



MTS2025:

From Live Broadcasts to AI Standards: Shaping the Next Era of Media Technology

BY RUSSELL POOLE

The 2025 Media Technology Summit was held in a new location, featured new experiences, and attracted a larger audience amid global economic uncertainty. It was an unmitigated success that brought together the diverse membership of SMPTE and the professionals, students, and leaders who had yet to be introduced to the Society.

Each day of the Summit brought something unique to the table, as did each presenter, exhibitor, and demonstrator. From the Live Events Broadcast Symposium to the Global AI Standards Forum, the Summit showcased not only current solutions but also future ones. It was a week jam-packed with programming, networking events, and live demonstrations, all of which drew a legion of engaged engineers and technologists to the Pasadena Convention Center.

Live Broadcast Symposium

The Live Broadcast Symposium marked the grand opening of MTS2025 and began with inspiring remarks from

SMPTE President Rich Welsh and SMPTE Executive Director Sally-Ann D'Amato. Following their introductions was a Keynote session from the Vice President of NEP Platform, Dan Murphy. His presentation, "Engineering as a Team Sport: How Orchestration Will Shape the Future of Media," encouraged coordination between seasoned industry veterans and newcomers to ensure the future of live broadcast is secure, especially in the advent of AI. This coordination will save jobs, maintain the workforce, and ensure a bright future for the industry.

The following panel, "Game Changers: How Technology is Revolutionizing the Sports Fan Experience," featured some of the biggest names in live broadcast, including Chris Witmayer, Chris Wells, Sir Ian Taylor, Jan Schaffner, and Brent Angle. The session expanded on several aspects of live sports, particularly live stat updates and innovations to the tech behind instant replays.

"Acceleration and Personalization in Sports Broadcasting" came next and featured panelists Thomas Edwards, Erin Rose Widner, and Jeremy Middle discussing the future



SMPTE President Richard Welsh.



Keynote speaker Dan Murphy.



SMPTE Executive Director Sally-Ann D'Amato.

of live sports broadcasting, including personalization options that utilize AI tools. This allows viewers to experience live sports like never before.

The largest panel of the day, “Quiet Chaos: The Art and Tech of Live Audio,” discussed the technology behind live audio, focusing on the event itself rather than everything surrounding it. It even touched on solutions for current audio issues. Panelists included Patti Gunnell, Fernando Delgado, Jeff Peterson, Steve Cormier, Andrew McHaddad, and Jan Schaffner.

Keynote Dan Murphy returned to the stage for “World of Live Soccer Competition: Designing Broadcasts for Global Audiences.” Lukas Schaufler and Pete Emminger joined Murphy for a lively discussion on how the world’s biggest soccer competitions can be tailored to the nations that broadcast them. Using new technologies, different audiences can experience the same game in their preferred fashion.

The next session, “Applied AI and Automation in Live Production,” detailed four technologies transforming live broadcasts and sports. Thomas Edwards, Chris Lennon, James Doyle, and Olivier Barnich discussed how AI automation can remove motion blur, focus on specific athletes and moments, and even personalize sports commentary.

The final session of the day was “Broadcast Horizons: Innovation, Efficiency and Immersive Experiences – Future Outlook Panel.” The panel included some of the biggest names in live broadcast, including Juan Reyes, Willem Vermost, Matthew Goldman, Terry Harada, and Richard Friedel. They discussed the future of live broadcast, including more efficient automations and unique immersive experiences.

Tuesday Technical Sessions

Tuesday technical sessions were held in Session Rooms AB and GH at the Pasadena Convention Center. Session Room AB began the day with the Color Science Track, “Advancing



“Game Changers” panel. (L-R): Jan Schaffner, Chris Wells, Sir Ian Taylor, Brent Angle, and Chris Witmayer.

Color Science: Multispectral Applications and Advanced Displays.” This block included the sessions: “A Multispectral Scanning and Post-Processing Workflow for Historical Film Colors,” with Barbara Flueckiger; “Investigating Spectral Rendering Techniques to Improve Color Matching in Virtual Production,” with Vlad Simion; and “LED 3D Cinema Display: The Future Display System in Cinemas,” with Chao Li.

Part two of the Color Science Track was “Advancing Color Science: Color Grading Tools and Perceptual Image Processing Across SDR and HDR Workflows.” This block included “Towards Automated Perceptual Shot Matching in Motion Pictures,” with Julius Tschannerl and Daniele Siragusano, and “Optimizing Color Grading with the Gamut Rings Color Scope,” with Kenichiro Masaoka. This session block focused on the color quality of High Dynamic Range, while part one of the Color Science track focused more on color grading during production.

The following session block in room AB was titled “AI at the Edge of Live: Real-Time Intelligence for Language, Pro-



Speaker Julius Tschannerl.

duction, and Signal Processing,” and it detailed how AI can help automate various aspects of live broadcasting. Sessions in this block included “Leveraging Multi-Agent AI Systems for SMPTE ST 2110 Broadcast Automation,” with Tejaswi Mulagada, “Scalable AI-Powered Content: Adaptive Encoding for Next-Gen Video Delivery,” with Herc Kwan, “From Captions to Translations: Evaluating Readiness for AI-Pow-



Speaker Chris Lennon.

ered Live Language Solutions,” with Bill McLaughlin, and “Voice-Activated Live Production: Real-Time AI Control via On-Air Talent Speech Cues,” with Chris Lennon and James Doyle.

The final Tuesday session block in room AB was “Next-Gen Media Transport: Advances in Compression, Streaming, and Interoperability,” rounding out a day full of the rigorous technical sessions attendees have been craving. The sessions taking place in this block included “Evolving TR-07 & TR-08: Integrating JPEG XS Temporal Differential Coding for Next-Gen Interoperability,” with John Dale, and “Towards Ultra-Low Latency in Adaptive Streaming,” with Alex Giladi and John Ellerton.

The other Session Room, GH, held concurrent sessions

throughout the day, starting with the block, “Building Resilient Networked Workflows: Security, Scale and Synchronization in Media Systems.” This block featured the sessions “Designing Secure ST 2110 Systems,” with Endrit Vorfaj, “The Dynamic Media Facility: The Second Wave of Live-IP Media Production,” with Felix Poulin, and “EBU DMF Media eXchange Layer: Streamlining Multi-Vendor Live Video,” with Thomas Edwards. All three sessions focused on IP network infrastructure.

The following block in room GH was “New Frontiers in Visual Fidelity: Metrics and Rendering for Media Innovation.” This block focused on solutions for image quality and included the sessions “An Efficient Quality Metric for Video Frame Interpolation,” with Conall Daly, and “From Meshes to Gaussians: Evolving 3D Scene Rendering for Broadcast Applications,” with Floriane Magera.

Next up was the block, “Future-Proofing Production: Software-Defined, Automated, and Interoperable Workflows.” This block included the sessions “SMPTE ST 2138 and the Catena Ecosystem: A Unified, Secure, and Scalable Control Architecture for Hybrid Media Environments,” with Chris Lennon, “Software-Defined Production in Practice: Status and Outlook,” with Klaus Weber, and “Reliability for Media Systems: Patterns and Anti-Patterns in Design and Operations,” with William Hooper.

The final session block in room GH was “Image Fidelity and Display-Ready Workflows: From Capture to Calibration.” The sessions in this block included “Optimizing 180 Degree Stereoscopic Cinematography for the Apple Vision Pro,” with Stanley Lin and Jordan Halsey, and “Display Evaluation Materials,” with Joseph Kane. These sessions, along with those in room AB, capped off one of the most successful days of Technical Sessions the MTS has ever had.

Wednesday Technical Sessions

The Wednesday Technical Sessions were a continuation of SMPTE’s most successful MTS. These concurrent sessions focused on the latest complex topics on every engineer’s mind and kicked off in room AB with the block, “Building the Software-Defined Future of Live Media.” This block included the sessions, “Device Memory Sharing Study,” with Sithideth Viengkhou and Jonas Ohland, “Navigating the Transition to Software-Defined Production: Lessons from CBC/Radio-Canada’s Dynamic Media Facility Implementation,” with Simon Patenaude, and “Dynamic Media Facility: Resource Planning & Orchestration – Possibilities Today and Challenges Ahead,” with Thomas Gunkel.

The following block in room AB was “From Metadata to Meaning: Intelligent Access and Strategy for Metadata at Scale,” which featured the sessions “Beyond Metadata: Next-Generation Video Archive Retrieval with CLIP-Based Approach in NHK Archives,” with Yo Narita, and “Data is Not a Byproduct – It’s the Product: Applying Data-as-a-Product Thinking in M&E,” with Dan Gesshel. These sessions focused on metadata solutions and new applications.

After lunch, sessions returned to room AB with the block, “AI in Production: Intelligent Tools, Automation, and Education for the Next Era.” The sessions featured here included “AI-Assisted Post-Production: Enhancing Workflows with AI Image Interpolation and Object Detection,” with Brian Gaffney, “From Archive to Action: Reimagining AI Video Pipelines with Hierarchical Codecs,” with Andy Beach and Guendalina Cobiainchi, and “Implementing an AI Teaching Assistant for a Class in Motion Picture Engineering,” with Deirdre O’Regan.

The final Wednesday sessions in room AB were part of the block, “Greener Pipelines and Smarter Conversations: Responsible Innovation in Media Tech.” These sessions showcased the latest solutions for efficient workflows to create a more sustainable and equitable future. Sessions like “Towards Energy Monitoring in Visual Processing Pipelines,” with Shreejith Shanker, and “Designing Culturally Adaptive Multilingual Chatbots for Global User Engagement in Media Platforms,” with Satya Karteek Gudipati, showcased how media could reach greater audiences while saving energy.

Session Room GH began the day with “Resilient and Adaptive Media Delivery: Protocols, Personalization, and Efficiency.” This block included the sessions, “A Performance Measurement Study of Open Internet Contribution Protocols,” with Ciro Noronha, “Redefining Media Delivery: Integrating a Stream Transformation Engine in the Distribution Pipeline for Next-Gen Streaming Efficiency,” with Pierre Le Fevre and Adam Nilsson, and “Architecting ST 2110 Systems: Balancing Software Agility and Hardware Reliability in Modern IP Infrastructures,” with Jesse Janosky.

The following block was titled, “Building the Modern Media Backbone: Mesh Architectures and Timing Integrity,” and included the sessions “A Partner-Centric Media Mesh: Overcoming Integration Bottlenecks in Cloud Native Production,” with Jonathan Soloman, and “Hybrid Live Production Workflows: The Missing End-to-End System Thinking,” with Andrew Rayner. These sessions were deep dives into the modern media infrastructures transforming workflows worldwide.

Attendees rushed back into room GH after lunch for “Securing Trust in Media: Authenticity, Privacy, and Resilience in the Age of AI,” which featured three rigorous sessions on the new challenges posed by the AI era. Sessions included “Ensuring Video Authenticity with C2PA on AWS,” with Rachita Chandra and Patrick O’Connor, “Privacy Vulnerabilities in C2PA Content Provenance Systems: Privacy Analysis and Recommendations for News Media Workflows,” with Mohamed Badr Taddist, and “Equipping M&E Businesses to Identify, Mitigate, and Build Resilience from Exploitation Against Synthetic AI Influence to Safeguard Its Creative Outputs,” with Raymond Evans.

The final block in Session Room GH was titled “Timing, Trust, and Transformation in Live Media Workflows.” The sessions in the block included “Protecting Broadcast In-

frastructure from GPS Jamming & Spoofing Attacks” with Allan Armstrong and “News Content Distribution Using the Time-Addressable Media Store API” with Thomas Edwards. This marked the end of the Summit’s engaging Technical Sessions, which covered workflows, safety, and the innovative solutions transforming the industry daily.

The Global AI Standards Forum

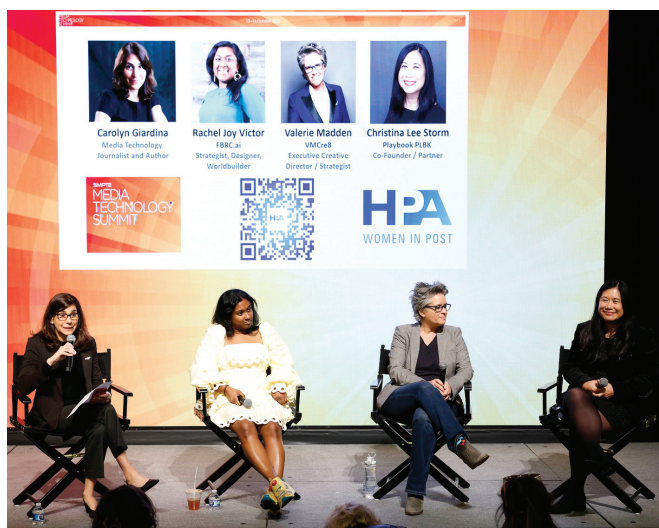
The final day of the Summit was focused entirely on AI, specifically on how the world of Standards could help develop workflows, create protections, and enable collaboration between engineers and this new tech. The Forum began with an in-depth discussion between SMPTE President Rich Welsh and CITO Muki Kulhan of Muki International. These two AI advocates discussed the current state of AI, including global policies attempting to regulate the technology, the Standards being created, and the current ways it has been successful, as well as the ways it hasn’t.

The following sessions primarily focused on how AI works and addressed myths versus facts. Panels like “Framing AI: Use Cases and Applications,” with Renard Jenkins, Jagger Waters, Jess Loren, and Thomas Thuydiyanplackal, “What’s Real,” with Renard Jenkins, Rish Welsh, Andy Beach, Jess Loren, and Dani Bellar Pilukas, and “The Technology Behind AI,” with Fred Walls and Zhenyu Gu, gave attendees context for the technology that the world has been hyping up.

Fred Walls and Zhenyu Gu stayed on stage to address the next section of the AI Forum, “The Next Evolution of AI.” This session focused on how AI will likely help media and production in the future, which seamlessly led into the final portion of the Forum panels: AI and Standards. The panels “Intersections of AI Standards and Policy: Exploring SMPTE’s Role,” featuring Andy Maltz, Thomas Bause Mason, Laurin B. Weissinger, and Rohit Israni, and



Muki Kulhan and Rich Welsh shared an indepth discussion during the Global AI Standards Forum on Thursday.



“HPA Women in Post: The Journey into AI.” (L-R): Carolyn Giardina, Rachel Joy Victor, Valerie Madden, and Christina Lee Storm.

“Interoperability in AI: Is there Such a Thing?” with Hans Hoffmann, Simon Crownshaw, Buzz Hays, Asim Jalis, and Jason Schugardt, detailed the progress that has already been made in the world of AI Standards as well as the steps that are being taken to create an interoperable, reliable future.

The day ended with a special Unconference session, “Targeting Practical AI Standardization Goals: An Open Conversation.” Led by Hans Hoffmann, Thomas Bause-Mason, and Andy Maltz, attendees used a special app to ask panelists questions and make strong points both for and against specific AI innovations. It was a lively discussion amongst the engineers and technologists ushering in the future, and a perfect way to end the Technical Program for MTS2025.

Expanded Solutions Hub

This year, the Solutions Hub was not just a space for exhibitors and attendees to network. The space included three live demo areas focused on the different stages of media production. The Acquisition and Live Capture Hub showcased the various workflows for capturing images. Companies like Sony, Panavision, Red Digital Cinema, Blackmagic Design, iodyne, Matrox, AcriPlex, and Cintel demonstrated different aspects of filming the F1 Movie and tools such as SMPTE ST 2110.

The Processing and Post Hub showcased several solutions for archiving, color fidelity, 3D assets, and more. Companies like Dolby and Pantone focus on workflows that enhance post-production, including tools from pre-production that make it easier.

The final Hub, Over-the-Air Delivery & Display, focused on how ATSC 3.0 and OTT workflows come together with hands-on, side-by-side displays of modern features. Leaders from Sinclair Broadcast Group and ONE Media Technologies demonstrated these delivery workflows, round-



Attendees pause to connect and exchange ideas in the Solutions Hub.

ing out the live demo experiences for the enthusiastic attendees who visited the expanded Solutions Hub.

Solutions Hub Stage

The Solutions Hub Stage featured programming on Tuesday and Wednesday that was less technical than the sessions in AB and GH, but still influential to the industry. Set in the center of the Solutions Hub, the Stage brought a welcoming energy to the expanded exhibit hall. The day opened with the session, “Virtual Production Revisited: Past Lessons & Future Possibilities,” with Frieder Hochheim and Ramiro Montes De Oca.

The following session was a discussion with multiple editors from ACE. Moderated by SMPTE Fellow Carolyn Giardina, “ACE Presents: Ask the Editor” included Michael McCusker, Harry Miller, and Angela Catanzaro. The session quickly turned into a discussion on how AI can help, and possibly hurt, the industry.

The next panel, “Interoperable Master Format: Current and Emerging Practices,” featured JoAnne Kim, Brandon Heaslip, Carlos Carmona, Wolfgang Ruppel, and Brian Holter, who discussed the flexibility of IMF and its future use cases. After a slight break, Juan Reyes and Tom Mendelboim presented “The Security Compliance Dilemma.”

After another break, the Solutions Hub Stage Program picked back up with the panel, “Colorist Society Presents: Ask the Colorist,” featuring Sarah Priestnall, Rory Gordon, Gareth Cook, John Daro, and Natasha Leonnet. This panel was an exciting discussion of how color science is transforming and becoming far more efficient. The next session, “HDR Master Workflows, Interoperable Production Processes & the Role of SMPTE Standards,” with David Touze and William Redmann, discussed how SMPTE Standards effect visual workflows.

Tuesday sessions continued with “Dolby Vision: A New Era for TV Picture Quality,” featuring Aby Mathew, before

moving into “Behind Vista Vision: From Production to Exhibition,” with Taylor Umphenour, Charlotte Barker, Steven Levy, and Oran Andrew. The final Tuesday session took place during the Solutions Hub Opening Reception. “F1 the Movie: Camera Design & RF Engineering,” with Dane Brehm, Dan Ming, and Gregory “Noodles” Johnson, ended the night with a bang.

Wednesday was the second and last day of the Solutions Hub Stage Program. It began with SMPTE Standards Director Thomas Bause Mason discussing AI with the session, “Trust in Media: Evolving SMPTE Standards for Content Provenance & Authenticity.” The following session, “AES & SMPTE Present: Repurposing Legacy Content for Broadcast, Streaming & Home Theater,” featured Doug Mountain, Nick Bergh, Elizabeth Kirkscey, and Brian Vessa.

William Redmann then came to the stage to present, “Saving the Planet, One Workflow at a Time (Or Are We?),” followed by the session, “VES Presents: Best Practices for AI in a Rapidly Changing VFX Industry,” with Robin Prybil, Amy Jupiter, and Sharina Radia. Both sessions discussed common workflow myths plaguing the industry.

The next sessions, “NextGen TV: What You Need to Know About ATSC 3.0,” with Matthew Goldman, “One Network, Endless Possibilities: Seamless SDI-IP Routing Made Simple,” with Rick Seegull and Drew Martin, and “HPA Women in Post: The Journey into AI,” with Carolyn Giardina, Valerie Madden, Christina Lee Storm, and Rachel Joy Victor all featured some of SMPTE’s brightest stars talking about the latest tech. The final session on the Solutions Hub Stage was “In Conversation: Paul Debevec with Caroline Giardina,” rounding out the excellent programming in SMPTE’s expanded exhibit hall.

Career Development Program

This year, SMPTE shone a light on students, early-career professionals, and those changing careers. Veronica Pineda from Deluxe Media put together a stellar program of lectures, roundtables, and networking events on Tuesday, and



“AES & SMPTE Present: Repurposing Legacy Content for Broadcast, Streaming & Home Theater,” panel. (L-R): Brian Vessa, Doug Mountain, Elizabeth Kirkscey, and Nick Bergh.



New SMPTE Fellows receive their certificates at the Annual Gala. (L-R):

attendees raved about the entire program.

On the Solutions Hub Stage, multiple panels demonstrated how to network, and SMPTE President Rich Welsh led an informal session on navigating the industry. The attendees then broke into groups for roundtable discussions on creating resumes, working with anyone, and networking organically. The final portion of the program was a networking event with refreshments and snacks in the Career Development Lounge.

Annual SMPTE Gala

The final event of MTS2025 was the Annual SMPTE Gala, hosted by Gregory Jbara, who spent 15 years on “Blue Bloods” and has appeared in numerous films, including *Oppenheimer* and *A Ramble Towards Rain*. The Gala was a beautiful evening full of glamour, excitement, and the honorees who make the industry great. The Gala culminated in a DJ battle between SMPTE President Rich Welsh and SMPTE Hollywood Chair Juan Reyes, who raised a good amount of money for the Society’s cause.

Conclusion

The 2025 SMPTE Media Technology Summit was a massive undertaking—one that took bold chances and delivered in remarkable ways. New exhibits, new locations, and even new audiences were mixed with the aspects attendees have come to expect. That fusion created something great. Over the course of four days, more than 900 attendees witnessed rigorous sessions, participated in engaging networking events, and connected with fellow industry colleagues. MTS2025 couldn’t have been a success without the support of our staff, our sponsors, and our members. SMPTE wants to thank everyone who came out to Pasadena, and we hope to see all of you again next year.

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