MTT-S Rump Sessions

RSA: High Efficiency MMIC Power Amplifiers—Watt's Up?

Date: June 15, 1993

Time: 7:30 PM–9:30 PM

Location: Marquis Ballroom, Salon I

Sponsor: MTT-6 Microwave and mm-Wave Integrated Circuits

Organizers: Frank Sullivan, Raytheon
Fazal Ali, Westinghouse-ATL

Moderator: Marv Cohn, Westinghouse-ATL

Speakers: Steve LeSage, Raytheon
Jim Schellenberg, Schellenberg Associates
Dale Dawson, Westinghouse-ATL
Burhan Bayraktaroglu, Wright-Patterson Lab
Paul Saunier, Texas Instruments
Inder Bahl, ITT-GTC
Steven Cripps, Hywave Associates

Abstract:

Significant progress has been made in the design and development of high power, high efficiency GaAs MMIC amplifiers. This rump session will focus on design techniques and resulting performance for state-of-the-art MMIC power amplifiers, and compare relative advantages of MESFETs, P-HEMTs and HBTs.

Rump Sessions

RSB: GPS/GLONASS: State-of-the-Art and Applications

Date: June 15, 1993

Time: 7:30 PM–9:30 PM

Location: Marquis Ballroom, Salon II

Sponsor: MTT-16 Microwave Systems

Organizers: Holger H. Meinel,
Deutsche Aerospace AG, Germany
Bernhard Geller, COMSAT Corp.
Thomas Jacob,
Deutsche Aerospace AG, Germany

Abstract:

Positioning on the move is a task that is often required in such applications as offshore positioning, airborne photogrammetry and land-based surveys. GPS and GLONASS were designed primarily for military mobile positioning needs, and they are consequently ideally suited for these types of applications.

However, new commercial microwave applications, especially in the area of traffic control and guidance, including autonomous route guidance for cars and dispatching systems for trucks, as well as the avionics market, including ADS, require positioning information for operation. Autonomous positioning will have a profound effect on air traffic control and management worldwide over the next decade.

Using GPS and GLONASS positioning while moving can be achieved in a variety of ways. Single point pseudo range positioning leads to an accuracy of 30 to 100 m, while differential pseudo range positioning exhibits an accuracy of less than 5 m.

Today, GPS/GLONASS systems are heavily influencing the development of commercial microwave applications (a mobile car communication system requires a positioning mode, or does it?). With this in mind, this rump session looks at this well-developed but little-known subject. It will discuss state-of-the-art performance and development trends in the area of GPS/GLONASS navigation systems, as well as further application possibilities.

Rump Sessions

RSC: Commercial and Consumer Markets, and Application of Microwave Digital and DSP Circuits

Date: June 15, 1993

Time: 7:30 PM–9:30 PM

Location: Marquis Ballroom, Salon III

Sponsor: MTT-9 Digital Signal Processing

Organizer: Robert Bayruns, Anadigics

Panelists: Anil Bedi, Triquint
Mark McDonald, National Semiconductor
David Babin, Motorola
Steve Anderson, Qualcomm

Abstract:

The purpose of this session is to bring together panelists from several different fields who are users of microwave digital circuits. Each panelist will address present and potential market needs. Performance and applications of commercially available digital microwave circuits also will be discussed.

RSD: Computer-Based Education and Corporate Training

Date: June 15, 1993

Time: 7:30 PM–9:30 PM

Location: Salon IV

Organizer: Magdy Iskander, University of Utah

Speakers: Harold J. Bailey, Bloomsburg University
Zvonko A. Fazarinc, Hewlett-Packard
Robert E. Collin, Case Western Reserve University
Magdy F. Iskander, University of Utah
Joseph Tront, Virginia Polytechnic Institute and State University

Abstract:

It is generally agreed that computers and software tools provide unique opportunities for boosting engineering education and corporate training. Visualization, animation, simulation, self-paced learning, and the ability to mimic laboratory experiments are among the most cited benefits of a computer-based education. The CD-ROM technology promises an effective mechanism for distributing the developed multimedia instructions. Therefore, the procedure for developing exciting computer-based engineering education and corporate training seems to be straight-forward, and the expected benefits seem to be guaranteed.

This panel session will focus on some aspects of the development of computer-based education, which include the role of software and multimedia lessons in modern engineering education/training, including examples of available software and interactive video lessons; procedures for converting standup courses into multimedia ones; educational needs at universities vs. requirements of industrial training; and mechanisms for effective integration of software and multimedia tools in teaching and corporate training.