

Vol. 51 • No. 8

August 2008

Microwave Journal

ELECTRONICA
005

www.mwjjournal.com

**Satellite and
mm-wave
Applications**

The New Radio Frontier

**50 Years of
Millimeter-waves**

**Sampler/Pulser
Exceeds 100 GHz**




horizon house
Founded in 1958

Microwave Journal

AUGUST 2008 VOL. 51 • NO. 8

FEATURES

COVER FEATURE: THEN AND NOW

22 Millimeters—The New Radio Frontier

Archie W. Straiton and Charles W. Tolbert, Electrical Engineering Research Laboratory, University of Texas

First published in January of 1960, this article described the unique characteristics of millimeter radio waves in evaluating their use in specific applications

28 50 Years of Millimeter-waves: A Journey of Development

Wolfgang Menzel, Institute of Microwave Techniques, University of Ulm

Past, present and future advances in the development of mm-wave technologies

TECHNICAL FEATURES

64 An Automatic Error Compensation Method for the Feedback Loop in Adaptive DPD Systems

Jianing Zhao, Jianyi Zhou, Jianfeng Zhai, Xiao Liang and Wei Hong, Southeast University

Description of the error items of the modulation and demodulation in a feedback loop in determining the compensation and correction algorithm

86 Monolithic Sampler/Pulser Architecture Exceeds 100 GHz

Joel M. Libove, Brendan R. Illingworth and Steven J. Chacko, Furaxa Inc.; Hal L. Levitt, Naval Research Laboratory

Implementation of a sampling and pulse generating technology in InP, SiGe, gallium arsenide and complementary metal-oxide semiconductor integrated circuit processes

SPECIAL REPORT

106 A Microwave Journey, Part II: The 1960s

David Vye, Editor, Microwave Journal

Second in a multi-part series dedicated to a decade-by-decade breakdown of the history of *Microwave Journal*

Microwave Journal (USPS 396-250) (ISSN 0192-6225) is published monthly by Horizon House Publications Inc., 685 Canton St., Norwood, MA 02062. Periodicals postage paid at Norwood, MA 02062 and additional mailing offices.

Photocopy Rights: Permission to photocopy for internal or personal use, or the internal or personal use of specific clients, is granted by *Microwave Journal* for users through Copyright Clearance Center provided that the base fee of \$5.00 per copy of the article, plus \$1.00 per page, is paid directly to the Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923 USA (978) 750-8400. For government and/or educational classroom use, the Copyright Clearance Center should be contacted. The rate for this use is 0.03 cents per page. Please specify ISSN 0192-6225 *Microwave Journal* International. *Microwave Journal* can also be purchased on 35 mm film from University Microfilms, Periodic Entry Department, 300 N. Zeeb Rd., Ann Arbor, MI 48106 (313) 761-4700. Reprints: For requests of 100 or more reprints, contact Wendelyn Bailey at (781) 769-9750.

POSTMASTER: Send address corrections to *Microwave Journal*, PO Box 3256, Northbrook, IL 60065-3256 or e-mail mwj@omeda.com. Subscription information: (847) 291-5216. This journal is issued without charge upon written request to qualified persons working in that part of the electronics industry, including governmental and university installation, that deal with VHF through light frequencies. Other subscriptions are: domestic, \$120.00 per year, two-year subscriptions, \$185.00; foreign, \$200.00 per year, two-year subscriptions, \$370.00; back issues (if available) and single copies, \$10.00 domestic and \$20.00 foreign. Claims for missing issues must be filed within 90 days of date of issue for complimentary replacement.

©2008 by Horizon House Publications Inc.



Horizon House also publishes *Telecommunications*®

Posted under Canadian international publications mail agreement #0738654

