

History of the Administrative Committee of the Microwave Theory and Techniques Society

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ALTHOUGH FOR THE LAST several years the history of the Microwaves Theory and Techniques Society Administrative Committee (AdCom) has been carried on an issue-by-issue basis in the *MTT Newsletter*, I thought a short historical overview might be appropriate in this Special Centennial Issue of the *TRANSACTIONS ON MICROWAVE THEORY AND TECHNIQUES*.

In order to appreciate the importance of the MTT Society, one has to go back to the period between the end of World War II and the formation of the Society to understand what the situation was in our profession. Up through World War II, and for several years thereafter, most of the microwave work that was going on was done first for the war effort, then for the Defense Department, and, as a result, was highly classified. The word "microwave" was rarely seen in print until the late forties-early fifties, and although people talked about high frequencies, many had no concept of how high in frequency the microwave range extended.

Shortly after the war ended, a number of microwave publications became available, in particular the historical M.I.T. Radiation Laboratory Series. Articles on the technology began to appear in the *Proceedings of the IRE* and also in *Electronics* magazine. There was also an occasional article in some of the publications of the American Institute of Physics and the AIEE, but there were really no places where a microwave engineer could go to find articles on his favorite subject. He had to wait for them to appear.

Most of the microwave people knew each other. They were all more or less familiar with the companies that were doing business in the field. In those days, the big event of the year for technical people was the IRE Convention, which was held in the spring in New York every year. I worked for Microwave Development Laboratories at the time, and about 1948 we took a booth at the IRE show and set up our display of microwave components. Our first IRE show was in the Grand Central Palace Building on Lexington Avenue, next to Grand Central Station. The purpose of the IRE Convention at the time was to have technical meetings. The exhibits were an attachment to those technical meetings. Many of us who were active in microwaves at the time would go to the IRE Convention and attend all of

the meetings relative to microwaves. We would also visit other companies in the exhibit hall. There was usually a cocktail party and sometimes a formal dinner for attendees. The Convention provided an opportunity for microwave people to get together, since most of us were members of the IRE at the time.

In 1948, the IRE recognized the need for forming smaller, more compact groups on the basis of professional interest. In March of that year, they adopted the Professional Group principle of operation. In 1951, at the National Convention in New York, Ben Warriner IV, who was a microwave engineer with General Precision Laboratories in Pleasantville, NY, had a discussion with Larry Cummings, who was the IRE Technical Secretary, on the possibility of promoting a Professional Group for Microwave Electronics. Although there was a lack of enthusiasm at headquarters, Ben circulated a letter dated July 9, 1951 to a group that he addressed as "members of the IRE interested in forming a professional group for microwave electronics." Included with the letter was a petition for the formation of the group. The letter stated a concern for possible conflicts with the group on antennas and a possible conflict with the group on instrumentation. He was able to get a sufficient number of distinguished workers in the field to sign the petition.

That original petition stated that the scope of the group, if approved, would "encompass microwave theory, microwave circuitry and techniques, microwave measurements and microwave tubes." The scope would also include "scientific, technical, industrial, or other areas that contribute to the field of interest, or to utilize techniques or products of the field where necessary to advance the art and science in the field, subject, as the art develops, to additions, subtractions, or other modifications directed or approved by the Institute Committee on Professional Groups."

There was no problem in getting enough people to sign the original petition, and the group was approved on March 7, 1952, by the Professional Groups Committee of the IRE.

The members of the first committee, which had its first meeting on May 1, 1952, included Ben Warriner as Chairman, Andre Clavier as Vice Chairman, and Bill Mumford as Secretary-Treasurer. The other members of the committee included Paul Coleman, Don King, Harry Marvin, Joe McCann, George Rosselot, Harald Schutz, and George Southworth.

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By January 1953, the group had a total membership of 942, of whom 471 had paid their dues. The annual dues at that time was \$2. The first symposium was held in New York City, on November 7, 1952, at the Western Union Auditorium. Attendance at the symposium was 210 people. Ten papers were presented.

In that first year, one issue of the TRANSACTIONS was published. It consisted of 48 pages and was made up of 13 articles and one abstract. Before going too far, and to avoid confusion, let me explain that our Society, which started as a Professional Group, has gone through a number of name changes. Starting as a Professional Group, it became a Professional Technical Group as a result of the merger with AIEE (which MTT-S opposed); this was later simplified to Group, then later to Society for reasons which I still don't clearly understand.

I became a member of the AdCom in its second year and attended my first meeting on September 3, 1953. The meeting was held at IRE Headquarters, which in those days was in a very handsome mansion on 1 East 79th Street, in New York City, across from the Metropolitan Museum of Art, where we would occasionally go for lunch. Since I was comparatively inexperienced and fairly young at the time, it was both exciting and frightening to sit in a room with Dr. Clavier, Bill Mumford, Dr. Southworth, and the other members of that distinguished committee. Fortunately, Henry Jasik and Harald Schutz were old friends, and that kept me from doing anything precipitous—like running out of the room.

In those early days, our meetings would take perhaps half a day. Occasionally, they would have to be extended into the afternoon. Normally, they would start at 10:00 a.m. and we would finish at lunchtime, but occasionally they would go beyond that and we would come back to the mansion on 79th Street and finish up our work.

For a while, it was difficult to get AdCom members to take the whole operation seriously. Although a number of people were named to the Committee each year, there was always a small nucleus who carried on most of the activities. This usually consisted in those early days of Dr. Clavier, Bill Mumford, Al Beck, Herb Engleman, Don King, and Dr. Southworth. Fortunately, in 1955, five new dynamic members were added to the AdCom, including Seymour Cohn, Art Oliner, Bill Pritchard, Kiyo Tomiyasu, and Harold Wheeler. All five of these people became active AdCom members and contributed to the growth and strength of the Committee. Four went on to become AdCom Chairman. Three became Honorary Life Members. Four won the Microwave Career Award.

Perhaps dating from that fifth AdCom, it became easier to find good, qualified, dedicated people. In fact, the problem quickly became one of trying to select the best of an outstanding slate of candidates—a problem that, happily, still exists. Another problem that had to be dealt with was having some AdCom members being constantly reelected to the Committee. And in addition, there were those who were not reelected, but who were still sufficiently interested to want to remain involved in other ways. The

whole scene has been and continues to be both fortunate and healthy.

Both a reason for the existence of the AdCom and a foundation of its success is the publication of the TRANSACTIONS. Starting with one issue during the first Adcom, to one issue per month, the TRANSACTIONS above all else has been the pride and mainstay of the Society. The first Administrative Committee published the one TRANSACTIONS issue in March 1953. For that and the following three issues, Al Beck as the Chairman of the Paper's Procurement Committee, with Bill Mumford serving as Publications Chairman. Together, they performed as Editors of the first TRANSACTIONS.

The history of the TRANSACTIONS is covered in an article that appeared in our 27-Year Index, in the November 1980 issue of the TRANSACTIONS. In my own case, I remember riding on the subway with Bill Mumford the day he became Chairman of the AdCom. He told me that he wanted me to be Editor of the TRANSACTIONS. I explained to him that I had no experience and even less knowledge of the whole editing process. I also explained that I didn't consider myself qualified. No matter how hard I tried to refuse, he kept pressing, until I finally gave in. It was a frightening responsibility, but having been given the task, I did the best I could. As it turned out, I was not quite as inept as I thought and I am eternally grateful to Bill Mumford for making me realize that hard work overcomes many deficiencies.

The AdCom gave me a budget of \$500 per year and allowed me to use my wife as Secretary. One of the first things we did was to have the TRANSACTIONS printed, using letterpress techniques to bring its quality up to that of the *Proceedings of the IRE*. We also included photographs and biographies of the contributors. As a special feature, we had an editorial and biography of a famous microwave person in each of the issues of the TRANSACTIONS.

In January 1957, Kiyo Tomiyasu took over as Editor, and later he was followed by Don King. One of the interesting aspects of being Editor of the TRANSACTIONS is the fact that most of them go on to become Chairmen or, later, Presidents of the AdCom.

One of the interesting events that took place relative to the TRANSACTIONS was the time when the IRE allowed the TRANSACTIONS to take advertising. MTT was one of the few groups at the time that was able to find companies willing to advertise. As it turned out, Tore Anderson was our Advertising Chairman and he was also President of FXR at the time. With the ads that he was able to solicit from FXR and a few other companies, we built up a fairly good surplus that stood us in good stead for a number of years.

The TRANSACTIONS started out with one issue the first year, three the second year, and six the third year. It was a quarterly for several years, until 1959. Starting in 1960, it was published every other month, and in 1966, monthly publication began. To a certain extent, the content of the TRANSACTIONS was influenced by the individual who was Editor at the time. Even more significant is the fact that

the quality of the publication has improved steadily since the very beginning.

One of the great concerns that the AdCom had in those early days was providing service to and communicating with the membership. By September of 1954, we had four local chapters, including ones in Albuquerque-Los Alamos, Boston, Buffalo-Niagara, and Chicago. It was the AdCom's concern to somehow arrange for communication with the local membership and to provide the members of the group with some sense of participation. As a consequence, the first *Newsletter* was published on September 10, 1954. It consisted of a report from the retiring Chairman, Dr. Clavier, and a message from the incoming Chairman, Bill Mumford. As the *TRANSACTIONS* Editor at the time, I was given the responsibility of preparing the *Newsletter*.

The idea was to publish the *Newsletter* after each Administrative Committee meeting, so that a report of the meeting, plus reports from the local chapters, could be included. The *Newsletter* was my responsibility until the issue of May 8, 1956, when Bob Wengenroth took over. Bob's first issue was that of October 1, 1956, and where I had six pages in May, he managed to find enough material to increase the size of the *Newsletter* to 13 pages. The *Newsletter* in those days was typewritten and then simply duplicated. As time went on, it grew in content and value to the members of the group. Bob Wengenroth completed his term as *Newsletter* Editor with the 17th issue, which was published in August 1958.

The new *Newsletter* Editor was Gus Shapiro, from NBS in Washington. His first *Newsletter* was December, 1958, and it was a bit of a surprise to many people, who were used to the solid, but perhaps antiseptic-like editions of the *Newsletter* that had appeared up to that time. Gus introduced a number of innovations, but there were two that I remember the most. The first was to distribute stamped envelopes addressed to himself so that the members of the AdCom could supply news notes for his *Newsletter*. The second was to intersperse jokes and clever sayings throughout the *Newsletter*. This had the tendency of inveigling people into reading the entire *Newsletter*. The first joke he used was: "Efficiency Expert: a man who waits to make up a foursome before going through a revolving door."

Gus' technique of interspersing jokes throughout the *Newsletter* created a lot of interest, and in fact we received one letter of protest, which was discussed at an AdCom meeting. However, the policy was continued through his last issue. The thing that he contributed to the *Newsletter* was the idea that perhaps we should not take ourselves quite so seriously. I think it was a good idea.

Gus continued to do an outstanding job as the *Newsletter* Editor through the 48th issue, dated December 1967.

Although a number of people were concerned that the *Newsletter* would not be quite as effective as it had been under Gus' leadership, Gus was not included in that list, since in that last issue he printed a poem in which he knocks the indispensable man. As a point of interest, the last joke that he published in the *Newsletter* reads: "When

it comes to foreign aid, everybody knows what Uncle Sam stands for. They just don't know how much."

The anxiety over losing Gus did not last very long. Al Clavin took over with issue No. 49 in January, 1968, and he immediately brought to the *Newsletter* a number of significant and professional changes. These changes were not simply mechanical, but they were more from the standpoint of an editorial approach. Whereas in prior years the *Newsletter* has been strictly a reporting medium, it was Al's intent to include controversial discussions rather than simply straight news items. This has made the *Newsletter* a more useful publication. Whereas Gus had included penciled sketches and various types of primitive graphical techniques, Al introduced photography to the *Newsletter*, along with the pencil sketches. Al continued as *Newsletter* Editor through the 60th issue, published in October, 1970. He was followed by Pete Rodrigue, who took over with the issue of April 1972.

Pete continued as *Newsletter* Editor through No. 77, published in the fall of 1974, and he was followed by Nat Pelner, who was *Newsletter* Editor for the spring issue in 1975. Nat completed his term as Editor with No. 88, published in the fall of 1977. He was followed by John Kuno, who brought out No. 89 in the winter of 1978. John continued as *Newsletter* Editor until No. 99 was published in the winter of 1981. He was followed by Steve March, who published his first issue in the spring of 1981.

Whereas John Kuno had been able to include all of the information that was supplied to him in 24 pages, Steve immediately had to increase the size of the *Newsletter* to 40 pages in the spring of 1982 edition. One wonders if it had something to do with the fact that the spring 1982 edition of the *Newsletter* included news of the 1982 MTT-S Symposium in Dallas, TX, for which Steve was the Technical Program Committee Chairman. It is interesting to note that the *Newsletter* Editor's position has proven to be a stepping stone to AdCom leadership.

Perhaps like any other society in the IEEE, the Microwave Society has its own personality. We have not always gone along with the crowd. We have usually voiced our opinions where we felt they should be voiced. We were one of the few groups in the IRE that was able to generate advertising when the opportunity for that additional funding was presented to us. That could have been the unique result of having a Tore Anderson on our committee, who was also responsible for a small microwave company.

Another area where we were a bit unique was in the matter of having exhibits at our annual Symposia. The Symposia started very early and their history is covered in a paper in the September 1983 issue of the *TRANSACTIONS* devoted to the Cumulative Index of the MTT Symposia. Originally, the idea was that the Symposia would alternate between the East and the West coasts of the U.S., and it has pretty well stayed with that tradition, although it deviates occasionally when we stop in Chicago or Colorado. But back in the mid-1960's, when finances were getting tight, there was some discussion as to the possibility of having paid exhibits at the Symposia to help defray

expenses. The discussion was carried on at many AdCom meetings, and initially there was great opposition. I was one of those who opposed the idea vigorously and to the bitter end. I was concerned that the Symposia would lose some of their flavor and become industry/sales oriented. Finally, however, the vote was taken to have the exhibits. They started modestly in 1972 in Arlington Heights, outside Chicago. As it turned out, they have proven to be very profitable for the Society, but there is no question that it has altered the tone of the Symposia. The fact remains, however, that the Symposium is the highlight of the Society year and perhaps, with exhibits, the industry year.

In the early days, there was a constant effort to increase the membership, but although the effort continues to this day, the effort is more slanted towards keeping the membership interested and involved. For example, we have a National Lecturer who travels around the country and around the world, giving lectures to the local chapters. This gives the local chapters an opportunity to hear an eminent microwave individual talk on a topic of current interest. We also have a number of awards. The Microwave Prize is usually given annually for the best paper appearing on a microwave subject in our publications; we also have an annual Applications Award, and recently there has been added a Distinguished Service Award. Our most eminent award is the Microwave Career Award.

Like any society, ours is always looking to the future for new areas of technology, new opportunities, new innovations. But coupled with that is the concern for the historical roots of the technology. This has been manifested by the Historical Collection and Annual Exhibit that was started in 1980 and has been growing steadily ever since.

I have included several tables to help identify some of the key contributors to the MTT-S AdCom and its activities over the years.

For anyone interested in more details of our history, I refer you to the ongoing, AdCom-by-AdCom history appearing in our *Newsletter*.

TABLE I
NATIONAL ADMINISTRATIVE COMMITTEE

<i>Chairmen</i>	
1952-1953	BEN WARRINER
1953-1954	ANDRE G. CLAVIER
1954-1955	WILLIAM W. MUMFORD
1955-1956	ALFRED C. BECK
1956-1957	HERBERT F. ENGELMANN
1957-1958	WILBUR L. PRITCHARD
1958-1959	THEODORE S. SAAD
1959-1960	ARTHUR A. OLINER
1960-1961	KIYO TOMIYASU
1961-1962	TORE N. ANDERSON
1962-1963	SEYMOUR B. COHN
1963-1964	DONALD D. KING
1964-1965	HELMUT ALTSCHULER
1965-1966	EUGENE N. TORGOW
1966-1967	SAUL W. ROSENTHAL
1968	RUDOLF E. HENNING
1969	LEO YOUNG
1970	JOHN H. BRYANT
1971	SEYMOUR OKWIT

TABLE I (Continued)

<i>Presidents</i>	
1972	ALVIN CLAVIN
1973	JOHN B. HORTON
1974	ROBERT A. RIVERS
1975	H. WARREN COOPER III
1976	GEORGE P. RODRIGUE
1977	LAWRENCE F. WHICKER
1978	HAROLD SOBOL
1979	DON PARKER
1980	STEPHEN F. ADAM
1981	FRED ROSENBAUM
1982	RICHARD A. SPARKS
1983	CHARLES T. RUCKER
1984	H. GEORGE OLTMAN

TABLE II
HONORARY LIFE MEMBERS

ANDRE G. CLAVIER	1894-1972
DONALD D. KING	1919-1984
GEORGE C. SOUTHWORTH	1890-1972
ALFRED C. BECK	
SEYMOUR B. COHN	
WILLIAM W. MUMFORD	
AUTHUR A. OLINER	
THEODORE S. SAAD	
KIYO TOMIYASU	
LEO YOUNG	

TABLE III
NATIONAL LECTURERS

1967	ARTHUR A. OLINER
1968	LEO YOUNG
1969	RICHARD W. DAMON
1970	HAROLD SOBOL
1971	CARL BLAKE
1972	THEODORE S. SAAD
1973	JOHN L. ALLEN
1974	SEYMOUR OKWIT
1975	ROBERT W. BEATTY
1976	FRED STERZER
1977	JOHN M. OSEPCHEK
1978	CHARLES A. LIECHTI
1979	JAMES C. WILTSE, JR.
1980	ROBERT A. PUCEL
1981	FERDO IVANEK
1982	JOSEPH A. GIORDMAINE
1983	STEPHEN F. ADAM

TABLE IV
MICROWAVE CAREER AWARD

1973	WILLIAM W. MUMFORD
1974	HAROLD A. WHEELER
1975	HENRY J. RIBLET
1976	JOHN R. WHINNERY
1977	ERNST WEBER
1978	A. GARDNER FOX
1979	SEYMOUR B. COHN
	WERNER J. KLEEN
1980	KIYO TOMIYASU
1981	ARTHUR OLINER
	AKIO MATSUMOTO
1982	MARION E. HINES
1983	JOHN R. PIERCE

TABLE V
MICROWAVE PRIZE WINNERS

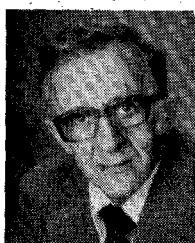
1955	HERMAN N. CHAIT, NICHOLAS G. SAKIOTIS
1956	ROBIN I. PRIMICH
1957	HAROLD SEIDEL
1958	LADISLAS GOLDSTEIN
1959	BERT A. AULD
1960	A. F. HARVEY
1961	GEORGE MATTHAEI
1962	LEONARD LEWIN
1963	LEO YOUNG
1964	SEYMOUR B. COHN
1965	HENDRIK BOSMA
1966	ARTHUR OLNER
1967	ROBERT WENZEL
1968	WILLIAM GABRIEL
1969	JOHN D. RHODES
1970	WILLIAM J. EVANS
1971	MARION E. HINES
1972	HARRISON E. ROWE, DALE T. YOUNG
1973	W. RICHARD SMITH, HENRY M. GERARD, WILLIAM R. JONES
1974	CHARLES A. LIECHTI, ROBERT L. TILLMAN
1975	TULLIO E. ROZZI, WOLFGANG F. G. MECKLENBRAUR
1976	ROBERT A. PUCEL, DANIEL MASSE, RICHARD F. BERA
1977	MARION E. HINES, RONALD S. POSNER, ALLEN A. SWEET
1978	ANTHONY R. KERR, DANIEL N. HELD
1979	ERIC R. CARLSON, MARTIN V. SCHNEIDER, THOMAS F. McMASTER
1980	HATSUAKI FUKUI
1981	KUNIKATSU KOBAYASHI, YOSHIAKI NEMOTO, RISABURO SATO
1982	KAZUHIKO HONJO, YOICHIRO TAKAYAMA
1983	REINMUT K. HOFFMAN, JOHANN SIEGEL

TABLE VI
MICROWAVE APPLICATIONS AWARDS

1973	EDWARD G. CRISTAL
1974	DEAN F. PETERSON III
	PHILIP H. SMITH
1975	JOSEPH F. WHITE
1976	MARTIN G. WALKER
1977	STEPHEN I. LONG
1978	DALE H. CLAXTON
1979	ERWIN F. BELOHOUBEK
1980	JULIUS LANGE
1981	CHARLES R. BOYD, JR.
1982	LES BESSER
1983	PAUL J. MEIER

TABLE VII
DISTINGUISHED SERVICE AWARD

1983	THEODORE S. SAAD
1984	ALVIN CLAVIN



Theodore S. Saad (S'41-A'45- SM'54-F'65) has been working as a microwave engineer from the time he graduated from M.I.T. in 1941 to the present, except for a six-month period, immediately after graduation. His main efforts have been in the design and development of passive microwave components. For this work, he has obtained 16 patents. He spent four years at the M.I.T. Radiation Laboratory as a research associate, four years at the Submarine Signal Company, four years at Microwave Development

Laboratories as Vice President and Chief Engineer, and a year at Sylvania. In early 1955, Mr. Saad became co-Founder, President, and Chairman of the Board of Sage Laboratories, Inc., which position he still holds. In

1958, Mr. Saad was a co-Founder of Horizon House Microwave Inc., which publishes *The Microwave Journal*. He was also a co-Founder of Artech House, which publishes technical books. He is presently a consulting editor of *The Microwave Journal*.

Mr. Saad has been a member of the National Administrative Committee of the IEEE Microwave Theory and Techniques Society since 1953. He has been Editor of the TRANSACTIONS ON MICROWAVE THEORY AND TECHNIQUES, Editor of the *Newsletter*, and Vice-Chairman and Chairman of the National Administrative Committee. He was the 1972 National Lecturer. He was made an Honorary Life Member in 1973 and received the Distinguished Service Award in 1983. He is the MTT-S Historian and Curator of its Historical Collection. He is also an active member of the IEEE and is presently Chairman of the Public Information Committee and Treasurer of Electro '84.