

Making Do with More: The Next Generation Workflow Explored

Preliminary Symposium Program

Produced in partnership with



Monday, 20 October

09:00

Welcome

Rooms: Salon 1, Salon 2

09:15

Mini-Keynote

“How Come you Always Want More”

Leon Silverman explores the impact of technology that promises to deliver enhanced theatrical and home experience and how it affects the creative, finishing, distribution and archive process. What should filmmaking professionals keep in mind as we contemplate creating content for existing and new platforms?

09:30

Lesson Time

“So Tell Me More About More”

We get schooled in the technical considerations necessary to wrap our heads around resolution, contrast, color, frame rate, screen brightness, and immersive sound. This session provides a nuts and bolts, step-by-step explanation that will serve as the foundation to better understand the topics of the day.

10:30

Break

11:00

Creative Session–Number 1

“What We Want to Do with More”

A panel of filmmakers will explore their views and ideas about the enhanced palette that the new cameras, displays and masters enable. They will talk about tools, techniques and what's missing, to realize their creative vision.

12:30

Lunch

14:00

Creative Session–Number 2

“Doing It with More”

An exclusive preview of *Emma*, one of the first film's made with the notion of enhanced dynamic range, color and resolution in mind is provided in this session. The film's director Howard Lukk and cinematographer Daryn Okada showcase their brilliance and creativity in this film.

16:45

“Listen Up–Immersive Sound”

With the need for elements in 2.0, 5.1, 7.1, Atmos, Auro, and Imax for theater, and the home, sound design and mixing need a creative approach to accommodate the needs of the content, filmmakers, studios and deliveries. Today's immersive formats offer an amazing creative soundscape, but making sure it plays across the diverse landscape of devices and venues becomes equally important. Sound professionals active in television and features will discuss creative options and the challenge of new audio deliverables.

17:25

Break

17:55

Creative Session–Number 3

“Hollywood Top Talent Shares More about More”

This session will feature filmmakers from one of Hollywood's biggest films, who will share insight about their own creative process as they walk through how they see “more” workflows and toolsets influencing, changing and hopefully, enhancing their films.

18:40

Bringing it on Home

“Over a Wire or Over the Top to the Consumer's House We Go”

This session provides a look at how the next-generation consumer experience gets to the consumer right where he lives.

19:10

Wrap-Up

What did we learn? What do we take away and what do we do about it?

This program is subject to change without notice.

2014 Annual Technical Conference Program



2014 ANNUAL TECHNICAL
CONFERENCE & EXHIBITION
HOLLYWOOD, CA.
20-23 October 2014



Tuesday, 21 October

08:30 – 08:45

Welcome and Introduction

Rooms: Salon 1, Salon 2

08:45 – 09:45

Opening Keynote

Chris Fetner (Netflix)

Rooms: Salon 1, Salon 2

09:45 – 10:15

Break

Rooms: Salon 1, Salon 2

10:15 – 12:15

Networked Media in the Facility *Part 1*

Room: Salon 1

Chair: **Al Kovalick** (Media Systems Consulting, USA)

10:15: IP Live Production

Toshiaki Kojima (Sony Corp., Japan); **John Stone** (Sony, U.K.);

Paul N. Gardiner (Sony Europe Ltd., U.K.)

10:45: Next Gen Post-Production Workflows and Enabling Infrastructure

Brinton Miller (Discovery Communications, USA); Ammar Latif (Cisco Systems, USA)

11:15: Generating Synchronous Video Signals From Just Time

J. Patrick Waddell (Harmonic Inc., USA)

11:45: Network Delivered References—Under the Hood and Across the System

Paul Briscoe (Consultant & SMPTE, IEEE, Canada)

Video Compression

Room: Salon 2

10:15: An Adaptive Threshold Selection Technique in Video Compression by Using FHW and Evolutionary Programming

H. Rajasekhar (Jawaharlal Nehru Technological University, India)

10:45: Perceptual Video Quality Analysis for HEVC in a Packet Loss Environment

Bhupender Kumar, Shekhar Madnani, Advait M. Mogre, Shailesh Kumar, and Muneesh Sharma (Interra Systems, India)

11:15: Improving Video Streaming and File Compression Efficiency without Affecting Quality

Yves Faroudja (Faroudja Enterprises, USA)

11:45: State of HEVC Bit Rates in 2014—Comparing HEVC, H.264 and MPEG-2

John Pallett (Telestream, Inc., USA)

12:30 – 14:00

Industry Luncheon

Keynote: **Mark Aitken** (Sinclair)

Room: The Annex

14:15 – 15:45

Networked Media in the Facility *Part 2*

Room: Salon 1

Chair: **Al Kovalick** (Media Systems Consulting, USA)

14:15: Ethernet AVB Standards Overview and Status

Jan Eveleens (Axon, The Netherlands)

14:45: Internet Protocol Networks in the Live Broadcast Plant

Ken Buttle (Grass Valley, USA); **Sara Kudrle** (Grass Valley, a Belden Brand; SMPTE Western Region Governor, USA); **Charles Meyer** (Grass Valley, USA)

15:15: Can COTS Ethernet Switches Handle Uncompressed Video?

Thomas Edwards (Fox Network Engineering & Operations, USA);

Brian Keane (Aperi Corp., USA)

Audio *Part 1*

Room: Salon 2

Chair: **Jerry C. Whitaker** (Advanced Television Systems Committee, USA)

14:15: Cinematic Sound Scene Description and Rendering Control

Charles Robinson and Nicolas Tsingos (Dolby Laboratories, USA)

14:45: Immersive and Personalized Audio: A Practical System for Enabling Interchange, Distribution and Delivery of Next Generation Audio Experiences

Jeffrey Riedmiller, Sripal Mehta, and Nicolas Tsingos (Dolby Laboratories, USA); **Prinyar Boon** (Dolby Europe Ltd., U.K.);

15:15: Object-Based Audio: Opportunities for Improved Listening Experience and Increased Listener Involvement

S. Merrill Weiss (Merrill Weiss Group LLC, USA)

15:45 – 16:15

Coffee Break

Rooms: Salon 1, Salon 2

16:15 – 17:45

Networked Media in the Facility *Part 3*

Room: Salon 1

Chair: **Al Kovalick** (Media Systems Consulting, USA)

16:15: PTP Deployment in Large Networks—Traps and Pitfalls

Nikolaus Kerö (Oregano Systems, Austria); **Thomas Kernen** (Cisco, Switzerland); **Tobias Müller** (University of Applied Sciences Technikum Wien, Austria)

16:45: The Fundamentals of the Professional Networked Media Ecosystem

Al Kovalick (Media Systems Consulting, USA)

17:15: IP for Contribution Broadcasting: The Next Step of IP Ubiquity

Chin Chye Koh (Nevion, USA)

Audio *Part 2*

Room: Salon 2

Chair: **Jerry C. Whitaker** (Advanced Television Systems Committee, USA)

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16:15: Immersive Audio Systems and the Management of Consequent Sounds

William Redmann (Technicolor, USA)

16:45: Loudness vs. Speech Normalization in Broadcast

Thomas Lund (TC Electronic A/S, Denmark)

17:15: Digital Audio Transmission Impairment and Link Failure: Test Data, and Recommendations for Improved Industry Standards and Reference Designs

Jon Paul (Scientific Conversion, Inc. & Blanche A. Paul Foundation, Crypto-Museum, USA)

18:00 – 20:00

Welcome Reception

Room: Exhibit Hall

20:00 – 22:00

Student Film / Movie Night

Room: Salon 1

Wednesday, 22 October

07:30 – 08:30

Morning Coffee

Rooms: Salon 1, Salon 2

08:30 – 10:30

File-Based Workflows Part 1

Room: Salon 1

Chair: **Sara Kudrle** (Grass Valley, a Belden Brand; SMPTE Western Region Governor, USA)

08:30: Addressing Issues in File-Based Workflows: the Joint Task Force on File Formats and Media Interoperability

Clyde Smith (Fox Network Engineering & Operations, USA); **Thomas Bause Mason** (NBCUniversal, USA); **Harold Geller** (Advertising Digital Identification, LLC (Ad-ID), USA); **Christopher J. Lennon** (MediAnswers, USA)

09:00: Re-inventing the Wheel or Choosing the Right One for the Job? Frame Rate Manipulation for the File-age

Bruce Devlin (Dalet, U.K.); **Simon Adler** (Dalet, USA)

09:30: Automating Closed Caption Verification, Timing, and Language Identification

Drew Lanham (Nexidia, USA)

08:30 – 09:30

UHDTV Colorimetry

Room: Salon 2

Chair: **Arjun Ramamurthy** (20th Century Fox, USA)

08:30: The Best Color Matching Between UHD and HD Displays

Lars Borg (Adobe, USA)

09:00: Color Management for Wide-Color-Gamut UHDTV Production

Kenichiro Masaoka, Yukiko Iwasaki, Yukihiko Nishida, and Masayuki Sugawara (Japan Broadcasting Corp., (NHK) Japan)

08:30 – 10:00

Cinema Workflow

Room: Theatre (Chinese 6)

08:30: Camera Raw Workflows—Like Film, But Digital

Ed Reuss (Unaffiliated, USA); **Lars Borg** (Adobe, USA)

09:00: Advances in Fully Immersive Theatrical Sound Mixing Workflows

Tom Graham (Avid, USA)

09:30: Options for Camera Raw in the Digital Workflow

Keith Hogan (Pixspan, Inc., USA)

09:30 – 10:30

High-Dynamic Range

Room: Salon 2

Chair: **Kevin J. Stec** (Dynamic Digital Depth, Inc., USA)

09:30: High Dynamic Range Intermediate

Gary Demos (Image Essence LLC, USA)

10:00: Quality Assessment Framework for Color Conversions and Perception

François Helt and Valerie La Torre (HighlandsTechnologies Solutions, France)

10:30 – 11:00

Coffee Break

Rooms: Salon 1, Salon 2

11:00 – 12:30

File-Based Workflows Part 2

Room: Salon 1

Chair: **Sara Kudrle** (Grass Valley, a Belden Brand & SMPTE Western Region Governor, USA)

11:00: Successful File-Based Workflow Transformation in a Complete Content Lifecycle

Pierre Lemieux, Francois Vaillant, and Dany Harrison (CBC/Radio-Canada, Canada)

11:30: Remote Content Access and the Rise of the Second Screen

Luc Doneux (Sports, EVS, Belgium)

12:00: Today's Smarter Workflow: Managing and Delivering Assets to All Devices

Petter Jakobsen (Vizrt, USA)

Higher Frame Rates

Room: Salon 2

Chair: **Jim DeFilippis** (TMS Consulting, USA)

11:00: 120 fps Capture as a Universal, Open Production Standard

David Richards (Moving Image Technologies, USA)

11:30: High Frame Rate Video Conversion

Paola Hobson (InSync Technology Ltd., U.K.)

12:00: Clustered Servers Take File-Based Workflows to New Levels of Quality, Functional Capacity, Automation, Flexibility and Latency

Keith Slavin and Chad Fogg (Isovideo, LLC, USA)

12:30 – 14:00

Fellows Luncheon

Keynote: **Darcy Antonellis** (Vubiquity)

Room: Vantage Room

14:15 – 15:45

Cloud

Room: Salon 1

Chair: **Richard J. Welsh** (Sundog Media Toolkit, U.K.)

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14:15: Alternate to Big Cloud Providers: Case Studies on Private/Hybrid Cloud Use

Brian Campanotti (Front Porch Digital, USA)

14:35: End-to-End Live Streaming Platform for Second Screen Combining Multi-Camera Capture, High-Speed Transport, and Cloud Video Processing

Michelle Munson (Aspera, USA)

14:55: Securing Media Content and Applications in the Cloud

Bhavik Vyas and Usman Shakeel (Amazon Web Services, USA)

15:15: Is the Future of Content Protection Cloud(y)?

Eric Diehl (Technicolor, France)

Display Technologies

Room: Salon 2

Chair: **Peter H. Putman** (Kramer Electronics, USA)

14:15: A Tutorial on Photometric Dimensions and Units

George Joblove (Consultant, USA)

14:45: Next-Generation Display Interfaces

Peter H. Putman (Kramer Electronics, USA)

15:15: Quantum Dots and Rec. 2020—Bringing the Color of Tomorrow Closer to Reality Today

Jimmy Thielen, James Hillis, John Van Derlofske, Dave Lamb, and Art Lathrop (3M Company, USA)

15:45 – 16:15

Coffee Break

Rooms: Salon 1, Salon 2

16:15 – 17:45

Audio Part 3

Room: Salon 1

Chair: **Jerry C. Whitaker** (Advanced Television Systems Committee, USA)

16:15: Utilizing Unique Information from File-Based Media for Automated File Detection

Michael Babbitt (Dolby Laboratories, USA)

16:45: Large-Scale Audio Processing, Which Chips?

Andrew Hillis (Studer Professional Audio GmbH, Switzerland)

17:15: The Origins of Audio and Video Compression: Some Pale Gleams From the Past; A Historical Perspective on Early Speech Synthesis and Scramblers

Jon Paul (Scientific Conversion, Inc. & Blanche A. Paul Foundation, Crypto-Museum, USA)

Ultra-High Definition Television

Room: Salon 2

Chair: **Peter H. Putman** (Kramer Electronics, USA)

16:15: Development of Super Hi-Vision (8K) Baseband Processor Unit “BPU-8000”

Kenichiro Ichikawa, Seiji Mitsuhashi, Mayumi Abe, Akira Hanada, and Kohji Mitani (Japan Broadcasting Corp., (NHK) Japan); **Mitsutoshi Kanetsuka** (Content Creation Solution Business Div. & Sony Corp., Japan)

16:45: Further Developments in 4K (12 GHz) Single-Link Coaxial Cable

Stephen H. Lampen (Belden, USA)

17:15: Viewing 4K and UHD in an HD World

Josef Marc (Archimedia Technology Inc., USA)

18:00 – 18:30

Annual Membership Meeting

Rooms: Salon 1, Salon 2

19:00 – 20:00

Centennial Gift Reception (Invitation Only)

Rooms: Salon 1, Salon 2

Thursday, 23 October

07:30 – 08:30

Morning Coffee

Rooms: Salon 1, Salon 2

08:30 – 10:30

Asset Management Part 1

Room: Salon 1

Chair: **Paul Chapman** (Foto-Kem Industries Inc., USA)

08:30: 2014 Survey of Digital Storage in Professional Media and Entertainment

Thomas Coughlin (Coughlin Associates, USA)

09:00: LTFs Transforms LTO Tape into Nearline Storage: Accelerating 4K Media Workflows

Tridib Chakravarty (StorageDNA, USA)

09:30: Concept for a File-Based Content Exchange Ecosystem Using Scalable Media

Heiko Sparenberg and Siegfried Foessel (Fraunhofer IIS, Germany)

10:00: A Holistic Approach to Digital Preservation

Bjørn Brudeli (Piq AS, Norway)

IP Streams, Control, and Production

Room: Salon 2

Chair: **Thomas Edwards** (Fox Network Engineering & Operations, USA)

08:30: Off-the-shelf IP Routing Switches in the Hybrid IP/SDI Television Broadcast Environment

John Shike and Martin Holmes (Snell, Inc. USA)

09:00: The Control of Media within an Internet of Things using SMPTE ST2071

Steven Posick (ESPN Inc., USA)

09:30: Taking Remote Production to the Next Level—CBC’s Coverage of the 2014 Sochi Olympic Games

Jeffrey Vella (Canadian Broadcasting Corp., Canada)

10:00: Monitoring Video Services in an IP Connected World

Yasser F. Syed (Comcast & Comcast Media Center, USA);

Chuck Wester and Joseph Badro (Comcast, USA)

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08:30 – 10:00

Theatrical Displays

Room: Theatre (Chinese 6)

Chair: **Peter Ludé** (Consultant, USA)

08:30: Viewer Preferences for Cinema Luminance Dynamic Range

Suzanne Farrell, Scott Daly, and Timo Kunkel (Dolby Laboratories, Inc. USA)

09:00: Development of an Accurate and Repeatable Measurement Method for Speckle in Laser Illuminated Projectors

Rick Posch (CR Media Technologies, USA); **Peter Ludé** (Consultant, USA)

09:30: Design Considerations for Cinema Exhibition Using Laser Illumination

Jim Houston (Starwatcher Digital, USA); **Bill Beck** (BTM Consulting, USA)

10:30 – 11:00

Coffee Break

Rooms: Salon 1, Salon 2

11:00 – 12:30

Asset Management *Part 2*

Room: Salon 1

Chair: **S. Merrill Weiss** (Merrill Weiss Group LLC, USA)

11:00: Media Archiving, Standards and the Library of Congress

James Snyder (Library of Congress, USA)

11:30: Applying AXF Tools from the Set through Production Workflows

S. Merrill Weiss (Merrill Weiss Group LLC, USA)

12:00: Open Standards Approach for Video and Film Archiving and Preservation

Andy Hurt (Front Porch Digital, USA)

Content ID and Security

Room: Salon 2

Chair: **Arjun Ramamurthy** (20th Century Fox, USA)

11:00: How Do We Measure Up?

Christopher J. Lennon (MediAnswers, USA); **Harold Geller** (Advertising Digital Identification, LLC (Ad-ID), USA); **Clyde Smith** (Fox Networks Engineering & Operations, USA)

11:30: Extending Content Protection Beyond End-user Digital Rights Management and to the Full Digital-Content Lifecycle

Ken Rudman (Civolution, USA)

12:00: Not Every Cyber Attack Can Be Stopped, But They Can Be Survived

Chris Morales (NSS Labs, Inc., USA)

12:30 – 14:00

Boxed Lunch

Room: Exhibit Hall

14:00 – 15:30

Image Processing *Part 1*

Room: Salon 1

Chair: **Siegfried Foessel** (Fraunhofer IIS, Germany)

14:00: Realtime Super Resolution for 4K/8K with Non-linear Signal Processing

Seiichi Goshi (Kogakuin University, Japan)

14:30: 4K: Model for Motion Control to Ensure True 4K Detail at Capture

Pierre Routhier (Technicolor, USA)

15:00: Beyond HD—The Status of the Image Acquisition Solutions for the Next-Generation Broadcasting Formats

Klaus Weber (Grass Valley & A Belden Brand, Germany)

Evolution of Broadcast Facilities *Part 1*

Room: Salon 2

Chair: **Harvey Arnold** (Sinclair Broadcast Group, USA)

14:00: IP to the Camera: Completing the Broadcast Chain

Jim Jachetta (VidOvation—Moving Video Forward, USA)

14:30: Signal Monitoring: Any Time, Any Where, Any Way

Elisabetta Fernandez (Wall Street Communications, USA);

Steve Farmer (Wohler Technologies, USA)

15:00: IPTV in CNN's Newsroom: A Productivity Breakthrough

Bob Baker (Turner Broadcasting, USA); **Wes Simpson** (Telecom Product Consulting, USA)

15:30 – 16:00

Coffee Break

Rooms: Salon 1, Salon 2

16:00 – 17:00

Image Processing *Part 2*

Room: Salon 1

Chair: **Siegfried Foessel** (Fraunhofer IIS, Germany)

16:00: A Psychophysical Study Isolating Judder using Fundamental Signals

Scott Daly, Ning Xu, and James Crenshaw (Dolby Laboratories, Inc., USA); **Vickrant Zunjarrao** (Microsoft, USA)

16:30: Moonviews

Gary Mandle (Sony Electronics Inc., USA)

Evolution of Broadcast Facilities *Part 2*

Room: Salon 2

Chair: **Harvey Arnold** (Sinclair Broadcast Group, USA)

16:00: Simple, Open Device Control in an IP Era

John R. Naylor (Ross Video, Ltd, USA)

16:30: IT-TV-Live—An Integrated Concept for IP-based Distributed Broadcast Production with “SDI Quality”

Alfred Krug (Scalable Video Systems GmbH, Germany)

18:30 – 19:30

Honors & Awards VIP Reception (Invitation only)

Hollywood Ballroom

19:00 – 22:00

Honors & Awards Ceremony and Dinner

Hollywood Ballroom

22:00 – 23:59

Afterparty and SMPTE Jam

Hollywood Ballroom

This program is subject to change.