



PANEL SESSIONS

Panel I: Issues in Government Funding of Microwave R&D

Date: Monday, June 2, 1986, Noon to 1:30 pm
Location: Constellation A Room, Hyatt Regency Hotel
Organizer: R. A. Moore, PACE Representative, Westinghouse Electric Corp.
Moderator: Joseph A. Saloom, M/A-COM
Panelists: E. C. Maynard, Jr., Director VHSIC & Electron Devices, Pentagon
Sven Roosild, DARPA/DSO
Frank E. Welker, RADC
Hans Hieslmair, USALABCOM
James A. Cauffman, Office of Chief of Naval Research

Abstract:

Pressures on federally funded microwave R&D come from diverse sources such as major systems requirements, from within the microwave community, and from competition for limited available funds from other major thrusts. These can include the need for low cost active aperture modules, a VHSIC-like microwave program, and the advent of SDI. The title for the session has been made broad purposely so that each panel member from the three services, DARPA, and the VHSIC Office can dwell on the issues felt most significant to their area of activity. After a brief presentation by each of the panel members the floor will be open for audience questions and discussion.

Panel II: Manufacturing MIC Assemblies for Performance, Reliability, and Profit

Date: Monday, June 2, 1986, Noon to 1:30 pm
Location: Constellation B Room, Hyatt Regency Hotel
Organizers: Chuck Buntschuh, Narda Microwave Corp.
Rudy Henning, University of South Florida, Tampa
Moderator: Chuck Buntschuh, Narda
Panelists: Bert Berson, ACRAN, Inc.
Gerald DiPiazza, M/A-COM
Gary Lerude, Texas Instruments
Walter Schwartz, Loral Electronic Systems

Abstract:

Advances in MIC design and technology are responding to the market pressure for more functions in smaller packages. New advances, led by MMIC developments are, in fact, launching us into a new era of miniaturization.

However, in spite of the elimination of connector interfaces and shortened line-lengths, MICs have generally failed to live up to the promise of improved performance. Also, the track record on MIC reliability leaves much to be desired, and their costs tend to exceed the threshold of pain for both supplier and customer.

How will the MIC industry grow and prosper in the face of these hurdles? What roles will monolithics, robotics, MIL-STD-1772 play? Do we need new organizational approaches, standardization of products, technical breakthroughs?

The panel will address these issues from the vantage points of the MIC designer, the manufacturer, and the customer.



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Panel III: Millimeter Wave System Development

Date: Monday, June 2, 1986, 8:00 pm to 9:30 pm

Location: Constellation A Room, Hyatt Regency Hotel

Organizers: J. J. Whelehan, Eaton Corp.
H. Paczkowski, Eaton Corp.

Abstract:

The future trends of millimeter wave technology and their system applications will be discussed by representatives from both government and industry. EW, smart weapons, radar, and imaging techniques are representative of the areas that will be discussed, as well as the technology drivers. The role of government versus industry in providing the stimulus to develop these emerging areas will also be discussed.

Panel IV: Millimeter Wave Integrated Circuit Sources

Date: Wednesday, June 4, 1986, 8:00 pm to 9:30 pm

Location: Constellation A Room, Hyatt Regency Hotel

Chairmen: H. J. Kuno, Hughes Aircraft Company
D. W. Maki, General Electric Company

Panelists: H. Q. Tserng, Texas Instruments
Y. Shih, Hughes
W. Courtney, MIT Lincoln Laboratory
P. M. Smith, General Electric
B. Bayraktaroglu, Texas Instruments
C. M. Krowne, Naval Research Laboratory
C. O. Bozler, MIT Lincoln Laboratory

Abstract:

The applicability of a variety of solid state devices to power generation at millimeter wave frequency for integrated circuit applications will be discussed. The panel members will give the current status of various devices in terms of power and efficiency as a function of frequency and will give predictions as to potential improvements.



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Panel V: GaAs Microwave Monolithic Integrated Circuits From Research Lab to Production

Date: Wednesday, June 4, 1986, 8:00 pm to 9:30 pm
Location: Constellation B Room, Hyatt Regency Hotel
Organizer: Krishna K. Agarwal, Rockwell International Corp.
Panelists: Allen F. Podell, Pacific Monolithics
George Kaelin, Rockwell Microelectronics R&D Center
Jim Schellenberg, Hughes Torrance Research Center
Phil Terzian, Narda Microwave Corp.
Jim Oakes, Raytheon Special Microwave Development

Abstract:

Rapid advances in GaAs material, microwave devices, and fabrication technology have been reported in recent years. These have led to microwave monolithic integrated circuits with increasing complexities. What level of integration is self defeating for performance, yield, and versatility in volume production? What inputs from research labs are necessary to production? What changes in chip design must be made due to power supply, package, and cost for use by the customer? These are some of the issues in the MMIC producer's mind. Panel members from several MMIC research and production centers will present their experiences—do's and don't's—in the transition of MMIC chips from research laboratory to production.

Panel VI: Microwave GaAs FET and MMIC Reliability

Date: Thursday, June 5, 1986, 8:00 pm to 10:00 pm
Location: Constellation E&F Rooms, Hyatt Regency Hotel
Organizers: Frank Sullivan, Raytheon Company, Missile Systems Division
Barry Spielman, Naval Research Lab
Moderator: Kenneth J. Russell, Jet Propulsion Laboratory
Panelists: W. T. Anderson, Naval Research Laboratory
E. A. Doyle, Rome Air Development Center
D. J. LaCombe, General Electric
T. Saito, Fujitsu Limited
W. J. Slusark, RCA Laboratory
R. N. Wallace, Raytheon Company
R. T. West, Avantek

Abstract:

The panel will address the current reliability database for microwave GaAs FETs and MMICs, and discuss the technology status of the critical device parameters.