeds Eric A. Walker, president of The Pennsylvania State University.

Chauncey Starr has been elected vice president of the Academy. Dr. Starr is Dean of the College of Engineering and Applied Science at the University of California at Los Angeles.

Mr. Linder holds the B.S. and M.S. degrees in electrical engineering from the University of Texas. He was associated with General Electric from 1924 until his retirement in 1963.

A founding member and former vice president of the Academy, Mr. Linder has also served as president of the American Institute of Electrical Engineers, Institute of Electrical and Electronics Engineers, United Engineering Trustees, and Engineers Joint Council. He is a member of the American Society for Engineering Education, American Society of Mechanical Engineers, Institute of Electrical and Electronics Engineers, National Society of Professional Engineers, and Tau Beta Pi.

BRITAIN IS GOING METRIC

The following is excerpted from the May 1970 issue of the NBS Technical News Bulletin, covering a speech given by Lord Ritchie-Calder, Chairman of the British Metrication Board, on January 29, 1970, in Washington, D.C.

IN BRITAIN THERE IS NO "IF" ABOUT GOING METRIC. By 1975 we shall have achieved what 200 years ago Jefferson proposed for the United States--a rational system of measurement.

During 1970 substantial progress will be made in many sectors of the economy. BSI expects that all important standards relating to construction, industrial materials, engineering components and equipment will be available.

Freight transport has set the beginning of 1972 as the target date. The road speed levels will be in kilometers in 1973.

Farming as a whole seems likely to begin to go metric in 1972, a change which should be substantially completed in 1973.

Vital industrial supplies such as aluminum, lead, copper, zinc, steel bars, flat steel products, wire mesh and electric cables will be available in 1970 to metric specifications. The production of plastics materials will be in metric terms by the end of 1971. During 1970 the paper, board and printing industries will complete the change-over to metric.

The engineering industries, including shipbuilding, are now going through the initial period of change, and many new designs, particularly equipment for the Armed Services, will be in metric terms from the beginning of 1970.

During 1970-71 there will not be much that the public will notice. Some do-it-yourself materials will be on sale in metric quantities, notably paints and timber. The bedding industry will go metric in the beginning of 1971, and some synthetic and woolen fibres will then be available in metric quantities. Footwear sizing is to be in metric units in the fall of 1972, and generally it is at that time that we would expect the general public to become increasingly aware of the change in the shops. Of particular significance will be the change in the units of sale of beer, milk, and petrol.

ENGINEERS SURVEY AIR TOWER ACCURACY

An article with the above title appeared in the March 1970 NBS Technical News Bulletin. Since many G-EMC members are expected to drive to the Anaheim Symposium, excerpts are extracted as follows:

ENGINEERS STUDYING TIRE WEAR AND SAFETY at the NBS Institute for Applied Technology recently measured the accuracy of tire inflation equipment at 50 service stations. Such a study was needed because station air towers are almost never tested, once installed, despite the importance of maintaining correct inflation pressures. This survey was performed by the Institute's Office of Vehicle Systems Research as part of its research for the Department of Transportation. OVSR engineers Bert Simson and Richard Radlinski found air tower errors to be so great that there is a 45 percent chance that tire inflation will differ by at least 3 psi from the pressure the tower is set for.

The pressure to which automotive tires should be inflated is specified by the vehicle manufacturer for various loads. Inflating tires to these pressures reduces the likelihood of tire failure and results in the best compromise between long tread life and good ride quality. Underinflation by only 5 psi can significantly reduce tread wear, impair handling, and lead to tire failure.

The distribution of the deviations of delivered pressure from the pressure setting was found to have a standard deviation of 4 psi. A motorist using air towers like those tested would have only one chance in five of inflating a tire to within 1 psi of the desired pressure. On the other hand, he is likely to get larger deviations according to the following table:

Pressure Deviation	Probability (%)
±2 psi or more	62
±3 psi or more	45
±4 psi or more	32

SAE AE-4 SPIKES AND RIPPLES

The following are excerpts from the March 1970 issue of Spikes and Ripples, the EMC Newsletter of the Society of Automotive Engineers:

TVI from EHV

The trend toward higher voltages in electric power distribution has increased the incidence of EMI with TV receivers. A searching analysis of the "noise" generated by EHV lines carrying 500-1200 Kvs is being conducted by the large power producers. As might be suspected, precipitation and corona activity are the elements most likely to cause trouble. TVI decreases with increasing receiver frequency but is of sufficient magnitude in the UHF band to warrant attention. Precipitation increases interference by at least 10-20 times. Wet snow is the worst offender. You might think, off hand, that leakage across insulators would be the prime source of RF noise. Not so. Conductors have been found to be the chief culprits. Suppression of UHF EMI from this source has been accomplished through the use of subconductors. Tests show that UHF RF noise is inversely proportional to the number of subconductors used. A practical minimum number is four.

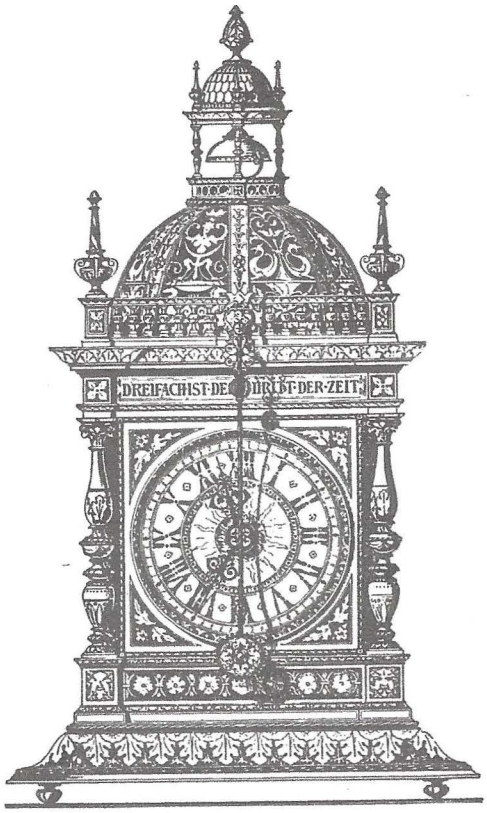
STATISTICS

Members interested in numbers relevant to the radio industry should enjoy the "FCC in Fiscal 1969, A Summary of Activities". Did you know that the Commission was established in 1934 and is now 35 years old? Or, that over 3 million homes are being served by CATV? How about 1,769,378 stations being licensed in the Safety and Special Radio Services? The Field Engineering Bureau issued 39,398 infraction notices and detected 2,352 unlicensed stations. Industry filed 1,339 certificates attesting that 2,608 different types of equipment complied with interference suppression requirements. There is a lot more than just numbers in the report. As the title indicates, this is the "Annual Report" of avery active regulatory body of the government.

Copy for the next issue of "Spikes and Ripples" (July 1970) should be received by June 15, 1970. Address correspondence to:

Charles M. Dean, Editor
P.O. Box 12865
St. Petersburg, Florida 33733

Meetings & Events



1970 IEEE ELECTRONIC & AEROSPACE SYSTEMS CONVENTION (EASCON) TO BE HELD OCTOBER 26-28, 1970

"Technology and the Course of Mankind" will be the principal theme of EASCON '70, the annual conference of the Group on Aerospace and Electronic Systems of IEEE to be held October 26-28, 1970, at the Sheraton Park Hotel, Washington, D.C.

The three-day conference will study the effects of electronic systems technology and its applications in aerospace systems as they apply to the nation in defense, environmental services and other areas of public interest.

EASCON '70 sessions of eight general topics will include: the impact of computers on society; data aspects of application satellite systems; urban problems; technology influences on government policy; international technology; electrography; radar and optical systems for society; and military communications and effect on civil life.

Important new developments in the technology of aerospace and electronic systems, equipment and processes will also be presented as well as exhibits from leading electronic and aerospace corporations.

1970 CANADIAN SYMPOSIUM ON COMMUNICATIONS TO BE HELD NOVEMBER 12-13, 1970 -- MONTREAL, CANADA --

The 1970 Canadian IEEE Symposium on Communications will be held in Montreal, Canada, on Thursday and Friday, November 12th and 13th, 1970, at the Queen Elizabeth Hotel, sponsored by the Canadian Region and Montreal Section of the IEEE.

Technical papers will be presented on subjects of interest to engineers and scientists working in the communications field describing principles, techniques, and developments which have novel and informative aspects. Particular emphasis will be placed on:

Digital Signal Processing Techniques
Statistical Communication Theory
Computer/Communication Data Networks
Coding Theory and PCM Systems
Channel Identification Procedures
Information Retrieval Systems

1970 IEEE EMC REGIONAL SYMPOSIUM TO BE IN SAN ANTONIO

On October 6-8, 1970, the Central Texas Chapter of G-EMC will host the Regional EMC Symposium. The three day symposium is sponsored by the Central Texas IEEE Section through its Electromagnetic Compatibility Group Chapter with the participation of the IEEE Group on Electromagnetic Compatibility (G-27) and SWIEEECO. It will be held in San Antonio, Texas, at the El Tropicano Motor Hotel located on the banks of the picturesque San Antonio River.

This Symposium is intended to continue the three previous Southeastern Symposia and complement the International Symposium. Papers have been requested covering all areas of EMC/EMI, with suggested topics including:

Components: Filters, Shielding, Semiconductors, Hybrids;

Environmental Noise or Pollution: Natural Phenomena, Man-Made, Statistical Analysis;

Interference: Control, Prediction, Prevention, Propagation, Sources;

Measurement and Testing: Equipment, Procedures, Techniques, Military Specifications;

Operations: Co-Site Problems, Interconnection, Interfacing Systems Problem and Solutions.

In addition to sessions on the above topics, tutorial sessions areplanned. Plans include one or more social events. Many exhibits of state-of-the-art EMC and related hardware and software are expected.

In addition to the rich professional and technical atmosphere planned for the Symposium, is the rich cultural atmosphere of Old San Antonio. Fine-Arts tours, Historical tours, museums, and fashion shows are among the many activities of interest to everyone available in the Alamo City.

The Co-Chairmen of the Symposium are:

William E. Cory
Southwest Research Institute
P.O. Drawer 28510
San Antonio, Texas 78228

Dr. F. J. Morris
Electro-Mechanics Company
P.O. Box 1546
Austin, Texas 78767

Plan to visit San Antonio and attend this Regional Symposium during the second week in October. IEEE members may register for $20; non-members, $25. This promises to be a most worthwhile symposium for anyone who is at all interested in the ever expanding science of Electromagnetic Compatibility.

INTERNATIONAL WIRE AND CABLE SYMPOSIUM

Sponsored by the U. S. Army Electronics Command, the 19th International Wire and Cable Symposium will be held at the Shelburne Hotel in Atlantic City, N.J. on December 2-4, 1970.

Among the topics will be EMC/RFI shield designs and termination techniques for cable, measurements of crosstalk and shielding effectiveness, equipment requirements, and system evaluation.

The Symposium Committee will institute a New Publication Procedure for this year's symposium. Instead of requiring copies of the papers from each author, the Committee will publish a proceedings.

For additional information, contact:

Mr. Jack Spergel, Co-Chairman
International Wire and Cable Symposium
U.S. Army Electronics Command
ATTN. AMSEL-KL-EE
Fort Monmouth, New Jersey 07703

1970 IEEE VEHICULAR TECHNOLOGY CONFERENCE

The 1970 IEEE Conference on Vehicular Technology will be held on December 2-4,1970 at the Statler-Hilton Hotel, Washington, D.C.

The conference will be a comprehensive unclassified program covering new developments pertinent to the field of Vehicular Technology. Papers describing significant contributions in the following or related areas will be presented:

Mobile Communications
Spectrum Management in the Mobile Radio Bands
Electronics in Traffic Control
Electronics in Traffic Surveillance
Vehicle Guidance and Control
Highway Electronics
Vehicular Electronics
Electric Automobile Technology
Maritime Techniques

For additional information, write :

Dr. Peter M. Kelly
Kelly Scientific Corporation
3900 Wisconsin Avenue, N.W.
Washington, D.C. 20016

1970 INTERNATIONAL IEEE/G-AP SYMPOSIUM AND FALL USNC/URSI MEETING

URSI and IEEE G-AP Technical programs will be separately arranged except for appropriate coordination at the Ohio State University on September 14-17, 1970. Topics to be covered by the G-AP include the following:

Antenna Theory
Antenna Designs and Implementations
Radio, IR, and Optical Propagation
Scattering and Diffraction (Radio, IR, Optical)
Radio and Radar Astronomy
Plasmas and Their Electromagnetic Effects

Topics to be covered by the URSI Commissions include the following:

Radio Measurement Methods and Standards
Radio Propagation in Non-Ionized Media

For additional information, write to:

William D. Stuart
Battelle Memorial Institute
505 King Avenue
Columbus, Ohio 43201

INTER-SYSTEM ELECTROMAGNETIC COMPATIBILITY

A two-week intensive course on the above subject will be conducted by Syracuse University on August 18-27, 1970.

The aims of this intensive course on specific phases of inter-system electromagnetic compatibility are to review pertinent current research, to examine state-of-the-art, and to point out promising future areas and developments.

Daily class sessions will be held in the Butler Building of the Continuing Education Center for the Public Service, 110 Roney Lane, Syracuse, N.Y. Registrants normally enroll for the entire course; however, a limited number of registrants may enroll for either the first or the second week.

Enrollment will be limited to 30 students, on a "first come" basis. Application may be made to:

Mr. Robert R. Belge, Director
Continuing Engineering Studies Program
Technical Resources Center
610 East Fayette Street
Syracuse, New York 13202

Additional course information may be obtained by writing to: Dr. Arlon T. Adams, Syracuse University, Department of Electrical Engineering, Hinds Hall, Syracuse, N.Y. 13210

PATENT LAW FOR SCIENTISTS AND ENGINEERS

A summer short course in Patent Law will be held on July 27-31, 1970, at the Franklin Institute, Philadelphia, Pa. ıly 27-31,

This seminar is designed for those scientists and engineers who deal with patents during the course of their work. The practicing scientist and engineer, R&D personnel of all levels, as well as technical management will benefit from the material presented. The course will cover details about patents and related records, steps that technical people must take to protect themselves as well as their employers and clients, and patents as a source of technical information.

The Seminar material will be presented in clear and simple fashion and illustrated with applications to practical examples. Morning sessions will be 9-12; afternoon held from 1-4. Each of the ten sessions is opened with a lecture and followed by discussion periods during which student problems will be tackled. Each registrant will receive the paperback text Patent Law and Practice.

Registration fee is $275. For additional information, contact:

Mr. Gunther Cohn, Registrar
The Franklin Institute Research Labs.
Philadelphia, Pa. 19103

Progress & Products

CAPTOR OPENS NEW PLANT

Captor Corporation has taken the second step in a series of planned expansions by opening an engineering and production facility in Hamden, Connecticut, to better serve customers in the northeastern and mid-Atlantic states.

This move follows Captor's acquisition of Diversified Plastics, Inc., of South Bend, Indiana, in September of last year.

The company has leased a 3600 square foot plant at 295 Treadwell Street in Hamden with options to acquire and expand the structure as the need arises, according to president Robert Swift.

Jack McGail, Captor's vice president for marketing and sales, is the General Manager of the Hamden plant and will supervise the design and manufacturing of radio frequency interference (RFI) and electronic wave filters at the facility.

ACE EXPANDS WESTERN FACILITIES

Ace Shielded Products Corporation has established new sales, warehousing and service facilities on the west coast, it was announced by W. R. Staats, international sales manager for Ace. At the same time, the maker of EMI shielded rooms and enclosures made shifts in its sales representative organization.

The new facilities will be located at 509 Hindry Avenue, Inglewood, Calif. All quotations for products will be f.o.b. Los Angeles. Named western regional sales and service manager was Frank Cobery, who for many years has operated Electronic Construction Service Company, contractor, installer and erector of electronic enclosures, computer floors, clean rooms and environmental test facilities. John Wright was appointed operations manager for the sales and warehousing activities.

ZIP-ON EMI CABLE SHIELDING COVER

A zip-on EMI shielding cover for electronic cable installations is described in new literature from Metex Corporation. Possessing both flexibility and durability, the sheilding material consists of an inner lining of knitted wire mesh which can withstand almost unlimited flexures without breakdown. The outer protective cover is made of a heavy duty .020" thick vinyl. The slide fastener teeth are crimped directly to the knitted wire mesh. This method makes it unnecessary for the zip-on shield to be tight on an enclosed wire bundle.

The literature also describes the transition and installation accessories available with shielding. For more information, contact: O. P. Schreiber, Metex Corporation, 970 New Durham Road, Edison, N.J. 08817. Phone (201) 287-0800.

QUICK-SHRINKING CABLE SPLICE COVERS

A unique heat shrinkable splice cover has been introduced by Chomerics. Made of Chomerics' Cho-Shrink, the thinwall polyolefin sleeve has a highly conductive inside surface which provides effective isolation of unwanted signals, and an adhesive/sealant which prevents moisture from entering the splice area. Because of its thinwall construction, the splice cover can be shrunk into position within seconds using a catalytic head on a propane or butane torch. Quick shrinking prevents cable dielectric degradation normally associated with thickwall splice covers.

The Chomerics splice cover is intended for use on aerial cables in both high signal metropolitan areas and low signal rural areas. It is especially applicable for use as a splice cover on CATV cables. Its conductive inner surface acts as a metal pipe over the connector, preventing stray signals from entering the cable. The hot-melt adhesive at each end flows as heat is applied, resulting in an effective corrosion barrier.

For more information about Chomerics new quick-shrinking cable splice covers, contact:

Chomerics, Inc.
77 Dragon Court
Woburn, Mass. 01801
TEL: (617) 935-4850

RF INTERONICS INTRODUCES MICRO-FILTERS

RF Interonics has introduced subminiature RFI/EMC micro-filters. The insertion loss characteristics available in both single and dual circuit configurations provide filter performance previously unattainable in parts of this size.

The body lengths run from 0.19 to 0.25 inches with diameters of 0.31 inches. Typical insertion loss is greater than 10db at 10MHz, reaching 50db at 150MHz. The filters come in a wide variation of mounting styles and termination arrangements.

For additional information, contact:
RF Interonics
100 Pine Aire Drive
Bay Shore, Long Island, N.Y. 11706
Phone: (516) 231-6400

NEW ELECTROMAGNETIC SHIELDING MATERIALS OFFERED TO INDUSTRY

Roselle, N.J. - Radcon Corporation is offering a new material to the shielding industry. This material is valuable in areas where high degrees of compressibility are essential. Fifty percent compression can be achieved with as little as twenty P.S.I. This becomes valuable when an electronic enclosure has wide tolerances in its manufacturing specification or screw spacing greater than six inch intervals.

Sample material is available upon request. This material is described in detail in RAD-15, a four page brochure. For literature and samples, write or call Radcon Corporation, 246 Columbus Avenue, Roselle, New Jersey 07203, Area Code 201-241-5550. Radcon's policy is Service.

FCC'S REGULATION OF RF DEVICES EXTENDED

Manufacturers, vendors and shippers of radio frequency devices that emit electromagnetic energy capable of causing harmful interference to radio communications must meet the technical standards of FCC rules after October 1, 1970, the Commission has ordered (Docket 18426).

The Commission said that the purpose of the new rules is to require compliance with equipment standards by manufacturers, importers and distributors of RF devices, as well as by users, and that the rules apply to many persons and companies not now directly subject to regulation.

The revised rules prohibit the sale or lease, or offer for sale or lease, or the importation, shipment or distribution for sale or lease of RF devices, unless the devices meet the Commission's technical standards or have been type approved, type accepted, or certified. (Type approval is based on testing by the Commission; type acceptance and certification on testing by the manufacturer, his notification to the Commission, and the Commission's acceptance of the test results.) The Commission said that it is presently reviewing its regulations to determine what changes are necessary in its type approval, type acceptance and certification procedures in view of the new regulation.

Only one category of RF devices--incidental radiation devices, such as electric motors, automobile ignition systems, and neon signs--was excluded from consideration in this proceeding, the Commission stated, because technical standards governing their operation have not yet been prescribed.

RF devices subject to Commission authority and included under the amended rules range from the many kinds of radio transmitters used in the broadcasting, common carrier, marine, aviation and land mobile services to restricted radiation devices, such as radio receivers, CATV systems, low-power communication devices, including wireless microphones, phonograph oscillators, radio-controlled garage door openers, radio-controlled models and toys, to various types of industrial, scientific and medical equipment such as ultrasonic, industrial heating, medical diathermy, radio-frequency-stabilized arc welders and miscellaneous equipment.

The 1968 law exempts from its operation, and from the new Commission regulations, carriers transporting radio frequency devices without trading in them; devices manufactured solely for export; the manufacture, assembly or installation of devices for its own use by a public utility engaged in providing electric service; and devices for use by the Government.

In addition, the Commission exempted the manufacture of RF devices from the new regulations, so as not to curtail research. It also exempted from the new rules transmitters operated in the AM, FM or TV broadcast services, or in the Instructional Television Fixed Service, and certain Industrial, Scientific and Medical equipment governed by Part 18 of the rules, including industrial heaters. (Industrial heaters that generate less than 10 kilowatts of radio frequency are subject to the condition that the purchaser be notified in writing whether the equipment, as delivered, complies with the technical requirements of Part 18 or whether a shielded enclosure is required.)

In response to comments expressing fear of an adverse impact by the new rules on preproduction marketing of products still in the design and development stages, the Commission stated that the new rules will not "preclude the proposal or execution of agreements to manufacture or produce in the future new products in the design or development stages or products which are to be manufactured in accordance with designated specifications." Advertising for sale of existing RF devices before it has been determined that the devices meet Commission requirements is prohibited.

A RECENT CHANGE IN THE ADDRESSES OF SEVERAL FCC FIELD OFFICES

Address of Engineer in Charge

Room 400, Federal Building
Norfolk, Va. 23510

P.O. Box 8004
Room 238, Post Office Building
Savannah, Georgia 31402

Room 1758 U. S. Courthouse
312 North Spring Street
Los Angeles, Calif. 90012

314 Multnomah Building
319 S.W. Pine Street
Portland, Oregon 97204

8012 Federal Office Building
First Avenue and Marion
Seattle, Washington 98104

691 Federal Building and U. S. Courthouse
Fourth and Robert Streets
St. Paul, Minnesota 55101

These addresses may be of value to you in cases of notification of interference to your Vehicular Communications.

OVEN RADIATION RULES TO BE TOUGH

The following news item is excerpted from the May 25, 1970 issue of Electronics:

The U.S. Bureau of Radiological Health is sticking to its plan for a touch microwave oven radiation standard of 1 milliwatt per square centimeter at 5 cm from the oven. The proposed at-the-factory standard, 10 times tougher than industry's, is set for early June disclosure along with a second standard of 5 mw/cm^2 once the oven is installed. The standards are being prepared at a time when 14 manufacturers are testing installed equipment to assure that ovens meet the 10-milliwatt industry standard.

Manufacturers are less concerned over the 1-mw maximum for ovens still in the plant than they are with the 5-mw maximum for ovens in use, with doors and seals gradually deteriorating. Sources at the BRH say surveys by state and Federal health authorities reveal that one-third of installed ovens that were tested emitted radiation greater than the industry standard of 10 mw.

FCC, HEW IN COOPERATIVE TESTING AGREEMENT

Microwave cooking ovens will be given preproduction checks for radiation emission potentials under a cooperative testing agreement between the Federal Communications Commission and the Department of Health, Education, and Welfare.

The agreement was announced on April 27, 1970 by FCC Chairman Dean Burch and recent HEW Secretary Robert H. Finch.

Secretary Finch said the tests will permit possible radiation problems to be called to the attention of oven manufacturers before new models go into production. The Secretary emphasized that pre-production model tests will not constitute radiation safety approval or certification of prototype microwave cooking ovens by HEW under the Radiation Control for Health and Safety Act.

The radiation tests of microwave ovens will be made by the HEW Environmental Health Service's Bureau of Radiological Health in an FCC laboratory at Laurel, Maryland. The FCC tests prototype microwave ovens in the laboratory to determine whether their operation complies with technical standards designed to keep interference to communications devices at a low level.

Recent surveys by local and State public health agencies and the Bureau of Radiological Health showed that a number of microwave cooking ovens tested in homes and commercial establishments were emitting radiation above the voluntary industry standard of ten milliwatts per square centimeter.

The agreement will make available to the FCC a Bureau laboratory at Rockville, Maryland, for examinations to determine if design changes in production ovens have altered microwave frequency performances approved in pre-production models. The Bureau uses the laboratory in checking the radiation safety of electronic products in production, including microwave ovens.

Under the agreement, the Bureau not only will make radiation leakage measurements with oven doors closed, but will check the ability of safety interlocks to prevent ovens from operating as doors are being opened. In addition, the Bureau will be provided opportunities for observing oven design changes which may have radiation safety significance.

People in the News

O'NEIL DIVISION 3 REPRESENTATIVE TO THE TAB FINANCE COMMITTEE

Mr. John J. O'Neil of the U.S. Army Electronics Command, Fort Monmouth, N.J. and Treasurer of the G-EMC AdCom, has been appointed to the Technical Activities Board (TAB) Finance Committee as representative of Division 3.

Division 3 consists of the following groups:

G - 2 Broadcasting
G - 8 Broadcast and Television Receivers
G - 10 Aerospace and Electronic Systems
G - 19 Communications Technology
G - 27 Electromagnetic Compatibility

Dave Hodgen is Director of Division 3. Mr. Robert Mills is Chairman of the Finance Committee.

As a result of this appointment, O'Neil was recently assigned the position of Finance Committee liaison member to the (TAB) Publications Committee.

O'NEIL AND SHOWERS REPRESENT USA AT YUGOSLAV CONFAB

John J. O'Neil and Dr. Ralph Showers attended the meeting of the International Special Committee on Radio Interference which was held in Bled, Yugoslavia, March 16-26, 1970.

This committee conducts its work in the USA under the cognizance of the US National Committee of the International Electrotechnical Commission and the American National Standards Institute.

Dr. Showers and Mr. O'Neil represented the USA and presented the national positions in various areas of electromagnetic compatibility.

Mr. O'Neil is employed at the Army Electronics Command in the Communications - Automatic Data Processing Laboratory, is past chairman of the N.J. Coast Section of the Institute of Electrical and Electronic Engineers (IEEE) and was chairman of the 1969 International Symposium on Electromagnetic Compatibility held at Asbury Park last June.

Dr. Showers is a Professor at the Moore School of Electrical Engineering, University of Pennsylvania, Philadelphia, Pa. He was no stranger to this meeting, for he has represented the USA at many such events over the past decade.

WARREN A. KESSELMAN PRESENTED CERTIFICATE OF APPRECIATION

A certificate of appreciation was presented to Warren A. Kesselman from the ADCOM for his contributions and service to the chapter as Chairman from May 1968 to 1970. In addition to his position of Chapter Chairman, Warren also served as Publications Chairman for the EMC Symposium held at Asbury Park in July 1969. This certificate was presented by Frank Mitchell, Chairman of Chapter Activities East, at the regular chapter meeting. Our congratulations and thanks to Warren for a job well done.

UFEN FORMS GRU ASSOCIATES

George R. Ufen, Chairman of the 1970 IEEE International Symposium and former Western Manager of Fairchild Electro-Metrics Corporation in Burbank, California, has formed GRU Associates. The new enterprise will deal in market research and testing, new product studies and sales promotion.

Mr. Ufen's vast membership affiliations past and present include: IEEE; SAE; and Boy Scouts of America since 1943. For additional information, write to GRU Associates, P.O. Box 1082, Glendale, Calif. 91209

Chapter Chatter

by Ira M. Berman

Far be it for the Chapter News column to be the harbinger of bad news, but occasionally it happens that way. The Canaveral Chapter has been terminated. We wish a quiet "Farewell" to the few active members who held the Chapter together. From the Chairman's final communication, the reasons seemed to be equally divided between massiv layoffs and massive indifference--and the indifference was not all the members', either.

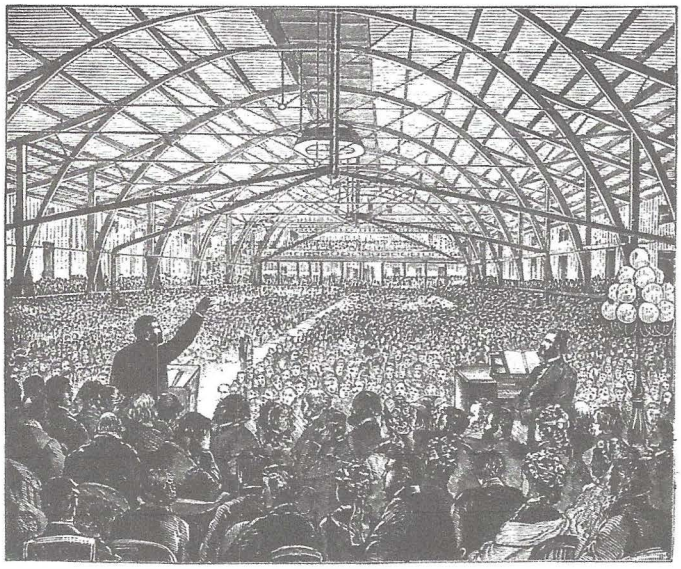
We do have some good news, too.

ATLANTA

Their last meeting had the kind of topic we need to hear more of, especially outside of IEEE circles.

Date:	March 1970 (Joint Meeting with Atlanta Section)
Place:	Racquet Club
Speaker:	Dr. Perlin
Affiliation:	Georgia Tech
Topic:	Frequency Management Considerations
Attendance:	50

As what spectrum we have gets more and more crowded, it becomes harder and harder to squeeze everyone in. Only the most astute management techniques will solve this problem.



The May meeting wound up Atlanta's year.

Date:	May 12, 1970
Place:	The Steaks Restaurant
Speaker:	Dr. Delmer Ports
Affiliation:	Atlantic Research Corp.
Topic:	EMC - A Change of State
Attendance:	28

The officers elected to serve during 1970-71 year were as follows:

Chairman:	Jim Toler, Georgia Tech
Vice-Chairman:	Hugh Denny, Georgia Tech
Secretary/Treasurer:	M.A. Thigpen Lockheed-Georgia

BOSTON

Boston reports a phenomenon that seems prevalent elsewhere, too: an increase in interest in EMC by those "outside" the Group, and a decrease in interest in those "inside." If we could just convince those outside to join the Group, then those inside might very well feel motivated to continue. It's always a good idea to proselytize a bit when there are interested guests around.

Reports of meetings from Boston follow:

Date: March 11, 1970

Place: AVCO, Wilmington, Mass.

Speaker: J. Blowney

Affiliation: AVCO

Topic: How to Make a Presentation

Attendance: 35

- - - - - - - - - - - - - - - -

Date: May 13, 1970

Speaker: A. Margulies

Affiliation: MITRE Corporation

Topic: EMC Considerations for Large Scale Systems

Guest attendance at Boston's meetings seems to be on the rise, as well. Perhaps that reflects the Chairman's comment on interest, but I'd like to think it's also due to their choice of topics.

CENTRAL TEXAS

Looks as if the Central Texas Chapter is vying for top honors in the Chapter-of-the-Year Award. The latest is approval to hold the 1970 Regional EMC Symposium in San Antonio early in October. The whole Chapter is up in the air over it, and they are looking forward to a successful three days.

There is a new slate of officers, too.

Chairman: Mr. C. C. Lambert
Electro-Mechanics Co.

Vice-Chairman: Mr. O. L. Jouffray
Southwest Research Inst.

Secretary-
Treasurer: Mr. C. Mike Brennan
Electro-Mechanics Co.

For a change the deadline caught a meeting in May!

Date: March 18, 1970

Place: Electro-Mechanics Co.

Speaker: C. M. Brennan

Affiliation: Electro-Mechanics Co.

Topic: Magnetic Shielding Measurement Techniques

Attendance: 15

- - - - - - - - - - - - - - - -

Date: May 6, 1970

Place: Southwest Research Institute

Speaker: Lt. Roger Fischer

Affiliation: USAF Security Service Kelly AFB

Topic: Evaluation of the NAK - 1/A Antenna Set

Affendance: 16

Best wishes to the new officers and lots of luck with your Symposium, fellows.

PHILADELPHIA

The Philadelphia folks keep on going. There is a good industrial and electronics industry there (as evidenced by the brown smog that you can see from aircraft), and even with current industrial ups and downs (mostly downs) interest is quite alive in EMC.

Date: March 4, 1970

Place: Univac, Blue Bell, Pa.

Speaker: William Swift

Affiliation: Hewlett-Packard

Topic: Use of Spectrum Analyzer for EMI Testing

Attendance: 30 (good showing)

Another meeting was held in May:

Date: May 19, 1970

Place: Univ. of Pennsylvania

Speaker: Panel Discussion

Topic: Electrical Noise Standards

Attendance: 28

Philadelphia (Continued)

The highlight of the 1969 - 1970 activity year was the day-long seminar on May 19, under the overall topic of "Electrical Noise and its Control." Eight technical presentations were given, starting with Dr. Salati's opening address defining the problems, ranging through graphical, physical, and analytic measurements and solutions, to Rex Daniels' discussion of things to come in Electromagnetic Pollution. The evening meeting was a continuation of the days' activities, with emphasis placed on greater rapport among G-EMC, SAE, and EIA. (It is strange to have three groups doing the same thing in such an uncoordinated manner.) Attendance was 67.

New officers were also elected as follows:

Chairman: Edgar Huff, AEL

Vice-Chairman: William Boral, GE-RESD

Secretary: E. Raglman, GE-RESD

And of course Philadelphia is still planning for the 1971 Symposium. We'll have more on that after the Symposium in Anaheim.

SEATTLE

Here's another group that keeps moving. Looking at the efforts the Seattle folks are putting forth sure makes you feel there's life in the G-EMC yet. Seattle's contribution was participation in the Sixth Regional IEEE Conference held in Seattle late in May. The conference was leaning heavily upon the Chapter for assistance, and four Chapter members have responded with papers. Two members are also presenting papers at the National Symposium in Anaheim this July.

Nominations for the new year's officers are:

Chairman: Dr. William Cooley

Vice-Chairman: Frank Beauchamp

Secretary-Treasurer: Thomas Herring

Additional nominations will be accepted from the floor at the May 20 meeting.

The topic of the March meeting was one of perennial interest.

Date: March 18, 1970

Place: Boeing Scientific Research Lab.

Speaker: Dr. William S. Cooley

Topic: Standing Wave Influences on Measurement Accuracy in Shielded Enclosures

Attendance: 16

And the May meeting featured a speaker well known on the West Coast:

Date: May 20, 1970

Place: Boeing Research Laboratory

Speaker: Walter McKerchar

Affiliation: Breeze-Illinois

Topic: A Re-Evaluation of Shielded Cables

TUCSON

Looks like the fellows in sunny Arizona have a going thing (sorry, Ford). They have officers and meetings and interest.

Chairman: Mr. A. F. Rashid
Bell Aerospace Co.

Vice-Chairman: Mr. R. R. Seach

Secretary: Mr. R. D. August

Program Chairman: Mr. R. E. Steinebach, Jr.

The first meeting sounded pretty good.

Date: April 21, 1970

Place: Aztec Inn, Tucson

Speaker: Mr. R. Larson

Affiliation: Bell Aerospace Company

Topic: EMC in Design

Attendance: 20

There may be another meeting this year, before the summer hiatus. But the best part of Mr. Rashid's report is his comment, quoted in full: "Local community interest. The State of Arizona is considered to be the most convenient place in the nation for EMC work." (Now watch the green-eyed monster in this comment: You bet it's convenient--the airlines don't call it "Sun Country" in February for no reason.)

WASHINGTON, D.C.

The Capital Chaps report new officers for 1970-71:

Chairman: Mr. William B. Morton
U.S. Forestry Service

Vice-Chairman: Mr. Carl C. Allen
Honeywell

Secretary/Program Chairman:
Mr. William C. Green

You know, I'm fascinated by the affiliation of the new chairman. The Forestry Service uses a tremendous amount of radio communications, even in normal, day-to-day activities. As more and more organizations using telecommunications get involved in Spectrum Management, we stand a better than even chance of licking the spectrum crowding problems.

The words "Spectrum Management" seem to crop up more and more these days.

Date: March 19, 1970

Place: Blackie's

Speaker: Sgt. Raymond Palma

Affiliation: New Jersey State Police

Topic: Problems in Spectrum Management Relating to Law Enforcement

The deadline dropped off what sounds like a great meeting.

Date: May 21, 1970 (Joint meeting with Section)

Place: Blackie's

Speaker: Charles C. Joyce

Affiliation: National Security Council

Topic: Strengthening Telecommunications Planning in the Executive Branch

This should be right down Washington's alley. I sure wish there was some way us uplanders could hear some of these Chapter addresses.

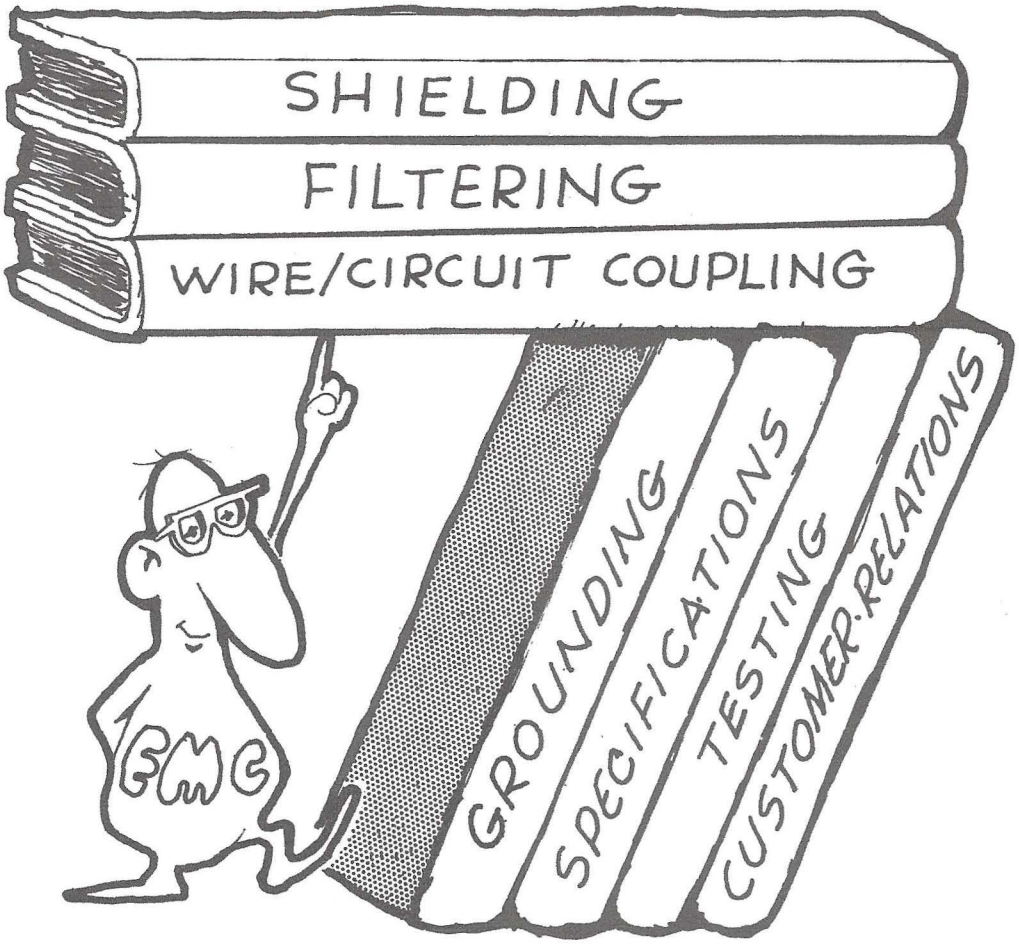
Washington's attendance figures look great, too: since September their average member attendance is 39 per meeting, with an average of 8 guests per meeting. In these days of dwindling east coast membership, that is a fine figure, indeed.

Boy, I wish I could get to some of those meetings. The topics sound better every day.

Well, I guess that's it. It's been a busy year, full of activity and frustration, but most of us managed to squeak through. To the new Chapter at Tucson, welcome. To the Canaveral group that didn't quite make it, we wish the best in whatever endeavor you undertake.

I doubt if I'll be in Anaheim this year. This will be the first National Symposium I've missed in five years. But I will be there in spirit.

And just a final note to those who think I needle too hard for news: I've learned that the only thing that comes to him who waits is whiskers. Please understand that I'm trying to get news. No offense is meant---I hope none will be taken.



DIVIDED INTO MANY DISCIPLINES

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