

Society of Motion Picture and Television Engineers

38<sup>th</sup> SMPTE Advanced Motion  
Imaging Conference  
2004

“New Initiatives in Motion Imaging”

February 26-28, 2004  
Chicago, Illinois, USA

**Printed from e-media with permission by:**

Curran Associates, Inc.  
57 Morehouse Lane  
Red Hook, NY 12571  
[www.proceedings.com](http://www.proceedings.com)

ISBN: 978-1-60423-807-5

## **TABLE OF CONTENTS**

### **ACQUISITION SYSTEMS PART I (Lenses and Imagers)**

|  |    |
|--|----|
| <b>Development Status of CMOS 1920x1080 Imaging System-on-Chip for 60p HDTV (Paper)</b> .....        | 1  |
| <i>Lester Kozlowski, M. Loose, G. Rossi, Y. Huang, P. Kulkarni, and G. Chow</i>                      |    |
| <b>Development Status of CMOS 1920x1080 Imaging System-on-Chip for 60p HDTV (Presentation)</b> ..... | 14 |
| <i>Lester Kozlowski, M. Loose, G. Rossi, Y. Huang, P. Kulkarni, and G. Chow</i>                      |    |
| <b>Will 1-Imager Cameras Ever Be Good Enough</b> .....   | 38 |
| <i>Peter Centen</i>  |    |

### **ACQUISITION SYSTEMS PART II (Processing Systems)**

|  |     |
|--|-----|
| <b>The Evolution of Non-Linear Acquisition - One Perspective (Paper)</b> .....           | 72  |
| <i>Noriaki Ugo, Stuart English &amp; Philip Livingston</i>                               |     |
| <b>The Evolution of Non-Linear Acquisition - One Perspective (Presentation)</b> .....    | 83  |
| <i>Noriaki Ugo, Stuart English &amp; Philip Livingston</i>                               |     |
| <b>HD-TRIAX: Pushing the Limits of Technology</b> .....                                  | 135 |
| <i>Peter Centen</i>  |     |
| <b>Development of the Precision Focus Assistance System for the HDTV Zoom Lens</b> ..... | 159 |
| <i>Masao Wada</i>  |     |

### **QUALITY AND MEASUREMENT SYSTEMS**

|   |     |
|---|-----|
| <b>MPEG-1, MPEG-2 and Windows Media Video Codec Comparisons Using MSE Analysis</b> .....      | 169 |
| <i>Praveen K. Aeluri, Vinodh Bojan, Samuel Richie, Arthur Weeks</i>                           |     |
| <b>Image Optimization in Digital Cinema, HD, SD and NTSC</b> .....                            | 185 |
| <i>David F.E. Corley and Shirley Li</i>   |     |
| <b>Broadcast System Monitoring and Troubleshooting Using a Graphical User Interface</b> ..... | 204 |
| <i>Dave Guerrero</i>  |     |

### **THE FILM-ELECTRONIC INTERFACE**

|   |     |
|---|-----|
| <b>4K Digital Intermediates &amp; Compression in a Content Creation Environment</b> ..... | 215 |
| <i>Kenbe Goertzen</i>   |     |
| <b>Film Image Perception and Simulation (Paper)</b> .....                                 | 233 |
| <i>Robert Faber</i>   |     |
| <b>Film Image Perception and Simulation (Presentation)</b> .....                          | 243 |
| <i>Robert Faber</i>   |     |

**Definition, Design and Analysis of Digital Intermediate Systems**..... 265  
*Roger Morton, Kathleen R. C. Gisser, David Long, Michelle Maurer and Chris DuMont,  
Kevin Wheatley and Aviv Yaron*

***DISTRIBUTION ISSUES FOR ADVANCED MOTION IMAGES***

**Six-Gigahertz Coaxial Cable (*Paper*)** ..... 317  
*Steve Lampen*

**Six-Gigahertz Coaxial Cable (*Presentation*)** ..... 329  
*Steve Lampen*

**AUTHOR INDEX**