

IEEE

ELECTROMAGNETIC COMPATIBILITY GROUP

NEWSLETTER



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

ISSUE NO. 67 - JANUARY, 1971

Dear G-27 Member,

Consider what is happening to your friends, co-workers and engineers who are looking for work. These happenings are but a prologue to what can happen to you tomorrow - or worse yet - sometime in the future when your salary, age, company benefits and pension plans act to limit your options.

In light of these thoughts, how much is your engineering worth?

Whatever its value, your right to determine its worth and your future is worth more. You help to preserve this precious right by building G-27 strength by signing up new members.

For every friend or co-worker who shares your EMC interests, your engineering worth increases. G-27 membership helps each of you to share and enjoy EMC engineering and use. And your engineering is worth more to you.

Every time our group has increased we have published more articles, larger transactions, abstracts, and Newsletters, provided more services and conducted more meetings thereby enhancing the value of your engineering. When you enroll new members you help to make these services possible. Add up the value in other ways, every engineer or student who attends G-27 meetings makes EMC engineering easier for you and your discipline stronger.

As membership grows, not only does G-27 programs reach new and more engineers, G-27 will be in a stronger position to influence IEEE policy - and more importantly, to influence any policy affecting engineering. For these reasons, plus others, I ask you to enroll new G-27 members and to sign up friends and co-workers. If each of you sign up one engineer then we have doubled our size - a phenomenal growth!

Here are more direct benefits new members bring

- . Dues stay down
- . More publications
- . Reduce likelihood of being absorbed by larger groups
- . More power to influence IEEE policy
- . Retention of the EMC discipline
- . More meetings and services
- . More money to carry forth the EMC message

Page 15 of your newsletter contains a membership application. Reproduce as many copies as you need to enroll new members and carry them with you. Fill out the form yourself and offer to mail the application.

In appreciation, G-27 recognizes the valuable service you perform in signing up new members. To show appreciation, a group of distinction Membership Awards have been obtained. After you have verified (by asking the person) that the member has enrolled mail the name of the member to the G-27 Membership Chairman for your award. See page 15 for a sample award form.

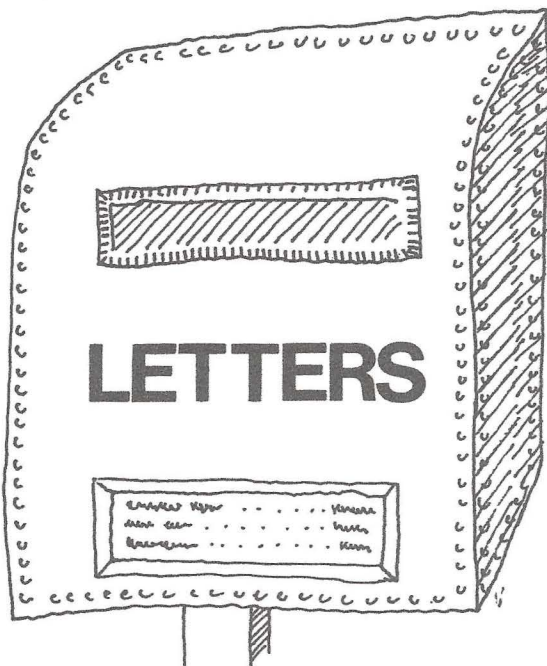
Sincerely yours,

Anthony G. Zimbalatti
IEEE, G-27 Membership Chairman

G-EMC AD COM MEETING

The IEEE has changed the date of the G-EMC Ad Com meeting from Tuesday, March 23, to Monday, March 22, 1971 during the IEEE International Convention. The meeting is now scheduled as follows:

Monday, March 22, 1971
9:00 AM to 4:00 PM
Room 534, fifth floor
New York Hilton Hotel



NEWSLETTER STAFF

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Dear Editor;

I have been following the letters to the editor in the IEEE EMC Newsletter with much interest and enthusiasm as the ones which seek to better the life of the engineer are dear to my heart.

My ideas on this subject are briefly as follows. I think we need an organization to work with the AIAA/IEEE or as a separate entity to gain some of the things we are talking about. This organization could be called the American Engineering Association (AEA) and patterned like the American Medical Association (AMA) or the American Bar Association (ABA). Such a group could concern itself not only with a portable pension plan, but also with: a set of ethics for engineers, maintain a strong lobby in Washington, set salary schedules and/or fees, maintain medical and health plans including life insurance, and others.

I am willing to give time and money to help start such an organization. Will those across the nation who are similarly inclined please write to me and we can start the ball rolling.

Very truly yours,

John M. Dailey
30753 Ganado Drive
Palos Verdes Peninsula, California 90274

Dear Mr. Goldblum,

It is with a great deal of interest that I read the brief item in the IEEE News and Views section of the October, 1970, issue of the Electromagnetic Compatibility Newsletter concerning the concept of "Dial Access" information system.

As the Educational Activities Board of IEEE is reviewing the concept I wonder if consideration could be given to a possible enlargement of the project.

It is proposed that, through "Dial Access," a recording of a technical paper can be heard by an IEEE member who was unable to personally attend a technical meeting. This would enable the listener to obtain, first hand, information which is not always published. An important feature of this idea would be the tape recording of not only the delivered paper itself, but also the question and answer periods which follow most technical presentations. The question and answer periods are often informative, yet seldom published.

It appears to this writer that, in these days of limited travel budgets, the inclusion of taped talks in the projected information library could find acceptance. I would appreciate any comments by you or other members concerning this idea.

Sincerely yours,

Alvin W. Paul
Adelphi, Maryland

PUBLICATIONS

INTERFERENCE MASTER AVAILABLE

The 1971 edition of the Interference Technology Engineer's Master - ITEM has finally been published and mailed to subscribers. Available free upon request, the publication contains over 200 listings of products and services specifically related to the control of electrical interference and radiation, and where to find them. In addition to manufacture's catalog pages, the book contains feature articles on FCC regulations, filtering and shielding techniques, transients, Government personal locator, and many others. Copies may be obtained by writing to ITEM, P.O. Box 328, Plymouth Meeting, Pennsylvania 19462.

HERO NEWSLETTER DISCONTINUED

Published for years by the U.S. Naval Weapons Laboratory in Dahlgren, Va., the HERO Newsletter (on Hazards of Electromagnetic Radiation to Ordnance) has been discontinued. The action follows in the wake of a reorganization in which the HERO program has been integrated with the Electromagnetic Vulnerability Division. The new division incorporates a broader scope of effort including HERO, EMC, and High Power RF effects. However, the HERO Consultation Services group is still active and will continue to render services to private contractors and government agencies as required.

FEBRUARY TRANSACTIONS AT PRESS

The following is the Table-of-Contents of the February 1971 G-EMC Transactions.

PAPERS

A New Method for the Spectral Density Calibration of Impulse Generators . . . J. R. Palladino

Theory of the Annular Slot Antenna Based upon Duality . . . C. W. Harrison and D. C. Chang

On the Pulse Response of a Flush-Mounted Coaxial Aperture . . . D. C. Chang and C. W. Harrison

SHORT PAPER

Correlation between Atmospheric Radio Noise Burst Amplitudes with Different Bandwidths . . S. N. Gupta

CORRESPONDENCE

Comment on "Analysis and Design of Wire Antennas with Application to EMC" . . . E. L. Bock

On the Comparison of Matrix Methods with Conventional Methods . . . B. J. Strait and A. T. Adams

Comments on "An Accurate Representation of the Complete Electromagnetic Field in the Vicinity of a Base-Driven Cylindrical Monopole" . . C.D. Taylor and C. W. Harrison

No Static Field from AC Currents . . . W. A. Stirrat

NEWS & VIEWS

DR. JAMES H. MULLIGAN, JR. ELECTED PRESIDENT BY THE IEEE

Dr. James H. Mulligan, Jr., Executive Secretary of the National Academy of Engineering, Washington, D.C., has been elected President of the IEEE for 1971. He succeeds Dr. John V. N. Granger, Director and Consultant, Granger Associates, Palo Alto, California.

Dr. Mulligan has a broad background of engineering experience, including assignments, prior to his present post, with the Bell Telephone Laboratories, the Naval Research Laboratory, the Allen B. DuMont Laboratories, and New York University. He was chief engineer of the Transmitter Division of DuMont immediately prior to joining the Department of Electrical Engineering at New York University; he was chairman of the department from 1952 to 1968. His principal technical contributions and publications have been in the area of network theory and electronic applications.

He is a Fellow of the Institute of Electrical and Electronics Engineers (IEEE), the Institute of Electrical Engineers (IEE, London) and of the American Association for the Advancement of Science. He is also a member of American Physical Society, American Mathematical Society, Mathematical Association of America, American Society for Engineering Education, Tau Beta Pi, Sigma Xi, and Eta Kappa Nu.

RESULTS OF THE AD COM ELECTION BALLOT

A ballot for the election of six Electromagnetic Compatibility Group AdCom members was issued on August 3, 1970. The ballots returned have been counted, and I am pleased to announce that the following six members have been elected for a three year term beginning on January 1, 1971:

W. E. Cory
J. J. Fisher
J. P. Georgi
E. S. Hughes
R. Powers
H. E. Taggart

We wish to thank all nominees for their willingness to serve and for permitting their names to be included on this ballot.

CONFERENCE NEWS

1970 March Convention figures are now available. Of the total 47,738 registration, 11,500 attended technical sessions at the hotel; 650 and 1,000 respectively were at the Highlight and Keynote evening sessions; the film theater at the Coliseum drew 5,000; the technical presentations at the Coliseum, 1,800.

As a result of the popularity of the last-mentioned practical how-to-do-it presentations, typically material of immediate use, the Coliseum technical program for 1971 will be beefed up another 200% -- to more than 25 sessions in addition to the film showings.

IEEE AND 3i COMPANY AGREE ON TECHNICAL INFORMATION RETRIEVAL SERVICES

The IEEE has reached an agreement with Information Interscience, Inc. (3i) of Phila. whereby 3i Company will market searching services using the IEEE REFLECTS data base. 3i Company, which already provides such services in the chemical, drug, and medical fields, will now be able to extend its information services into the areas of electrical and electronics engineering, computer science, and applied physics.

IEEE REFLECTS (Retrieval from the Literature in Electronics and Computer Sciences) is a monthly magnetic tape service which supplies users such as 3i Co. with computer readable bibliographic data, index terms, and abstracts of the important technical literature in IEEE fields of interest. This world-wide data base can then be used in computerized information systems to supply researchers, engineers, and managers with information pertinent to their work.

IEEE has been actively marketing its service only for the last six months and has several customers already who will be using the data based on in-house systems.

3i Company, however, is the first organization which will provide commercial services to outside organizations engaged in research in this field. 3i's customers will be able to choose services of the current awareness (SDI) or of the retrospective, cumulative varieties.

Further information may be obtained from T. Hogan, IEEE Information Services, 345 E. 47th St., N.Y., N.Y. 10017 or from A. Haines, 3i Company, 2101 Walnut Street Philadelphia, Pa. 19103.

AD COM OFFICERS RE-ELECTED FOR SECOND TERM

Dr. Heinz Schlicke of Allen Bradley and Jim Kristansky of ITTRE have been re-elected as chairman and vice chairman of the G-EMC administrative committee. They will serve their second term of one year as our Group leaders with the continued support of Len Thomas as secretary. It is a thankless task which demands time, energy, and financial support to effectively head our Group. Let's give them our support for continued success in '71.

TRANSACTIONS TO INSTITUTE VOLUNTARY PAGE CHARGE

To help the Group through its financial doldrums, the G-EMC will institute a voluntary page charge to the author's organization for papers appearing in the Transactions. The initial rate will be \$60 per page. Many authors and their companies (roughly 50 per cent) consider these charges a normal cost of doing business and will receive 100 reprints in return. These charges will probably be instituted with the February 1971 issue. This plan has successfully worked for other groups.

INSTITUTE VITALITY

Despite layoffs in industry, IEEE membership figures attest to value of our services to members. As of July 31, 1970, grand total paid-up membership was 160,466 compared to 154,937 same date one year ago. Total number of Group fees paid was 145,964 vs. 141,702.

THE IEEE STANDARDS COMMITTEE

The IEEE Standards Committee has the responsibility of encouraging and coordinating IEEE standards activity. It carries out its work principally through the production of IEEE standards publications and it also supports standards work carried on in other organizations by appointing IEEE representatives and by providing technical inputs. It is one of the very few committees that represents the IEEE; in matters concerned with standardization it develops the IEEE technical position. This responsibility of developing a position through achieving a consensus within the large and complex IEEE organization accounts in significant measure for the sometimes slow and cumbersome process of developing an IEEE Standard.

As a result of the membership attitude survey carried out in 1968, in which 39% of the members polled indicated that they believed that issuing standards was a principal way in which the IEEE served its members, the Technical Activities Board appointed a special committee under I.G. Easton. This committee was charged with recommending how the Standards Committee should act to carry out the total responsibility of the IEEE in standards.

With the appointment of five standing subcommittees to handle its many administrative tasks, the IEEE Standards Committee has cleared decks for action. An Administrative Subcommittee has been established to coordinate activities and develop policy proposals, as well as to handle many routine matters. The Procedures Subcommittee is responsible for maintaining the Standards Manual, a guide both for the members of the Standards Committee itself and for the literally hundreds of IEEE members who are engaged in one way or another in IEEE standardization activity. A new committee, the Resources Subcommittee, will advise on the allocation of IEEE resources to tasks that have to be performed. It will, for example, recommend which of the dozens of IEEE committees should be involved in individual standards projects. It will also advise on the dozens of appointments to American National Standards committees and other outside organizations.

A special committee has been formed to handle the presentation of proprietary IEEE Standards to the American National Standards Institute. Each such submission is a special case and must be handled individually. Finally, an International Liaison Subcommittee handles questions of coordination with the recommendations of international bodies, particularly the International Electrotechnical Commission (IEC) and the International Organization for Standardization (ISO). The committee also prepares material for submission to these international organizations through the appropriate national standardization organizations.

The technical work of generating IEEE Standards is for the most part carried on within the Groups. Most of the Groups that carry on extensive standardization work have a number of technical committees that work in their particular areas of specialization.

After the drafting committee and the responsible Group Technical Committee approve the submission of a draft, it is sent to the IEEE Standards Committee. In the case of a new document, the draft may be approved as a "Proposed Standard," and issued for trail-use standard will be published in the Transactions just as a full-status standard. However, after it has had a year of exposure to the public, the originating committee will be asked to take into account the comments received and the experience gained, and to prepare a new draft to be balloted for publication as a full-status

Standard

MEETINGS AND EVENTS

CALL FOR PAPERS

1971 IEEE JOINT NATIONAL CONFERENCE ON MAJOR SYSTEMS

The national meeting for the Systems, Man and Cybernetics Group of the Institute of Electrical and Electronics Engineers will be held October 25-29, 1971. This recently formed group comprises a merger of the Systems Science and Cybernetics Group and the Man-Machine Systems Group. This national conference has been called to highlight advances in the system sciences and technology and provide for the exchange of information, the cross-fertilization of ideas, and the stimulation of workers in the emerging field of major systems.

The meeting will comprise plenary sessions devoted to interdisciplinary advances in such major systems as Civil, Urban and Social Systems; Transportation and Logistics Systems; Ecological and Environmental Systems and Large Scale Data Systems. Parallel sessions devoted to specific interests will be held in such areas as bio-engineering and biological systems learning and adaptive systems, macrosystems theory and applications; robots, automation and cybernetics; modelling simulation and evaluation techniques; pattern recognition and artificial intelligence; decision and information processing; manual control and vehicle handling; displays and graphics; and recreational systems.

Is your work of interest to those responsible for major systems? If so, your work should be presented at this conference.

Instructions for the Author

Three copies of a one page, single spaced abstract must be submitted by February 1, 1971. A summary technical paper containing the problem statement, assumptions, technical approach, results and conclusions will be required by April 15, 1971. This summary shall not exceed a total of six pages including figures. Send abstracts and summary to:

Dr. Frank J. Mullin
Joint National Conference on
Major Systems
Post Office Box 188
Manhattan Beach, California 90266

SYMPOSIUM COMMITTEE TO EXHIBIT IN MARCH

A new policy has been adopted that permits future IEEE sponsored conferences to take advantage of promotion opportunities during the 1971 IEEE New York convention in March. Two types of promotions are available; Panel Displays and Exhibit Spaces at nominal cost. The 1971 International EMC Symposium Committee plans to exhibit since it offers the potential to obtain additional exhibitors and attendees for our July event. The exhibit will be managed by Frank Hamell of Burroughs Corp. who is publicity chairman for the committee members as well as members of the Ad Com. If you're there, stop by say hello, and pick up an early preliminary program.

SYMPOSIUM EXHIBITS

Since the initiation of exhibits at the 1963 G-EMC Symposium, the annual event has relied upon the sale of exhibit space as its main source of income. This year's international EMC symposium will be no different, having sent out invitations to over 200 prospective exhibitors. The 1971 symposium budget is rather conservative in comparison with recent years, for it is realized that the depressed economy may prevent some companies who otherwise normally would, from exhibiting. However, those who can't swing the \$400 exhibitor fee often support our event by contributing \$100 and becoming a co-sponsor. In more prosperous years, we have typically had ten or more co-sponsors from companies within and on the fringe of our technology. Some of the co-sponsors continue to participate year after year nearly as a gesture of good will and to support our professional society. We are grateful to both exhibitors and co-sponsors, for our Group needs the support of our industry to maintain the vitality of our annual event. We are confident that the support will continue as the economy bottoms-out and turns around.

Hospitality suites have historically provided an air of good will at symposiums. Some feel that they learn as much through BS sessions in hospitality suites as they do from formal technical sessions. The hospitality offered by our industry is a welcome part of the event although not directly recognized by the IEEE.

Occasionally, we have a company which conducts a hospitality suite as an exhibit, but does not support the event as an exhibitor or co-sponsor. Generally, it is a company that can well afford to participate, but can't turn down the opportunity of passing the financial burden of the event on to you. It is your registration fee, and the other companies that do their share which preserves the identity of our technical Group and helps make us financially solvent.

Let's hope that all our attendees share in every aspect of the event during the 1971 International EMC Symposium.

1971 SYMPOSIUM ON APPLICATIONS OF WALSH FUNCTIONS

13, 14, and 15 April 1971. Departmental Auditorium on Constitution Ave., between 12th and 14th Streets, N. W. (opposite Museum of History and Technology), Washington, D. C.

Supporting Organizations: Naval Research Laboratory; IEEE Electromagnetic Compatibility Group; University of Maryland (Mathematics and Electrical Engineering).

Steering Committee: H. Garlan, Federal Communications Commission; H. F. Harmuth, University of Maryland; Mr. J. D. Lee, ITT Electro-Physics Laboratories, Inc; Mr. L. W. Thomas, Thomas Engineering Company, Washington, D.C.; Dr. J. L. Walsh, Department of Mathematics, University of Maryland; Dr. L. B. Wetzels, Naval Research Laboratory; Mr. R. W. Zeek, Naval Research Laboratory.

Final Program and Registration Forms:

Those who received this ADVANCE INFORMATION by mail will also receive the final program and registration forms during February 1971. Additional programs and registration forms may be obtained from the members of the Publicity Committee or from H. Harmuth, Department of Electrical Engineering, University of Maryland, College Park, Maryland 20742.

STATE OF AFFAIRS

UNIONISM

In recent discussions with engineers I have found growing acceptance of the idea of unions for collective bargaining purposes. Traditionally, engineers have been opposed to collective bargaining and, for the most part, have desired to bargain individually for their salary and fringe benefits. The apparent acceptance of unionism today stems from the growing unemployment in our industry. Unionism appeals to the fears of the individual. As the number of engineers on lay-off lists increases, his fears increase. He looks to unionism and collective bargaining as a means of acquiring security.

I am afraid that this desire for security through unionism is a facade and that engineers will be hurried into an action that they may later regret. It is my belief that most engineers are not necessarily dissatisfied with their employers; they are dissatisfied with the Government customer and its methods of procuring services. They feel that the companies, by and large, treat them fairly. There may be some difficulties, i.e. in terms of their building equities, which I discussed in a recent note, but they realize companies must make a profit to sustain their activities. Feather-bedding or creating jobs for which there are no requirements will eventually mean the demise of all companies that are afflicted by such policies. This may well result in less jobs for engineers rather than more jobs.

What is needed, more than unions, are professional societies, as distinguished from technical institutes such as the IEEE. In many of these notes I have urged the IEEE to become more of a professional society to represent the engineer in the things important to him in non-technical as well as technical areas. It may be necessary, in order to do this effectively, to form a "super" professional society coordinating all engineering activities. This society would include not only electrical engineers, but mechanical, chemical and civil engineers as well. Certainly this size an organization could influence legislation more easily than just the IEEE alone. (Extracted from IEEE Group on Microwave Theory and Techniques Newsletter.)

WPA FOR SURPLUS ENGINEERS? YOUR DREAMING!

The following article (condensed) appeared in the November 22, 1970 issue of the Washington Post.

A new federal "WPA" for unemployed scientists and engineers - something like the Works Progress Administration of the 1930's -- is being urged by spokesmen for the country's chemists and physicists.

Unless unemployed experts are put to essential work like attacking pollution, it is argued, they will be lost to jobs like running highway franchises.

And the country, it is predicted, will face a severe shortage of technologists as early as 1975.

There are now an astonishing 45,000 scientists and engineers unemployed and even more underemployed, Dr. Wallace Brode, former president of the American Chemical Society, estimated at a special "scientific manpower crisis" news conference called by the American Institute of Physics last week.

At the same time, Brode maintained, "there are essential jobs that must be done" in health, education, environment, transportation "and many other areas".

Unless the country puts these specialists to work, he warned -- through direct employment, grants or contracts -- most will be "lost" as they desperately find other ways to earn bread.

Dr. H. William Koch, director of the American Institute of Physics, agreed. The institute represents the American Physical Society, American Astronomical Society, and five other groups.

"If you interpret such a WPA simply as making work, I don't support it", Koch said. "But there is a crying need for applying our scientists and engineers to our many problems. We just haven't figured out how to apply them.

One danger is that today's lack of demand for such experts will discourage educational programs, agreed Brode and other panelists, including Koch, Dr. Carl M. York of the President's Office of Science and Technology, and Dr. Arnold A. Strassenburg, the AIP's education and manpower director.

"Production of scientists takes a long time", he warned, and unless new demand is created, the country's impending scientist and engineer shortage could last "even beyond" the years 1985 to 2000.

The following (condensed) article appeared in the November 24, 1970, issue of the same newspaper.

SCIENTIFIC WPA PROPOSAL DASHED

A leading economist in the Nixon administration and student of the military industrial complex poured cold water yesterday on congressional proposals to put aerospace companies to work on environmental projects.

Unfortunately, there has been a great deal of naivete in attempting to sell the systems ability of the aerospace industry as a cure-all for public sector needs", said Murray L. Weidenbaum, assistant treasury secretary for economic policy.

Other witnesses before a Government Operations subcommittee said the pollution and environmental engineering business is already overcrowded and that some existing firms are on the point of closing down for lack of business.

Weidenbaum was gloomy about the adaptability of these firms to convert their resources to such programs. "The most basic criticisms relate to the naivete of aerospace industry personnel, which led them to think that they could blithely apply the so-called systems approach as readily to social, political and economic questions as they had to military problems," he said.

As for the growing army of unemployed aerospace engineers, Weidenbaum counseled against a "technological WPA", noting they are highly paid and suggesting that federal subsidies could better be spent on returning Vietnam war Veterans.

Thomas B. Robinson, president of the consulting Engineers Council of the United States, said members of his group find unemployed aerospace engineers seeking jobs in the environmental field are generally ill-prepared for the work although they demand salaries on the order of \$35,000 or 40,000.

As it is, Robinson said, consulting engineers already in the environmental field "are right now working at only 50 to 60 per cent of their capacity.

The following article appeared in the November 1970 issue of Microwaves.

NON-THERMAL RADIATION EFFECTS INVESTIGATED

Non-Thermal biological effects of microwave radiation were discussed at the Fifth International Symposium of the International Microwave Power Institute (IMPI) held in Scheveningen, the Netherlands, last month.

Among the speakers was Jack G. Christian of the U. S. Army Surgeon General Office, who noted that recent stricter Dept. of HEW Radiation regulations placed on microwave ovens -- $1\text{mW}/\text{cm}^2$ leakage prior to sale and $5\text{mW}/\text{cm}^2$ throughout lifetime -- represented an important departure from the "what you don't know won't hurt you" attitude held in the U.S.

Christian charged, "We in the United States have chosen to disregard Soviet research which has shown damage to tissues subjected to little or not heating by microwave radiation". He expressed hope that the new regulations mean a "recognition of the possibility that micro-thermal and non-thermal hazards may exist as was earlier suggested by Soviet and other European scientists".

Soviet reports that low level irradiation alters heart beat were disputed by Milton M. Zaret, M.D. director of research of the Zaret Foundation, Scarsdale, N.Y. Irradiation of a rabbit's heart-beat by heating and "not as a result of electrophysiological stimulation of either brain cells or peripheral neural sensors by microwaves", he said.

But just the opposite was reported by Allan H. Frey of Randomline, Inc. Willow Grove, Pa., who described experiments where frogs were irradiated by 1.2 GHz pulsed modulated energy at average power densities below $1\text{microwatt}/\text{cm}^2$. Heart rate decreased when rf pulses were directed at the frog during the occurrence of the ECG R wave. "Under certain exposure conditions", Frey said, "arrhythmia (disturbance of rhythm) and heart block could be induced".

INSTITUTE FOR TELECOMMUNICATION SCIENCES

Effective September 20, 1970, the Institute for Telecommunication Sciences was transferred from ESSA to become part of the new U.S. Department of Commerce Office of Telecommunications. This action was taken by the Secretary of Commerce in connection with additional new responsibilities in telecommunications assigned to the Secretary by Executive Order No. 11556, dated September 4, 1970. The new mailing address for the ITS is as follows:

U.S. Department of Commerce
Office of Telecommunications
INSTITUTE FOR TELECOMMUNICATION SCIENCES
Boulder, Colorado 80302

The mission of the ITS under the new organization includes continued service to other agencies of the Government and industry in electromagnetic wave transmission research and services. The ITS mission has been extended substantially on behalf of the Federal Government into telecommunication systems science and engineering, and standards of performance and practice.

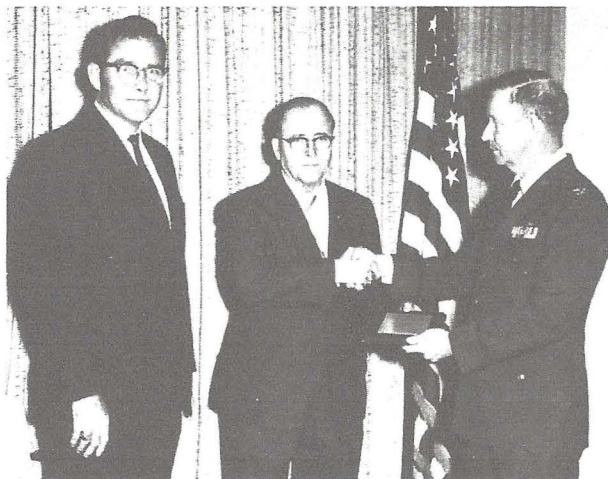
NEED ACCURATE RECORDING OF FAST TRANSIENTS? TRY DISKS

A four page article with the above title appeared in the November 9, 1970, issue of Electronics. The article was co-authored by R. Calfee, E. Hatley, and P. Kauffman of Data Disc., Inc. The first three paragraphs are excerpted as follows.

"Disadvantages plague the usual methods of recording transient waveshapes for later analysis. Magnetic tape encounters track-to-track time-base errors; greatly increased noise and distortion occur whenever high-frequency data are played back at speeds slower than their recorded rate. On the other hand, a camera-oscilloscope setup photographs only a single event unless complicated resetting techniques are used; what's more, results can be interpreted only by manual techniques.

Disk recording generally outclasses either approach. Long used in video and digital work, such recorders allow transients to be played back repetitively--a must for automated signal analysis. No longer are expensive high-speed analog to digital converters needed; low-speed a-d units can convert high-frequency data at rates up to 100 megabits per second without any need for slowing down the replay rate. Also, since the disks may rotate continuously, they are always ready to record random transients. And disks come out on top, too, with a high signal-to-noise ratio and minimal interchannel time base error.

Disk recording systems for instrumentation are particularly convenient in monitoring setups where spikes, short term radio frequency interference, or other forms of transient distortion must be located and recorded. Being multichannel instruments, they're also valuable in such areas as nuclear and physiological experimentation, where many transient events must be recorded simultaneously. And the repetitive playback feature makes them suitable for signal-analysis applications like telemetry, one-shot phenomenon studies, time-correlation work, and power-line transient recording, to name just a few."



THOMAS RECEIVES CERTIFICATE OF APPRECIATION

Mr. Charles S. Proter of Headquarters U.S. Air Force looks on as Colonel G. O. Nicholson, Director, Department of Defense Electromagnetic Compatibility Analysis Center, Annapolis, Maryland, presents Certificate of Appreciation to Mr. Leonard W. Thomas in recognition of his outstanding contributions to the progress of the Society of Automotive Engineers, National AE-4 Committee on Electromagnetic Compatibility. Mr. Thomas has enthusiastically and diligently supported this Committee for many years. His technical ability on electromagnetic compatibility has been of insurmountable benefit to their success.

Mr. Thomas and his wife Vida are residents of Washington, D. C.

BYLAWS

IEEE Group on Electromagnetic Compatibility (G-27)

1. These Bylaws provide detailed guidance for the supervision and management of the G-EMC affairs, in accordance with the Group Constitution. Amendments may be made by means of the procedures described in Article VIII, Section 2, of the Constitution.

Suitable Bylaws, and amendments thereto, may be adopted by a two-thirds vote of the Administrative Committee in meeting assembled, provided that notice of the proposed Bylaw, or amendment, has been sent in time to reach each member of the Administrative Committee at least a week prior to such meeting; or a Bylaw, or amendment, may be adopted by a two-thirds mail vote of the members of the Administrative Committee, provided a 30-day period is provided for such responses. In either event, the proposed Bylaw, or amendment, shall be published in the Group Transactions or Newsletter. No Bylaw, or amendment, shall take effect until it has been published and it has been mailed to the Technical Activities Secretary of the IEEE, and he has obtained approval of the General Manager.

2. Membership: There shall be only one grade of Group membership available to all IEEE members, based on the payment of the annual fee prescribed in Bylaw 8.1.

2.1 Honorary Life Members: Such membership, exempt of the payment of the annual fee, shall be based on the recommendation of the Group Awards Committee, the endorsement of the Group Administrative Committee, and the approval of the General Manager of IEEE.

2.2 Affiliates: Affiliation may be based on membership in other societies that have been recognized for affiliate purposes by specific action of the Administrative Activities Secretary of the IEEE. Further, affiliates may join in accordance with any other provision that may be incorporated in the IEEE rules and regulations.

A Group Affiliate may not serve in an elective office in the Group or in a Chapter, or vote for candidates for these offices, however, he may serve in any appointive office in the Group or Chapter of the Group. A Group Affiliate is entitled to receive notices of all meetings sent to Group members, to receive copies of publications of the Group, to attend and participate in any function of the Group by payment of IEEE member charges, and to receive any award bestowed upon him by the Group. A Group Affiliate may not receive any IEEE benefits that are derived through IEEE membership except as approved by the Executive Committee of the IEEE.

2.3 Students: An exception to the annual fee shall be made for students as prescribed by IEEE rules and regulations.

2.4 Ex Officio: The retiring ADCOM Chairman is the only ADCOM member with vote. (See para. 3.1 below). His responsibilities are to provide counsel to the newly-elected ADCOM Chairman with respect to those matters wherein his background and experience may be utilized for the benefit of the group. As other Ex Officio members are designated, such action shall be covered by future provisions in these laws.

2.4 Special Provisions: Any special members (life, or other honorary) and affiliates of the Group (date of adopting the new Bylaws), may continue even though their respective attainment of such special membership or affiliation was by a means other than as defined above.

3. Administrative Committee: Article V, Section of the Constitution provides that the Ad Com shall consist of 18 elected members-at-large plus the ex-

officio member. Article VII, Section 4, provides that a quorum shall be 50% of the members, without distinction between the members at large and the ex-officio members with vote, and that all members shall have an equal vote.

3.1 Each retiring Ad Com Chairman shall be for a period of one year, an ex-officio member with vote, if he is not elected a member-at-large (in the latter case, there shall be only one vote).

3.2 Unless otherwise provided, a majority vote of the members attending and Ad Com meeting shall be sufficient for the conduct of its business.

3.3 In order to ensure a continuously active Ad Com, elected Ad Com members who miss three consecutive meetings will be dropped from membership in the absence of extenuating circumstances. Vacancies thus or otherwise created shall be filled by the appointments for the unexpired terms by the Chairman with the consent of the Ad Com.

3.4 Roberts Rules of Order (Revised) shall govern conduct of Ad Com meetings on all matters not otherwise specified in these Bylaws or the Constitution

4. Nomination and Election of the Ad Com: The Nominating Committee shall be reconstituted by the Group Chairman on or before April 1st of each year. The Nominating Committee shall consist of a chairman and four or more members of the Group, not more than half of which may be members of the Ad Com.

4.1 The Nominating Committee shall immediately after 1 April mail notices for the solicitation of Nominations for membership on the administrative committee to Ad Com members, and to Chapter Chairmen. There shall also be published in the Newsletter prior to 15 April a call for nominations for Ad Com membership. Such nominating petitions shall be received by the Chairman of the Nominating Committee by 30 May.

4.2 On or before 10 June the Chairman of the Nominating Committee shall mail to IEEE Headquarters the slate of at least twelve nominees for election to the six offices to be filled on the Ad Com.

4.3 On or before 1 August IEEE Headquarters will mail ballots to Group members, with the request that the ballots be returned to IEEE Headquarters by 1 September.

4.4 IEEE Headquarters will have complete ballot count, and by 30 September will have notified the new Ad Com members and the Ad Com officers of the results of the election.

4.5 During the first Ad Com meeting following 30 September the new Ad Com members will be introduced to their duties in preparation for their assuming their duties on 1 January.

4.6 A nominating petition shall carry a minimum of 15 names of Group members, excluding students and affiliates, for the nominee to be placed on the slate.

4.7 The nominating committee may make nominations for the Ad Com in addition to those nominated by petition.

4.8 The Ad Com may make contingent elections to be effective in case an elected member fails to accept the office, or a disapproval is received from IEEE Headquarters.

4.9 In the preparation of the slate of nominees, consideration shall be given to both geographical representation and technical interests. In the event the 2/3 Ad Com carry-over members into the following year and the nominations received by petition do not include members and nominees from IEEE regions one through six, the nominating committee will contact Group members in these unrepresented regions (who are qualified for Ad Com membership, and who are willing to serve in such capacity if elected), and submit their names in the slate of nominees forwarded to IEEE Headquarters on or before 10 June.

4.10 Persons nominated and elected to the Ad Com should have adequate resources and company backing to be able to attend meetings and actively contribute

to the Ad Com, including committee activities correspondence, telephone calls, etc. The technical qualifications and the stature of the proposed nominee in the EMC community should also be taken into consideration.

5. Officers: Following the election of incoming Ad Com members, the Ad Com including the newly elected members and all current members, during its first meeting following 30 September, shall nominate and elect from among themselves a Chairman and Vice-Chairman, and from among the group membership, a Secretary and a Treasurer who will occupy those respective officer for the succeeding year.

5.1 The term of elected officers shall be one year, commencing on January 1st. The Chairman may be re-elected to a second term of one year. Whether he serves one or two years, he shall not again be eligible for election to the chairmanship until a lapse of three years. The Vice-Chairman may hold office for not more than two consecutive years. Eligibility is restored after a lapse of one year.

5.2 All officers shall continue to serve until their successors take office.

5.3 The Chairman shall supervise the affairs of the Group and shall speak for the Group on all matters not specifically delegated to others.

5.4 The Vice-Chairman shall fulfill the duties of the Chairman in his absence or incapacity. He shall fulfill such other functions as the Chairman of the Ad Com shall from time to time direct.

5.5 The Secretary shall be responsible for keeping the records of the Administrative Committee in the areas commonly ascribable to his functions. He shall prepare and distribute reports, notices, or such documents as may be required by the Chairman and the Ad Com.

5.6 The Treasurer shall be responsible for keeping the financial records of the Administrative Committee in the areas commonly ascribable to his functions. He shall prepare vouchers for withdrawal of Group funds for payment to officers or members of the Group; certify bills to be paid by IEEE Headquarters direct to suppliers; make a report at each Group business meeting covering the current financial status of the Group; prepare the Group budget, and perform such other duties as may be assigned to him by the Chairman of the Ad Com.

6. Sub-Groups: Sub-Groups are voluntary associations of a significant portion of the total Group membership and hence, differ from the standing committees, which are appointive.

6.1 Chapters: Chapters are sub-groups organized on a geographical basis. This subject is fully treated in the IEEE Bylaws and the Groups and Section Manuals.

6.2 Technical Sub-Groups: A technical sub-group may be organized to cover a specified portion of the field of interest of the Group. Each technical sub-group shall be governed by a Technical Committee. Sub-Groups may organize sessions at a Group Symposium or Technical Conference and may also organize separate specialized symposia. Sub-Groups may organize special issues of the Transactions or a special section in an issue. Any service for sub-group members, beyond these provided all Group members, must be paid for by the sub-group and the amount must be endorsed by the Ad Com and approved by the General Manager of the IEEE.

7. Publications: The Group shall sponsor such publications as are recommended by the Publications Committee and approved by the Ad Com. The Chairman, with the advice and consent of the Ad Com, shall appoint the editor for each publication.

7.1 Term of Office: An editor may serve indefinitely

ly, subject to mutual agreement with the Chairman. The compensation for an editor may be set by the Chairman, with the advice and consent of the Ad Com.

7.2 The editor of the Transactions shall be a member of the Publications Committee, the Papers Procurement Committee, and the Chairman of the Papers Review Committee.

7.3 The Newsletter Editor shall be a member of the Publications Committee, and the Chairman of the Information Retrieval Committee shall be an Associate Editor of the Newsletter.

7.4 Each Editor shall be responsible for implementing the publication program defined by the Publications Committee. In accordance with guidance of this committee and general IEEE rules & regulations, he shall designate associate editors, special guest editors, and manuscript reviewers.

7.5 Editorial expenses shall be subject to review and approval of the Publications Committee Chairman, the Ad Com Chairman and the Treasurer, the latter being explicitly responsible for adherence to the annual publications budget.

8.0 Group Funds: The Group may raise funds as specified in Article IV of the Constitution, and in the IEEE Bylaws and rules and regulations.

8.1 The annual Group fee shall be determined by action of the Administrative Committee.

a. Failure of a Group member to pay the annual Group fee will not render him liable to dismissal from the IEEE, but any Group member who fails to pay such fee before March 31 of each year will be automatically dropped from the Group membership.

8.2 IEEE Headquarters shall act as bursar for all Group funds except as specified hereunder. Billings and receipt of the annual fee shall be via the IEEE Membership and Fiscal Departments. All other fiscal affairs shall be handled through the office of the Technical Activities Secretary.

8.3 The general committee for a symposium or technical conference may, with the advice and consent of the Ad Com, authorize the symposium treasurer or fiscal officer to open an account to be used for the deposit and disbursement of funds related to the symposium. In each case, the Ad Com shall be advised of the name of the bank, the anticipated size of the account, the names of the account signatories, and of arrangements of insurance and for bonding. Symposia jointly sponsored with other technical societies are excluded where a charter of operations with those societies is approved by the Ad Com and the IEEE.

8.4 For other special circumstances, such as co-sponsorship of a symposium, the Ad Com shall make prudent arrangements to safeguard the Group funds that may be involved.

9.0 Group Business: The Chairman and officers shall conduct the Group affairs subject to the advice and consent of the Ad Com, except where authorization is specified.

9.1 No Ad Com meetings shall be held for the purpose of transacting business unless each member shall have been sent notice of the time and place of such meeting which will be mailed at least 30 days prior to the scheduled date of the meeting. If less than a quorum attend a duly called meeting, tentative actions may be taken which will become effective upon subsequent ratification, either at a meeting or by mail by a sufficient number of members as to constitute a majority. Minutes of such meetings shall be mailed by the Secretary to each Committee member, who shall register his disapproval of any actions taken at such meetings, within ten days after receiving said minutes, or he shall be deemed to have ratified.

9.2 An appropriate order of business at a regular meeting of the Ad Com may be:

- a. Roll Call
- b. Approval of minutes of previous meeting
- c. Reading of report on business transacted other than at meeting
- d. Report of communications
- e. Reports of Officers
- f. Reports of Committees
- g. Unfinished business
- h. New Business
- i. Elections, if not otherwise provided for
- j. Announcements
- k. Adjournment

9.3 Symposiums: The Group shall sponsor at least one symposium each year.

10.0 Technical Committees: A Technical Committee, which may organize a sub-group if desired, functions in a specific technical area with a scope to be approved by the Ad Com.

10.1 Appointment: Members and Chairmen of Technical Committees shall be appointed by the Chairman of the Ad Com.

10.2 Functions: Each Technical Committee shall promote activities in its field and shall provide the expert knowledge and assistance to:

a. Receive, generate, and review papers within its scope in cooperation with the Transactions Editor and the Technical Papers Committee.

b. Organize and operate sessions at meetings of IEEE at all levels and at meetings of other organizations with which Group EMC is desirous of cooperating, in accordance with the rules in effect at such meetings.

c. Arrange through appropriate editors for publishing pertinent papers in IEEE publications in cooperation with the cognizant Technical Program Committees.

d. Generate and develop appropriate standards in its field for processing by the IEEE Standards Committee, through the Group Standards Committee and otherwise in accordance with Institute policies.

10.3 Operations: The operation of each Technical Committee shall be in accordance with the Manual for Operation of Technical Committees, or other Administrative Committee rules.

10.4 Council: The Chairmen of all the Technical Committees shall constitute a Council to coordinate their activities. The Council shall organize itself. Not more than two members of the Council including its Chairman, shall be members of the Administrative Committee.

11.0 Standing Committees: Standing Committees shall be appointed by the Group Chairman, with the advice and consent of the Ad Com. It will be discretionary with the Group Chairman to appoint any part or all of any Standing Committee, or to appoint the Chairman only of a Committee, and request the latter to appoint additional members.

11.1 Advisory Committee: The functions of the Advisory Committee will be to:

a. Establish avenues of communication between past chairmen and the present chairman.

b. Act for the Ad Com in emergency situations wherein time is not available to call a special meeting of the Ad Com.

c. Assist the incumbent chairman and vice-chairman as necessary.

11.1.1. The Advisory Committee will be composed of: the present Ad Com chairman as Committee chairman; the two immediate past Ad Com chairmen, or vice-

chairmen in the unavailability of the past chairmen. the present vice-chairman; the secretary; and the treasurer.

11.2 Awards and Fellows Committee: The functions of the Awards and Fellows Committee will be to:

a. Recommend candidates for all awards and prizes in accordance with requirements, requests, and rules and regulations of IEEE Headquarters, both for general IEEE awards and Group EMC awards.

b. Recommend candidates for Fellow grade.

11.3 Chapters Activities Committees: The functions of the Chapters Activities Committees will be to:

a. Create and promote interest in the Sections for the formation of Chapters of Group EMC.

b. These Committees (East Coast, and West Coast) are charged with carrying out this organization of Chapters in accordance with the procedures established by IEEE Headquarters, as set forth in the IEEE Technical Activities Manual.

11.4 Constitution and Bylaws Committee: The functions of the Constitution and Bylaws Committee will be to:

a. Maintain records of the Constitution and Bylaws

b. Ascertain that the Constitution and Bylaws are not in conflict with any requirements or rules of IEEE Headquarters.

c. Make recommended changes in the Constitution or Bylaws as necessary to conform to the development of the Group on Electromagnetic Compatibility, its Administrative Committee, and its membership and mode of operation.

11.5 Education Committee: The functions of the Education Committee will be to:

a. Ascertain the needs for education of the overall Group membership in the areas covered by the Group's field of interest as set forth in Article II, Section I of the Group Constitution.

b. Promote such programs, in cooperation with other committees of the EMC Group, as appropriate, to fulfill these needs.

11.6 Information Retrieval Committee: The functions of the Information Retrieval Committee will be to:

a. Plan methods of improving the availability of EMC information.

b. Establish the necessary indexing, storage and retrieval procedures.

c. Publish EMC abstracts.

d. Establish liaison with IEEE Groups, and with other bodies engaged in information planning and handling.

e. Make recommendations in this area to the Ad Com.

11.7 International Affairs Committee: The functions of the International Affairs Committee will be to:

a. Promote participation in Group meetings, symposia and conferences by members and affiliates residing in foreign countries.

b. Cooperate with the Meetings Committee, the Technical Papers Committee and chairmen of EMC Symposia and Conferences, and with other committees concerned in arranging for the participation of foreign nationals in Group functions. This may include, but not be limited to the presentation of technical papers at formal meetings or scheduled events, and the publication of papers of foreign authors in the Group Transactions.

11.7.1 Objectives of the International Affairs Committee include fostering the exchange of EMC ideas, doctrines, etc., on an international basis with the view toward the development of EMC interests in specific areas that would lead to the establishment of EMC Chapters, and eventually holding EMC conferences, symposiums, etc.

11.8 Long Range Planning Committee: The functions of the Long Range Planning Committee are to develop answers to two basic questions:

a. What will be the future of EMC? (environmental forecasting, challenges identified.)

b. What shall we do to have a future as a Group? (Objectives, alternate strategies, plans.)

11.9 Meetings Committee: The functions of the Meetings Committee will be to:

a. Promote and manage meetings of the Group.

b. Cooperate with the Technical Papers Committee and with other committees concerned with arranging programs at Group sponsored and jointly sponsored meetings, and with the IEEE Convention Program Committee in arranging for participation of the Group at the International Convention.

c. Handle all necessary arrangements for Group Technical Sessions at the WESCON or other IEEE sponsored meetings.

11.9.1 The Chairman of the Meetings Committee may in turn appoint Committee Members to head any of the various meetings for which the committee is responsible.

11.10 Membership Committee: The functions of the Membership Committee will be to:

a. Supply information to the members and Sections, on Group EMC and advantages of membership in it.

b. Provide promotional material to the members and sections, and plan membership drives.

c. Act as liaison with the Section Chapter officers and members for the other staff committees.

d. Make recommendations to the Administrative Committee whether to accept a new society as the basis for allowing affiliate membership.

11.11 Newsletter Committee: The functions of the Newsletter Committee will be to:

a. Solicit and promote the collection of information pertinent to the Group and its activities, and publish a Newsletter on a regular schedule.

11.12 Nominating Committee: Duties of the Nominating Committee are detailed in Section 4 of the Bylaws.

11.13 Publication Committee: The functions of the Publications Committee will be to:

a. Solicit or otherwise obtain sufficient quantity of suitable material and technical articles for publication of the Transactions on a regular schedule.

b. Supervise and otherwise arrange for the publication of the Transactions on this basis.

c. Supervise other Group publications.

11.14 Standards Committee: The function of the Standards Committee will be to recommend standards of engineering practices to be followed in electrical and electronics and allied industries in the field of Electromagnetic Compatibility.

11.15 Student Activities Committee: The functions of the Student Activities Committee will be to:

a. Promote student interest and participation in G-EMC activities.

b. Promote a Student understanding of the role of the EMC engineer.

c. Provide Guidance in formulating the academic foundation best suited to a profession in EMC through cooperation of other committees of G-EMC.

d. Promote an interplay of the functions of the G-EMC Student Activities Committee with those of all student committees within other IEEE Groups, Sections, and the Educational Activities Board.

e. Define and pursue active programs which will accomplish the above objectives.

11.16 Symposium Committee: The functions of the Symposium Committee will be to:

a. Develop EMC Symposium Policy.

b. Provide guidance and act as advisors to Annual EMC Symposiums, colloquia, and regional and local EMC Symposiums.

11.16.1 The Symposium Committee will be composed of the chairmen of the three previous Annual EMC Symposiums with the immediate past Symposium chairman as the committee chairman.

11.17 Technical Advisory Committee: The functions of the Technical Advisory Committee will be to:

a. Study the needs of the Group regarding such matters as fall within the field of interest, including, but not limited to, terminology, definitions, specifications and standards, measurement procedures, guidelines and workshops.

b. Recommend to the Administrative Committee those areas where further effort is necessary. In making these recommendations, work of outside groups (ETA, AIA, SAE, AIS, USASI, CISPR, DOD, etc) in these areas shall be taken into consideration. In so far as is possible, recommendations of this committee shall be specific.

11.18 Technical Papers Committee: The functions of the Technical Papers Committee will be to:

a. Study the needs of members of the Group, and of procuring papers, lectures, tables, books, tutorial papers, and other material within the field of interest of the Group.

b. Cooperate with the Meetings Committee for presenting said material, and with the IEEE Papers Procurement Committee in the IEEE Papers Procurement Program.

12.0 Special or ad hoc Committees: Special or ad hoc committees may be created by the Ad Com. For each such case, the Ad Com shall specify the number of members the committee shall have and how the members are to be selected, and the terms of the members if other than for the life of the committee. Special or ad hoc committees shall be automatically dissolved after two years unless the Ad Com sets an expiration date.

NOTE: This draft, dated January 1, 1970, is in accordance with the vote of the Administrative Committee on December 8, 1969.

NEWLY ELECTED FELLOWS

The IEEE news release giving the names and citations for the IEEE members elected to the Grade of Fellow as of January 1, 1970, has just recently been circulated. Four of the 123 newly elected fellows are members of the G-EMC. They are as follows:

William E. Cory
Southwest Research Institute

"For contributions in the fields of electromagnetic compatibility and systems analysis."

Louis C. Aicher, Jr.
Allis Chalmers Mfg.
Elect. T&D Division

"For contributions in power transformer design relative to impulse testing techniques and analysis corona measurement, and fault detection."

Alvin L. Hiebert
The Rand Corporation

"For research and leadership on electromagnetic compatibility analysis techniques and spectrum engineering."

Carl L. Frederic
Southwest Research Institute

"For leadership and contributions in the field of electromagnetic technology and in the development of standards."

CHAPTER CHATTER

by M. Berman

Cheer up! Things could get worse! Oh, yeah?

More bad news from down south. The New Orleans Chapter, which recently merged with the Antennas and Propagation Chapter, has quietly folded its tents. The letter that I received from James Cronvich was signed "Former Chapter Chairman." It must have been a painful experience to write a letter like that.

Your columnist has new employment: System Design Engineer at GE's Knolls Atomic Power Laboratory. At the moment it's pretty far removed from EMC, but it's work. That is something to be thankful for this time of the century.

ATLANTA

It used to be that the Atlanta stereotype expression was Peachtree Street, but I'm told that's old hat now. The new hats in the Chapter are:

Jim Toler, Ga. Tech.	Chairman
Hugh Denny, Ga. Tech.	Vice-Chairman
M. A. Thigpen, Lockheed Marietta	Secretary-Treasurer

A salute to the new officers. The Chapter, under its new leadership, wasted no time in having a meeting either.

Date:	September 1, 1970
Place:	Ansley Mall Shopping Center
Speaker:	Panel of Members
Topic:	An explanation of EMC members' wives.
Attendance:	18

There was some mention that this attendance figure was rather low. Lately, a figure of 15 to 20 at a meeting has become quite respectable, and nothing really to complain about.

Four more meetings are planned in some detail for the balance of the year.

Date:	December 14, 1970 (Joint meeting with Section)
Place:	Southern Railway
Speaker:	Mr. Jack Jones
Affiliation:	Southern Railway
Topic:	Electronics in a Modern Railway System

Date:	January 25, 1971 (Joint Meeting with Comm Tech Group)
Place:	Ga. Tech Student Center
Topic:	Enrichment of Urban Living Through Electronics

Date:	March 9, 1971 (Joint meeting with MTT/AP)
Place:	Ga. Tech Student Center

Date:	May 11, 1971
Place:	The Steaks Restaurant
Topic:	Introduction of new Officers, and Technical Meeting

My spies tell me that a paper is being prepared by one of the members, but that's all he said.

It's good to hear from a Chapter that has enthusiasm and drive. Let's hope that's a good sign from the future.

BOSTON

For a while Boston was a silent partner. But now I have a stack of papers with all kinds of good news. First, a change in government:

Chairman:	Robert J. Berkovits, TRW Systems
Vice-Chairman:	Ted Twarog, Jr., RCA
Secretary:	James D. Gordon, Raytheon

Joint meetings are the rage all around. Boston has had two so far.

Date:	September 30, 1970 (Joint with A-ES)
Speaker:	A. W. DiMarzio of Fairchild/Electro-Metrics
Topic:	Concepts in Computer Control for Frequency Surveillance
Attendance:	20 (approximately)

Date:	October 19, 1970 (Joint with A-ES)
Speaker:	S. E. Periman of Sylvania
Topic:	The Role of Modeling in Susceptibility Studies
Attendance:	21

One more meeting is firm for 1970:

Date:	November 18, 1970
Speaker:	J. R. Gerry of Raytheon
Topic:	An Approach to the Prediction of Component Generated Noise

I guess Route 128 is still alive and well.

CHICAGO

It seems strange, but the Windy City never seems to blow hard with Chapter News. We do have the new officers:

Chairman:	Robert A. Peterson
Vice-Chairman:	Marvin J. Frazier
Secretary:	Steve Smanora, Jr.

I hope I read that last name right. If I didn't write me a nasty letter and throw in some good, juicy Chapter News, as well.

NEW JERSEY COAST

A little bird flew by and said the Electronics business down Jersey way has been looking rather lean, lately. Let's hope that no news is good news for all we have is the new roster of officers (it appears they elect for a two-year term):

Maxwell A. Brown, Chairman
Charles D. Jolly, Vice-Chairman
Bruce C. Miller, Secretary-Treasurer

Are you there, New Jersey Coast?

LOS ANGELES

The Southern California EMC Chapter (almost large enough to be their own group) reports on their final meetings for the 1969-70 season. As a matter of interest, attendance at the February 19, meeting where the program was a presentation and tour of the MARINER facilities, was 33 members and 19 guests. Three more meetings finished the year.

You know, when you are surrounded by the glamour industries of the age, it helps make the meeting planning easier. When you are a tiny group (say, like Mohawk Valley) you have to try harder to get and keep interest. I don't doubt that the Los Angeles Chapter works hard at their programming, but you must admit one of their problems is not what to see or where to go. Jealous? You bet I am! I'm green -- and tickled pink that we are so fortunate to have the Los Angeles Chapter as a going concern.

Kudos to the new officers, too:

Chairman: Tom Walter, TRW
 Vice-Chairman: Bob Cowdell, Consultant
 Treasurer: John Merrell, Glenair
 Secretary: Larry Zynda, Stoddart/Tamar

MOHAWK VALLEY

Funny this could be the next Chapter on the list. I hope no one was offended by my invidious comparisons just above.

Here are the new officers:

Chairman: Major Marion T. Ruple, USAF, RADC
 Vice-Chairman: Jacob Scherer, RADC
 Secretary-Treasurer: Hollis Hewitt, RADC
 Program Secretary: Thomas Baldwin, RADC

Last Spring four papers were under preparation for later presentation. The word came in too late for the previous column, but here they are now:

1. "Application of Time Sharing Techniques to Air Traffic Control Interference Problem," by John Spina and Richard Rabe, of RADC, Dr. Jose Perini of Syracuse University, and Major Lawrence Greve of AFCS; EMC Symposium, Anaheim.
2. "Mil-STD-462 Measurements in the Anechoic Room," by Douglas Clark of RADC; EMC Symposium, Anaheim.
3. "Empirical Propagation Path Loss Model Development" by Frank E. Ferrante of Atlantic Research Corporation, John H. Edwards of RADC and Dr. Jose Perini of Syracuse University; NAS, Washington, D. C.
4. "Near Field of Arrays," Thomas E. Baldwin of Atlantic Research Corporation, Dr. Arlon T. Adams of Syracuse University, and John H. Edwards of RADC; NAS, Washington, D.C.

That finishes Mohawk's 1969-70 year. Now for the next season's activities:

Seven (count 'em!) more meetings are planned for 1970-71, including two social evenings. Fantastic.

We're not done yet. A two or three-day EMC Workshop is planned for sometime during the winter in Rome, N.Y. Government and industry participation is expected. And another paper (or papers) are in preparation.

Talk about trying harder! This is an absolutely fantastic Chapter, considering their tiny size and isolated location. Hats off to Mohawk Valley!

PHILADELPHIA

My old stomping grounds is sort of floundering these days. From my contacts, there is little

interest on the part of the employers in EMC. That is a shame, for there are some dedicated and talented people there, too. The Chapter seemed to start out the year well, with a meeting on an interesting subject:

Date: October 6, 1970
 Place: Americal Electronics Laboratories
 Speaker: Mr. Karl Wheeler of AEL
 Topic: Electromagnetic Environment Surveillance System
 Attendance: 16

The problem arose in attendance. There were only 6 Chapter members there (out of a total possible of 65), and three of those who did attend were the Chapter Officers. That's not good, especially after the local Seminar the Chapter held in May.

The new Officers are:

Chairman: Edgar C. Huff, AEL
 Vice-Chairman: William F. Boral, GE
 Secretary: E. T. Raylman, GE

Philadelphia is still on tap for the 1971 Symposium, in July. There's a call out for papers now. The Symposium symbol is a key. Will the Symposium Committee headed by Bob Goldblum be able to "turn on" the members?

CENTRAL TEXAS

Mike Brennan, the Secretary of the San Antonio-based Chapter, sends along the report of the Chapter-sponsored Regional EMC Symposium, October 6-8, 1970. 154 attended five 3-hour sessions, and a sixth session put it all together with a panel discussion of Measurements, MIL specs, Side Effects, and Systems testing. Panel members were Len Thomas, Don White, Rex Daniels, Jim Toler, and John Moe. That's a pretty high powered group. They had an evening social blast on October 6 as well, and buffets and luncheons. In fact, the Chapter is considering submitting a bid to hold the Annual Symposium in San Antonio in the future. Good show!

Oh yes--they have held two meetings this season, too.

Date: September 3, 1970
 Speaker: Jack Davis, Engineering V-P of APC
 Topic: Fabrication and Qualification Testing of the APC-ILS Marker Beacon.
 Attendance: 10

Date: October 8, 1970 (joint with Central Texas Section)
 Speaker: Louis Raeke, Jr., System Analyst Communications Office of the Governor of Texas
 Topic: The State of Texas in Telecommunications
 Attendance: 140

Busy, busy. It's wonderful to hear it.

WASHINGTON D.C.

On every questionnaire that I send to the Chapter Chairmen (or Secretaries) to get information, I ask for criticisms, and suggestions. Usually that part of the form comes back empty, but Bill Morton, the D.C.

Chairman, took the time to write quite a bit, and I think it is appropriate to include his comments here. The Chapter plans to continue its luncheon meetings, he says, but they are looking for some location out along the Beltway (I-495). I will quote Bill's second comment verbatim:

"Chairman Bill Morton wishes to express appreciation for the extra effort by Carl Allen and Bill Green in keeping Chapter activities moving. Bill has a heavy job travel schedule, and is Chairman of the IEEE Vehicular Technology Conference, Washington D. C., December 2-4, both activities competing with EMC Chapter for his spare time."

As a sample of these moving Chapter activities, look at the meeting schedule:

Date: September 17, 1970
 Speaker: James J. Grenca, Manager, Special Projects, Atlantic Research Corp.
 Topic: Economics of Automated Measurement
 Attendance: 25 (approx.)

Bill Green, the Secretary, writes that this is quite a controversial field, and cites an example where an installation of very complex computers was performing functions simple enough for desk calculators.

Date: November 19, 1970
 Speaker: Don Cook, EMC and Safety Group Leader, RCA Moorestown
 Topic: EMC/EMI Programs for the AEGIS System

Meetings are also scheduled for January 21, March 18, and May 20, 1971.

So goes another column. A sense of elation set in when I read the new from Washington and Mohawk Valley and Los Angeles. It's almost enough to counter the bad news from Philadelphia, and New Orleans. Almost--but not enough. We have a potential Hudson River or Lake Erie in our spectrum, and the efforts to clean up the spectrum pollution are just about as feeble as are the efforts to clean up the waters. Could it be we are wasting our time on esoteric formulas for computing pick-up from shielded line to open wire, while vital military communications are listening to taxi broadcasts? Is our basic emphasis and direction wrong?

But that's another editorial. Merry Christmas and Happy New Year, and there should be only good fortune for EMC in 1971.

PROGRESS & PRODUCTS

SURPLUS COMPONENTS

"August J. Link has started a part time business selling surplus filters and other EMC related electronic components and equipment. For his latest price list write to him at 1355 South Hope Street, Los Angeles, California 90015".

ELECTROMAGNETICS ACQUIRES STODDART FILTERS

LectroMagnetics, Inc. (LMI), Los Angeles, California, has acquired the EMC/RFI filter product line and certain other assets of Stoddart Components of Gardena, California.

"This acquisition is one of several planned moves to broaden the base of operations of LMI within the highly specialized industry of electromagnetic compatibility and radio frequency interference control", Fred J. Nichols, President of LMI, said in making the announcement.

Mr. Nichols said that the addition of EMC/RFI filters is a natural by-product of the shielded rooms which have been LMI's principal activity. LMI is known for its all-welded and clamp-together shielded rooms and related RF shielded products. In addition to the relocation to LMI's Los Angeles facilities, the filter operations have been more than doubled and LMI has added a complete application, engineering and prototype facility. At the same time, Mr. Nichols announced a reorganization of LMI to accommodate the new filter capability by the formation of two divisions, the Filter Division and the LectroShield Division. Mr. Lawrence J. Zynda, formerly manager of Stoddart Components, was appointed Manager of the new Filter Division and was elected Vice President and Director of LMI. Mr. James C. Senn was named Manager of the LectroShield Division. Mr. Senn was one of the original founders of LMI and has been a Vice President and Director since incorporation.

TECKNIT ACQUIRES RAYSEEL ASSETS

In a joint announcement, Stewart Nellis, President of Technical Wire Products, Inc. and Arnold Zais, President of Rayproof Corporation, disclosed that Tecknit had acquired substantially all of the assets of Rayseel Corporation, Lawrenceville, Illinois, a subsidiary of Rayproof, which manufactures EMI/RFI and magnetic shielding products.

Tecknit's plans call for complete transfer of the Rayproof operations to its plants in Santa Barbara, California and Cranford, New Jersey by mid-December, 1970.

This new acquisition follows on the heels of Tecknit's September 14, 1970 purchase of assets of Primec Corporation, Venice, California and now relocated in Santa Barbara, California.

"Tecknit now offers the most complete facilities in the industry for manufacture of EMI/RFI and magnetic shielding products, as well as conductive elastomers and resin systems" reported Edward Steel, Tecknit's Sales Manager.

TECKNIT ACQUIRES PRIMEC ASSETS

Stewart Nellis, President of Technical Wire Products, Inc., announced on Sept. 23, 1970, that the corporation has acquired substantially all of the assets of Primec Corporation of Venice, California.

Tecknit will continue to manufacture magnetic shielding products and materials formerly produced by Primec, thus expanding its already broad lines of EMI/RFI shielding devices and electrically conductive materials. The new operations will be integrated into Tecknit's manufacturing plants in Cranford, New Jersey, and Santa Barbara, California, by November 1, 1970. In the interim manufacturing will continue at the Venice, California location under the direction of E. C. "Woody" Riggs, Tecknit's Western Operations Manager.

MEMBERSHIP AWARD

SIGNED UP BY:

NAME _____

ADDRESS _____

CITY, STATE, ZIP _____

NO.	NAME	DATE SIGNED
1		
2		
3		
4		
5		

List Members who have enrolled (told you they are member). Send me the Awards I have indicated below.

QUANTITY	DESCRIPTION OF AWARD

Only good for members enrolled between January 1971 and December 1971.

MEMBERSHIP APPLICATION

IEEE ELECTROMAGNETIC COMPATIBILITY GROUP

Send to: IEEE Headquarters 345 East 47th Street, New York, N. Y. 10017

NAME _____ IEEE MEMBERSHIP NO. _____

MAILING ADDRESS _____

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☐ I am a _____ member of IEEE and hereby apply for membership in
(Grade)

G-EMC.

☐ My fee* is enclosed.

☐ I am interested in joining IEEE** and the G-EMC. Please send information.

* Annual Fee: \$5.00 for IEEE members of all grades except Student. Student fee is \$2.00.

** Annual Fee for IEEE except student is \$25.00 plus \$5.00 for enrolling, and \$25.00 thereafter. Student fee is \$5.00. To join the group, the additional fee described above must be paid.