

SM

FINAL PROGRAM

streaming media west

the business and technology of online video

November 19-20, 2019

PRECONFERENCE WORKSHOPS
MONDAY, NOVEMBER 18

- Learn what you need to know to make streaming work—from content capture and creation to distribution and management
- Get in-depth training on online video technology and applications in intensive preconference seminars
- Learn about the new business and distribution models for online video
- Gain access to the Showcase featuring major streaming and online video vendors
- Network with your colleagues, peers, and experts in streaming media



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FEATURING THESE SPECIAL EVENTS



PUBLISHERS OF





**streaming
media west**
the business and technology of online video

**November
19-20, 2019**

**The Westin
Bonaventure
Los Angeles, CA**

Welcome to Streaming Media West 2019. We're thrilled to be in downtown Los Angeles, right in the heart of the entertainment industry, and we hope you enjoy our new venue as much as we have.

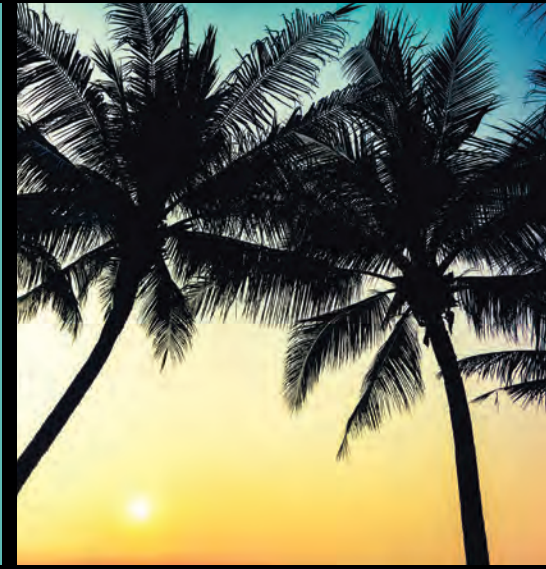
It's our biggest—and, we think, best—Streaming Media West yet. In addition to our long-running Business & Strategy Track and Technical & How-To Track, we've got four focused summits that let you zero in on the speakers and topics that are most important to you—the Video Engineering Summit, the OTT Leadership Summit, the Live Streaming Summit, and the brand-new Esports & Sports Summit. There's also the Discovery Track, where you can learn directly from solutions providers about how they're tackling the biggest challenges facing streaming media today. Depending on the type of pass you have, you can take a deep dive into any single track or summit, or you can “build your own show” by attending sessions across all of them.

Of course, just as important as the great content are the networking opportunities. In addition to receptions Monday and Tuesday evening, we are holding meetups during the coffee breaks in the networking lounge in the Showcase. Each one will be hosted by a *Streaming Media* magazine contributing editor. If your focus is video engineering, OTT, live streaming, or esports & sports, check the program schedule for the meetup that will help you “find your tribe.”



If you're not sure which sessions are the best fit for you, or if you're looking for a solution but aren't quite sure which exhibitor might be able to help you, don't hesitate to ask me or another Streaming Media representative. We're here to make sure you get as much as possible out of your time here in Los Angeles.

Eric Schumacher-Rasmussen, Conference Chair, VP & Editor, *Streaming Media*



Where the Best Companies and Minds in the Industry Come to Meet and Mingle

Business & Strategy TRACK

Attention C-level executives and VPs, digital media strategists, and sales, marketing and product managers: This is your home at Streaming Media West. This forward-thinking track offers high-level strategic discussions to learn from the best where the online video economy is moving. We shed light on the future of the online video marketplace, discussing ways broadcasters, cable and satellite operators, MVPDs, and content rights holders can unlock the value of OTT and TV Everywhere. It points to improvements in content creation, acquisition, and monetization and reveals coming shifts in consumer viewing habits. A sea change is coming to streaming media; this track is for executives who want to ride the wave.

Technical & How-To TRACK

The Technical & How-To Track is for CTOs, technology managers, studio professionals, and developers who want one thing: solutions. The video ecosystem is a fragmented mix of platforms and devices: Learn from the pros how you can eliminate the bottlenecks and deliver results. Expert presenters will offer sessions on the entire video workflow, from formats to delivery to player and UI development to AI and machine learning. This is the place to go to learn real skills and improvements you can put in place as soon as you're back in the office. And even if you're not currently a video developer and want to learn more about how the technology works, this track is for you.

Discovery TRACK

Open to all Streaming Media West 2019 conference attendees and Discovery Pass holders, Discovery Track sessions are moderated by *Streaming Media* magazine editors and presented by speakers related to our conference sponsors. The presentations, which typically focus on products and customer case studies, provide a good opportunity to learn more about specific technologies and practical solutions to real-world business needs. The Discovery Track is where to go to seek expertise and advice, get trained on unique products, or hear about new solutions and trends in online video.

live streaming SUMMIT

Live Streaming Summit focuses on the challenges and opportunities inherent in delivering large-scale live events and live linear channels to multiple screens. Sessions address every step of the live video workflow, including ingestion, transcoding, management, distribution, and post-event evaluation. Whether you're streaming one-time entertainment, news, sports, esports, or worship events, or delivering recurring live content, we've got you covered. While other events focus on event video production, the Live Streaming Summit takes it to the next level, covering the technologies and strategies required to take that video and deliver it to viewers watching on every device.



Video compression and related technologies are the bedrock of the online video industry, and they've always been the heart of Streaming Media. The Video Engineering Summit is for the hardcore video engineers, the ones who are really pushing the boundaries of video quality and compression efficiency. It's a deep dive into encoding and transcoding, packaging and delivery, player and UI development, and formats, protocols, and standards. If you're looking for deep dives into HEVC, VP9, AV1, DASH, CMAF, WebRTC, video optimization, or perceptual quality, you've come to the right place. Our expert speakers will help you take your video to the next level.

OTT LEADERSHIP SUMMIT

OTT is the future of television, and this summit is a deep dive into how broadcasters, cable & satellite operators, MVPDs, vMVPDs, and content rightsholders can unlock the value of OTT and TV Everywhere. Because business and technology factors work hand-in-hand to create a successful OTT service, we'll look at the entire OTT ecosystem to provide a thorough understanding of the opportunities and challenges that lie ahead. We'll also unveil fresh OTT research to give you actionable data and help you thrive in this increasingly competitive market.



Nowhere is streaming having a bigger impact than on live sports. It's not just how we watch, it's what we watch. Esports are products of the digital age and traditional sports are running to keep pace with this upstart. The Esports & Sports Streaming Summit is the place to be for a closer look at the incredibly addictive, highly charged, and constantly evolving world of esports and sports streaming. We'll bring you into the conversations happening right now—and even anticipate the changes ahead, so you can profit!



Streaming Media University features world-class experts delivering content-rich training. This series of Monday workshops at our Streaming Media West 2019 event offers attendees the opportunity to get deep-dive training on online video and streaming technologies. Three hours in length, these workshops give you the sound theories and practiced techniques to become a top performer in the online video field. In the end, you walk away with unique, in-depth training, a Streaming Media University Completion Certificate, and the professional know-how to enhance your career.

CONFERENCE AT-A-GLANCE

MONDAY, NOVEMBER 18 PRECONFERENCE WORKSHOPS (priced separately)

9:00 a.m. - 12:00 p.m.	W1 Introduction to ABR Production & Delivery	W2 Deploying CMAF; Why, When, & How	W3 Off-the-Shelf Streaming Tools
1:30 p.m. - 4:30 p.m.	W4 Objective Quality Metrics 2D & 3D	W5 Video Machine Learning: Customizing Solutions & Training Models	W6 Discovering the Power of FFmpeg
5:00 p.m. - 6:30 p.m.	VIP WELCOME MIXER Lakeview Bistro, Lobby Level <small>sponsored by</small> applied <small>digital</small> element		

TUESDAY, NOVEMBER 19

9:00 a.m. - 9:45 a.m. **WELCOME & OPENING KEYNOTE** | San Francisco | **Fireside Chat: Amazon Fire TV's Customer-First Approach to Streaming** | Sandeep Gupta, Amazon Fire TV

9:45 a.m. - 10:00 a.m. **KEYNOTE** | San Francisco | **Industrializing Broadcast-Quality Streaming** | Mark Russell, MediaKind

10:00 a.m. - 10:30 a.m. **COFFEE** sponsored by **verizon media** | **NETWORKING AND OTT MEET UP** in the Streaming Media Showcase

	Business & Strategy Sacramento	Technical & How-To San Diego	OTT LEADERSHIP SUMMIT San Francisco	Video Engineering Summit Beverly	Esports Streaming Echo Park
10:30 a.m. - 11:15 a.m.	B101 Subscription Fatigue: Too Much of a Good Thing?	T101 HOW-TO: Fine-Tuning Your Encoding With Objective Quality Metrics	OTT101 Fireside Chat: Innovation in the Time of Streaming TV	VES101 The Video Engineer's Toolbox	ESS101 Get in the Game: How Players and Producers Can Get Started
11:30 a.m. - 12:30 p.m.	B102 Building Video Services Consumers Want	T102 Everything You Need to Know About Cloud Graphics & Digital Overlays	OTT102 Fireside Chats: Finding New Audiences	VES102 Low Latency Live Streaming at Scale	ESS102 Focus on Fans: Attracting Eyeballs, Keeping Them Hooked
12:30 p.m. - 1:30 p.m.	ATTENDEE LUNCH				
1:30 p.m. - 2:15 p.m.	B103 LinkedIn Live: A Producer's Journey	T103 Microservices in Action	OTT103 Understanding the DRM Lifecycle	VES103 CDN and Edge Services	ESS103 Let's Sync Up: Understanding the Opportunities of Live Sports Streaming
2:15 p.m. - 2:45 p.m.	COFFEE <small>sponsored by</small> verizon media NETWORKING AND LIVE STREAMING MEET UP in the Streaming Media Showcase				
2:45 p.m. - 3:30 p.m.	B104 The State of the CDN Market	T104 Open Source Streaming	OTT104 Fireside Chat: Connecting With Generation Alpha	VES104 Integrating CMAF Into a VOD Workflow	ESS104 Women, Games, & the Streaming Community
3:30 p.m. - 4:30 p.m.	HAPPY HOUR in the Streaming Media Showcase <small>sponsored by</small> MediaKind				
4:30 p.m. - 5:15 p.m.	B105 Optimizing Corporate Communications	T105 ATSC 3.0: What You Need to Know	OTT105 Who Cares About Sports & News?	VES105 Applications of Per-Title Encoding	ESS105 Esports and Streaming in Education
5:30 p.m. - 7:00 p.m.	NETWORKING RECEPTION Plaza Deck, 4th Level				

WEDNESDAY, NOVEMBER 20

8:30 a.m. - 9:00 a.m. **Streaming Media Magazine's Readers' Choice Awards Breakfast** | San Francisco | Gold Sponsor **aws** | Silver Sponsors **DISCOVER VIDEO** **MAGEWELL** **OPTICS**

9:00 a.m. - 10:00 a.m. **KEYNOTE** | San Francisco | **The Next Generation of Sports Streaming** | MODERATOR: **Kiran Paranjpe**, Google, Inc.

10:00 a.m. - 10:30 a.m. **COFFEE** sponsored by **verizon media** | **NETWORKING AND ESPORTS & SPORTS STREAMING MEET UP** in the Streaming Media Showcase



	Business & Strategy Sacramento	Technical & How-To San Diego	OTT LEADERSHIP SUMMIT San Francisco	Video Engineering Summit Beverly	Esports Streaming Echo Park
10:30 a.m. - 11:15 a.m.	B201 UX: Keep Viewers Happy	T201 HOW TO: Payout in the Cloud	OTT201 How Niche Video Services Can Find Success	VES201 Controlling QoE With Better Data	ESS201 Live Streaming in Challenging Conditions
11:30 a.m. - 12:30 p.m.	B202 Connecting the Dots for Connected TV Advertising	T202 Multicast: Has Its Time Finally Arrived?	OTT202 2019—The Year of Direct-to-Consumer Video Services?	VES202 Hardware Transcoding Solutions for the Cloud	ESS202 Moneyball: Monetizing Your Assets
12:30 p.m. - 1:30 p.m.	LUNCH BREAK —Visit the Streaming Media Showcase				
1:30 p.m. - 2:30 p.m.	B203 Video Machine Learning Demystified	T203 Tackling the Latency Challenge	OTT203 Harness SSAI's Superpowers	VES203 How to Customize Encoding, Packaging, & DRM for All Target Formats	ESS203 Overtime: Here's What's Next
2:30 p.m. - 3:00 p.m.	COFFEE <small>sponsored by</small> verizon media NETWORKING AND VIDEO ENGINEERING MEET UP in the Streaming Media Showcase				
3:00 p.m. - 3:45 p.m.	B204 Mixed Realities: VR, AR, & XR	T204 5G & the Future of Streaming	OTT204 Addressable TV: How Close Are We to Finding the Holy Grail?	VES204 LCEVC: The Latest MPEG Standard	ESS204 Niche Sports Find a Home
4:00 p.m. - 4:45 p.m.	CLOSING SESSION San Francisco Low-Latency HTTP Live Streaming Update Roger Pantos, Apple				



Location Key

- Keynotes & Closing Session** | San Francisco
- Track B** | Sacramento
- Track T** | San Diego
- OTT Leadership Summit** | San Francisco
- Video Engineering Summit** | Beverly
- Esports & Sports Streaming Summit** | Echo Park
- Live Streaming Summit** | Mt. Washington
- Discovery Track** | Silver Lake



 <p>LS101 Bringing Convenience to Corporate Streaming</p> <p>LS102 Live-Streaming Best Practices</p> <p>LS103 Fireside Chat With Industry Leaders</p> <p>LS104 Real-Time Remote Production for the FIFA Women's World Cup</p> <p>LS105 Scaling for the Demands of a Growing Live Audience</p>	 <p>DT101 Stop Bad Video in its Tracks The Future of Live Video Encoding</p> <p>DT102 Monitoring Live OTT Services Is Critical for Service Assurance Content and Eyeballs—The Perfect Match at the Edge</p> <p>DT103 OTT: Where to Invest your UX and Design Budget Low Latency Live Streaming Delivery: What's Next?</p> <p>DT104 Upgrade Your Network, Upgrade Your Stream Configuring Robust Multi-CDN in Azure, Powered by DLVR</p> <p>DT105 Subscriber Retention Benchmarks for OTT Businesses</p>
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Find Your Tribe & Learn From Them! Meet Ups in the Showcase

Streaming Media is the place to network with your peers and learn from the leaders and innovators in the field. Whether you are from broadcast and cable, media and entertainment, education, IT, sports, advertising, telco, or any other industry involved in online video, you'll find your niche. Meet Ups are located in the Showcase area.

TUESDAY

- 10:00 a.m. – 10:30 a.m. | OTT Meet Up
- 2:15 p.m. – 2:45 p.m. | Live Streaming Meet Up

WEDNESDAY

- 10:00 a.m. – 10:30 a.m. | Esports & Sports Streaming Meet Up
- 2:30 p.m. – 3:00 p.m. | Video Engineering Meet Up

VIP Welcome Mixer

Sponsored by **apptaster** digital element

Monday, November 18 | 5:00 p.m. – 6:30 p.m.
Lakeview Bistro, Lobby Level

Kick off your Streaming Media West experience with cocktails as you mix and mingle with other conference attendees! Open to all full-conference attendees, speakers, and exhibitors. No access to Discovery or Exhibits Only Pass holders.

Streaming Showcase Happy Hour

Sponsored by **MediaKind**

Tuesday, November 19 | 3:30 p.m. – 4:30 p.m.

Get a firsthand look at the leading software, hardware, and network solutions and services in the streaming media industry. The Showcase is the perfect place to meet with conference sponsors. Open to all.

Conference-Wide Networking Reception

Tuesday, November 19 | 5:30 p.m. – 7:00 p.m.

Plaza Deck, 4th Level

Join us outside on the Plaza Deck after a full day of sessions. Open to all attendees, speakers, exhibitors, and Discovery Pass holders.

Wi-Fi

Complimentary Wi-Fi is available in the conference area during conference hours.

Network: Streaming Media Wifi
(Click on browser to open log-in page)

Username/Password: smwest19

Streaming Media Magazine's Readers' Choice Awards

Gold Sponsor



Silver Sponsors



Wednesday, November 20 | 8:30 a.m. – 9:00 a.m.
San Francisco

Grab your breakfast and join *Streaming Media Magazine* editor Eric Schumacher-Rasmussen and emcee Jose Castillo of ThinkJose, as they announce the winners of the 12th annual Readers' Choice Awards.

Continental Breakfast & Breaks

Sponsored by **verizon media**

A continental breakfast will be offered each morning starting at 8:00 a.m. before the keynote. Check your program for additional breaks happening in the Streaming Media Showcase.

Showcase Hours

Tuesday, November 19 | 10:00 a.m. – 4:30 p.m.
Happy Hour | 3:30 p.m. – 4:30 p.m.

Wednesday, November 20 | 10:00 a.m. – 3:00 p.m.


Live Stream & Video On-Demand

Streaming Partner **MOBEON** On-Demand Partner **brightcove**

Sessions will be archived and available in video on-demand after the conference at streamingmedia.com/videos. Have a colleague that couldn't attend this year's event? Tell them to check out our live stream on Tuesday and Wednesday.

Streaming Media Magazine Interviews

Streaming Media Magazine will be interviewing key speakers, attendees, and vendors. Have an announcement or a specific topic you'd like to discuss on Streaming Media TV during the show? Email the editor, erics@streamingmedia.com, with your request. After the show, watch all the video interviews at <http://bit.ly/SMEEventVideos>.



DT201 Reliability of Live Streaming in the Cloud
Cross-Device Media Apps: Build or Buy? Why Not Both!


DT202 Data-Driven Video
Cloud Ingest Portals: Strategies for Acquiring Content from Providers Around the Globe

DT203 Low Latency Reality Check
Delivering Innovative Consumer Experiences to End-Users Through DTC and OTT Aggregated Services

DT204 See onsite flyer for details

Get the App & Connect

Download the HelloCrowd app and search for Streaming Media West 2019 to access everything you need during the event.



Scan this QR code or follow the link to download this app

Enter URL: <http://bit.ly/SMW19APP>



JUNE 2-3, 2020
THE WESTIN COPLEY PLACE BOSTON, MA

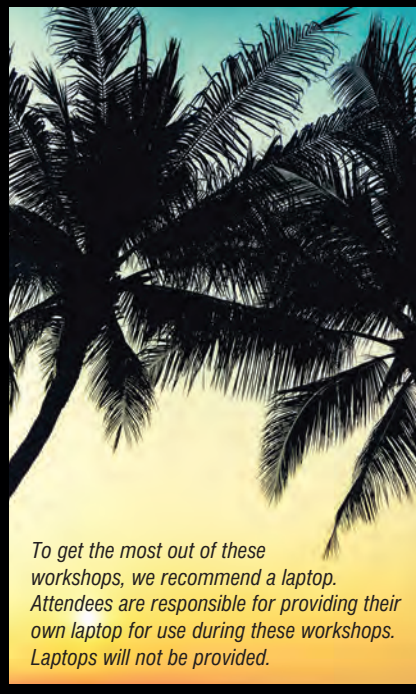
SAVE THE DATE





All Streaming Media University Workshops Include:

- Light continental breakfast
- Morning and afternoon breaks
- Lunch (when you register for both a.m. and p.m. workshops)
- Access to the Streaming Media Showcase on Tuesday, November 19 and Wednesday, November 20
- Certificate of Completion



To get the most out of these workshops, we recommend a laptop. Attendees are responsible for providing their own laptop for use during these workshops. Laptops will not be provided.

MORNING WORKSHOPS ■ 9:00 a.m. – 12:00 p.m.

W1 ■ Introduction to ABR Production & Delivery

This course helps those new to streaming media get familiar with relevant terms, concepts, and technologies. The session begins with a definition of terms like codecs, container formats, and adaptive bitrate (ABR) streaming, as well as encoding concepts like bitrate control (VBR, CBR) and frame types (I, B, and P). Then it details the key H.264 encoding parameters that impact quality and compatibility. Next up is adaptive streaming, including a review of available ABR technologies like HLS and DASH, how to formulate an encoding ladder, and how to use multiple DRM to protect premium content. Then we review the technical requirements for ABR delivery to computers, smartphones and tablets, OTT devices, and smart TVs. We finish with a quick look at advanced codecs like HEVC, VP9, AV1, and VVC. You walk away knowing the technical requirements for delivering to all key platforms and an understanding of how to do so.

PRESENTER: **Jan Ozer**, Principal, Streaming Learning Center, & Contributing Editor, Streaming Media

W2 ■ Deploying CMAF; Why, When, & How

The concept of a single set of files deliverable to all relevant end points has been the holy grail since the dawn of adaptive bitrate (ABR) streaming. By mid-2019, the Common Media Application Format (CMAF) will enable such a solution, slashing encoding, storage, and bandwidth costs for companies who deploy it. In this workshop, attendees learn how to create CMAF-packaged assets for HLS and or DASH and get a greater understanding of the benefits CMAF has to offer. We start at the industry baseline of H.264-based CMAF content, then offer insight and direction on how to handle more complex and emerging solutions. We will briefly cover how to extend what you learned to alternate codecs starting with VP9, then to 4K encoding, packaging, and delivery with HEVC or AV1. Then, we dive into what needs to happen next inside the video players to enable proper multi-bitrate ABR streaming with low latency. Last but not least, we cover the details around protecting your CMAF content with DRM, including what you need to know about CENC, CBCS, CTR, and working toward truly fulfilling the vision for unified common encryption DRM on the horizon.

PRESENTER: **David Hassoun**, Founder & CEO, RealEyes Media

W3 ■ Off-the-Shelf Streaming Tools

The build vs. buy debate will never go away, but sometimes the perfect tool for content development and distribution already exists, is easy to learn and use, and fits within your budget. This workshop covers the latest developments in a number of tools that will help you at virtually every step of the streaming video workflow, from editing to analytics. This workshop is open to product owners, engineering staff, or others involved with delivering media—you don't need a development background, just an interest in finding out how the latest tools can optimize your workflow. Nadine Krefetz and co-presenters cover the following types of tools: cloud-based switching products for multi-playout management; collaborative editing; UX prototyping; churn-busting analytics; artificial intelligence and machine learning; live and on-demand video libraries.

PRESENTER: **Nadine Krefetz**, Consultant, Reality Software, & Contributing Editor, Streaming Media

AFTERNOON WORKSHOPS ■ 1:30 p.m. – 4:30 p.m.

W4 ■ Objective Quality Metrics 2D & 3D: What They Are, How to Compute Them, & How to Use Them

Every compression practitioner should understand what objective quality metrics do, how to compute them, and how to use them. This workshop guides attendees through the following steps: an introduction to metrics like PSNR, SSIM, SSIMplus, and VMAF, plus several 3D metrics; how to compute metrics with open source tools like FFmpeg and VMAFMaster, as well as third-party tools like the Moscow State University Video Quality Measurement tool and SSIMWave Quality of Experience Monitor; how to interpret the results; how to use these tools to choose a preset, choose the top rate for video files, and build an encoding ladder.

PRESENTER: **Jan Ozer**, Principal, Streaming Learning Center, & Contributing Editor, Streaming Media

W5 ■ Video Machine Learning: Customizing Solutions & Training Models

Do you want to realize maximum business value from video machine learning solutions? To do so requires customization and model training. During this workshop, we go over core concepts that will help you in your customization and model training efforts. We also take a look at various options that are in the wild and ready for you to realize value from machine learning applications for video. We wrap things up with some hands-on demonstrations and customization and training tips and tricks. You walk away from this workshop armed with knowledge on how to get started providing your business value in this exciting area of video machine learning.

PRESENTER: **Jun Heider**, CTO, RealEyes Media

W6 ■ Discovering the Power of FFmpeg

One of the most widely used tools with video encoding and deployment processes is FFmpeg, an open-source command line utility that can read and write just about any video, audio, or subtitle codec with just about any format, container, or protocol. Starting with core command line parameters, you learn how to read video files and output in various bitrates, codecs, and containers. The workshop then moves into more intermediate-level commands with map parameters and video filters. We look at more advanced utilization of FFmpeg as well, exploring composition of two video sources with text labels and placement and setting up multiple processes to output multiple bitrates for adaptive delivery.

PRESENTER: **Robert Reinhardt**, Video Solutions Architect, VideoRX, & Contributing Editor, Streaming Media

streaming media east
the business and technology of online video

JUNE 2-3, 2020
THE WESTIN COPLEY PLACE
BOSTON, MA

FEATURING THESE SPECIAL EVENTS
live streaming summit OTT LEADERSHIP summit video engineering summit

SAVE THE DATE

STREAMINGMEDIA.COM/EAST

VIP Mixer
MONDAY, NOVEMBER 18
5:00 p.m. – 6:30 p.m.
Lakeview Bistro, Lobby Level

You're Invited
VIP
You're Invited

Kick off your Streaming Media West experience with cocktails as you mix and mingle with other conference attendees! Open to all full-conference attendees, speakers, and exhibitors. No access to Discovery or Exhibits Only Pass holders.

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**Tuesday
November 19**

8:00 a.m. – 9:00 a.m.
**CONTINENTAL
BREAKFAST**
sponsored by 



OPENING KEYNOTES



9:00 a.m. – 9:45 a.m.
Fireside Chat: How Amazon Fire TV's Customer-First Approach to Streaming Is Revolutionizing Home Entertainment

Sandeep Gupta, Vice President, Fire TV Devices and Experience, Amazon Fire TV

From voice control of your living room to an increasingly personalized content viewing experience, customers are living in a golden age of entertainment. But building a customer-first experience doesn't happen overnight—it takes hard work and a laser-focused strategy. This keynote discusses how the company has evolved its hardware strategy and reimagined the ways voice can power a seamless entertainment experience for customers, leveraging strategic partnerships with would-be competitors and a user experience focused on content and discovery.

9:45 a.m. – 10:00 a.m.
Industrializing Broadcast-Quality Streaming

Mark Russell, Chief Strategy and Corporate Development Officer, MediaKind

We all dream of broadcast-quality streaming of live TV. Flexibility and video quality—once considered trade-offs—have both become uncompromisable table stakes. As we enter more seasoned stages of cloud native-architecture and low-latency ABR streaming, content and services providers see the true promise of the ability to augment and scale video headends, optimize infrastructure, and enable fast and seamless delivery across multiple networks. So how close are we to going all-in on flexibility without compromising quality? And what potential could fully leveraging Kubernetes container orchestration unlock for the media industry?

10:00 a.m. – 10:30 a.m.
COFFEE sponsored by  & **OTT MEETUP** in the Streaming Media Showcase

10:30 a.m. – 11:15 a.m.
Business & Strategy Track
B101 ■ Subscription Fatigue: Too Much of a Good Thing?

More than 60% of U.S. households subscribe to at least one SVOD service, according to Parks & Associates; Deloitte says that the average subscriber pays for three services. As the total cost of those services approaches the cost of a cable TV bundle, might we see a reduction in subscriptions? Should we expect more bundling of SVOD services, with or without cable subscriptions? How can SVOD services prevent customer churn? Join our panel of industry experts as they discuss the implications of an increasingly crowded market.

MODERATOR: Allan McLennan, Chief Executive, Global Market Technologist, Analyst/Advisor, PADEM Media Group

SPEAKERS:
Anthony Layser, VP, Content Partnerships & Programming, Xumo
Mark Young, Chief Business Officer, Fandango
Marshall Nord, President, ShortsTV Americas
Erick Opoka, CEO, Cinedigm
Scott Ehrlich, Vice President, Emerging Platform Content, Sinclair Broadcast Group

Technical & How-To Track
T101 ■ HOW-TO: Fine-Tuning Your Encoding With Objective Quality Metrics

Choosing the number of streams in an adaptive group and configuring them is usually a subjective, touchy-feely exercise, with no way to really gauge the effectiveness and efficiency of the streams. However, by measuring stream quality via metrics such as VMAF, SSIMPlus, and others, you can precisely assess the quality delivered by each stream and its relevancy to the adaptive group. This presentation identifies several key objective quality metrics, teaching how to apply them using

commercial and open source tools and how to use them to fine-tune your adaptive bitrate ladders and encoding settings.

SPEAKER: Jan Ozer, Principal, Streaming Learning Center and Contributing Editor, Streaming Media

OTT Leadership Summit

OTT101 ■ Fireside Chat: Innovation in the Time of Streaming TV

With the introduction of myriad screens and technologies like time-shifting, DVR, and on-demand programming, the days of families gathering around the television to watch linear TV are gone. Consumers expect to bend "TV time" to work around their schedules, and they demand an ever-evolving set of intuitive yet cutting-edge features to constantly improve the experience. Philo CTO Ben Chambers walks us through how the team at the nation's first entertainment-focused OTT service is approaching and exceeding consumer expectations.

SPEAKERS:
Ben Chambers, CTO, Philo
Eric Schumacher-Rasmussen, VP & Editor-in-Chief, Streaming Media, USA

Video Engineering Summit

VES101 ■ The Video Engineer's Toolbox

Having the right tools for the job allows you to work smarter, not just harder. When developing for and supporting some of the biggest live streaming events such as the Super Bowl, Olympics, and the World Cup, we have beefed up and refined the arsenal of tools we bring. This session covers some of the tools to monitor, debug, and identify to solve problems quickly and effectively for live and on-demand streaming content, then dives deeper into some key, often overlooked use cases.

SPEAKER: David Hassoun, CEO, RealEyes Media

Esports & Sports Streaming Summit

ESS101 ■ Get in the Game: How Players and Producers Can Get Started

Case Study: From Game Seat to Driver Seat

Dreams really do come true, and sometimes gamers get a chance for real-world action. In this case study, Torque Esports introduces World's Fastest Gamer, an online competition that lets casual mobile players and pro gamers become actual pros. Using advanced driving simulators, WFG teaches driving skills and turns talented gamers into motorsport professionals.

SPEAKER: Darcy Lorincz, Torque Esports

Mass Appeal: Advancements in Technology Empower Esports Live Streaming

The latest innovations and growing affordability of live-streaming technology have opened the esports live-streaming market to the average consumers, allowing anyone to become a live streamer with the right tools. Learn how the latest technology developments have enabled esports fans to join YouTube, Twitch, Mixer, or other live-streaming services.

SPEAKERS: Marco Ordaz, Product Manager, & Michael Volpe, Marketing Director, IOGear

Live Streaming Summit

LS101 ■ Bringing Convenience to Corporate Streaming

While social media and entertainment get most of the attention when it comes to live streaming, it's just as crucial to B2B and internal corporate communications. This panel of experts discusses how to effectively and efficiently connect to all of your internal viewers while also being able to scale for an external audience, as well as the myriad technologies that can be used from capture to distribution.

SPEAKERS:
Dan Swiney, Head of Live Production and Streaming, LinkedIn
Dan Houze, VP of Encoding & Digital Strategy, BC Live

Discovery Track

DT101 ■ Discovery Track Session: SSIMWAVE, Xilinx

Stop Bad Video in its Tracks

Not all content is created equal. Gate and switch content to avoid getting trapped into expending resources needlessly. Reject or send the content to the appropriate encoder to optimize storage and transmission costs while ensuring video quality thresholds. *Attend this session for your chance to win: 10 gift cards for streaming services (\$25 value each).*

SPEAKER: Abdul Rehman, CEO, SSIMWAVE

The Future of Live Video Encoding

In this talk, we walk through the future landscape of major problems to solve in video encoding—what lies ahead in terms of approaches to reduce bandwidth and encoding compute complexity, data center power consumption, codec adoption, quality measurements, and tools to increase differentiation across a range of industries.

SPEAKER: Sean Gardner, Senior Marketing Manager, Xilinx

Download the Streaming Media West App



Scan this QR code or follow the link to download this app
Enter URL: <http://bit.ly/SMW19APP>

11:30 a.m. – 12:30 p.m.

Business & Strategy Track

B102 ■ Building Video Services Consumers Want

Risk & Decision: The Insider's Guide to Avoiding Disaster When Building a Video Service

Launching an OTT service or creating a video delivery platform isn't a simple undertaking. There are myriad considerations regarding technology, business model, content licensing, and more. But nothing can derail a promising video offering more than not knowing what's waiting around the next corner to challenge getting to market. In this presentation, you learn about some of the critical challenges facing streaming services today. Aggregating survey responses from across the Streaming Video Alliance membership, this presentation shares some of these challenges, how to address them, and the risk they pose to undermining your efforts to provide viewers a great video experience.

SPEAKER: **Jason Thibeault**, Executive Director, Streaming Video Alliance

5 Steps to Media App Success in the Emerging Connection Economy

The velocity of technological change and audience expectations aren't slowing down, and launching an OTT service isn't a simple undertaking. Join this strategic session on building a future-proofed media app strategy to launch and connect with your most valuable audiences while maximizing your current and future tech investments. Jim Bennette shares the key steps from the important but often overlooked step of defining your goals, then examines the process from devising a holistic app strategy to successfully connecting with your most valuable viewers.

SPEAKER: **Jim Bennette**, VP Sales, U.S., Applicaster

Technical & How-To Track

T102 ■ Everything You Need to Know About Cloud Graphics & Digital Overlays

If content is king, then graphics is one of the most important technologies in streaming media. While sharp producers have been using graphical overlays forever, the Chromium Embedded Format and the rapidly growing esports market have thrust cloud graphics—which doesn't require an expensive on-prem server—into the view of major broadcasters and OTT streamers globally. This workshop features a live technical demo, viewer research, and an overview of the vendors in the cloud graphics space.

SPEAKER: **Brian Ring**, Principal Analyst, Ring Digital

OTT Leadership Summit

OTT102 ■ Fireside Chats: Finding New Audiences

Reaching Generation Z

Consumers' video consumption habits are changing dramatically. Generation Z watches video in a completely different way than older generations, and it's imperative that we reach them on their terms, with the type of content they want, in the formats that speak to them, on the devices they prefer. In this fireside chat, we talk with an executive from Awesomeness TV about what works—and what doesn't—with the next generation of consumers.

SPEAKERS:

Rebecca Glashow, Co-Head, Awesomeness

Shelley Zimmerman, Co-Head, Awesomeness

Eric Schumacher-Rasmussen, VP & Editor-in-Chief, Streaming Media

Ad-Supported VOD as an Alternative to Broadcast & SVOD

Many consumers are looking for alternatives to traditional cable and SVOD services, as well as skinny bundles that aren't so skinny after all. Enter free, ad-supported services that offer premium content without the premium price tag. We talk about the challenges and opportunities facing AVOD services.

SPEAKERS:

Adam Lewinson, Chief Content Officer, Tubi

Eric Schumacher-Rasmussen, VP & Editor-in-Chief, Streaming Media

Video Engineering Summit

VES102 ■ Low Latency Live Streaming at Scale

Many streaming producers are attempting to enable viewers to interact with live streamers in relative real time through chat, Q&A, betting, bidding, and more. They all encounter the same challenge: reducing latency while syncing interactions between the live streamer and viewers. There's currently a race between WebRTC-based approaches, which are very low in latency but hard to scale, and

HTTP-based approaches, which are easy to scale but higher in latency. Neither is ideal. This session details approaches to achieving interactivity at scale using existing technologies.

SPEAKER: **Steve Heffernan**, Founder & Head of Product, Mux and Creator of Video.js

Esports & Sports Streaming Summit

ESS102 ■ Focus on Fans: Attracting Eyeballs, Keeping Them Hooked

Increasing Fan Engagement

Streaming live video is just the beginning. To succeed today, it's crucial to engage fans and keep them tuning in. Putting out a tune-in message isn't enough anymore. You've got to get fans invested in the next match, engaging them on multiple platforms. Here's how some leagues cater to their fans to create all-new experiences and lifelong engagement.

SPEAKERS:

Ed Nordholm, Chief Corporate Officer, Anthem Sports & Entertainment, President, Fight Media Group, (Fight Network and Impact Wrestling)

Brett Collins, Founder & CEO, BC Live Productions

Matt Smith, Comcast

The Next Generation

Don't assume that young people today are going to watch the same sports that their parents follow. Young viewers are up for grabs, as the traditional sports world undergoes massive changes. Will today's young viewers grow up loving basketball and football, or will esports eventually dominate? Here's how leagues are securing the next generation.

SPEAKERS:

Nick Crooks, Global Head, Business Development, Nitro Circus

Ari Evans, Founder & CEO, Maestro.io

Brett Casadonte, President & Co-Founder, GlobeStream Media LLC

Codi Warren, Managing Director, Communications, USA Softball

Live Streaming Summit

LS102 ■ Live-Streaming Best Practices

How reliable is your live-streaming production workflow? Learn how to use and configure the essential components of a live streaming event system, including cameras, H.264 encoders/streamers, video switchers, video signal conversion, and recorders. Also learn how to best deploy the live stream to your audience based on business requirements: Do you utilize free social media outlets, work with a premium third-party streaming service, or build your own live-streaming infrastructure? Learn how to approach different live scenarios with the right gear to fit the budget you have.

SPEAKER: **Robert Reinhardt**, CTO, videoRx

Discovery Track

DT102 ■ Discovery Track Session: Interra Systems, EdgeConneX Monitoring Live OTT Services Is Critical for Service Assurance

Around the globe, OTT video consumption is rising steadily, with live streaming, attracting large audiences. This necessitates that operators adopt a holistic methodology to service assurance to gain better visibility into what is happening with the live OTT workflow, decrease the chance for churn, and maximize monetization. Monitoring solutions are a fundamental requirement today for VOD and live OTT applications. This session highlights the challenges of live streaming and how monitoring can help by providing a centralized service assurance view, validation of where the issue is located, and increased flexibility via a software-based and cloud-deployable approach. *Attend this session for your chance to win: Google Nest Hub (\$129 Value).*

SPEAKER: **Anupama Anantharaman**, VP, Product Marketing, Interra Systems

Content and Eyeballs—The Perfect Match at the Edge

Latency is one of the most important factors in delivering content to users. There is a growing trend in the community of partners, customers, and providers to meet the eyeball providers away from carrier hotels. The high density environments require a greater amount of power, cooling, redundancy that EdgeConneX has built for our customers since inception. We'll discuss trends in key markets, and why EdgeConneX is recognized as the leader in this space. *Attend this session for your chance to win: Beats Pill & Portable Wireless Speaker (\$195 value).*

SPEAKER: **Elsa Pine**, VP Global Sales & Business Development, EdgeConneX

12:30 p.m. – 1:30 p.m. ■ **ATTENDEE LUNCHEON**

1:30 p.m. – 2:15 p.m.

Business & Strategy Track

B103 ■ LinkedIn Live: A Producer's Journey

LinkedIn Live has quickly become one of the most valuable streaming platforms, reaching more than 600 million professionals worldwide. In this discussion, you not only learn about the value and engagement that LinkedIn Live is driving for key publishers, companies, and influencers, but also how you can become a part of the LinkedIn Live beta program as well. Join LinkedIn's streaming producer, Chris Packard, on a journey into the world's largest professional streaming network.

SPEAKER: **Chris Packard**, Streaming Producer, LinkedIn Media Productions

Session Rooms

<p>Keynotes & Closing Session</p> <ul style="list-style-type: none"> ■ San Francisco <p>Track B ■ Sacramento</p> <p>Track T ■ San Diego</p> <p>OTT Leadership Summit ■ San Francisco</p> <p>Video Engineering Summit ■ Beverly</p>	<p>Esports & Sports Streaming Summit</p> <ul style="list-style-type: none"> ■ Echo Park ■ Mt. Washington <p>Live Streaming Summit</p> <ul style="list-style-type: none"> ■ Silver Lake
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Technical & How-To Track

T103 ■ Microservices in Action

The discussion around microservices has moved from theory and planning to looking at optimization for deployment for streaming within a microservices/services-oriented architecture. A year ago many were thinking about deployment in this new highly available, scalable and agile way; today, it has emerged as common practice, or at the least as a common strategy. This session examines some examples of microservices in action in a discussion with leading content publishers and goes deep into some real-world microservices architectures, exploring introspection, orchestration, containerization, and wider virtualization strategies.

MODERATOR: **Dom Robinson**, Director & Creative Firestarter, id3as and Contributing Editor, StreamingMedia.com

SPEAKERS:

Nermeen Ismail, Distinguished Engineer, Cisco

Tanu Aggarwal, Director of Engineering of Video Platform, Twitch

Nathan Moore, Director of Performance Engineering Platform, StackPath

Olga Kornienko, Co-Founder & Chief Operating Officer, EZDRM

Shobana Radhakrishnan, Director of Engineering, Android TV

OTT Leadership Summit

OTT103 ■ Understanding the DRM Lifecycle

As DRM becomes a global standard for content creators and consumers, the DRM lifecycle becomes more and more important. Implementing DRM into a complex video workflow can be a daunting task. That combined with the mandatory use of DRM for premium content leaves an OTT Operator with a lot of questions. In this session, we explore the “DRM Lifecycle” from content creation to editing to digital dailies to post to screeners and, ultimately, to consumer distribution.

MODERATOR: **Christopher Levy**, CEO and Founder, BuyDRM

SPEAKERS:

Gulliver Smithers, SVP Product & Technology, Sony Pictures Entertainment

Corey Smith, Director Live Operations, Global Broadcast, Blizzard

Steve Cronan, CEO, 5th Kind

Video Engineering Summit

VES103 ■ CDN and Edge Services

Evaluating & Testing CDN Suppliers for Performance & Unit Economics

This discussion details how video engineers should set up their CDNs for optimal delivery around the world. From multi-CDN to optimizing encoding and transcoding efforts, we provide actionable recommendations based on real, unbiased testing. Attendees walk away with insights regarding how to optimize their CDN(s) for media delivery.

SPEAKER: **Steven Tripsas**, Platform Solutions Architect, Zype

Delivering Premium Content at Scale

With many streaming services available, and more coming online every day, it's critical that premium content continues to engage viewers and can be delivered with reliability, quality, and flexibility. Learn more about how premium video platforms are bringing together the best of Silicon Valley and Hollywood to deliver captivating content, and the infrastructure and technology innovations being put into place to ensure success for 2020 and beyond.

SPEAKER: **Heather Mellish**, Principal BDM, Edge Services, AWS

Esports & Sports Streaming Summit

ESS103 ■ Let's Sync Up: Understanding the Opportunities of Live Sports Streaming

Advanced technologies such as ultra-low latency, synchronized multi-stream, and 5G are transforming the streaming of live sports, offering new, superior experiences to traditional linear TV. However, as these technologies increase the value and consumption of live streaming, they present challenges in protecting high-value content. This session focuses on the new technologies that are transforming live sports video, as well as what this means from a content value and content protection perspective.

SPEAKERS:

Mark Nakano, VP Content Security & Anti-Piracy, Turner Broadcast

Michael Jones, SVP & Head, Business Development, VisualOn

Live Streaming Summit

LS103 ■ Fireside Chat With Industry Leaders

Join us as we discuss the massive increase in live streaming viewership and the importance of your audience with one of the industry leaders in the tech space. See website or the Streaming Media West app for details.

Discovery Track

DT103 ■ Discovery Track Session: UI Centric, Wowza

OTT: Where to Invest Your UX & Design Budget

Designing great digital products—because digital is always evolving—is a never-ending proposition. Identifying what users really want is only the beginning. How can you make the UX definition and design process run more smoothly and deliver products which are both compelling, effective, and

technically efficient? We discuss the latest practices for OTT products, G16 which will make everyone involved in the product lifecycle through to end-consumers happy with what you're creating. *Attend this session for your chance to win: A 1.5 day UX audit.*

SPEAKER: **Sam Drury**, Head, UX, UI Centric

Low Latency Live Streaming Delivery: What's Next?

At the Apple Worldwide Developer Conference, Apple announced the specs for a brand-new extension of its HTTP Live Streaming (HLS) protocol: Low-Latency HLS. While reducing latency for live streaming is a valiant goal (and one that we can get behind), this news interrupted an industry-wide effort to do so via chunked transfer encoding. With more viewers ditching traditional satellite and cable services each year, the race for speedier live-stream delivery is in full force. Apple Low-Latency HLS is an emerging standard that could very well lead the pack, but what are the pros and cons? The standard's real-world appeal and long-term benefits are still playing out. Join our discussion and learn where the industry is heading, ideal use cases, and what can be expected of low-latency HLS next. *Attend this session for your chance to win: Amazon gift card (\$250 value).*

SPEAKER: **Tim Dougherty**, Director of Sales Engineering, Wowza Media Systems

2:15 p.m. – 2:45 p.m.

COFFEE sponsored by verizon media & LIVE STREAMING MEETUP

in the Streaming Media Showcase

2:45 p.m. – 3:30 p.m.

Business & Strategy Track

B104 ■ The State of the CDN Market

Content delivery networks (CDNs) deliver vast quantities of data to an ever-growing, media-hungry audience. The sheer scale of operations and consumer adoption of these services is daunting. Forgotten when they work, yet in the spotlight if they fail, the CDNs have a thankless but critical role in our industry. In this session, Dom Robinson, chair of Content Delivery Summit and 25-year veteran in the CDN space, talks to executives from the leading CDNs about the state of the sector, the challenges being faced, new technology strategies, and which services are rising and falling in demand. If a CDN is a part of your ecosystem, then this broad discussion should touch on a variety of high-level topics that directly affect your business.

MODERATOR: **Dom Robinson**, Director & Creative Firestarter, id3as and Contributing Editor, StreamingMedia.com

SPEAKERS:

Peter Chave, Principal Architect, Akamai Technologies

Neil Glazebrook, Senior Director of Content Delivery and Edge Compute, Limelight Networks

George Bokuchava, CEO, Tulix

Ryan Durfley, CDN Senior Product Manager, Comcast

Technical & How-To Track

T104 ■ Open Source Streaming

In this session, we review every stage of the live- and on-demand streaming workflow and explore how open source options can be used in real-world implementations. We'll examine tools such as FFmpeg, VLC, and NGINX, as well as open source codecs, and discuss our panelists' favorites for solving specific challenges, the pros and cons of each, and compare them to some commercial offerings. While this session is of use for technicians and developers, the emphasis is on higher-level strategic questions about where and when open source tools can replace commercial offerings and thus reduce costs.

MODERATOR: **Jason Thibeault**, Executive Vice President, Streaming Video Alliance

SPEAKERS:

Steve Heffernen, Head of Product, Mux

Rob Dillon, Principal Strategist, Dillon Media Ventures

OTT Leadership Summit

OTT104 ■ Fireside Chat: Connecting With Generation Alpha

Born with the iPad, Generation Alpha consumes video in ways that are even more different than Generation Z. So how do you create content and deliver it in a way that connects with viewers 9 and younger, while being respectful of the fact that these are just kids? Pocket.watch is the studio behind Ryan ToysReview, HobbyKidsTV, and EvanTubeHD, and this discussion with David B. Williams sheds light on the opportunities and challenges that come with creating content for the next generation.

SPEAKERS:

David B. Williams, GM/SVP for Channels, Pocket.watch

Eric Schumacher-Rasmussen, VP & Editor-in-Chief, Streaming Media

Video Engineering Summit

VES104 ■ Integrating CMAF Into a VOD Workflow

This presentation details how to implement CMAF into a VOD workflow, and how CMAF saves storage space, reduces latency, and improves cache efficiency, which leads to better performance and the simplification of content encryption.

SPEAKER: **Tomas Bacik**, VP of Product Development, CDN77

Esports & Sports Streaming Summit

ESS104 ■ Women, Games, & the Streaming Community

Women now account for nearly half of all video game enthusiasts, and they're turning their passion into successful careers—and vibrant communities—on Twitch. In this fireside chat, Twitch's VP, Sales Katherine Bowe leads a discussion with one of Twitch's leading female content creators. Find out the secrets to working with brands as a female broadcaster, building a community by streaming what you love, and more in this lively session.

SPEAKER: **Katherine Bowe**, VP, Sales, Southwest, Twitch

Live Streaming Summit

LS104 ■ Real-Time Remote Production for the FIFA Women's World Cup

Millions of people around the world tuned in for the 2019 FIFA Women's World Cup Finals in France between the USA and Norway. After the huge success of FOX Sports' innovative broadcast of the 2018 FIFA World Cup, our panelists collaborated with FOX Sports to deliver new remote production capabilities and greater efficiencies for this year's women's final. Boasting more than twice as many streams as the 2018 World Cup, these panelists discuss how they enabled production teams in Los Angeles to begin editing multiple camera feeds within less than 10 seconds of the live action for highlights, playback, and bridge programming and employed new capabilities such as real-time direct-to-cloud archiving and more extensive—yet consolidated—monitoring.

SPEAKERS:

Michael Flathers, Chief Technology Officer, IBM Aspera
Dustin Myers, Senior VP, Production Operations, Fox Sports
Dave Norman, Telestream
Daniel Gonzales, Senior Solutions Architect, Levels Beyond

Discovery Track

DT104 ■ Discovery Track Session: PacketFabric, DLVR

Upgrade Your Network, Upgrade Your Stream

As streaming media continues to take over the entertainment world, content creators and providers will require advanced infrastructure to keep up with production schedules and consumer demands. This session examines how private networks can play a critical role in the lifecycle of streaming content, from its creation and distribution and through to its consumption. We discuss how PacketFabric enable powerful new workflows to quickly go from the camera to the cloud to the screen by delivering reliable, flexible and high-capacity connectivity from production locations to cloud providers, CDNs, and beyond. *Attend this session for your chance to win: Amazon gift card (\$200 value).*

SPEAKER: **Chad Milam**, President & CEO, PacketFabric

Configuring Robust Multi-CDN in Azure, Powered by DLVR

Reliable, high-quality video viewing experiences are critical to video publishers. This presentation discusses how DLVR's integration on Azure offers a highly scalable, measured, optimized, and simplified multi-CDN service for large and medium-size Azure customers running video workloads. *Attend this session for your chance to win: 3 Hydro Flasks (\$35 value each).*

SPEAKERS:

Mike Gordon, Co-founder & CEO, DLVR
Daniel Gickhorn, Lead Product Manager, Azure Cloud CDN and Azure Front Door, Microsoft

3:30 p.m. – 4:30 p.m.

HAPPY HOUR sponsored by **MediaKind** in the Streaming Media Showcase

4:30 p.m. – 5:15 p.m.

Business & Strategy Track

B105 ■ Optimizing Corporate Communications

From delivery to improving end-user experiences, this covers how enterprises can support internal video activities at scale without harming the network. Focus is then placed on developing a secure-rich process for accessing and hosting video assets to be accessed by employees and stakeholders. This also includes covering value adds for end users, including using artificial intelligence to make content more accessible and discoverable through automated processes.

MODERATOR: **Scott Grizzle**, Senior Solutions Engineer, Watson Media & Weather, IBM

SPEAKERS:

Stephen Condon, VP Global Marketing, Hive Streaming
Dan Houze, VP of Encoding & Digital Strategy, BC Live
Sean Patrick Keen, Global Director of Sales Engineering, Intrado Digital Media
Andy Howard, Founder & Managing Director, Howard & Associates

Technical & How-To Track

T105 ■ ATSC 3.0: What You Need to Know

The promise of ATSC 3.0 is the ability to multicast not only audio and video, but data as well. If ATSC 3.0 can achieve this, plus allow for targeted personalized advertising, the broadcast

world will have combined the digital promise of targeting with the scale of broadcast, essentially changing the broadcast vs. streaming playing field. How will this work with legacy CDNs and new 5G pipes? What does broadcast-as-a service mean? How do converged OTT-OTA apps work in the future? How does this help deliver the right content to the right audience?

SPEAKERS:

Nadine Krefetz, Consultant, Reality Software and Contributing Editor, Streaming Media
Michael E. Bouchard, Vice President, Technology Strategy, ONE Media—a division of Sinclair Broadcast Group

OTT Leadership Summit

OTT105 ■ Who Cares About Sports & News?

As video offers proliferate, many have purely on-demand content while others include live programming. Understanding the nuances of consumer interest in live video, especially sports and news, is critical to securing content rights, designing offers, and targeting subscribers. For many consumers, interest in a favorite team or athlete is the primary driver for their live video subscription, while other consumers have virtually no interest in sports or traditional news and often find little value in live TV. This session explores findings from a new consumer survey from Altman Vilandrie & Co., including a deep dive into reasons for consumer adoption of live TV offers, and a panel discussion featuring top executives from the TV industry.

MODERATOR: **Jonathan Hurd**, Director, Altman Vilandrie & Co.

SPEAKERS:

Kaizar Campwala, Vice President, Business Operations and Insights, Disney DTCI/ABC News
Tony Brown, Chief of Staff, Newsy
Rob Dillon, Principal Strategist, Dillon Media Ventures

Video Engineering Summit

VES105 ■ Applications of Per-Title Encoding

Per-title encoding techniques have progressed from theory to reality with real-world statistics to verify effectiveness. In this roundtable, panelists discuss how their technologies work and the overall impact on their encoding ecosystem and share case studies about how per-title encoding has saved bandwidth and/or improved quality of experience.

MODERATOR: **Jan Ozer**, Principal, Streaming Learning Center and Contributing Editor, Streaming Media

SPEAKERS:

Assaf Berkovitz, Director of Technical Services, Kaltura
Jon Dahl, CEO, Mux
Steve Geiger, Solutions Director of Americas, Bitmovin

Esports & Sports Streaming Summit

ESS105 ■ Esports & Streaming in Education

What's happening in collegiate esports? How do new programs in elementary, middle, and high school esports factor in? We look at the benefits to an esports and streaming program in schools and how it prepares students for jobs in the real world. We also discuss opportunities for streaming hardware and software vendors to sell into this new vertical within education.

SPEAKER: **Todd Conley**, Executive Director, HighSchool.GG

Live Streaming Summit

LS105 ■ Scaling for the Demands of a Growing Live Audience

As more people are turning to streaming as their main source of content, companies are dealing with the necessity of scaling quickly. On top of this, everyone is viewing from many devices, each with a specific set of quality specifications. With many viewers now getting their live events and sports coverage almost exclusively from streaming services this panel discusses the necessary tools to ensure a successful viewing experience.

SPEAKERS:

Tim Baldwin, Director of Product, Zixi
Edward Doty, Executive Producer, Jukin Media
Corey Smith, Director Live Operations, Global Broadcast, Blizzard
Daniel Pisarski, VP of Engineering, LiveU

Discovery Track

DT105 ■ Discovery Track Session: Recurly

Subscriber Retention Benchmarks for OTT Businesses

With more subscription streaming offerings coming onto the market every year, subscriber engagement and retention is top of mind for OTT providers. In this presentation, Recurly shares the latest subscription OTT benchmarks on churn and subscriber retention as well as the strategies smart OTT providers are using to fight churn and accelerate growth. *Attend this session for your chance to win: 30 "Subscribe" T-Shirts (\$10 value) and 20 "Subscriber" tote bags (\$9 value).*

SPEAKER: **Jonas Flodh**, SVP, Product, Recurly

5:30 p.m. – 7:00 p.m.

NETWORKING RECEPTION on the Plaza Deck, 4th Level

Our evening reception is the perfect place to network with industry peers while enjoying a drink and some tasty bites. Open to all attendees, speakers, exhibitors, and Discovery Pass holders.

**Wednesday
November 20**

8:30 a.m. – 9:00 a.m.
**READERS' CHOICE
AWARDS BREAKFAST**

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KEYNOTE



9:00 a.m. – 10:00 a.m.

The Next Generation of Sports Streaming

MODERATOR: **Kiran Paranjpe**, Head of Sports & Entertainment/Global Partnerships, Google, Inc.

PANELISTS:

Brendan Reiley, Director, Revenue Operations, NASCAR Digital Media;

Rich Robinson, SVP, Digital, World Surf League

Jared Smith, Senior Vice President of Digital Products, WWE

Advanced TV has opened up a new world of possibilities when it comes to the sports viewing experience. This includes new direct-to-consumer (DTC) platforms that let fans watch anytime or anywhere, second-screen experiences that complement the TV and in-person viewing experience, and more personalized content and ads that are relevant to the viewer. Whether you're watching from the stands, from the couch, or on-the-go, new technology is delivering a heightened sports viewing experience for fans everywhere. In this session, Kiran Paranjpe moderates a roundtable of digital executives from sports organizations to discuss their successes and strategies launching and growing DTC platforms. Topics include streaming technology decisions, subscription vs. advertising revenue models, regional vs. global distribution models, and marketing DTC services effectively.

10:00 a.m. – 10:30 a.m.

COFFEE & ESPORTS & SPORTS STREAMING MEETUP in the Streaming Media Showcase

10:30 a.m. – 11:15 a.m.

Business & Strategy Track

B201 ■ UX: Keep Viewers Happy

What delights viewers and keeps them engaged when it comes to the video user experience (UX)? This panel discusses the trends media companies are following when it comes to creating a one-click environment, moving customers through a registration or transaction process, or simply structuring navigation so content can be more easily found. Are text-based navigation systems a bad idea? What about removing the program guide? If customers churn early and often when they're not happy, what will keep viewers happy?

MODERATOR: **Nadine Kretetz**, Consultant, Reality Software and Contributing Editor, Streaming Media

SPEAKERS:

Tyler Winton, Vice President Business Development, TiVo

Tony Brown, Chief of Staff, Newsy

Rema Morgan-Aluko, Director, Software Engineering, FandangoNOW

Sam Drury, Head of User Experience, UI Centric

Technical & How-To Track

T201 ■ HOW-TO: Payout in the Cloud

This presentation will fundamentally shift the way attendees think of payout in the cloud. Rather than building a schedule and expensively re-encoding assets in real time for broadcast, learn how to decouple the monolith of payout software into discrete components on top of AWS services. The approach discussed will open new possibilities of channel customization, personalization, and end-user quality, while also dramatically reducing running costs.

SPEAKER: **Phillip Harrison**, Solution Architect, Amazon Web Services

OTT Leadership Summit

OTT201 ■ How Niche Video Services Can Find Success

Netflix, Prime Video, Hulu, and other entertainment giants get most of the attention, but that doesn't mean there's not a place for niche services to not only survive, but thrive. It's all about knowing your

audience—not just creating a great video offering but building communities that deliver content of all kinds and invite user interaction and participation in curating the channels they've always wanted.

MODERATOR: **Jonathon Barbato**, Office of the CEO, Best Ever Channels

SPEAKERS:

Gene Pao, Senior Vice President, Digital Enterprises, Shout! Factory

Jon Cody, Founder & CEO, TV4 Entertainment, Inc.

Erick Opeka, CEO, Cinedigm

Floris Bauer, Co-Founder and President, Gunpowder & Sky

Video Engineering Summit

VES201 ■ Controlling QoE With Better Data

Quality of experience (QoE) is critical to all successful streaming services. Using worldwide benchmark data, this talk identifies the most important QoE KPIs for VOD services and discusses their regional impact. For example, in the U.S., buffering issues drive user churn, while in Asia, managing device fragmentation is key. It also reviews a number of metrics, explores benchmark data, and details how to best understand and leverage the relationship between QoE and data.

SPEAKER: **Marc Maycas**, VP of Product Solutions, Nice People at Work

Esports & Sports Streaming Summit

ESS201 ■ Live Streaming in Challenging Conditions

Not long ago, going live from a remote location meant driving up with a satellite truck. Well, those days are over. Today's publishers are delivering live streams from challenging remote locations that a truck could never reach. These producers make it look easy, but it's not. Learn how to overcome any obstacle.

SPEAKERS:

Peyote Perryman, Founder & Creative Director, Digital P Media

Stu Grubbs, CEO & Co-founder, Lightstream

Ben Gabrielson, LiveU Sales Manager, Sports ESS

Jacob Potter, Assistant AD, Broadcasting, University of Oklahoma

Discovery Track

DT201 ■ Discovery Track Session: AWS, Applicaster

Reliability of Live Streaming in the Cloud

Delivering reliable and resilient live streaming is a must for video providers, who depend on live video workflows being highly available and scalable with audience size so viewers never miss a moment of content. A truly resilient live video stream delivers a smooth and consistent experience for viewers, without gaps, stalls, or silences. In this session, learn how to use the AWS Cloud and AWS Media Services, like AWS Elemental MediaLive, AWS Elemental MediaConnect, AWS Elemental MediaStore, and AWS Elemental MediaPackage, to build highly available and reliable live video workflows in a cost-effective and scalable way, complete with monitoring, alerts, and security. Attend this session for your chance to win: Amazon Echo Show (\$230 value).

SPEAKER: **Kiran Patel**, Sr. Product Marketing Manager, AWS

Cross-Device Media Apps: Build or Buy? Why Not Both!

In this session, Idan Maron highlights how leading media companies like Zee5, ProSiebenSat.1, DirecTV, and others are maximizing their pre-existing workflows and resources, combined with best-of-breed third-party tech, to build user-loved apps with Zapp, Applicaster's app lifecycle management platform. Attend this session for your chance to win: Sony Wireless Noise Canceling Extra Bass Headphones (\$250 value).

SPEAKER: **Idan Maron**, VP, Business Development, Applicaster

11:30 a.m. – 12:30 p.m.

Business & Strategy Track

B202 ■ Connecting the Dots for Connected TV Advertising

Study after study shows increased viewing for all OTT services on the TV screen, and not just SVOD services. In fact, ad-supported services are growing in number, leading to an increase in connected TV ad inventory. If you're an ad buyer, how do you take advantage of this growing source of addressable ad inventory? If you're a provider with inventory, how do you connect with the buyers? What are the issues with connected TV advertising, and how are they being addressed? Join this panel representing both the supply and demand sides, as well as content services and platforms, for answers.

MODERATOR: **Michelle Abraham**, Sr. Research Analyst, Media & Communications, S&P Global Market Intelligence

SPEAKERS:

Allen Klosowski, SVP, Advanced Solutions Group, SpotX

Jay Prasad, Chief Strategy & Business Officer, VideoAmp

Gerrit Niemeijer, Chief Technology Officer, Ampersand

Sean Doherty, Senior Vice President of Operations, Co-Founder, Wurl

Rachel Gantz, General Manager, Activation Solutions, Comscore

Reed Barker, Head of Advertising, Philo

Technical & How-To Track

T202 ■ Multicast: Has Its Time Finally Arrived?

IP multicast is 31 years old this year. This session takes a rapid tour through multicast's history; looks at some deployments and their successes and failures; and examines the emergence of IPTV, operator CDN, and application-layer P2P models. It then looks at why multicast adoption has been difficult, along with some of the technical and commercial challenges it has faced. Finally, it looks to the future and the re-emergence of interest with the hot new technologies in the space, including multicast-ABR, LTE-B, and BIER.

MODERATOR: **Dom Robinson**, Director & Creative Firestarter, id3as and Contributing Editor, StreamingMedia.com

OTT Leadership Summit

OTT202 ■ 2019—The Year of Direct-to-Consumer Video Services?

As Disney, WarnerMedia, Apple, and NBCUniversal prepare to launch direct-to-consumer (DTC) services—joining existing ventures like ESPN+, CBS All Access, and DC Universe—will existing SVOD and live-linear services like Netflix, Hulu, and Amazon Prime be able to compete? Or will the DTC offerings falter against the incumbents? This session examines the pros and cons of DTC services and evaluates the likelihood of success in the crowded OTT landscape.

MODERATOR: **Rob Dillon**, Principal Strategist, Dillon Media Ventures

SPEAKERS:

Josette Bonte, Managing Director, Digital Media Strategies and USC

Tyler Champley, VP Marketing and Audience Development, Poker TV

Jim Long, CEO, Didja

Video Engineering Summit

VES202 ■ Hardware Transcoding Solutions for the Cloud

Hardware codecs in FFmpeg, like those from Intel and NVIDIA, deliver significant performance gains over x264/x265, but have a reputation for lower quality and use a completely different command set. This session benchmarks the performance and quality of these codecs and details the FFmpeg command syntax. Attendees learn when and how to use these hardware codecs in VOD and live encoding workflows.

SPEAKER: **Jan Ozer**, Principal, Streaming Learning Center and Contributing Editor, Streaming Media

Esports & Sports Streaming Summit

ESS202 ■ Moneyball: Monetizing Your Assets

Betting on the Future

Wagering and interactivity are about to become big parts of the streaming sports experience, whether that means adding on-screen trivia quizzes to keep fans engaged or betting for real money on a game's outcome. Hear from the architects of our gambling future as they chart out a path for integrating bets and sports viewing.

SPEAKERS:

Greg Gemignani, Partner, Dickinson Wright

Rich Robinson, Senior Vice President, Digital, World Surf League

Steve Heffernan, Founder & Head of Product, Mux and Creator of Video.js

Doing Sponsor Integrations Right

In the days of ad skipping, sponsors want to create unskippable moments that put their products in a good light. As plenty of brands have found, viewers will welcome branded integrations when they're done the right way. Here's how to create authentic moments that fit in with the action, pleasing sponsors and viewers alike.

SPEAKERS:

Felix LaHaye, Founder & CEO, unitedesports.com

Scott Sonnenberg, Chief Global Partnerships Officer, LA Clippers

Ryan James, Cofounder and Chief Design Officer, Unreel Entertainment

Darcy Lorincz, Torque Esports

Discovery Track

DT202 ■ Discovery Track Session: Bitmovin, Signiant

Data-Driven Video: Using Analytics to Determine When & Where to Optimize Your Video Pipeline

Streaming video is easy, right? However, delivering a seamless, enjoyable, and consistent video experience to users can be difficult—especially across a range of markets and platforms. Address the biggest and most common challenges in the video streaming market by measuring your viewers' QoE+G32 and video pipeline performance and using that data to derive actionable insights and make smart choices about how to optimize video encoding and playback. Attend this session for your chance to win: Notebooks for all attendees (\$8 value each).

SPEAKER: **Steve Geiger**, Solutions Director, Americas, Bitmovin

Cloud Ingest Portals: Strategies for Acquiring Content from Providers Around the Globe

While there are plenty of tools for getting data into public and private clouds, professional media requirements are unique: File sizes are enormous and only getting bigger, video file specifications vary widely so file validation against exact specifications is critical, and metadata is core to

unlocking business value so custom metadata entry is key. This session will discuss strategies to make it fast, easy, and secure to ingest content from around the globe. Attend this session for your chance to win: Roku Ultra (\$99 value).

SPEAKER: **Jon Finegold**, Chief Marketing Officer, Signiant

12:30 p.m. – 1:30 p.m.

LUNCH BREAK ■ A chance to visit the Streaming Media Showcase

1:30 p.m. – 2:30 p.m.

Business & Strategy Track

B203 ■ Video Machine Learning Demystified

Do vendor machine learning models not get the gist of your video? If so, it's time to create a custom model. Don't worry if you're not a data scientist. These days, there is a growing number of solutions available for everyone. During this session, we take a look at some of these solutions, talk through what it takes to use them, and discuss some tips and tricks to keep in mind as you do. By the end of this session, you should feel empowered to start tinkering even without contemplating a data science degree.

SPEAKER: **Jun Heider**, CTOO, RealEyes Media

Technical & How-To Track

T203 ■ Tackling the Latency Challenge

HOW-TO: Latency, Real-Time Streaming, & WebRTC

Is latency impacting your customers' experiences and your business? The good news is sub-second latency is within reach. In this session, you learn about WebRTC, what it takes to support it and the available APIs from MediaStream to RTCDataChannel and more, as well as the protocols that make it real time such as UDP, DTLS, SCTP and everything in-between. This session also addresses workflow best practices and implementation options.

SPEAKER: **Andrew Crowe**, Lead Engineer, Lighthouse Networks

High Efficiency Streaming Protocol (HESP)

Ultra-low latency for live is the most important challenge that ABR streaming faces. THEO Technologies' HESP is a new streaming protocol, an alternative to HLS and DASH and streams over HTTP, that enables streaming services to be delivered with sub-second latency, with a significantly reduced streaming bandwidth, at scale. Join the conversation to get the latest straight out of the THEO Innovation Lab.

SPEAKERS:

Thijs Lowette, Lead Solution Architect, North America, THEO Technologies

Willem De Saegher, North America Sales Director, THEO Technologies

OTT Leadership Summit

OTT203 ■ Harness SSAI's Superpowers

Server-side ad insertion (SSIA) claims to have superpowers: the ability to replace broadcast ads with or without SCTE markers, avoidance of viewer ad blockers, more standardized integration into each platform and better targeting and personalization are the superpowers SSAI brings to the streaming environment. The evil lurking in the wings is ad server ability to dynamically scale, mistaking true scale for fraud and getting standardized measurements to your partners. We also touch on reach, frequency and wholistic ad strategy to arm you with information for talking to business colleagues.

MODERATOR: **Nadine Krefetz**, Consultant, Reality Software and Contributing Editor, Streaming Media

SPEAKERS:

Stephen Gray, Director of Ad Technology Systems, Disney

Michael Dale, Executive VP, Media & Entertainment, Crunchyroll/Ellation

Byron Saltysiak, VP of Video and Connected Devices, Warner Media

Video Engineering Summit

VES203 ■ How to Customize Encoding, Packaging, & DRM for All Target Formats

Consumer devices have many different operating systems, firmware, and chipsets, which often require different codecs, packaging formats, and DRM schemes. To achieve optimal QoE for all

Session Rooms	
Keynotes & Closing Session ■ San Francisco	Esports & Sports Streaming Summit ■ Echo Park
Track B ■ Sacramento	Live Streaming Summit ■ Mt. Washington
Track T ■ San Diego	Discovery Track ■ Silver Lake
OTT Leadership Summit ■ San Francisco	
Video Engineering Summit ■ Beverly	

WEDNESDAY, NOVEMBER 20

viewers, distributors should customize delivery for each device. This session details how companies can leverage intelligence built into technology to understand the differences between platforms and automatically modify content as it's delivered to achieve optimal QoE while minimizing encoding, packaging, and storage costs.

SPEAKER: **Yuriy Reznik**, Video Technology Fellow, Brightcove

Esports & Sports Streaming Summit

ESS203 ■ Overtime: Here's What's Next

Fireside Chat: Navigating OTT vs. Linear Sports Production With DAZN's Jamie Horowitz

In these early days of sports streaming, executives are realizing that the production approach for OTT sports differs vastly from traditional linear television. One of those executives making the transition is DAZN EVP of Content Jamie Horowitz. In this fireside chat, Horowitz discusses early learnings on how to produce a compelling experience for the OTT generation, what specific strategies DAZN is implementing to separate itself, and how the fan viewing experience on direct-to-consumer services will continue to evolve.

SPEAKERS:

Jamie Horowitz, EVP Content, DAZN

Adnan Virk, Host, ChangeUp and DAZN Boxing

Case Study: Activating the San Francisco Giants' 60-Year Media Archive With AI

AI is now accelerating content discovery within the San Francisco Giants' vast media archive. Using AI solutions, the SF Giants can now bring its 60-year media archive to life and drive an advanced fan engagement strategy. AI enables rapid content search and accelerated asset sharing with media, global partners, internal stakeholders (including web and social media teams), and fans during live games in the ballpark.

SPEAKERS:

Paul Hodges, VP, SFG Productions, San Francisco Giants

Brad Martens, Manager, Media Systems & Workflow, San Francisco Giants

Ryan Steelberg, President, Veritone Inc

Discovery Track

DT203 ■ Discovery Track Session: THEO Technologies, Mediakind

Low Latency Reality Check

As an industry, we have latency on the mind. It's a hot topic, and we hear big promises surrounding low latency being made throughout the industry. So, how can you move from promise to production? We share our wealth of industry experience, being at the forefront of low latency development, and experience working together with different partners in the ecosystem. Attend this session for your chance to win: Notebooks for all attendees (\$10 value each).

SPEAKERS:

Thijs Lowette, Lead Solution Architect, North America, THEO Technologies

Willem De Saegher, North-America Sales Director, THEO Technologies

Delivering Innovative Consumer Experiences to End-Users Through DTC and OTT Aggregated Services

Today's consumers watch hours of content, from different networks across a range of different devices. With so much content available at the push of a button and the opportunity to tailor it to individual user preferences, the industry is pushing to deliver high quality, highly personalized offerings directly to consumer screens. Although traditional broadcasters and other established content owners have access to some of the most valuable premium content, new entrants have used OTT to reach a wider audience. They are using cloud technology to scale and quickly introduce new functionality, allowing delivery over all networks to all devices and to introduce improved consumer viewing experiences (e.g. UHD and HDR content). However, the increasingly fractured user experience caused by separate applications leads to the question: what is the best way to deliver content to the consumer? This presentation explores how DTC and OTT aggregated services are enabling operators to deliver innovative consumer experiences directly to the end user, as well as outlining the opportunities and challenges for services as a result of this competition. Attend this session for your chance to win: An international travel adapter (\$15 value).

SPEAKER: **Erik Ramberg**, Mediakind

2:30 p.m. – 3:00 p.m.

COFFEE sponsored by & VIDEO ENGINEERS MEETUP

in the Streaming Media Showcase

3:00 p.m. – 3:45 p.m.

Business & Strategy Track

B204 ■ Mixed Realities: VR, AR, & XR

Consumers were supposed to pioneer "extended reality" (XR), the umbrella term for virtual reality (VR) and augmented reality (AR). Instead, things took an unexpected turn: Corporations and universities are leading the way for training, learning, and conferencing use cases. These experiences entail

streaming a wide range of large media assets including video, images, audio, and 3D objects. This session features a discussion with one of the leading XR labs in the United States.

SPEAKERS:

Gil Sheffer, XR Evangelist, Kaltura

Ruben Duran, Documentary Filmmaker & Director of XRLabS, Houston Community College

Technical & How-To Track

T204 ■ 5G & the Future of Streaming

5G marks a new era of cellular network connectivity. In this presentation, Jon Landman, VP of sales at Teradek, describes how 5G will make a difference for live streaming. Learn how you can use 5G to optimize your connectivity for more reliable broadcasts. Explore what exactly is 5G and how it differs from our current 4G LTE networks. Discover how you can combine 5G connectivity and HEVC compression to deliver higher-quality video while using less bandwidth.

SPEAKER: **Jon Landman**, Vice President of Sales, Teradek

OTT Leadership Summit

OTT204 ■ Addressable TV: How Close Are We to Finding the Holy Grail?

From the beginning of the online video revolution, personalized video has been one of our loftiest and hardest-to-achieve goals. This session examines the state of addressable television for both content distributors and advertisers today, as well as what we can expect in the near future and what sort of privacy and data collection issues pose challenges to truly personalized video delivery.

SPEAKERS:

Zeev Neumeier, Senior Vice President, Product, Inscope

Kemal Bokhari, General Manager, Data & Analytics, DISH Media

Sean Doherty, Senior Vice President of Operations, Co-Founder, Wurl

Scott Worthem, Senior Vice President of Strategic Partnerships, Comscore

JT Taylor, Head of Product Marketing, Synamedia

Video Engineering Summit

VES204 ■ LCEVC: The Latest MPEG Standard

Heard of MPEG-5 part 2 (LCEVC)? And EVC? VVC, AV1, AVS2? Anyone getting an acronym headache? Alongside VP9 and HEVC, these next-generation standards are vying to be the successor to H.264, but will there ever be a single leader again? With the single-standard, single-resolution media delivery chain broken, operators and service providers are looking for the best tool for the job in every part of their ecosystem. Compression experts from Facebook and V-Nova discuss the reasons why and reveal some of the secrets of the latest standard in the MPEG family, LCEVC—a low-complexity enhancement for all codecs, even non-MPEG ones.

SPEAKERS:

Guido Meardi, CEO & Co-Founder, V-Nova

Tarek Amara, Principal Video Specialist, Twitch

Esports & Sports Streaming Summit

ESS204 ■ Niche Sports Find a Home

In the online video world, there's no such thing as niche. Formerly remote events are now as close as a cellphone. Viewers are discovering a range of unusual events like they haven't seen since The Wide World of Sports, and they can't get enough. Here's how several niche sports used online video to tap into a worldwide audience.

SPEAKERS:

James Patrick, Unreel.me

Loc Sondheim, Director, Ad Sales and Distribution, The World Poker Tour and Allied Esports

Lindsey Ross, Director of Rights Acquisition, FloSports

Discovery Track

DT204 ■ Discovery Track Session

Please check the onsite flyer or Streaming Media West app for details.

CLOSING SESSION



4:00 p.m. – 4:45 p.m.

Low-Latency HTTP Live Streaming Update

SPEAKER: **Roger Pantos**, Media Streaming Engineer, Apple

Earlier this year Apple announced Low-Latency HTTP Live Streaming which can deliver broadcast-level latency using industry-standard protocols such as HTTP/2. The specification is evolving towards release and incorporating feedback from the streaming community. Join Roger Pantos from Apple who will give an update on LL-HLS and answer common questions about it.

SPEAKER ROSTER

Michelle Abraham

Sr. Research Analyst, Media & Communications, S&P Global Market Intelligence

Tanu Aggarwal

Director of Engineering of Video Platform, Twitch

Tarek Amara

Principal Video Specialist, Twitch

Anupama Anantharaman

VP of Product Management, Interra Systems

Tomas Bacik

VP of Product Development, CDN77

Tim Baldwin

Director of Product, Zixi

Jonathon Barabato

Office of the CEO, Best Ever Channels

Floris Bauer

Co-Founder and President, Gunpowder & Sky

Jim Bennette

VP Sales, US, Applicaster

Assaf Berkovitz

Director of Technical Services, Kaltura

Kemal Bokhari

General Manager, Data & Analytics, DISH Media

George Bokuchava

CEO, Tulix

Josette Bonte

Managing Director, Digital Media Strategies, USC

Michael E. Bouchard

Vice President of Technology Strategy, ONE Media—a division of Sinclair Broadcast Group

Katherine Bowe

Vice President of Sales, Southwest, Twitch

Tony Brown

Chief of Staff, Newsy

Kaizar Campwala

Vice President, Business Operations and Insights, Disney DTCI/ABC News

Brett Casadonte

President and Co-founder, GlobeStream Media LLC

Tyler Champley

VP Marketing and Audience Development, Poker TV

Peter Chave

Principal Architect, Akamai Technologies

Jon Cody

Founder & CEO, TV4 Entertainment, Inc.

Stephen Condon

VP Global Marketing, Hive Streaming

Steve Cronan

CEO, 5th Kind

Nick Crooks

Global Head of Business Development, Nitro Circus

Andrew Crowe

Lead Engineer, Limelight Networks

Jon Dahl

CEO, Mux

Michael Dale

Executive VP, Media & Entertainment, Crunchyroll/Ellation

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North-America Sales Director, THEO Technologies

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Senior Vice President of Operations, Co-Founder, Wurl

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Executive Producer, Jukin Media

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Director of Sales Engineering, Wowza Media Systems

Sam Drury

Head of User Experience, UI Centric

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Documentary Filmmaker & Director of XRLabS, Houston Community College

Ryan Durfee

CDN Senior Product Manager, Comcast

Scott Ehrlich

Vice President, Emerging Platform Content, Sinclair Broadcast Group

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Founder and CEO, Maestro.io

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Sr. Manager, Product Management & Development, Cox Media

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Director of Ad Technology Systems, Disney

Scott Grizzle

Senior Solutions Engineer, Watson Media & Weather, IBM

Stu Grubbs

CEO & Co-founder, Lightstream

Sandeep Gupta

Vice President, Fire TV Devices and Experience, Amazon Fire TV

Phillip Harrison

Solution Architect, Amazon Web Services

David Hassoun

CEO, RealEyes Media

Steve Heffernan

Founder & Head of Product, Mux, Creator of Video.js

Jun Heider

CTOO, RealEyes Media

Paul Hodges

VP, SFG Productions, San Francisco Giants

Jamie Horowitz

EVP Content, DAZN

Dan Houze

VP of Encoding & Digital Strategy, BC Live

Andy Howard

Founder & Managing Director, Howard & Associates

Jonathan Hurd

Director, Altman Vilandrie & Co.

Nermeen Ismail

Distinguished Engineer, Cisco

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Cofounder and Chief Design Officer, Unreel Entertainment

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Global Director of Sales Engineering, Intrado Digital Media

Allen Klosowski

SVP, Advanced Solutions Group, SpotX

Olga Kornienko

Co-Founder & Chief Operating Officer

Nadine Krefetz

Consultant, Reality Software, Contributing Editor, Streaming Media

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Founder & CEO, unitedesports.com

Jon Landman

Vice President of Sales, Teradek

Anthony Layser

VP, Content Partnerships & Programming, Xumo

Christopher Levy

CEO and Founder, BuyDRM

Adam Lewinson

Chief Content Officer, Tubi

Jim Long

CEO, Didja

Darcy Lorincz

Torque Esports

Thijs Lowette

Lead Solution Architect, North America, THEO Technologies

Idan Maron

VP Business Development, Applicaster

Brad Martens

Manager, Media Systems & Workflow, San Francisco Giants

Marc Maycas

VP of Product Solutions, Nice People at Work

Allan McLennan

Chief Executive, Global Market Technologist, Analyst/Advisor, PADEM Media Group

Guido Meardi

CEO & Co-Founder, V-Nova

Chad Milam

President and CEO, PacketFabric

Nathan Moore

Director of Performance Engineering Platform, StackPath

Rema Morgan-Aluko

Director, Software Engineering, FandangoNOW

Dustin Myers

Senior VP, Production Operations, Fox Sports

Zeev Neumeier

Senior Vice President, Product, Inscape

Gerrit Niemeijer

Chief Technology Officer, Ampersand

Ed Nordholm

Chief Corporate Officer, Anthem Sports & Entertainment, President, Fight Media Group, (Fight Network and Impact Wrestling)

Marshall Nord

President, ShortsTV Americas

Dave Norman

Telestream

Erick Opeka

CEO, Cinedigm

Jan Ozer

Principal, Streaming Learning Center, Contributing Editor, Streaming Media

Chris Packard

Streaming Producer, LinkedIn Media Productions

Roger Pantos

Media Streaming Engineer, Apple

Gene Pao

Senior Vice President, Digital Enterprises, Shout! Factory

Kiran Paranjpe

Head of Sports & Entertainment/Global Partnerships, Google, Inc.

James Patrick

Unreel.me

Sean Patrick Keen

Global Director of Sales Engineering, Intrado Digital Media

Peyote Perryman

Founder and Creative Director, Digital P Media

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Daniel Pisarski

VP of Engineering, LiveU

Jay Prasad

Chief Strategy & Business Officer, VideoAmp

Shobana Radhakrishnan

Director of Engineering, Android TV

Erik Ramberg

MediaKind

Abdul Rehman

CEO, SSIMWAVE

Brendan Reiley

Director, Revenue Operations, NASCAR

Robert Reinhardt

CTO, videoRx

Yuriy Reznik

Video Technology Fellow, Brightcove

Brian Ring

Principal Analyst, Ring Digital

Dom Robinson

Director and Creative Firestarter, id3as, Contributing Editor, StreamingMedia.com

Rich Robinson

Senior Vice President, Digital, World Surf League

Lindsey Ross

Director of Rights Acquisition, FloSports

Byron Saltysiak

VP of Video and Connected Devices, Warner Media

Eric Schumacher-Rasmussen

VP & Editor-in-Chief, Streaming Media, USA

Gil Shefler

XR Evangelist, Kaltura

Corey Smith

Director Live Operations, Global Broadcast, Blizzard

Jared Smith

Senior Vice President of Digital Products, WWE

Matt Smith

Executive Director, Business Development & Strategy, Comcast Technology Solutions

Gulliver Smithers

SVP Product & Technology, Sony Pictures Entertainment

Loc Sondheim

Director, Ad Sales and Distribution, The World Poker Tour and Allied Esports

Scott Sonnenberg

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President, Veritone Inc

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JT Taylor

Head of Product Marketing, Synamedia

Jason Thibeault

Executive Director, Streaming Video Alliance

Steven Tripsas

Platform Solutions Architect, Zype

Adnan Virk

Host, ChangeUp and DAZN Boxing

Codi Warren

Managing Director of Communications, USA Softball

Tyler Winton

Vice President Business Development, TiVo

Scott Worthem

Senior Vice President of Strategic Partnerships, Comscore

Mark Young

Chief Business Officer, Fandango

Shelley Zimmerman

Co-Head, Awesomeness

Showcase Hours

Tuesday, November 19
10:00 a.m. – 4:30 p.m.

Wednesday, November 20
10:00 a.m. – 3:00 p.m.



FIND YOUR TRIBE & LEARN FROM THEM!

Meet Ups in the Showcase

Streaming Media is the place to network with your peers and learn from the leaders and innovators in the field. Whether you are from broadcast and cable, media and entertainment, education, IT, sports, advertising, telco, or any other industry involved in online video, you'll find your niche. Meetups are located in the Showcase area.

TUESDAY

10:00 a.m. – 10:30 a.m. | OTT Meetup
2:15 p.m. – 2:45 p.m. | Live Streaming Meetup

WEDNESDAY

10:00 a.m. – 10:30 a.m. | Esports & Sports Streaming Meetup
2:30 p.m. – 3:00 p.m. | Video Engineering Meetup

TUESDAY NETWORKING EVENTS

Streaming Showcase Happy Hour Sponsored by MediaKind

3:30 p.m. – 4:30 p.m.

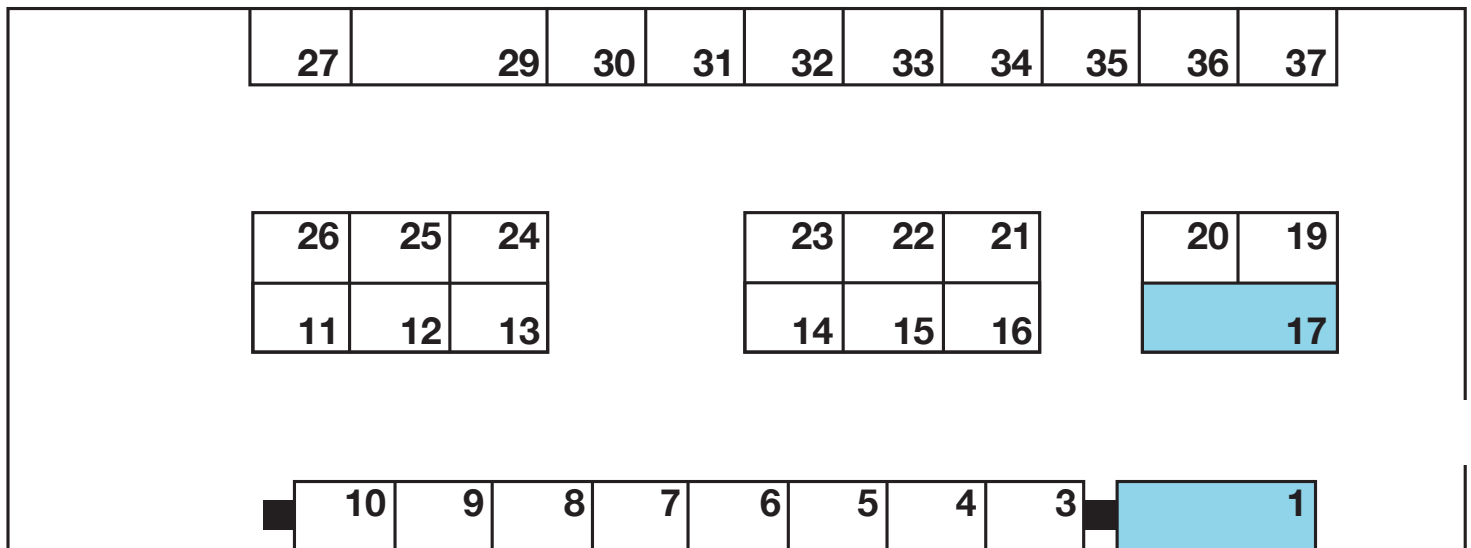
Get a firsthand look at the leading software, hardware, and network solutions and services in the streaming media industry. The Showcase is the perfect place to meet with conference sponsors. Open to all.

Networking Reception

5:30 p.m. – 7:00 p.m. | Plaza Pool Deck, 4th floor

Our evening reception is the perfect place to network with industry peers while enjoying a drink and some tasty bites. Open to all attendees, speakers, exhibitors, and Discovery Pass holders.

A Different Engine	6
Ai-Media Inc.....	25
Amazon Web Services, Inc.....	24
Anexia, Inc.....	26
Applicaster.....	4
BaishanCloud	23
Bitmovin.....	15
Comcast Technology Solutions.....	19
Digital Element.....	16
DVEO	14
Limelight Networks	9
MediaKind.....	1
Mobeon	36
NETINT Technologies	20
PacketFabric.....	7
Rev.....	5
Signiant	21
SSIMWAVE Inc.....	27
Streaming Media Interview's.....	29
Streaming Media Magazine	TBD
Teradek	37
THEO Technologies NV	3
Tulix Systems	11
Ucodec Inc.....	8
UI Centric	10
Xilinx, Inc.	13



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2120 University Avenue
Berkeley, CA 94704
www.adifferentengine.com

Bronze Sponsor Booth No. 6

A Different Engine is an interactive Emmy Award-winning digital product agency. We help define, design and execute on a variety of digital ecosystems. We create and execute digital strategies for new technologies, working at the intersection of smart TVs, OTT boxes, connected cars, connected homes, and voice services.



Ai-Media Inc.

241 West Federal Street
Youngstown, OH 44503
www.ai-media.tv

Bronze Sponsor Booth No. 25

Making your content accessible anytime, anywhere. We help you make the world accessible with captions, transcripts, subtitles, described video and more. We stand for access inclusion—global impact, one word at a time. We can also live-caption and live-translate your streaming events and programming.



Amazon Web Services, Inc.

410 Terry Avenue North
Seattle, WA 98109
aws.amazon.com

Platinum Sponsor Booth No. 24

Media solutions from Amazon Web Services (AWS) make it easy to build reliable, broadcast-quality video workflows in the cloud. These services allow you to create professional-quality media experiences for your viewers without the time, effort, and expense typically required to run specialized video equipment in a traditional data center. With pay-as-you-go pricing and fully automated resource scaling, you can accommodate any size audience without significant capital investment. Instead of managing complex infrastructure, media solutions from AWS let you focus on content to give viewers a great user experience.



Anexia, Inc.

152 W 57th Street, 54th Floor
New York, NY 10019
www.anexia-it.com/en

Bronze Sponsor Booth No. 26

Anexia operates a worldwide cloud covering over 90 locations in over 50 countries, providing IP connectivity, storage, computing, and colocation resources catering to organizations that benefit from a multi-national and localized presence. Anexia's infrastructure is well-suited for

live-streaming applications and can help reduce latency with its widespread presence.



Applicaster

1410 Broadway
New York, NY 10018
www.applicaster.com

Platinum Sponsor Booth No. 4

Applicaster helps companies reduce costs, increase audience engagement, and significantly improve time-to-market and speed of ongoing innovation of their direct-to-consumer experiences. Our platform, Zapp, is a cloud-based solution that simplifies the production, delivery, and management of media-centric apps, at scale, on iOS, Android, Apple TV, Android TV, Samsung Smart TV (Tizen), Amazon Fire, and Roku. With open APIs, an extensive partner marketplace, and the ability to code custom components, Zapp provides an open plug-in architecture within which you can build and scale your multi-device media app strategy. Applicaster customers across the world include Hearst, DirecTV, ProSiebenSat.1, Televisa, Zee5, Funke Mediengruppe, Fox TV stations, Central European Media, Baby First and CONMEBOL.



777 108th Avenue Northeast, Suite 2050
Bellevue, WA 98004
www.baishancloud.com

Bronze Sponsor Booth No. 23

BaishanCloud is a leading Chinese cloud data service provider focusing on data lifecycle management. With a strong emphasis on data interactions and exchanges, Baishan's product suite is comprised of cloud delivery, cloud security, and cloud API management. Leveraging its extensive cloud delivery network, BaishanCloud's platform fulfills the data-transmission, data-security, and data-governance needs of Internet and enterprise customers.



Bitmovin

301 Howard Street, Suite 1800
San Francisco, CA 94105
www.bitmovin.com

Gold Sponsor Booth No. 15

Bitmovin is a leading provider of video infrastructure for online media companies and enterprises globally. Bitmovin technology innovations focus on video encoding, playback, and analytics around user experiences. Innovations include the co-authoring of the MPEG-DASH streaming protocol, and massively parallel cloud-native encoding. For more information, please visit our website.

CONNECT WITH US



Comcast Technology Solutions

1899 Wynkoop Street
Denver, CO 80202

www.comcasttechnologysolutions.com

Bronze Sponsor Booth No. 19

Comcast Technology Solutions provides a suite of media and entertainment technology solutions. We invent technology that solves industry challenges, reimagines what is possible, and transforms business through new innovations. Built on Comcast's know-how, proven facilities, platforms, and infrastructure, Comcast Technology Solutions offers more than 20 years of reliable real-world broadcast and digital experience. We partner with customers to redefine expectations and deliver the future to global audiences. For more information, visit our website.



Digital Element

155 Technology Parkway, Suite 800
Norcross, GA 30092
www.digitalelement.com

Bronze Sponsor Booth No. 16

Digital Element's IP geolocation technology delivers information about online users such as location, connection type, proxy, and more. Using our accurate and reliable data allows you to proactively control digital assets, reduce associated risks, and preserve the online experience. Customers such as Netflix, BBC, Hulu, Sony, JP Morgan Chase utilize our solutions.



DLVR, Inc.

5555 E. Van Buren Street, Suite 235
Phoenix, AZ 85008
www.dlvr.com

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DLVR measures, optimizes, and simplifies multi-CDN delivery for internet video. With DLVR, publishers get better video performance, increased stability, and mitigation of problems (large and small) vs. CDNs alone, plus QoE/QoS metrics, CDN performance, and workflow metrics for every video from beginning to end. DLVR is 100% cloud, requires no client-side SDKs, and works across all devices.



DVEO

11409 West Bernardo Court
San Diego, CA 92127
www.dveo.com

Bronze Sponsor Booth No. 14

DVEO is a leader in encoding, transcoding, delivering, and decoding video over IP. We support the popular protocols and codecs, including MPEG-2, H. 264, H.265 and JPEG 2K. We are excited to announce most of our streaming products have been virtualized and support AWS, AZURE, and many other cloud solutions.



EdgeConneX

2201 Cooperative Way, Suite 400
Herndon, VA 20171
www.edgeconnex.com

Silver Sponsor

An Edge defined by you; no matter the location; no matter the scale. EdgeConneX builds and operates highly proximate, high-powered, purpose-built data centers tailored to the optimal size, power, and location requirements for any deployments, anywhere in the world.



Interra Systems

1601 S. De Anza Boulevard, Suite 212
Cupertino, CA 95014
www.interrasystems.com

Silver Sponsor

Interra Systems is a global provider of enterprise-class solutions that streamline the classification, quality control (QC) process, and monitoring of media content across the entire creation and distribution chain. Relying on Interra Systems' comprehensive video insights, media businesses can deliver video with high quality of experience, address new market trends, and improve monetization.



Limelight Networks

1465 North Scottsdale Road, Suite 400
Scottsdale, AZ 85257
www.limelight.com

Bronze Sponsor Booth No. 9

Limelight Networks Inc. is a global leader in delivering the highest quality online video experiences and edge-enabled workflows. Our edge services platform makes knowledge, information, and entertainment instantly accessible anywhere in the world and accelerates the next generation of real-time, interactive and immersive content.



MediaKind

6300 Legacy Drive
Plano, TX 75025
www.mediakind.com

Diamond Sponsor Booth No. 1

We are MediaKind, a global leader of media technology and services, established as a joint venture between One Equity Partners and Ericsson. Our mission is to be the first choice among service providers, operators, content owners and broadcasters looking to deliver immersive media experiences. Drawing on our long-standing industry heritage, we are driving next-generation live and on-demand, mobile and multiscreen media experiences for everyone, everywhere. Our end-to-end portfolio of media solutions include Emmy Award-winning video compression solutions for contribution and direct-to-consumer video service distribution; advertising and content personalization solutions; high-efficiency cloud DVR; and TV and video delivery platforms.

EXHIBITORS & SPONSORS



Mobeon
www.mobeon.com

Streaming Partner
Booth No. 36

Mobeon is an advanced media studio that produces immersive content for virtual cinema, live video streaming and experiential media. We transform how companies engage, connect, and share with audiences across the digital landscape.



NETINT Technologies
3500 Gilmore Way, Suite 306
Burnaby, BC V5G 0B8
www.netint.ca

Bronze Sponsor
Booth No. 20

NETINT Technologies is an SoC innovator focused on computational storage and video processing. Our Codensity products offer high-quality H.264 and H.265 transcoding for live video streaming and AI processing, through a unique combination of ASIC-based encoding densities and economics, with the scalability of NVME storage infrastructure.



PacketFabric
9920 Jefferson Boulevard
Jefferson City, CA 90232
www.packetfabric.com

Gold Sponsor
Booth No. 7

PacketFabric redefines how companies build and use network services. The PacketFabric network-as-a-service platform provides instant connectivity between colocation facilities, to major cloud providers, and Internet Exchanges. PacketFabric is simple, cost-effective, and scalable network connectivity and all of our services are provided via our portal and API.



Recurly
400 Alabama Street, #202
San Francisco, CA 94110
www.recurly.com

Gold Sponsor
Booth No. 12

Recurly, Inc. provides a versatile subscription management platform to manage the entire subscription lifecycle for market-leading businesses worldwide. Leading subscription businesses such as Sling TV, BarkBox, Asana, FabFitFun, Cinemark and Fubo.tv depend on Recurly to harness the power of the subscription model and drive recurring revenue growth. Since its launch in 2010, Recurly has deployed subscription billing for thousands of companies across 42 countries.



Rev
222 Kearny Street, Suite 800
San Francisco, CA 94108
www.rev.com

Bronze Sponsor
Booth No. 5

Rev provides fast, high-quality, and on-demand services for video captions, foreign language subtitles, and transcription. Starting at \$1/minute with 24-hour turnaround, Rev is disrupting the market. Our FCC- and ADA-compliant services can be delivered in file types that are compatible with all major editing softwares and video platforms.



Signiant
91 Hartwell Avenue
Lexington, MA 02421
www.signiant.com

Gold Sponsor
Booth No. 21

Signiant's enterprise software provides the world's top content creators and distributors with fast, reliable, secure access to large media files, regardless of physical storage type or location. By enabling authorized people and processes to seamlessly exchange valuable content—within and between enterprises—Signiant connects the global media supply chain.



SSIMWAVE Inc.
375 Hagey Boulevard, Suite 310
Waterloo, ON N2L 6R5 Canada
www.ssimwave.com

Gold Sponsor
Booth No. 27

At SSIMWAVE, science meets art to make sure each video you deliver makes its way to a happy customer. We tune video content quality to balance feasibility with the best experience possible. We leverage our Primetime Emmy Award-winning technology to make the unknown, known; the subjective, objective; to reliably deliver video quality levels subscribers expect, and are willing to pay for.



Streaming Media Magazine
143 Old Marlton Pike
Medford, NJ 08055
www.streamingmedia.com/magazine

Booth No. TBD

Streaming Media magazine is the trusted resource for organizations investing in enterprise, news/entertainment, and education applications for streaming and other digital media. Online audio and video are now the delivery methods of choice for both business and consumer content, and *Streaming Media* magazine covers the processes, products, and services that make it happen. Sign up for your free subscription.



Teradek
8 Mason
Irvine, CA 82618
www.teradek.com

Bronze Sponsor
Booth No. 37

Teradek develops industry-leading real-time wireless video transmission systems, wireless lens control systems, a wide range of video encoders/decoders, and portable on-set monitoring solutions. Our show lineup includes the Bolt 4K, VidiU Go, HEVC Codex and much more. Stop by our booth and experience a new class of filmmaking technologies.



THEO Technologies NV
1B Kolonel Begaultlaan Leuven
3012 BE Belgium
www.theoplayer.com

Platinum Sponsor
Booth No. 3

THEO Technologies is at the forefront of a rapidly evolving online video landscape, delivering a high-quality video experience across platforms and devices. THEOplayer, THEO Technologies' flagship product, integrates seamlessly with every aspect of the video chain. THEO Technologies empowers publishers, telcos and broadcasters to deliver a cutting-edge video experience to their audiences. We are continually improving and expanding our offer; developing and testing the latest technologies in our "Innovation Lab." With a strong focus on user experience, performance and cross-platform compatibility, THEO Technologies is delivering world-class video streaming for a global customer base.



Tulix Systems
1002 Hemphill Avenue NW
Atlanta, GA 30318
www.tulix.com

Bronze Sponsor
Booth No. 11

Tulix is a streaming technology incubator that supports innovators, investors, and enterprises by providing guidance and resources on strategy, infrastructure, technology, and business models across the whole streaming ecosystem. Tulix provides complete 360 managed streaming solutions from its data centers in the United States and Europe. The company operates its own streaming-optimized CDN.



Ucodec Inc.
1601 McCarthy Blvd.
Milpitas CA 95035
www.ucodec.com

Bronze Sponsor
Booth No. 8

Ucodec Inc., based in Silicon Valley, is building the most efficient HEVC (H.265/MPEG-H) software encoder and decoder: fast and lightweight,

highly efficient, cross-platform, easy-to-use and affordable with flexible licensing.



UI Centric
1239 Broadway, Unit 1100B
New York, NY 10001
www.uicentric.com

Gold Sponsor
Booth No. 10

UI Centric is a leading creative engineering company that specializes in delivering bespoke TVE and OTT applications for the media and entertainment industry. With offices in New York, London, Austin and San Antonio, we provide a comprehensive range of digital product planning, design, software development and support services—all delivered in-house—to create ultra-high-quality end-user experiences for our clients.



Verizon Media
13031 West Jefferson Boulevard, Building 900
Los Angeles, CA 90094
<https://verizonmedia.com/media-platform>

Silver Sponsor

Our media platform is the simplest way to prepare, deliver, display, and monetize content. It's built on the world's largest, most connected delivery network, ensuring high-quality, instant-on viewing of digital content on every device, every time, everywhere. Learn more at www.verizonmedia.com/media-platform.



Wowza Media Systems
523 Park Point Drive, Suite 300
Golden, CO 80401
www.wowza.com

Silver Sponsor

Wowza Media Systems is the recognized gold standard of streaming, with more than 24,000 customers in 170-plus countries. By reducing the complexities of video and audio delivery to any device, Wowza enables organizations to expand their reach and more deeply engage their audiences, in industries ranging from education to broadcasting.



Xilinx, Inc.
2100 Logic Drive
San Jose, CA 95124
www.xilinx.com

Gold Sponsor
Booth No. 13

Xilinx is the inventor of the FPGA, programmable SoCs, and now, the ACAP. Our highly-flexible programmable silicon, enabled by a suite of advanced software and tools, drives rapid innovation across a wide span of industries and technologies—from consumer to cars to the cloud. Xilinx delivers the most dynamic processing technology in the industry, enabling rapid innovation with its adaptable, intelligent computing.