Cisco CKN: Media Industry Update & NAB Preview!
March 2019

Media Drive Team
Cisco Systems
Host’s for Today

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Business Development Lead, Cisco’s US Media & Cable Sales
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Agenda

• Positioning the Opportunity within Media & Entertainment

• Cisco Core Solutions for Media & Entertainment

• NAB Overview & Update
The Opportunity within Media & Entertainment
Macro Trends

Mergers & Acquisitions

Content Continues to be KING

“Excluding the Time Warner and Twenty-First Century Fox mega-deals, 2018 media transactions are worth roughly $140 billion, the New York City-based investment bank estimates.”

- DigitalDaily News, July 2018

Digital Transformation

Digitizing workflows and delivery by:

• Leveraging Cloud / Multicloud
• Transitioning to IP infrastructures
• Virtualizing workflows
• Containerized Service Creation remote production, and centralized operation.

Acceleration & Innovation of Creation / Immersive

Accelerated Consumption is driving Media Companies to:

• Leverage Artificial Intelligence and Machine learning to automate and personalize content creation
• Accelerate creation and production of assets in a bingeable high consumption world
• Reducing overall cost of creating and producing high quality content & “participatory content experiences”
A blueprint for how Cisco is enabling the move to IP & Cloud within Media
Accelerating ideas to audience
Reimagine your content workflows

Cisco is broadening the limits of storytelling with cutting edge technologies that transform the content production

• Content can be reviewed anywhere
• Assets, data and resources that are allocated wherever and whenever you need them
• Storage and processing that are limitless
• Content workflow that’s flexible and efficient through every stage of content production

www.cisco.com/go/media
Our blueprint for IP/IT adoption within the Media Supply Chain

Collaboration Tools
- Deliver new services and reach new segments

IP Fabric for Media
- Produce and distribute more engaging content

Cloud & Hybrid Orchestration
- Simplify and secure operation and management

Media Data Center Solutions
- Implement open standards and interoperability
• Content is produced at a much quicker pace than usual
• The challenge is to review content on site, even if you’re shooting in remote locations
• The key is to bring content in HD, through the power of the cloud, in real time and in true form
• Directors and producers can now collaborate with remote teams all over the world, to review, mark-up and edit content right there on set
Collaboration for Media and Entertainment

Collaborate to increase speed to market

Open opportunities
• Review content in real time - take multiple shots, redo scenes and get higher quality
• Reduce complexities with collaboration applications connected to the internet
• Quickly bring content to the mainstream, generating more production at a faster pace
• Enrich your live productions with collaboration tools that bring your viewers into the studio

What makes Cisco Collaboration unique?
Cisco is the only producer of both the collaboration hardware and software, creating a video first approach tuned to support 4K and beyond.

• Real-time content review supported with video, through messaging, meetings and white boarding
• Bring 4K content to review through our video portfolio
Using IP throughout your operation relieves you from the very rigid frame format dependency, creating a dynamic network that allows you to allocate resources upon need and future-proof your business!
Open opportunities

- Simplify 4K live broadcast
- Save resources by converging all signals into one network
- Operate faster with an infrastructure that’s agile
- Preserve the operational experience

What makes Cisco IP Fabric unique?

- Automation - Integrated HW and SW with the support you need to simplify operations
- Reliability - Cisco enhanced the industry standards with a unique, non-blocking multicast fabric that assures the high standards of delivery required for high-end media
- Security - Multi-level security to protect you and your content, including measures to confirm authorized users for packet access and deep visibility into security threats
- Integrated with the major ecosystem partners in the industry
Cloud Orchestration for Media and Entertainment

Gain Agility and Cost Efficiency with Cloud Orchestration

• The media industry is moving to IP, and the next evolution is on its way – from bespoke boxes to software based media production
• Running on standard servers, in a virtualized environment in the cloud, this migration increases flexibility and delivers significant cost savings
• The key is Cloud Orchestration - simplifying equipment redundancy and network complexity to more efficiently manage media applications.
Cloud Orchestration for Media and Entertainment

Gain Agility and Cost Efficiency with Cloud Orchestration

Open opportunities

• Manageability means agility
  • Availability of media applications
  • Quickly test new ideas
  • Bring content faster to the market
• Virtualized infrastructure
  • Applications are replacing the costly appliances
  • Standard servers are efficiently utilized to serve all purposes
  • Hybrid cloud flexibilities

What makes Cisco Cloud Orchestration unique?

Cisco is the first in the market to bring virtualization and hybrid cloud orchestration to the media space

Our holistic approach to cloud orchestration is designed to simplify operations and improve results:

• Automation simplifies: provisioning of applications, day two operation, changing the underlining infrastructure
• Requiring only minimal requirements from the operational team
• Optimized for high availability, performance, operability

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• Media and entertainment companies are creating an incredible amount of content with escalating resolution
• The challenge is to manage this vast amount of unstructured data in a way that can be easily scale and be readily accessible across the media chain
• The answer is the integration of software-defined storage and an end-to-end workflow (including virtualized playout) that creates a single pool of data that is easy to find, easy to store, easy to access and easy to protect
Data Center Solutions for Media and Entertainment

Limitlessly Scalable and Flexible Storage

Open opportunities

• Accelerated workflows, with content available whenever you need it, and wherever you need it, ready for different use cases
• Limitlessly scalable and flexible storage system that gives you the freedom to grow, in your own terms both with your hardware and software

What makes Cisco Data Center unique?

The UCS storage series is proven - widely adopted across multiple industries.

For media and entertainment, the UCS solution is a more cost efficient way to store and access with scalable infrastructure:

• Very low cost per petabyte of storage
• Pay-as-you grow model
• High performance

• Smart maintenance
• Simple management
• Easily integrates with your existing UCS ecosystem

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Securing the Media Industry

Protect your **infrastructure**, **workloads**, premium **content** and **business** from cyber threats

**New Threats Are Affecting the Media Business**

- Leak, steal, or ransom premium content
- Replace or modify content in the data center to affect your live broadcast
- Alter security settings and access rights to compromise conditional access and Digital Rights Management (DRM) systems
- Use denial-of-service or other targeted attacks to disrupt your subscribers’ experience
- Compromise customer relations management (CRM) and billing systems

**Cisco’s approach to media production and IT security:**

- Protects premium content and customer data across the media production and content delivery value chain, from creation through consumption
- Provides granular access control over, as well as enhanced visibility into every device in the network
- Locks down the corporate network and the media infrastructure to stop threats before they can cause damage and quickly remediate if they get in
Media and Entertainment Solutions in Action

Enabling warm, fun, and inclusive experiences

"Something undeniably powerful happens when you bring people from all over the place into the studio. Cisco gave The Ellen Show that power to connect the fans all over the world."

Derek Westervelt, Technical Executive Producer, The Ellen DeGeneres Show

Epic film producer collaborates with Webex

Jerry Bruckheimer knows that the best ideas need to be brought to life and shared. He also knows that the team that collaborates the best wins.

CANAL + transitioned into IP and Cloud orchestration

Cloud based operations allow CANAL + to fully utilize their infrastructure and optimize the way the business runs. But much more than that, it allows them to create new customer experiences, in ways that were not economically viable before.
Media and Entertainment Solutions in Action

Top media companies are using Cisco IP networking

NBC Olympics delivers the 2018 Olympic Winter Games with Cisco

Canal + transformed live studio production to IP with Cisco

Grass Valley and Cisco created for Arena TV the first all-IP media truck
The Power of Partnering

Whether it's IP Fabric for media, Cloud innovations or Data Center solutions, Cisco's Media Blueprint is fully integrated with the major ecosystem partners.

The customer gets full solution
• We integrate Cisco equipment and partner equipment together
• Test it end-to-end
• Validate and qualify it
• Create design guide for it
Join global IP training programs for broadcast engineers
IP for Broadcaster Training – The Cisco Learning Network

IP Foundation for Broadcast Engineers
- 5 day instructor led course w/ Hands on Labs
- No previous IP knowledge needed
- Basic principles of:
  - Ethernet functions and standards, IP protocol
  - TCP/IP stack
  - Multicast networks


Operating Cisco IP Fabric for Media Solution Training
- 4 day instructor led course
- For broadcast engineers who will use IP technologies to replace SDI-based deployments
  - Learn and hands-on with IP Fabric for Media (IPFM) and Data Center Network Manager (DCNM) solutions
  - Required for IP Fabric for Media Partner Authorization Program

#CiscoNAB 2019

April 8–11, Las Vegas, NV
## Agenda At-A-Glance

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Cisco 2019 Booth Presence @NAB (South Hall Upper)
Media Data Center – See it in Action

IP Fabric For Media
Hybrid Cloud For Media
Security For Media
Media Data Center
Storage for Media

Orchestrate | Remote Production | 2110 O/P
- Virtualized Production leveraging IPFM, Hybrid Cloud, Media Data Center, and Obj Storage
- Hybrid Cloud Orchestration
- End-to-end Workflow Automation
- Bare metal, VM, and Containers

Scalable Hybrid Cloud Data Center for Media

Media Data Center
Hybrid Cloud For Media
Security For Media

- Scale-out Storage
- Virtual Playout
- End-to-end Security
- Duo
- Stealthwatch
- Hyperflex

Unleashing Dynamic Network – IP Fabric for Media

IP Fabric For Media

- Scalable 2110 Fabric
- SMPTE 2110 Flows
- STMPTE 2022-6/7 PTP Monitoring
- Mixed Workflows
- RTP Monitoring
- Streaming Analytics
- Media Insights

Collaborate in True Form – Media in the Cloud

Collaboration For Media
Webex Teams In action
- Webex Teams Board
- Webex Team App

Open and Flexible Workflow Virtualization

Media Data Center
Storage for Media
Hybrid Cloud For Media

- Media processing workflows:
  - Avid VDI on HX
  - GPU Enabled Workloads
  - Virtualized Transcoding on HX
  - Video Monitoring
NAB Speaking Events
# CM|IP Theater Sessions Details

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| **Cisco Speaker:** Bryan Bedford | **Cisco Host:** Nish Parkar  
**Cisco Speaker:** Rahul Parameswaran  
**WWT Speaker:** Gene Arantowicz  
**Lawo:** Erling Hedkvist | **Cisco Host:** Kyle Tedeschi  
**Cisco Speaker:** Dave Desroches  
**Scality Speaker:** Paul Speciale  
**Avid:** Ray Thompson |

| **Description:** IP in Media is every evolving with new ways to capture, edit, source content, and certainly collaborate with others with the Media Supply Chain. The process by which companies are leveraging IP to do this work is where cool innovation is happen with some of the leading media companies in the world. Hear first hand accounts how the world of IP/IT is impacting Media & Entertainment | **Description:** The IP transition already unfolded in adjacent sectors – like music and cable/broadband, as two examples. Media and entertainment is the next logical step. It’s happening, and like everything else in the IP landscape, it’s happening fast. In a technological sense, it’s happening because IP is a more reliable, efficient, and flexible way to process signals. In a business sense, it’s happening because “traditional broadcasters” – which still generate 90 of the top 100 TV shows – want their content to behave more like internet-styled video. In this session, key partners will join Cisco to review and discuss the latest updates to the IP Fabric for Media solution, industry standards and tent pole customer deployments. | **Description:** Look at your phone. All of those things are in it, plus a travel agent, television, mirror, document scanner, cookbook, pager, and whatever other handy apps you carry with you, every day, that used to be standalone things. The same thing is happening in broadcast video facilities, to single out one (of many) industrial instances of the “bespoke-to multi-purpose device” phenomenon. Banks of switchers, servers, broadcast-specific production/playout hardware – all of the individual components that make TV signals get from where they start to the screen – are ultimately tilting toward the same general destiny as your formerly physical stuff is to their smartphone doppelganger. Join Cisco and partners to discuss the triad of virtualization (including object storage), orchestration and automation and learn how gear is being optimized and cost savings realized. |
Panel Debates

Tuesday 9 April: 16.00-16.40.
Panel Debate 6: Is Artificial Intelligence and Machine Learning ready for its TV debut?
Key topics:
Artificial Intelligence, Machine Learning, Automation.
Synopsis:
Artificial intelligence is probably the hottest topic within technology and the wider society. Linked with everything from energy efficiency, fighting crime and autonomous cars, AI and its sibling Machine Learning are buzzwords across multiple industries. However, what do AI and ML mean today for the TV industry? Is it being harnessed already or is it something for the distant future? And what are the practical ways that operators can benefit from the technology here and now? Our CM|IP Panel will offer a broad overview of the technology, its massive potential and current limitations along with examples of use cases that are delivering tangible results.

Wednesday 10 April: 16.00-16.40.
Key topics:
A look at the latest technologies and trends across the connected TV industry.
Synopsis:
Media and entertainment as a broad category is experiencing a renaissance of innovation fuelled, in part, by the Internet and an opening up of markets. This CM|IP Panel looks at innovation in all its forms across the broadcast and pay-TV industry including inspiring business models, technologies, individuals, and market strategies. The audience will take away some lessons as to where the industry is heading and how we can innovate within our respective spheres. The panel of experts from across the industry will also offer some predictions, highlighting issues that operators will need to prepare for in what is a most exciting era.
NAB Auxiliary Events
Devoncroft Executive Summit

“The Business of Media Technology”

• **Date/Time:** Sunday, April 7 from 12:00pm – 5:00pm
• **Location:** Aria Hotel Las Vegas
• **Free Passcode for Customers:** DEVCIS2019
• [https://devoncroft.com/lv19-devoncroft-summit-agenda/](https://devoncroft.com/lv19-devoncroft-summit-agenda/)
• Join Cisco’s David Ward for a “Fireside Chat on the future of technology in Media”
Cisco: Press & Thought Leadership Event

“Straight Talk: Insider Insights on the IP Transition in Media”

• **Date/Time:** Sunday, April 7 from 5:00pm – 6:30pm
• **Location:** Piero’s Italian Cuisine, Las Vegas, NV
• **Panelist:**
  • Kathy Haley, Co-Founder, TV Newscheck
  • John Britt, Director of Media, WWT
  • Dave Ward, SVP and CIO, Cisco Systems
  • Roger Crothers, Head of Technology, BBC Wales
  • Bryan Bedford, Global Industry Lead, Sports, Media & Retail
Customer Cocktail Reception

“Cisco Customer Reception”

• **Date/Time:** Monday, April 8 from 4:30pm – 6:00pm inside the Cisco NAB Booth!

• **Theme:**
  - NCAA College Basketball Championship Game at 6pm PST.
    - Join us for drinks and snacks and watch the game!
  - Sponsored by
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