



**EXECUTIVE**

David L. George  
*Editorial Vice-President*

Frederick M. Remley  
*Chairman/Board of Editors*

Lynette Robinson  
*Executive Director*

**JOURNAL STAFF**

Jeffrey Friedman  
*Editor/Publisher*

Joyce R. Hurwitz  
*Senior Editor*

Carol King  
*Associate Editor/Public Relations*

Mathew V. Kuriakose  
*Graphics/Production Supervisor*

MaryAnn Frusciante  
*Production Coordinator*

Marilyn Waldman  
*Advertising/Editorial/Program  
Coordinator*

**MARKETING/EXHIBITS**

Alan Ehrlich  
*Marketing/Exhibits Manager*

**ENGINEERING**

Sherwin H. Becker  
*Director of Engineering*

Mark S. Hyman  
*Staff Engineer*



Advertising Representative: Debby Crane,  
Crane Marketing, Inc., 462 Farview Ave.,  
Paramus, NJ 07652. Phone (201) 967-  
9838; Fax (201) 967-1977.

# SMPTE Journal

VOL. 102, NO.2

February 1993

**ARTICLES**

New 8-14 Channel Coding for High-Density Recording  
*Yoshinobu Oba and Toshihiro Uehara*..... 114

Digital EDTV — An NTSC-Compatible Widescreen EDTV System  
Employing Digital Compression  
*Hee-Yong Kim and Sai Naimpally*..... 119

Digital HDTV Compression Techniques for Terrestrial Broadcasting  
*William Y. Zou*..... 127

Digital Audio Synchronization in a Mixed-Media Plant  
*Charles Meyer*..... 132

NVRSC: The Design of a Graphical Interface for a Router  
Switch Controller  
*Neill Allen*..... 136

**SMPTE NEWS AND DEPARTMENTS**

Section Meetings.....	141
Engineering Calendar.....	144
Engineering News.....	145
Obituaries.....	146
News.....	147
Errata.....	147
New Products.....	148
Classified.....	150
Professional Services.....	151
Information for Authors.....	152
Application for Membership.....	153

**STANDARDS AND RECOMMENDED PRACTICES**

Approved American National Standards.....	156
<i>ANSI/SMPTE 125M-1992, Television — Component Video Signal 4:2:2 — Bit-Parallel Digital Interface; and ANSI/SMPTE 238M-1992, Television Analog Recording — 1/2-in Type L — Tapes and Cassettes</i>	
Proposed SMPTE Standards.....	174
<i>SMPTE 259M, Television — 10-Bit 4:2:2 Component and 4f<sub>sc</sub> NTSC Composite Digital Signals — Serial Digital Interface; and SMPTE 261M, Television — 10-Bit Serial Digital Television Signals: 4:2:2 Component and 4f<sub>sc</sub> NTSC Composite — AMI Transmission Interface</i>	

*SMPTE Journal* (ISSN: 0036-1682) published monthly by the Society of Motion Picture and Television Engineers, 595 West Hartsdale Ave., White Plains, NY 10607. Second-class postage paid at White Plains, N.Y., and at additional mailing office. Copyright © 1993 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., \$75; elsewhere, \$85.00; airmail surcharge in addition to nonmember rates are: Europe \$50.00, Asia \$65.00. Single copy, \$8.00. MEMBERSHIP in SMPTE is available according to qualifications at the following annual dues: Active and Associate, \$65.00; Student, \$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.