IEEE SOCIETY ON MICROWAVE THEORY AND TECHNIQUES

NEWSLETTER

EDITOR: Nat Pelner

Hughes Aircraft Co., Missile Engineering Labs, Canoga Park, California 91304

Number 87, Fall 1977

'77 AWARDS BANQUET

The Annual Awards Banquet was held on June 22 in the Sheraton Inn in San Diego, CA. The banquet was a sellout due in large part to the featured speaker, Dr. Harold B. Puthoff of S.R.I. Dr. Puthoff described the E.S.P. experiments at present being performed at S.R.I. These are probably the first such SCIENTIFIC experiments which show some basis of fact, particularly from an information theory and biological frequency standpoint. The question and answer period lasted far into the evening.

Highlighting the evening were the awards presentation. The Microwave Prize was presented to R. A. Pucel, D. Masse', and R. Bera. J. R. Whinnery received the Microwave Career Award, and M. G. Walker received the Microwave Application Award.

S. B. Cohn and A. A. Oliner were made Honorary Life Members of ADCOM.

Distinguised Service Awards were given to R. W. Beatty, S. Okwit, A. Clavin, G. Haddad and S. W. Rosenthal.

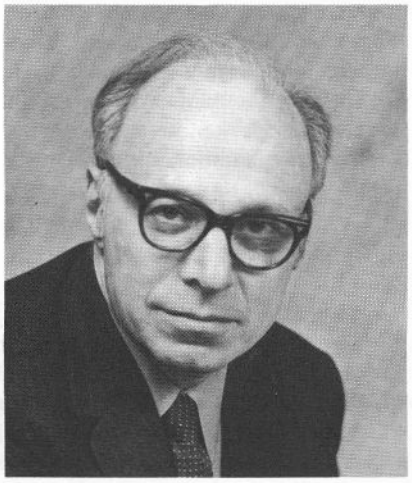
ADCOM Certificates of Appreciation were awarded to D. B. Anderson and A. W. Guy.

M. Caulton and B. deMarinis (not at banquet) were awarded Certificates of Appreciation for their work as Program Chairman and Steering Committee Chairman respectively for the 1976 International Microwave Symposium.

Dave Rubin, Steering Committee Chairman served as M.C. A grand time was had by all.

Hal Puthoff making E.S.P. believers out of us!

IN MEMORIUM



Dr. Henry Jasik

Dr. Henry Jasik, a world renowned antenna design expert and editor of "The Antenna Engineering Handbook" recognized as one of the most authoritative books dealing with antennas and a Vice President of Cutler-Hammer's AIL Division, died on July 11, 1977 following complications of recent surgery.

An internationally known authority in the antenna engineering field, Dr. Jasik was highly respected for his breadth of information, keen insight, and depth of knowledge both fundamental and applicational. In the course of his distinguished career, he was editor of the prestigious Antenna Engineering Handbook, published by McGraw-Hill in 1961; President of Jasik Laboratories, Westbury, Long Island, a consulting antenna engineering organization which he founded; and Vice President of AIL, a division of Cutler-Hammer. In early work, he designed the FM broadcast antenna which operated for many years at the top of the Chrysler Building. He received the degrees of Master and Doctor in Electrical Engineering in 1951 and 1953, respectively, from the Polytechnic Institute of Brooklyn, and he was elected a Fellow of the Institue of Electrical and Electronics Engineers in 1958 for his contributions to "the theory and design of VHF and microwave antennas." Although he was widely known primarily for his practical designs, he also contributed to the basic theory of such antennas as the Luneberg lens antenna.

PRESIDENT'S MESSAGE

by Larry Whicker

The 1977 International Microwave Symposium in San Diego was a huge success. Several past records were broken. Some features of the meeting include:

1. The largest attendance at any recent MTT Symposium.
2. A complete, well-received, and well-attended technical sessions.
3. Four (4) Workshops with outstanding attendance and participation.
4. Our first professionally managed exhibits with sixty-four (64) booths and an involvement of six-hundred (600) people in addition to those attending the Symposium.
5. A sell-out crowd for the banquet with a provocative and controversial speaker.
6. Outstanding hotel facilities, with good weather.

Dave Rubin and his Steering Committee are to be congratulated on the complete and thorough job they did in organizing and running the Symposium. Howard Ellowitz, Exhibits Manager, and his Horizon House organization are to be congratulated on doing a highly professional job in organizing and managing the Exhibit portion of the Symposium. As will be outlined in Hal Sobol's column, the MTT-S ADCOM has agreed to a joing Exhibit with the CPEM and IMPI at next year's Symposium in Ottawa. This should provide for continued growth of the Symposium and Exhibits.

At the Symposium Banquet, I had the great honor of presenting several awards in addition to those normally awarded. The Special Awards include:

1. The 1977 Microwave Applications Award to Mr. M. G. Walker for his work on Solid State Device.
2. The 1977 Microwave Career Award to Dr. John R. Whinnery for an outstanding career as an educator, inventor and as a co-author of "Fields and Waves in Modern Radio."
3. The announcement of the names of two new Honorary Life Members of MTT-S ADCOM

   Dr. S. B. Cohn
   Professor A. A. Oliner

In addition to thier pioneering work in microwaves, these gentlemen have each served five terms on MTT-ADCOM and have made outstanding contributions to the growth of the MTT and the IEEE.

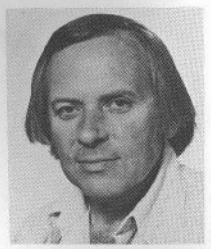
4. Additional ADCOM Distinguished Service Awards were presented to:

   Dr. Robert W. Beatty
   Mr. Alvin Clavin
   Dr. George Haddad
   Professional Saul Rosenthal
   Mr. Seymour Okwit

After the MTT Symposium, I am left with the feeling that the microwave field, while mature in some areas, is growing in some areas while challenging areas are emerging.

EDITOR'S NOTES

by Nat Pelner



As of the next issue of the NEWSLETTER, or the one following, John Kuno will take over as editor. Knowing John, he will do a masterful job. I enjoyed my three year stint as editor, and I regret having to turn the job over to him. I look forward to performing a new task for MTTS.

For all of us "has beens" this is time for reflection. This last symposium was a throughly enjoyable experience as well as an excellent learning process, but four concurrent sessions – that's wild. In a number of instances it was difficult to decide which one to attend. I know I missed a large number of papers that were of interest to me. I suggest we go in the direction of reducing not increasing the number of concurrent sessions.

The banquet speaker, Dr. H. Puthoff of S.R.I. discussed the experiments in E.S.P. that have been, and are now being, performed there. Much to my surprise, he may well make a believer out of me. The question and answer period was fascinating and long. I left at 11:00 P.M., and it was still going strong.

This was the first MTT symposium where the exhibits were professionally managed. It was well done, and done in good taste. Horizon House should be complimented.

In my last editorial I complained that over these three years I have received only two letters for publication in the "Letters to the Editor" column. In this issue alone we are publishing three – all full of "fire and brimstone" about our last book review. They make very interesting reading.

Without trying very hard, I could fill several pages listing the innovations that our ADCOM has made; all vectored toward improving the MTT Society and making it more responsive to the membership. The ADCOM presidents had the ability to make a cohesive, well oiled group out of volunteers. This was not an easy task.

ADCOM has worked hard and long in our behalf, and they deserve our appreciation.

UPDATE YOUR DIRECTORY

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ADCOM HIGHLIGHTS

by Hal Sobol

MINUTES
ADCOM MEETING 6-20-77
SAN DIEGO
by H. Sobol

The second AdCom meeting of the year was held in San Diego, one day before the official start of the Symposium. The meeting was opened by President Whicker at 9:00 A.M.

PRESIDENT'S REMARKS – L.R. WHICKER

Larry reported on the outcome of two AdCom letter votes. AdCom voted to support the formation of a Society to replace the Quantum Electronics Council. AdCom had previously voted twice to reject the formation of this society, however, after an indepth study and a presentation of material by the committee appointed at the last meeting, AdCom decided to reverse its earlier votes. This new society will highlight IEEE's activities in such fields as fiberoptics and quantum electronics. AdCom also voted to upport joint exhibits with CPEM during the 1978 MTT conference in Ottawa.

The 1978 technology issue of Spectrum will be published in January and the editors asked for inputs from MTT by September to support this issue. The technical committees will highlight work in the significant areas.

A 25-year MTT Index was suggested and will be investigated.

DIVISION IV DIRECTOR'S REPORT – DICK DAMON

Dick has attended twenty-five meetings, including USAB, AdCom, TAB, and Audit Committee since his election last year. He reported on several meetings that he attended recently. IEEE approved a recommendation that members become registered engineers. TAB approved the PHP/Manufacturing Technology Societies' merger. Dick also presented some thoughts that he would like to see IEEE consider. These included the sponsorship of two Congressional fellows to work with Congress on such issues as funding of electron device research. This is particularly important since a Senate Committee recently voted to reduce funding for this area.

Dick also discussed the possibility of a Division IV magazine that would inlcude inputs from all Societies within the Division. The magazine would be similar to publications of the Communication and Computer Societies and could be a replacement for current newsletters.

MTT STANDARDS COORDINATING COMMITTEE – STEVE ADAM

Steve reported on the MIcrowave Magnetics, the Waveguide Measurements, and the Waveguide Standards Committees. A method for measurement of spin-wave line width of ferri-magnetic oxides was accepted at the 1977 meeting of the IEC in Budapest, Hungary. A draft of a new waveguide measúrement standard will be completed in several months. The standard will include measurements of power, frequency, signal characterization, noise, time domain reflectometry, and network analysis. A revised standard on definitions of terms for waveguide components has been prepared and is ready for re-submission to the IEEE Standards Board.

AWARDS – PETE RODRIGUE

Pete reported that twenty-nine fellow nominations were submitted by MTT. Three major medals and field awards were also submitted. At this year's MTT meetings, service awards for completion of service to AdCom were given for the first time. Nominations for the yearly MTT awards were solicited.

MEETINGS AND SYMPOSIA – KEN BUTTON

Jerry Rubin, chairman of the 1977 symposium, reported a large increase in advance registration over the previous year as well as a significant increase in the number of rooms reserved at the Sheraton Hotels. As described elsewhere in this Newsletter, the 1977 conference in San Diego was a huge success, primarily due to the effort of Jerry and his team. They are all to be congratulated for an outstanding job. Roy Van Koughnett reported on the 1978 Ottawa conference. The conference is taking shape and the rate structure for joint attendees to the IMPI and CMPE conferences was voted on and unanimously approved by AdCom. The 1979/1980 conferences were briefly discussed. Al Clavin presented a proposal for the 1981 conference to be held in Los Angeles. The proposal was unanimously accepted by AdCom. Congratulations to the Los Angeles chapter for a magnificant proposal. H. Sobol presented a letter from the Dallas Chapter to receive consideration for holding the 1982 MTT Symposium in Dallas.

Harlan Howe discussed activity by the Boston chapter to hold the Symposium there in 1983. Harlan pointed out that only one hotel was available during 1983 to house the conference. This points out a problem the AdCom will have to address in the future since the lead-time for hotels has increased significantly in the past several years.

(Continued on page 4)

(Continued from page 3)

AdCom Highlights (cont'd)

MINUTES ADCOM MEETING
6-20-77 SAN DIEGO (cont'd)

COUNCIL AND COMMITTEES – KEN BUTTON

Ken discussed the QEC meeting in more detail than mentioned above. The name of the new group will be Quantum Electronics and Applications. The present members of the council will serve as an interim AdCom. The Council must now submit an Area of Interest Statement before they can gain group status. Walter Gelnovatch will replace Don Parker as a member of the Solid State Circuits Council. The COMAR committee of IEEE served to testify on radiation hazards to Congress. COMAR also prepared a reply to the New Yorker Magazine article on the dangers of Microwave.

TRANSACTIONS – D. PARKER

Don will be retiring as editor of the Transactions and will be replaced shortly by Lamar Allen. Don received the thanks of AdCom for an outstanding job as editor. The current forecast for pages in 1977 will be 1,110 as against a budget of 1,000. AdCom voted to allocate the funds so that the pages for 1977 could be increased to the estimated level. Through June 1977, 758 papers were submitted to Don Parker. Of these, 437 were accepted and 201 rejected. Several are still in the review cycle and others are waiting author's revision. 523 papers were published during Don's term as editor. MTT has achieved during the past year an average page charge recovery ot 59% versus a goal of 55%. Nat Pelner is also retiring this year. Nat served as editor of the NEWSLETTER for several years and he, too, received the thanks of AdCom.

FINANCE – GEORGE OLTMAN

George reported that 1977 will be an excelllent year financially. AdCom voted to advance $6,000.00 to he 1978 conference. This amount is higher than the advance to recent conferences. However, because of different rate structures in Canada, it is necessary that the committee have the funds at this time.

The meeting was adjourned at 2:00 P.M. in order that the AdCom could attend the Microwave Journal sponsored session preceding the San Diego conference. The next scheduled meeting will be in Dallas in October.

CHAPTER ACTIVITIES

by Dick Sparks

The San Diego Microwave Symposium proved to be a very interesting and successful microwave conference. The attendance at the technical sessions, exhibits and workshops, I believe, exceeded all expectations. The Annual Chapter Chairman's meeting, and the dinner that preceded it, benefitted from the high attendance figures with representatives from seventeen chapters present including two foreign.

At the Chapter Chairmen's meeting the major activities that are important to running a chapter were reviewed including discussion of ways to increase MTT-S membership and ways to formulate an interesting technical program for next year. Many suggestions were offered for obtaining good speakers, and updated Speakers Lists were distributed to all those present. All incoming Chapter Chairmen should have these lists. Now is the time to be contacting the National Lecturer, John Osepchuk, so that he can fit your chapter into his speaking schedule. With enough advanced planning he should be able to meet all requests.

The latter half of the meeting was devoted to presentations by several ADCOM members on the subjects listed below:

- The MTT-S Technical Committees — J. B. Horton
- Proposals for Future Symposia — K. J. Button
- One-Day Seminars and Lecture Series — H. E. Stinehelfer
- Nominating Candidates for Election to ADCOM — H. W. Cooper

John Horton should be contacted directly on any questions pertaining to the Technical Committees. His new address appeared on page 2 of the Spring Newsletter or he can be reached at (213) 536-1431.

Ken Button had a number of innovative ideas for chapters considering sponsoring a future symposium. One of his more interesting suggestions, that may have appeal to chapters located in smaller cities, is to choose a symposium site in a large city (presumably where there is no MTT-S chapter) and handle most of the coordination by mail and by phone. This approach obviously has risks but it has been done (at least by Ken)!

Harold Stinehelfer discussed some new ideas for one-day seminars and lecture series. The latest booklet from IEEE on Short Courses is also available now for programs beginning in September 1977. Copies can be obtained from IEEE Headquarters by contacting the Manager of Continuing Educations, (201) 981-0060, extension 174.

Finally, Warren Cooper addressed the group on the processes by which candidates from the chapters may be nominated for election to ADCOM. The announcement calling for nominees appeared on page 4 of the Spring Newsletter, but do not hesitate to call either Warren or myself for assistance in his matter. See the Directory for addresses and phone numbers of current ADCOM members, also.

(Continued from page 4)

CHAPTER ACTIVITIES (cont'd)

In spite of the scope of the topics discussed, the meeting adjourned by 10 PM as planned. I look forward to seeing you all again next year in Ottawa and feel free to contact me at any time. Area Code 617-274-7100, Ext. 4523.

J. R. Whinnery receiving the Microwave Carreer Award

Al Clavin receiving his Distinguished Service Award and suffering from arm-over-face disease.

Al after receiving his award and cured.

BOOK REVIEWS

RADAR SYSTEM ANALYSIS

by David K. Barton
Artech House, 1976

Is it possible that a book written in 1964 on an advanced technology subject is still useful in 1977? Artech House must think so since they have reissued David Barton's book Radar System Analysis published originally in 1964 by Prentice Hall. No face-lifting or major revisions have been performed in generating the 1976 version so the commentary to follow is basically a book review twelve years after the fact.

Barton's book includes 17 chapters which span the range of basic system topics: detection, the radar equation, target descriptions, search radars, tracking radars, target noise, propagation problems, target acquisition, radar networks, etc. Rather than survey these chapters, I will try to define the type of problem considered in this book. Radar analysis and design takes place on many levels from hardware and software design, to block-diagram signal-processing design, to the determination of system concepts and major parameters. The last task in this list, namely the selection of a system configuration and system parameters which will allow system requirements to be met, is the lasting topic most closely associated with Barton's book. Since propagation effects and the basic constraints imposed by the radar equation have not changed over the years, the analytical techniques described in 1964 are as valid now as they ever were.

Examples of signal-processing block diagrams are included, especially in the chapters on MTI and tracking in angle, range, and doppler. Enough information is included to give the reader a good feeling for the fundamental problems in these areas, and some knowledge of the possible solutions, crica 1964. Technology and research have broadened our frontiers considerably in the last dozen years as is evidenced by topics not in the book in significant detail: K-band tracking radars, trends toward medium and high p.r.f. radars, synthetic aperture radar, pulse compression techniques, frequency hopping to counteract target scintillation, radome design, etc. However, the treatment of topics which are included in the book, on the whole remains remarkably up-to-date. Perhaps the major sign of age in the book is the lack of post-1964 references.

Artech House has performed a service to the engineering community by reprinting useful books which are not technology-dated. Hint: DeFrano and Rubin's book, Radar Detection, has been out of print for at least six months.

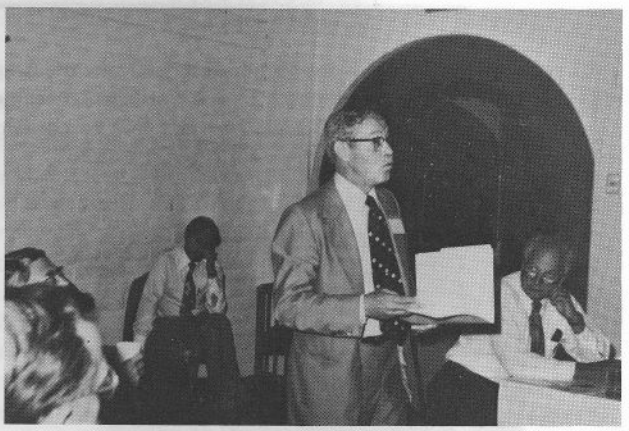
Dr. Robert A. Scholtz
Professor of Electrical Engineering
University of Southern California

The Microwave Prize Winners. (L–R) R. Bera, R. A. Pucell, and D. Masse.'

M.G. Walker receiving the Microwave Application Award.

George Haddad loved getting his Distinguished Service Award.

REPORT OF THE DIRECTOR, DIVISION IV



Dick Damon addressing MTT ADCOM.

REPORT OF THE DIRECTOR, DIVISION IV
Number 2, July 20, 1977
by Dick Damon

This is another report to you on some if the IEEE activities in which I have been involved that may affect the members of Division IV.

I attended several AdCom and technical committee meetings during May and June, including: Parts, Hybrids and Packaging; Quantum Electronics Council; Magnetics; Microwave Theory and Techniques; and Committee on Man and Radiation (COMAR). Before losing your attention, I would like to mention two topics which I suggested at some of these meetings and on which your criticism will be welcomed.

1) Some IEE Societies publish magazines, in addition to their Transactions and Newsletters, which carry review articles, technical applications articles, industry, Institute and professional news, etc. Division IV contains G/S with a reasonably homogeneous range of interests and it occurred to me that a magazine for the entire Division might be useful. With the help of Dr. G. P. Rodrigue, the Div. IV representative on the IEEE Publications Board, the problems of financing and editing such a publication are being explored. A more detailed letter describing the concept and plans has been sent to G/S presidents.

2) The IEEE has been sponsoring Congressional Fellows (two of them this year). To my knowledge, however, none of the Fellows sponsored to date has been identified with the technical interests of Div. IV. This is not a lobbying position, but an opportunity to learn and to work within the political process. If any members are interested, I will be pleased to provide information, to put them in touch with the IEEE Congressional Fellow Selection Committee and generally to serve as a sponsor.

(Continued from page 6)

In addition to my official relation to the AdComs, I have also received some letters from members advising me or their opinions on certain issues. I welcome all your ideas and recommendations, because many issues on which I must vote affect people in different situations in ways I may not anticipate.

The Board of Directors met in Minneapolis on July 14-15 and will meet again in San Diego on November 18-19. Some of the actions taken at the July meeting are:

- establishment of a copyright policy, in response to a new copyright law, that authors transfer copyright to the IEEE. Under this policy, IEEE will continue to hold publication rights for its papers and will grant appropriate rights for re-use of the published material to the author.
- adoption of a policy that USAB support industry and government objectives when it is in the interests of IEEE members to do so.
- release of some funds which had been withheld in the 1977 budget as a safeguard against a possible shortfall in income. It now appears that both the IEEE general fund and the G/S fund will report a surplus for 1977.
- approval of a deficit budget for the 1978 general fund. In view of the Board action in February to reject a 1978 dues increase, there was a choice of either a deficit budget or a significant reduction in member services. A move to have automatic dues increases based on some cost of living index was defeated, but a dues increase for 1979 appears to be necessary.
- reduction in he number of signatures required for petition candidates from 2% to 1% of the members in the Region or Division, provided that a majority of the Sections or Groups/Societies in the respective Region/ Division are represented by at least 1% of their members.

Several other items which are being studies or developed, and may well come up for vote at the November meeting, include:

- election of a President-elect, one year prior to the beginning of the term as President.
- submission by the Board of Directors to the members of multiple candidates for President and Executive Vice President.
- approval of a code of ethics.
- establishment of a political action fund, with voluntary contributions from IEEE members and having a separate, independent board of directors.

I attended meetings of TAB OpCom on April 16 and July 11 and of TAB on July 12. Some of the actions at these meetings were:

- approved three position papers prepared by the TAB Energy Committee.
- approved the "field-of-interest" statement for the proposed Group on Quantum Electronics and Applications, which will be formed from the present Quantum Electronics Council, subject to letter-ballot approval by all G/S.
- approved a policy on IEEE delegates to URSI and relationships to the URSI/US National Committee, with details to be worked out in further discussions with URSI.
- voted to recommend establishment of a task force appointed by the President, with representation from all major Boards, to define issues and plan implementation of the policy on registration which was approved by the Board of Directors in February.
- discussed finances of the Groups/Societies/Councils. The total reserves of all G/S/C are equal to about 6 months of their operating budget. About 15% of these reserves are "receivables," of page charges invoiced but not yet paid. A new TAB Finance Manual has been prepared and will go to the printer shortly.
- received a report from the Committee on Social Implications of Technology on their ethics study and on assistance to members.

The Audit Committee met on July 12-13. Topics considered include:

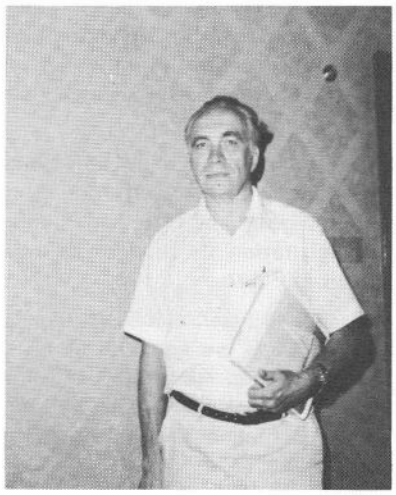
- review of the material to be mailed with the ballot for election of 1978 officers.
- discussion of any electioneering policy infractions; none has come to our attention at this time.
- recommendation that both G/S/C and Section financial summary be included in the annual Treasurer's report.
- various topics in the Bylaws and Policies and Procedures Manual were reviewed and come revisions proposed to clarify or improve them.

I attended meetings of the US Activities Board on April 14-15 and on June 17-18 and the Registration Workshop on June 3-4. Several topics discussed at these meetings were described above under the Board of Directors meeting. In addition, USAB voted to recommend an increased IEEE public relations effort in 1978, to better inform the public of the contributions of electrical engineering to society, and to support one-third of this activity. The registration workshop was attended by several IEEE officers and directors and a number of Group/Society officers. The purpose was to clarify the issues and develop a preliminary program of implementation of the recently adopted IEEE Policy Statement on Registration of Engineers. The conclusions were:

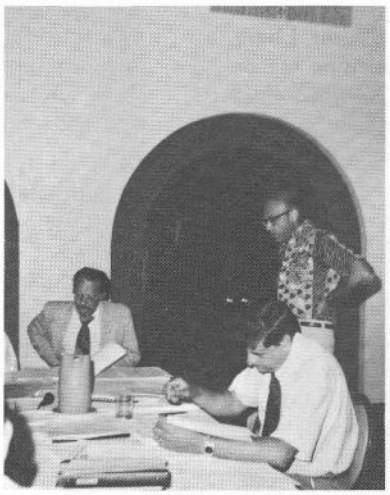
- studies whould be made of representative engineering organizations to determine the effect of this policy on professionals in various disciplines, including the allied sciences such as physics, chemistry and computer sciences.
- meetings should be held with industry representatives to address their concerns and attempt to resolve differences.

As a final point in this report, I urge you to vote in the forthcoming election. The IEEE is in considerable ferment, with many contested positions on the ballot. It will be unfortunate if a minority should choose the future direction of the Institute. Your vote is important!

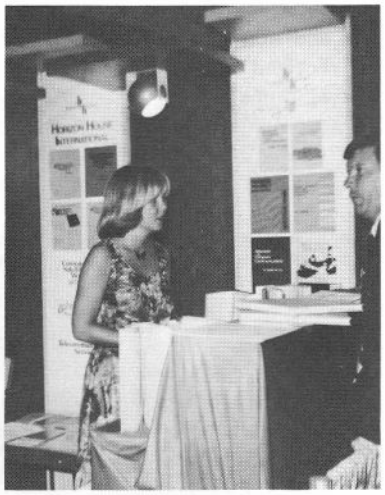
PICTURES FROM THE SYMPOSIUM



Bill Steenart getting ready for Ottawa.

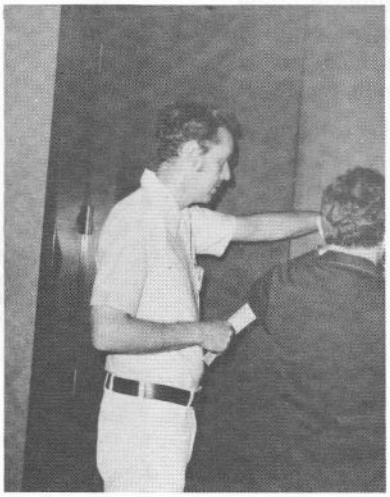


Larry Whicker making a point and Hal Sobol contemplating it.

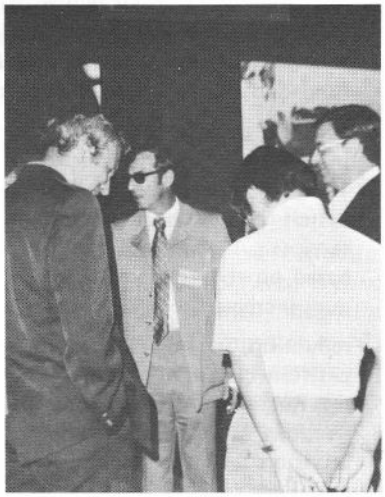


Horizon House had an attractive exhibit.

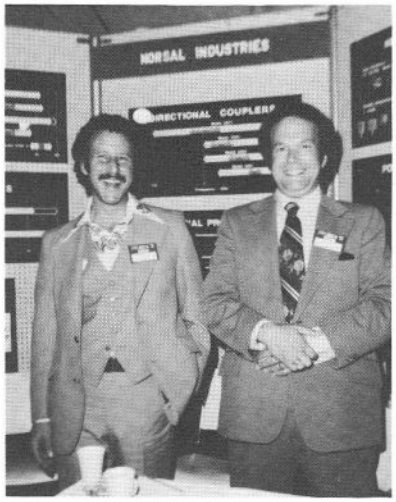
Ted Saad minding the store.



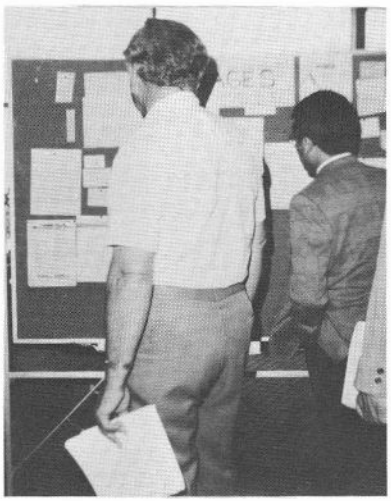
Dave Rubin making last minute changes.



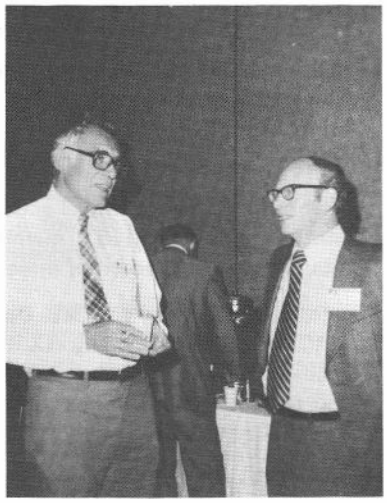
A good picture of the back of John Kuno's head.



Harvey Olifson and Ron Midwin enjoying themselves.



Al Clavin looking for messages.



Marion Hines and Ralph Levy are hard at it.

LETTERS TO THE EDITOR

LAST ISSUES' BOOK REVIEW

Editor,

While I am not an MTT member, the review by Dr. J.A. Glassman of Dr. R.L. Mitchell's Radar Signal Simulation has been brought to my attention as editor of the Artech Radar Library. The tone and content of the review forces me to offer these comments, as one editor to another.

Your reviewer starts with a general comment on the "casual, conversational style" of the book, the "bold typography," and the "numerous grammatical lapses and typographical errors." Any objective reader of the text will find the first comment incorrect. We will have to plead guilty of using pica type and oversize section headings, but I'm not sure how this gives an impression of "off-handedness." It is impossible to defend against an unspecific charge of bad grammar and typographical errors, although I'm sure there are examples to be found, as in any new book.

The most serious complaint made by Dr. Glassman is that the book does not cover many "key topics in the field of radar signals," which he lists. Most of these turn out to be related to the properties of RF waves in space, rather than to signals in a radar receiver or processor. There is room for a book on over-all radar system simulation, including propagation, polarization effects, radome distortion, etc., but that was not the scope selected by the author, and the title of the book is not System but Signal simulation, which acknowledges these limitations. If the reviewer wishes to encourage another author to attempt the broader subject, he has chosen a strange method of doing this.

Subsidiary complaints include absence of techniques for generating uniform random numbers (a subroutine generally available in any computer) and failure to include the Swerling target models. Perhaps Dr. Mitchell assumes too much when he expects the reader (or reviewer) to recognize that the Rayleigh and more general chi-square distributions, combined with fast or slow fluctuation rates (see pp. 17–18) cover these models. The Mitchell book assumes prior knowledge of radar systems subjects, and lists many references (including the classic Swerling work), and it is only your reviewer who feels that it is an elementary text which should cover all these subjects without reliance on the established literature.

The reviewer's misapprehension of the scope and content of the book would not be so serious if his general remarks did not indicate such hostility and unjustified resentment of the author's entire effort. Fortunately, Dr. Mitchell's reputation as an eminent author of papers in the professional journals, and as a significant contributor in radar theory, can easily withstand attack.

Dr. Glassman appears, in his final remark, to resent the very existence of an Artech Radar Library. You and your readers should be aware that we select material as carefully and critically as we can, offering books which we feel will be useful to engineers in radar and related fields. The author puts his best efforts into a manuscript, and the publisher risks his investment in the hope that he can make a profit if he provides a useful product. Unlike your Newsletter, these books have no captive audience, taxed from IEEE dues to support the viewpoints of a self-selecting staff of experts and critics.

David K. Barton
Editor, Artech Radar Library

EDITOR'S COMMENT:

"Self selecting staff . . ." ! ! ! I am the staff, unpaid volunteer staff. The only payment I receive is the pleasure of supporting my profession through my professional organization. No member of ADCOM is paid. We travel from coast to coast at our and our employer's expense in order to serve. We spend much of our off time on MTT business. Speaking for myself, I do it as payment to the profession that has been good to me.

DR. GLASSMANS'S REPLY:

Editor,

The following categorical replies are offered in response to the Editor of the Artech Radar Library on the defense of Mitchell's book.

(1) The "casual, conversational style" comment is in part an impression left by the extensive use of the first person plural. In the introduction alone, I located 51 uses of the word "we" in what I estimated to be less than 1700 words. The word occurs so frequently that after a while it seems to jump off the pages.The reader seems to be listening to the author lecture informally, and this is the sense of the characterization as "casual" and conversational".

(2) As far as grammar is concerned, the Editor can find "data" treated as singular in several locations and frequent examples of split infinitives (e.g., page 2, paragraph 3; p. 10, para. 1; p. 21, para 1, p. 26, para 4; p. 28, para. 3; p. 72, para 2; p. 118, para 1; p. 185, para 1; p. 190, para 2). These I termed lapses in view of the often accepted common usage; "bad grammar" is the Artech editor's characterization, not mine, in this instance. Bad grammar, however, is not inappropriate for the following examples:

> "This case would be representative of where..." (p. 18, para. 4, emphasis added)

(Continued on page 10)

(Continued from page 9)

and

"Actually the principal case of interest is where a...," (p. 100, para. 7, emphasis added).

The text was not reviewed by me specifically for grammar, but these errors are too numerous to ignore. They should bother anyone sensitive to the proper use of English, especially an editor. They also add to the impression of a "casual" and "conversational" style, as if the work had been dictated and transcribed.

(3) More disturbing than these grammatical problems are the technically imprecise uses of the language. For example, the redundancy in "steady d.c. component" and "fluctuating a.c. component", (p. 26, para. 2); or "discontinuity on the surface of the target," (p. 20, para. 1); "random process" where "random sequence" was proper, (p. 55, para. 1); and "the real world which is continuous" (p. 72, para. 2).

(4) The typography is similarly of poor quality. For the editor's benefit, he can find "reach" for "teach" in the preface; a floating, broken sentence (page 4, para. 2); "frequency sensitivity to targets" rather than "of targets" (p. 21, para 2); missing parenthesis (p. 43, eq. 5.47); wrong equation call-out (p. 53, para. 5); missing braces (p. 54, p. 57 and p. 86, eq. 7.7); "range sames" vs. "range gates", (p. 154, para. 4); "intant", (p. 45, para. 2); "impluse::, (p. 117, Table); "1n" for " n" (p. 101, para. 4 and p. 130, para. 2); "multiples" for "multiplies" (p. 168, para. 1); etc. For the more discerning, there are other typographical "lapses", such as hyphenating in unjustified right format and then hyphenating two-letter syllables.

(5) I suggest to the editor, or anyone else interested in random sequence generation, that he explore the extensive literature on the statistical properties of random number generators used in digital computer libraries before blindly accepting them as appropriate for simulation purposes. As far as converting pseudo-uniform sequences into other densities is concerned, the process is straight forward and deterministic. The text discusses the latter, but it is found in good, first-year probability texts.

(6) In his letter, the editor seems to be creating a new and limited definition "signal" so that it applies internally to a radar receiver or processor but not to space. This is certainly unorthodox in this writer's experience. It is also in contradiction to the text he is defending, for the text discusses fluctuating targets as well as other internal phenomena and, in fact, makes the following definition:

"a real-time radar signal simulation may be defined broadly as a system or process that starts with a general purpose computer implementation of the environment and ends with the production of real-time signals injected into the front end of a radar receiver or processor,..." (p. 174, para. 1).

The editor's convenient distinction between "system" and "signal" simulation is incompatible with the text, and his attempt to exclude signals from phenomena external to the radar is similarly at odds with his own text.

(7) The editor has without justification impuned the motives of this critic and of the Newsletter staff. The review of this text of only 200 pages was difficult, made so by the quality of the work. The remarks above and in my review were constructed with special care and, I hope, precision because of the general negative tone that was mandated. In the end, I had to ask myself if the text could be recommended. The only value I could find would be to a prospective contributor to the series, whose work might suffer by association with this sample from the Library. I had no preconceived notions about the Artech Radar Library, and to suggest that I "resent the very existence of an Artech Radar Library" is desparate nonsense.

(8) The editor's closing remarks are equally unjustified and strangely unorthodox. The Newsletter, in his view, is suspect because it is not founded on the profit motive! And to claim that it is supported by "taxes" is a semantic distortion. Finally, I can defend the Newsletter against the charge of self-serving to its "self-selecting staff of experts and critics" since this critic, like the Artech editor, is neither a member of the Newsletter staff nor of the Microwave Theory group. The only pay received for this review was a free copy of "Radar Signal Simulation"!

Dr. J. Glassman

Editor,

My friend and associate Dr. Mitchell sent me a copy of the "review" of his book Radar Signal Simulation by Dr. J. A. Glassman which appeared in the MTT newsletter. He also sent me a copy of Dave Barton's answer to this review.

I have known Dr. Mitchell by reputation for several years and personally for about two years. He is a person of highest technical competence. I have also been associated with Artech House Publishers since 1973, when they published my book on radars.

Over the years I have used a number of Artech publications in my courses on radars at UCLA and USC and also as references at work. In particular, we used Dr. Mitchell's book just last year as a text for a course on Advanced Radars at UCLA. I feel that Artech House is doing a great service to the radar community by publishing these books.

With the above background, I completely endorse Dave Barton's comments on the unfortunate review which you published. I feel that the review was completely unjustified and should not have been published – even in a local newsletter.

Publication of such reviews can only hurt the reviewer and your newsletter.

S. A. Hovanessian
Senior Scientist
Hughes Aircraft Company

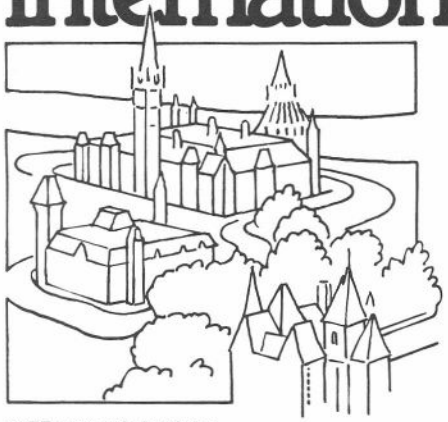
EDITOR'S COMMENT:

"Local" ! ! ! with 7000 members worldwide!!!

1978 IEEE-MTT-S International Microwave Symposium

"MICROWAVES TODAY AND TOMORROW"

Chateau Laurier Hotel Ottawa, Canada June 27-29



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Ottawa, Ontario — K1N 6N5

EXHIBITS
H. Ellowitz
Horizon House
610 Washington Street
Dedham, Massachusetts 02026

First Call for Papers

The 1978 IEEE MTT-S International Microwave Symposium will be held at the Chateau Laurier Hotel, Ottawa, Canada, within view of the Parliament Buildings.

The Symposium will feature "Microwaves Today and Tomorrow", an assessment of the state of the art and its applications as well as a look into the future.

Papers are solicited describing original work, not published or presented previously, which can be theoretical, technological or application oriented. Although any papers concerned with microwave techniques, devices, systems and applications will be considered, the following subject areas are regarded as particularly appropriate for this conference.

- Computer Aided Design and Measurement Techniques
- Solid State Devices
- Satellite Communication
- Microwave Acoustics
- Biological Effects and Medical Applications
- Digital Techniques at Microwave Frequencies
- Microwave Integrated Circuits
- Radiometry and Remote Sensing
- Submillimeter and Millimeter Wave Techniques
- Ferrite Devices
- Filters and Passive Components
- High Power Techniques
- Low Noise Techniques
- Integrated Optics, Fibre Optics and Optical Techniques
- Field Theory and Network Theory
- Microwave Education for the Future
- Technology Forecasting and New Ideas

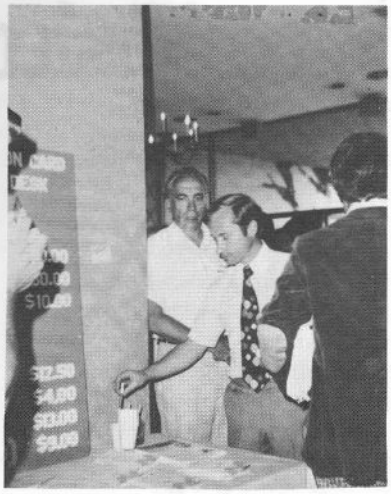
Concurrently, the IEEE Conference on Precision Electromagnetic Measurements and the International Microwave Power Institute Symposium will be held in Ottawa. Joint sessions are being planned with IMPI in the area of biological effects and medical applications of microwaves.

Authors are requested to submit both a 35 word abstract and a 500-1000 word summary (up to six illustrations), clearly explaining their contribution, its originality, and its relative importance. For anonimity of review please identify author(s) only on the cover sheet. Abstracts and summaries (5 copies) must be received on or before January 7, 1978 by:

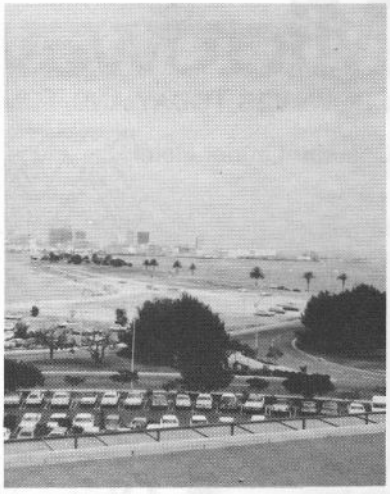
Dr. Willem Steenart
TPC 1978 MTT-S Symposium
Electrical Engineering Department
University of Ottawa
Ottawa, Ontario — K1N 6N5 — Canada

Notices of acceptance or rejection will be mailed to authors by March 5, 1978. At that time, authors of accepted papers will receive forms and instructions for preparing material to be printed in the Symposium Digest.

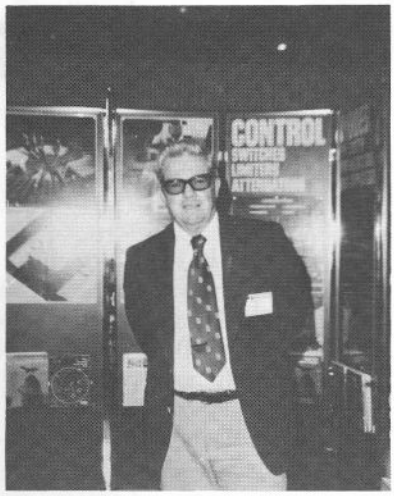
MORE PICTURES FROM THE SYMPOSIUM



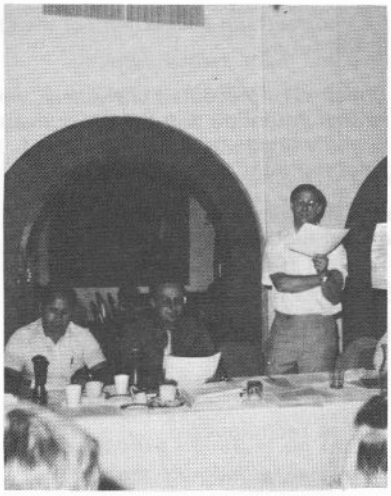
Roy Van Koughnett getting ready to sign-up.



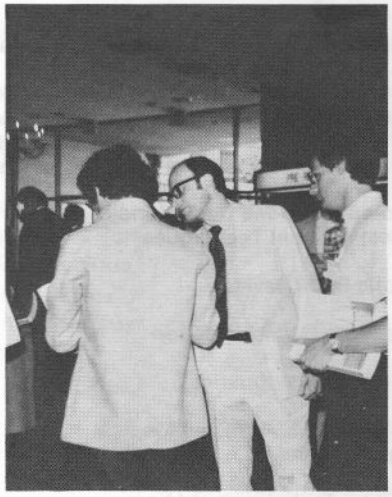
View from the Sheraton.



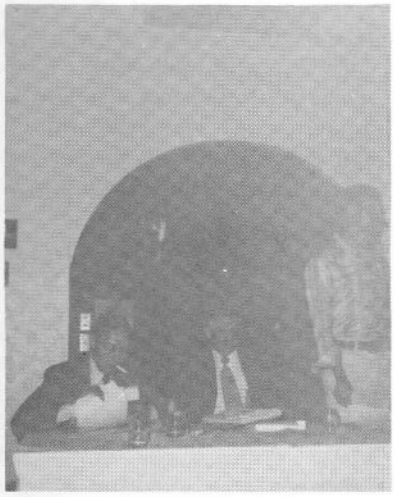
Chuck Swift looks good.



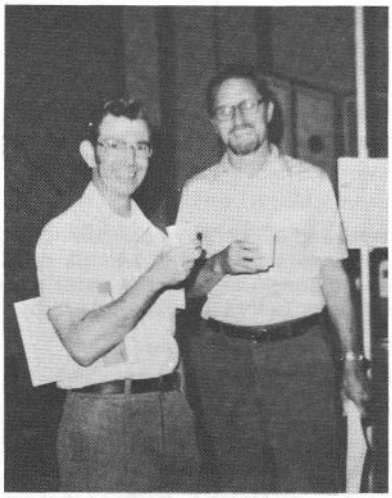
Don Parker telling ADCOM the state of the Transactions.



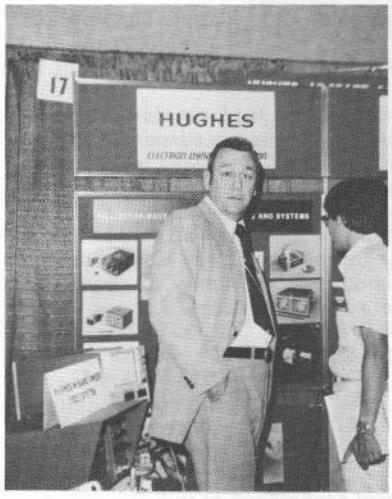
Terry Cisco gets the word.



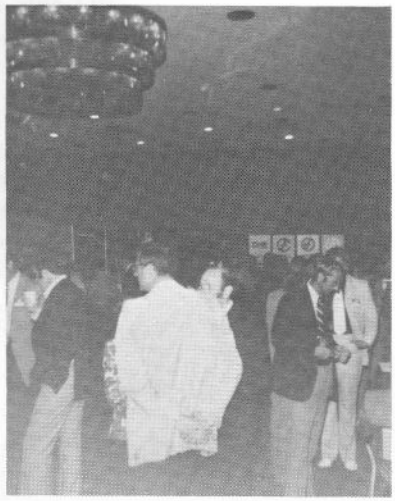
Dave Rubin telling us how great the Symposium will be, and Dick Damon checking his reports.



Walter Day and Dave Adams getting bombed on Coke.



"Surprise!!"



Lots of action at the exhibits.

REPORT OF 1977 MTTS EXHIBITION

by Howard Ellowitz

The lure of the San Diego site, coupled with the excellent technical program and 100+ company displays, proved too much to resist as the 1977 Symposium/Exhibition broke every attendance record in the history of the meeting.

Over 800 registered for the Symposium, there were 300 Exhibition-only registrants and there were 300 exhibitor badges issued for a grand total exceeding 1400. The previous Symposium attendance mark of 752 set in Boston in 1967 was shattered as was the total attendance record of the 1976 Cherry Hill meeting.

There is little doubt that the drawing power of San Diego played an important part in these results. The magazine and direct-mail advertising which was done on a scale far beyond what had ever been done before must be given due credit as well. Between October 1976 and May 1977, the Microwave Journal carried full-page ads about the meeting. Sale of booth space was promoted early in this campaign and attendance was promoted beginning in February 1977. Two direct-mail efforts complemented the space advertising for attendance. A 16,000 piece mailing reached 7500 MTT-S members and 8500 other prospects before the Advance Program was mailed. A second mailing was mde to the non-MTT-S group in April. This total program produced over 450 mail inquiries for attendance information (more than half of these from non-MTT-S members), a number of phone calls and one pre-registration check mailed directly to the Journal.

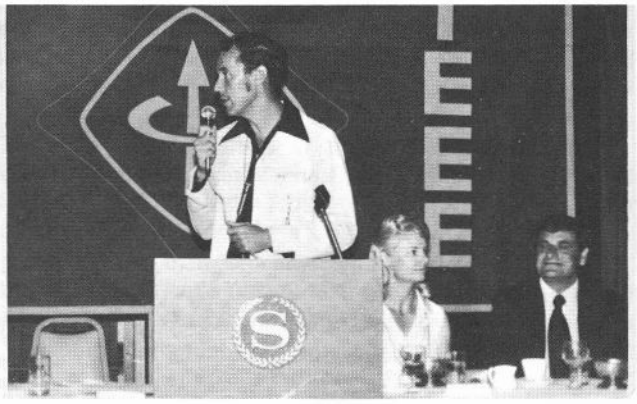
On the Exhibition side, all 64 available booths were sold out by the middle of May and there was a waiting list of companies ready to exhibit if there had been any cancellations. Over 100 companies were represented in the Exhibition.

Attendees and Exhibitors, alike, were uniformly satisfied with the conduct and inherent value of the Exhibition. While the Terrace area exhibitors were understandably apprehensive before the meeting began that their location away from the principal meeting rooms might limit attendance at their displays, their concern was allayed during the opening day. The traffic through the Terrace displays on Tuesday was comparable to the excellent level at the Ballroom booths and it continued at good levels throughout the three days. Exhibitors in both areas were generally pleased with the inquiry rate and were particularly impressed with the quality of the inquiries. While we couldn't guarantee the former in advance of the meeting, there was little question that the responsibility level of attendees would be extremely high and our claims to that effect to prospective exhibitors were amply fulfilled.

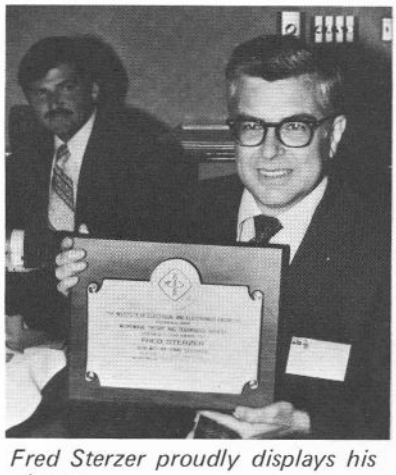
Symposium registrants' comments about the Exhibition were equally positive. Most took full advantage of the opportunity to see so many current and prospective suppliers. They considered their time spent at the displays a worthwhile investment and were comfortable in the generally informal atmosphere of the show.

Work is already underway in preparation for next year's meeting in Ottawa. The MTT-S, CPEM, and IMPI meetings which will all run during the week of June 26 can be expected to produce combined technical symposium registrations exceeding 1200. Supplemented by separate exhibition and exhibitor registrations, the total attendance at Ottawa will approach 1800. This potential audience plus the prospective exhibitors who will be interested in the specialized CPEM and IMPI attendees will undoubtedly fill the somewhat larger exhibit area available at the Chateau Laurier in Ottawa. Reservations for booth space have already been received from some of the San Diego exhibitors and a show approaching the 90-booth capacity of the space is anticipated.

One last note about the excellent working relationship which developed between the local committee and the Journal during the planning and running of the San Diego meeting. ADCOM's decision to run a large-scale exhibition was reached long after much of the local committee's preparatory work was complete. While that decision necessitated some rather significant changes in those plans, Dave Rubin and his committee were amenable to compromises which balanced the needs of both the Symposium and Exhibition. The results speak for the effective communications channel which Dave and I maintained prior to and during the meeting itself and it was a pleasure working with him.



Dave must have tickled Larry Whicker's fancy.



Fred Sterzer proudly displays his plaque.

INCIDENTAL INTELEGENCE FROM THE TECHNICAL GROUP MTT-4 SUBMILLIMETER WAVES

Dr. Dean T. Hodges, Aerospace Corporation will succeed Ken Button as Chariman of the Technical Group on Submillimeter Waves. Prof. Thomas A. DeTemple will serve as the new Vice Chairman of the Group. The following are members of the IEEE-MTT-Society: Dean B. Anderson, Clarence Arnow, D. Buhl, Peter K. Cheo, Brian J. Clifton, Paul D. Coleman, J. N. Crouch, Jr., Jochen Edrich, Herbert Flicker, Stephen M. Fry, A. Gardner Fox, Thomas A. Galantowicz, James J. Gallagher, Richard A. Handy, Raymond Hoskins, Albert V. Jelalian, Steven Johnson, Howard J. Jory, C. H. Ma, John M. J. Madey, P. A. Redhead, H. C. Praddaude, Lawrence G. Rubin, S. P. Schlesinger, Michael C. Sexton, F. Tittell, Bruce Wber, W. Wilson, James C. Wiltse, and Masanobu M. Y. Yamanaka.

The members of the IEEE-MTT-Society are herewith requested to examine the Collection of Selected Papers of the San Juan Conference on Submillimeter Waves which have been published in three parts, namely, the June, 1977 issue of the IEEE Transactions on Microwave Theory and Techniques, the IEEE Journal of Quantum Electronics and the July, 1977 issue of the Journal of the Optical Society. These papers were carefully referred but we need the opinion of the members concerning the quality of each issue. Would you please send your opinion to Ken Button, M.I.T., Cambridge, stating where each issue was better, worse or about the same quality as a typical issue of the journal. Everyone's opinion is solicited to give us guidance in the preparation of future Collections.

The Conference Digest is available from the IEEE Service Center, 445 Hoes Lane, Piscataway, New Jersey 08854 for $10. Catalog No. 76 CH 1152-8MTT.

The Third Conference will be held in Guildford, England, 28 March 1978. About 100 papers and over 200 registrants are expected according to G. W. Chantry, National Physical Laboratory, Teddington, Middlesex, TW11 0LW England.

Marty Walker, a proud award recipient.

SHORT COURSES

SHORT COURSE NO. 409

TITLE: Airborne Microwave and Millimeter Wave Sensor Systems

DATE: January 16-20, 1978

LOCATION: George Washington University, Washington, DC

DESCRIPTION: Designed for engineers, scientists, and managers who desire a better working knowledge of the concepts and applications of airborne radar and radiometric sensor systems. The objectives of this course are: to provide the participants with (1) a broad perspective of the applicability of airborne sensors operating in the microwave and millimeter spectrum, (2) an appreciation of the constraints and limitations imposed by the airborne environment, and (3) state-of-art technological advances that render certain applications possible.

FEE: $470

For further information, please write to the Director, Continuing Engineering Education, George Washington University, Washington, DC 20052, or call (201) 676-6106.

SHORT COURSE NO. 252

TITLE: Electromagnetic Compatability

DATES: October 17-21, 1977

LOCATION: George Washington University, Washington, DC

DESCRIPTION: This course is designed for engineers, managers and others who need a working knowledge of electromagnetic interference and compatibility, and who have only a limited background in the field. Participants should acquire a broad perspective of both the principles and practive of electromagnetic compatability. The basic principles, theory, and techniques will be presented to enable the participant to gain a solid understanding of electromagnetic interference and compatibility without excessive use of mathematics. Ideas will be illustrated with examples portraying actual interference situations and their solutions. Broader matters, such as spectrum management, will be discussed based upon the interests of participants.

FEE: $475

For further information, please write to the Director, Continuing Engineering Education, George Washington University, Washington, DC 20052, or call (202) 676-6106.

(Continued on page 15)

(Continued from page 14)

SHORT COURSES (cont'd)

SHORT COURSE NO. 247

TITLE: Technology Trends in Communication

DATE: January 9-11, 1978

LOCATION: George Washington University, Washington, DC

DESCRIPTION: This course is designed for engineering managers, engineers, scientists, and others who need a better understanding of the evolutionary trends in complex communication networks. It will encompass new developments in communications systems and techniques and will indicate areas where promising developments are taking plase. The major emphasis will be on satellite communications and computer-communications networks. Digital voice techniques and other special topics will be discussed. Note: The emphasis of the course will be on general technology trends. There will be no discussion of planned defense communications programs which have not already appeared in the public literature.

FEE: $525

For further information, please write to the Director, Continuing Engineering Education, George Washington University, Washington, DC 20052, or call (202) 676-6106.

CONFERENCE NOTICES

SUBMILLIMETER WAVES '78

FIRST ANNOUNCEMENT

3RD INTERNATIONAL CONFERENCE ON SUBMILLIMETRE WAVES AND THEIR APPLICATIONS

UNIVERSITY OF SURREY

29 MARCH – 1 APRIL 1978

The Third International Conference on Submillimetre Waves and Their Applications will be held at the University of Surrey, Guildford, England from 29 March to 1 April 1978 and is being organised by The Institute of Physics in association with The Institute of Electrical Engineers, The Institution of Electronic and Radio Engineers and The Institution of Electrical and Electronics Engineers. Registration will be from 12 noon on 28 March and there will be a social reception on the evening of the 28th. The submillimetre research groups at the National Physical Laboratory and at Queen Mary College, London will be open for visits on Monday and Tuesday 27 and 28 March and on Saturday 1 April. Guildford is about 25 miles South West of London and is very well served by public transport. It lies on the main A3 Trunk Road and is only 35 minutes by fast train from London Waterloo. Good quality student-type accommodation is available close to the lecture theatres and restaurant. Limited hotel and inn-type accommodation is available in Guildford and the surrounding countryside for those who prefer it.

Papers are invited on: Gas Phase and Solid State Sources, Electron Beam Sources, Detectors, Radiometry, Frequency Determinations, Measurement Techniques and Components and on the applications of submillimetre waves in the study of plasmas, the atmosphere and dielectric media. Papers on applications in other fields will also be considered if emphasis is placed on the exploitation of the submillimetre waves.

There will be formal sessions, informal sessions and discussions groups and also working parties if these seem desirable. Authors may suggest suitable topics for discussion group sessions to the Organising Committee. Intending Authors may submit a title on the accompanying reply sheet but must in any case send a 35–50 word abstract to G W Chantry by 1 October 1977. Authors will be informed if their papers have been accepted and they must then prepare two page summaries on the Special Camera-ready paper which will be provided. These summaries must be returned by 1 February at the absolute latest if they are to be included in the digest and if the papers are to be optimally placed in the programme. The digest will be distributed to all participants upon registration and extra copies will also be available for sale.

Guildford is near to several places of outstanding interest, including Royal Palaces, Gardens, Antiquities etc. and there will be organised a programme for guests accompanying delegates. It would be a great help to the organisers if intending delegates could signify whether they will be bringing guests with them and whether they would be interested in the social programme.

G W Chantry, National Physical Laboratory, Teddington, MIDDLESEX, England TW11 OLW.

E/EI CONFERENCE
September 26–29, 1977
Palmer House, Chicago, Illinois

The 1977 Electrical/Electronics Insulation Conference will include two microwave sessions and a microwave rap session. The microwave sessions are entitled: "Microwave Packaging, Processes, and Applications", and "Microwave Substrate Materials". Papers will address productization techniques for microwave assemblies, new dielectric materials and their microwave properties, methods of metalization, and measurement techniques aimed at realizing a final product.

History of MTT

by Ted Saad
MTT Historian

ADCOM III July 1, 1954 thru June 30, 1955

Administrative Committee: W. W. Mumford, Chairman
A. C. Beck, Vice Chairman
H. F. Engelmann, Secretary-Treasurer

R. E. Beam	D. D. King	L. D. Smullin
C. W. Chandler	G. A. Rosselot	G. C. Southworth
A. G. Clavier	T. S. Saad	Ben Warriner
Henry Jasik	Harold Schutz	J. R. Whinnery

In ADCOM III, Herb Engelmann was held over as Secretary-Treasurer. Because the professional group concept was in it's early stages and had no history of strength, some of the early ADCOM members who willingly gave their name were reluctant to devote time to the group. Consequently, in the early days, there were members who did not attand any ADCOM meetings nor did they participate in any of the activities. Fortunately, there was a hard core of strong, active people who gave unstintingly of their time, and as a result, the group survived, prospered and grew. By the time of the third ADCOM, it was quite obvious that the group on Microwave Theory and Techniques would indeed survive and be a healthy organization for some years to come.

There were five ADCOM meetings held that year. All of them were held at IRE headquarters with the exception of one meeting that was held at the Kingsbridge Armory, the location of the IRE Convention.

During the year, five issues of the Transactions were published, which included four letters and fifty-five articles, totalling 394 pages of archival technical material. During the same year, the Newsletter was organized and first published. The first issue of the Newsletter was published in September of that year, and was comprised primarily of a message from the retiring and incoming Chairmen. Ted Saad was the Transactions and Newsletter Editor at the time.

It was during this Administrative Committee that the consideration of a microwave Prize was first brought up. In a letter from Dr. George Southworth to W. W. Mumford, he mentioned that younger authors were not impressed by papers published in the Transactions and, consequently, some good papers are lost because of the lack of recognition. He suggested that it might be a good thing to have an award that could be given to a Transactions paper. In November, the ADCOM voted to submit to IRE headquarters a proposal for a P-GMTT Award Certificate of $100.00. Headquarters approved the award which later became the Microwave Prize.

At that meeting in October, there was a discussion of the method of printing used in the Transactions. It was voted that the Transactions would from that point on be printed using letter press techniques. It was also voted to include biographies of the contributors and biographies of famous microwave people, one in each issue of the Transactions.

In a later ADCOM meeting, the possibility of an annual meeting was discussed. At the time, the discussion centered around the possibility of a fall meeting. Ben Warriner had written suggesting the possibility of a West Coast Microwave Symposium.

In January 1955, the group published it's first Transactions using the letter press techniques, which gave it a quality of print equivalent to the Proceedings of the IRE. In addition, authors' photographs and biographies were included for the first time, and an invited editorial by a distinguished member of the Microwave community was added as a regular feature. The first editorial and biography was that of Dr. George C. Southworth.

In March 1955, because of the added activity, the ADCOM petitioned the IRE to increase it's membership from 15 to 18. Approval was received late in the ADCOM year.

A significant feature of that third ADCOM was the election to ADCOM membership of Dr. Seymour Cohn, Dr. A. A. Oliner, W. L. Pritchard, Dr. K. Tomiyasu, and Harold A. Wheeler. All Five of these people became active ADCOM members, four of them later became Chairman of the Group.

During the year, the group participated in four technical sessions at the IRE convention held in New York in March and it was also involved in two sessions at the URSI meeting held in May. The group also helped to co-sponser the Polytechnic Institute of Brooklyn Symposium held in New York City on November 8th, 9th and 10th. It was called the Symposium on Modern Advances in Microwave Techniques and Al Beck was the MTT representative.

Another first for this rather active ADCOM was solicitations for institutional listings in the Transactions at $25.00 an issue. Also, it was during this ADCOM that the first letters to the Editor appeared in the Transactions, which with the January 1955 issue became quarterly.

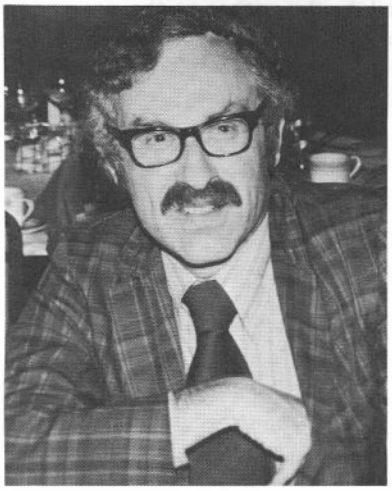
In the December 15th meeting of the ADCOM, it was decided to include ADCOM minutes as a regular part of the Newsletter. With slight modification over the years, that policy has been adhered to.

Through the end of the ADCOM term, chapters had been approved in Alberqueque-Los Almos, Baltimore, Boston, Buffalo-Niagara, Chicago, Long Island, Northern New Jersey, Philadelphia. Seven Newsletters were published during the year. A growing attitude of this ADCOM and successive ones was the efforts to improve and increase the size of the Transactions and provide the membership with more and better papers. At one meeting, it was suggested that the Transactions be distributed to prominent microwave people to help attract good technical papers from abroad. In June, the group agreed to co-sponsor with P-GAP and the IRE, Philadelphia section, a Symposium to be held in Philadelphia at the University of Pennsylvania on February 2 and 3, 1956.

The Schaffner's at the head table.

They're breathing a sigh of relief!

PICTURES FROM THE BANQUET



Doctor George — What are you doing here?

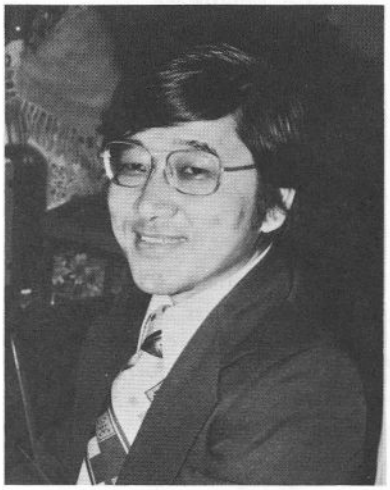
Larry letting it all hang out.

Seymore Cohn making an impassioned speech.

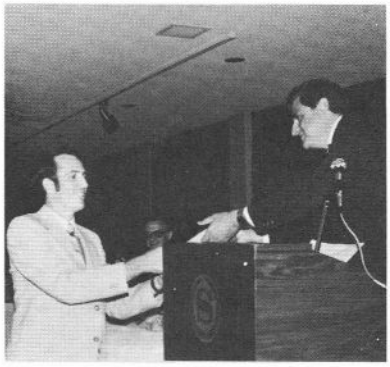
Pete proudly receives his Past Prez Pin.

The Whinnerys, proud and enjoying themselves.

Lucky Larry.



John Kuno from the front.



Lamar Allen receives his IEEE Fellow Award.

Do you think Hal Puthoff can read Dave Rubin's mind?

MTT TRANSACTIONS EDITORIAL POLICY

The IEEE Transactions on Microwave Theory and Techniques will now publish three types of papers: Articles, Technical Notes, and Letters. This reflects a change from previous policy in that the category Short Paper has been eliminated and a new category, Technical Note, is being introduced. Furthermore, the category Letters will be limited in scope. Each of these types of papers is defined below.

The category Short Paper is being eliminated because it is felt that every paper should be judged on its technical contribution and clarity of presentation rather than on length. Without a clear definition of a short paper, these papers have sometimes been excessively long relative to their technical content. The category Technical Note is being introduced to provide a means for publishing in a timely fashion new and useful engineering techniques or experimental results. By the use of author prepared photo--reproducible manuscripts, the publication time can be reduced significantly. The Editor and the MTT Administrative Committee feel that these changes will enable us to provide better service to he membership of the MTT.

Articles

Articles will continue to be the principal form of papers published by the Transactions on Microwave Theory and Techniques. Articles are used to report new and significant contributions in microwave engineering. Theoretical and/or experimental results as well as design, analysis, or measurement techniques will be considered. Papers will be judged on the basis of engineering usefulness and technical significance, timeliness, clarity of presentation and archival merit.

Manuscripts should be typed double-spaced on 8 1/2" by 11" sheets and have an abstract that clearly summarizes the problem addressed, approach used, results obtained, and engineering significance of the paper. In preparing a paper an author should keep in mind the following criteria to be used in evaluating his paper for publication:

1. Is the paper technically sound?
2. Does the paper contain new information of engineering importance and usefulness to the MTT community?
3. Does the abstract summarize and the paper clarify the problem addressed, approach used, results obtained, and engineering significance of the paper?
4. If primarily a theoretical paper, is the usefulness of the results made as clear as possible by the use of graphs, tables, dimensional drawings, or other appropriate means?
5. If primarily an experimental paper, have the critical parameters of the device or system been sufficiently described to permit duplication of the experiment by one "skilled in the art"?
6. Is the paper placed in proper context by referencing previous relevant publications?
7. Is the order of presentation satisfactory and the grammar adequate?

Articles are reviewed by three members of the Editorial Review Board. Each reviewer is specifically asked to address the above criteria in reviewing a paper. The reviewer's responses along with additional comments and recommendations are returned to the author at the time he is notified of the Editor's decision on the disposition of his paper.

There are no specific length requirements for Articles, but excessively long papers are generally to be avoided. The Editor may return unreviewed manuscripts that exceed the equivalent of twenty typewritten double-spaced 8 1/2" by 11" pages and eighteen illustrations.

Technical Notes

This category will provide a means to publish quickly new and useful experimental or theoretical results or techniques in the practice of microwave engineering. Technical Notes will be limited in length to the equivalent of one page of the Transactions. This requirement must be adhered to strictly. (One page corresponds to about three double-spaced 8 1/2" by 11" typewritten pages and one or two figures or their equivalent.) Technical Notes should also contain a short abstract at the beginning. Members of the Editorial Review Board will review Technical Notes. Once a Note has been accepted for publication, the author will be asked to submit his Note typewritten on standard mats (provided by the Editor) suitable for photo-reduction and publication as is. These photo-ready copies will be published in the next available issue of the Transactions upon their receipt and final review by the Editor. Notes will thus be inserted in issues which are essentially ready for final printing. A number of pages will be reserved in each issue for these Technical Notes.

Letters to the Editor

Letters to the Editor will be limited to corrections to papers, comments on papers, posing of new problems, or other dialogue. Letters are not to be used to report new results or techniques, as such advances should be submitted as Technical Notes. No review other than that of the Editor is required for a letter.

SURVEY SUCCESS

Nearly two hundred (200) survey forms were completed at the San Diego International Microwave Theory and Techniques Symposium. The survey was designed to sample current attitudes and ideas about MTT-S. There were several questions that prompted very interesting comments. The multiple selection questions probed areas of concern to MTT-S chapters and their membership.

The next issue of the NEWSLETTER will carry an in depth reporting of the survey results.

The rate of return of the membership survey questionnaire exceeded 20% of all attendees at San Diego. This method of soliciting opinions, facts, and ideas about MTT-S can be valuable in every membership campaign. Special thanks is extended to the Microwave Journal Staff and Howard Ellowitz, of M-J for the coordination and collection of the survey forms.

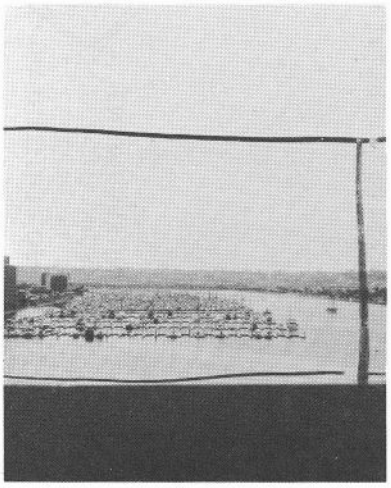
Glenn R. Thoren
Chairman–Membership Subcommittee
Raytheon M.S.D.
CS2-59
Bedford, MA 01730

MORE PICTURES

John Whinnery telling "like" it was and is

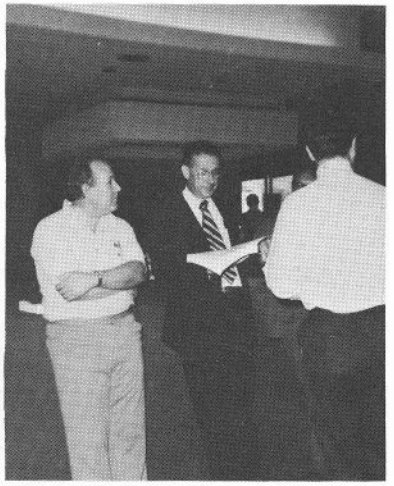
The three proud Microwave Prize Winners

Gee! Can I hock it?



Another view from the hotel

Larry and John



"The digest makes very interesting reading"

Happy faces at the banquet

INSTITUTIONAL LISTINGS

The IEEE Microwave Theory and Techniques Society is grateful for the assistance given by the firms listed below, and invites application for institutional Listing from other firms interested in the microwave field.

An Institutional Listing recognizes contributions to support the publication of the IEEE Transactions on MICROWAVE THEORY AND TECHNIQUES. Minimum rates are $60.00 for listing in one issue; $260.00 for six consecutive or alternate issues; $440.00 for twelve consecutive issues. Larger contributions will be most welcome. No agency fee is granted for soliciting such contributions. Inquiries, or contributions made payable to the IEEE, plus instructions on how you wish your Institutional Listing to appear, should be sent to R.M. Emberson, The Institute of Electrical and Electronic Engineers, 345 East 47 Street, New York, N.Y. 10017.

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