

1991 Symposium



Panel Sessions

Panel Sessions

PSA: Packaging: Is there a need for domestic suppliers?

Date: Tuesday, June 11, 1991
Time: 12:00–1:30 p.m.
Location: Room 309—Hynes Convention Center
Sponsor:
Organizers: B. Berson, Berson Associates
F. Rosenbaum, Washington University
Panelists: Alan Buck, Kyocera
Mike Ehman, Alcoa Electronic Packaging
Gary Holz, Holz Industries

Abstract:

The purpose of this panel is to assess the state of package availability. This will include the availability of catalogue packages as well as issues related to procurement of custom packages. We will explore the possibilities of making standard packages that are widely useable.

PSB: GaAs MMICs for Consumer Applications

Date: Tuesday, June 11, 1991
Time: 12:00–1:30 p.m.
Location: Room 310—Hynes Convention Center
Sponsors: MTT-6 Microwave & Millimeter Wave ICs
MTT-16 Microwave Systems
Organizers: Fazal Ali, Pacific Monolithics
Doug Maki, M/A-COM, Inc.
Panelists: R. Gilmore, Qualcomm
P. Ho, Pacific Monolithics
E. Lissel, Volkswagen AG
R. Malczyk, Continental Microwave Technology Ltd.
M. Pettus, Metricom
C. Snapp, Avantek

Abstract:

The utilization of MMICs in commercial products is rising dramatically with applications in areas such as consumer electronics, communications and computers. This increase is both made possible by technology developed by military module programs, the traditional driver of MMIC research, and made necessary due to the downturn of this same military market. Past panels have dealt thoroughly with the circuitry under development for commercial applications and their projected required volume in production. In this panel discussion, we will bring together representatives from the user community of commercial MMICs, a group mostly unimpressed by the novelty of the circuitry and the complexity of the technology. We plan to deal with the requirements of quality, price, electrical performance, ease of use of the finished product and reliability that will allow MMICs to compete with traditional technology which is already well down the learning curve, mature and available. Commercial products we will be discussing include but are not limited to: cellular radio/telephone, direct broadcast satellite, wireless cable, automotive radar and local area networks.

Panel Sessions

PSC: GaAs MMIC Insertion: How Important is Foundry Transportability of Designs

Date: Wednesday, June 12, 1991
Time: 12:00–1:30 p.m.
Location: Room 309—Hynes Convention Center
Sponsors: MTT-6 Microwave & Millimeter Wave ICs
MTT-16 Microwave Systems
Organizers: Fazal Ali, Pacific Monolithics
Gailon Brehm, Texas Instruments
Mike Kim, TRW
Moderators: Fazal Ali and Mike Kim
Panelists: Barry Allen, TRW
Gailon Brehm, Texas Instruments
Sanjay Moghe, Northrup DSC
Frank Paik, Hittite Microwave
Al Patz, Triquint
Allen Podell, Pacific Monolithics
Jaime Tenedorio, Harris Microwave Semiconductor

Abstract:

As GaAs MMICs are being inserted into real systems, the issue of reliable foundry sourcing becomes critical to both design and system houses whether or not they have internal foundry capability. Clearly, design and system houses that depend solely on outside foundries are subject to basic survival risk, and second sourcing is needed to reduce the risk although at the expense of cost and logistical difficulties. Also, system houses that have internal foundry capability often have stringent insertion commitments requiring second sourcing to back up their internal fabrication capability. In addition to these factors, changes in both economic and political climate may be impacting the GaAs MMIC insertion business. The panel discussions will address both technical and business issues surrounding the foundry transportability of MMIC designs.

Panel Sessions

PSD: Concurrent Design Engineering for Electronic Design Automation

Date: Wednesday, June 12, 1991
Time: 12:00–1:30 p.m.
Location: Room 310—Hynes Convention Center
Sponsor:
Organizers: Jitendra Goel, TRW
Ravender Goyal, Mentor Graphics Corp.
Panelists: Garry Langelier, Mentor Graphics
Peter Parish, EEsof
Barry Perlman, US LABCOM
Ulrich Rhode, Compact Software
Vittorio Rizzoli, University of Bologna, Italy
Jim Solomon, Cadence

Abstract:

Today, a wide range of design tools are available to microwave designers. These include a variety of circuit simulation and analysis packages—frequency domain, time domain, mixed mode, analog and digital, filter design, system analysis and other home grown simulators; schematic capture; layout tools for hybrid and multi-layer monolithics and other placement and routing tools, cell libraries for catalog discrete components and foundry macro models, thermal analysis and reliability analysis tools; and finally mechanical package design and documentation tools.

Interfacing data from one tool to the other is a nightmare. This is especially true for microwave design, as a simple change in a chip can result in a significant change in the overall module performance. Hence, concurrent design engineering using an object-oriented data base working under an open framework environment is becoming necessary. Then a variety of different tools can be integrated under one framework allowing user transparent data transfer from one tool to another. This will allow a change in design at the component level to be automatically propagated to the system level design.

The purpose of this panel session is to discuss the present status and availability of concurrent design engineering and framework technology and how this technology can be helpful in reducing the design cycle time for electronic sub-system, module, component and IC design.

Panel Sessions

PSE: Is 100% RF-On-Wafer Testing Necessary for MMIC Production?

Date: Thursday, June 13, 1991
Time: 12:00–1:30 p.m.
Location: Room 309—Hynes Convention Center
Sponsor:
Organizer: Tom Miers, Ball Aerospace
Panelists: Ching-der Chang, Hughes
Jean-Pierre Lanteri, M/A-COM
John McNeilly, Raytheon
Bill Mitchell, Texas Instruments
Terry Wilson, Triquint

Abstract:

With the high volume, low cost objective of producing GaAs monolithic microwave integrated circuits (MMICs), testing plays a critical part from both the cost and production rate aspects. The objective of this panel session is to examine the cost, rate, yield and quality aspects of the different testing philosophies. Some of the questions that will be addressed are:

- Is DC testing needed at all?
- Is 100% microwave testing necessary?
- Is only on-wafer microwave testing adequate?
- Is sample chip testing in fixture required?

PSF: Microwave Hardware Description Language: What Is It? Why Do We Need It?

Date: Thursday, June 13, 1991
Time: 12:00–1:30 p.m.
Location: Room 310—Hynes Convention Center
Sponsor:
Organizers: Lorna Carmichael, US Army LABCOM ETDL
Barry Perlman, US Army LABCOM ETDL
Panelists: Dave Barton, Intermetrics Inc.
Robert Bierig, B&B Technology
William Gaydos, ITT Avionics
Walter Ghijsen, Compact Software
Mitch Mlinar, EEsof Inc.
Ward Titus, Hittite
Russell Vacante, CECOM CED

Abstract:

The MIMIC Hardware Description Language (MHDL) is a new DARPA/Tri-Service initiative, intended to impact the entire design process. The largest impact will occur in the design of systems and components; highly integrated design automation tools will be provided. The objective of this panel session is to inform the audience what MHDL is and why the development of MHDL is necessary. Speakers from various disciplines in the community will explain why MHDL is necessary and the usefulness of such a language.