



FOUNDED 1916

EXECUTIVE

Robert B. Kisor
Editorial Vice-President
LeRoy E. DeMarsh
Chairman/Board of Editors
Frederick C. Motts
Executive Director

JOURNAL STAFF

Jeffrey Friedman
Editor/Publisher
Mathew V. Kuriakose
Production/Graphics Supervisor
MaryAnn Frusciantie
Production Editor
Jermaine Hall
Assistant Editor
Marilyn Waldman
Advertising/Editorial/Program Coordinator

ENGINEERING

Carlos V. Girod, Jr.
Director of Engineering
Mark S. Hyman
Staff Engineer

MARKETING

John Izzo, Jr.
Director of Marketing

COVER PHOTO:

The Empire State Building aglow in the center of New York City, site of the 139th SMPTE Conference and Exhibit, November 21-24, 1997.

Printed in the USA

SMPTE Journal®

VOL. 106, NO. 11

NOVEMBER 1997

MESSAGE FROM THE PRESIDENT

David L. George760

MESSAGE FROM THE EXECUTIVE DIRECTOR

Frederick C. Motts761

TECHNICAL PAPERS

Elements of a New Authoring System for Digital Video Disk (DVD)
Kenji Sugiyama and Neil Neubert762

A Prototype VLSI Solution for Digital Terrestrial TV Receivers
Conforming to the DVB-T Standard
*F. Scalise, M. Balanza, N. Chauve, P. Combelles, P. Penard,
C. Del Toso, D. Hepper, G. Masera, C. Hernandez, F. Nicolas,
D. Le Goff, and P. Robertson*768

Advanced Motion Estimation and Motion Compensated Deinterlacing
E. B. Bellers and G. De Haan777

A New Approach to Transporting Program Content
Paul Donaldson and Fred Huffman787

POINT OF VIEW PAPER

Issues to be Considered—The Implementation of a Digital Distribution
System by the Commercial Broadcast Networks
Brent L. Stranathan795

SMPTE REPORTS

139th SMPTE Technical Conference and Exhibit799
32nd SMPTE Advanced Motion Imaging Conference805
Second Annual Spring Conference, Los Angeles, Calif.805
Philadelphia Section Presents Panel Discussion806

SMPTE NEWS AND DEPARTMENTS

Section Meetings809
Section Calendar809
Calendar810
News811
Obituaries811
New Products812
Engineering News814
Professional Services815
Classified816
Application for Membership839
Application for Sustaining Membership840

SMPTE NEWS AND DEPARTMENTS

Proposed SMPTE Practices818

*RP 194, Film Negative Cutter's Conform List; RP 195, Use of the Reference Mark in
Manufacturer-Printed Latent Image Key Numbers for Unambiguous Film Frame Identification;
RP 197, Film-to-Video Transfer List; and RP 198, Bit-Serial Digital Checkfield for Use in
High-Definition Interfaces*

SMPTE Journal (ISSN: 0036-1682) published monthly by the Society of Motion Picture and Television Engineers, 595 West Hartsdale Ave., White Plains, NY 10607. Periodicals postage paid at White Plains, N.Y., and at additional mailing office. Copyright © 1997 by the Society of Motion Picture and Television Engineers, Inc. All rights reserved. Printed in the U.S.A. No part of this issue may be reproduced without written permission of the publisher. Statements and opinions expressed in articles or editorials in the *SMPTE Journal* are expressions of contributors and do not necessarily represent the policies or opinions of the Society. Advertisements appearing in this publication are the sole responsibility of the advertiser. Subscription rates: SMPTE members, \$20.00 included in membership dues; nonmembers, U.S., \$115.00; elsewhere, \$125.00; airmail surcharge in addition to nonmember rates are: Europe \$50.00, Asia \$65.00. Single copy, \$10.00. MEMBERSHIP in SMPTE is available according to qualifications at the following annual dues: Active Member, \$95.00; Student Member, \$25.00. All members receive the *SMPTE Journal* as part of membership.

POSTMASTER: Send change of address to *SMPTE Journal*, 595 West Hartsdale Ave., White Plains, NY 10607-1824.