



Connect (X)
Connectivity Everywhere 2024

GEORGIA WORLD CONGRESS CENTER
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**Overcoming DAS and In-Building Challenges
in Large Venues**
Outline of Remarks

Speakers

Thierry Chau, VP Global Market Development – CommScope

Michael Conley, Executive President and Chief Information Officer - Cleveland Cavaliers

Kevin Pope, VP & Chief Information Officer - AMB Sports & Entertainment

MODERATOR:

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Overview

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- **Distributed Antenna Systems (DAS)**
 - “Network of spatially separated antenna[s] connected to a common source via a transport that provided wireless services within a geographic area of structure”
 - Wireless infrastructure of choice for stadiums and other large venues
 - Indoor/ Outdoor
 - Vendor Managed v. Neutral Host
 - Growing market for “5G” antennas
 - \$700 billion for by 2030 (Source: IEEE)
 - Transition from LTE /legacy systems
 - Technical, operational, legal challenges

DAS Implementation

DAS Implementation Drivers:

- Wireless connectivity for stadium attendees
- Enhanced event experience
- Cap X. recovery.
- Platform for future enhancements (data analytics)

Challenges

- Plan/ build/ operate (“PBO”) agreements
- Transition issues (e.g., LTE-to-5G) /“Rip and Replace”
- Bid process: RFI/RFP
- Metrics (e.g. Latency)/testing
- Multi-party acceptance (Multiple Carriers – Landlord)
- ROI – large capital outlay

DAS Operation

DAS Operation: Stadium owner (“Owner”) issues

- Neutral Host:
- Multiple DAS agreements:
 - Owner – System integrator (manager) agreement
 - Owner - Multiple carrier agreements (“hearding cats”)
- Vendor managed:
 - Simpler deal structure
 - But cooperation issues
 - Vendor managing competitors
 - “fox guarding the hen house”

DAS Operation

DAS Operation: Owner issues (cont'd)

- Challenges:
 - Scheduling, building access, power, maintenance
 - Carrier v. Owner Responsibilities - “DEMARC”
- Performance failure (“whose?”)
 - DAS service provided “as is”
 - RF interference issues/resolution
 - Trouble shooting /fault isolation/ escalation procedures

DAS Operation

DAS Operation: DAS Vendor issues:

- Data analytics
 - Privacy policies / attendee consent
- DAS installation /integration testing
- Upgrades / conversion /technology upgrade
- Fiber interconnection
- Purchase v. Finance lease
 - “True lease” vs Conditional sale

Spectrum Management

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Spectrum Management:

Carrier Issues

- FCC compliance: Carrier obligation(s)
- Licensed v. Unlicensed Spectrum; Interference management
- Band separation: LTE; CBRS, C-band; Millimeter wave; Wi-Fi
- Frequency coordination

Owner/Manager Issues

- Venue spectrum allocation /best use of bandwidth
- Interference management (among multiple carriers)
- Environmental considerations / RF exposure
- User experience / performance measurement

Legal Issues

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- **Document Control**
 - “Battle of the forms” (who controls?)
 - Owner form of agreement
 - Unlike typical enterprise agreement
 - (where carrier tariffs or “price guide” controls)
 - Letter of intent (non-binding) v. Exchange of draft agreements (invite acceptance)
- **Term & Termination**
 - Typically, long term agreement/multiple renewal rights
 - Renegotiation: 2 – 3 YEAR PRIOR TO EXPIRATION
 - “Agree to talk” clauses (UNENFORCEABLE)
- **Confidentiality**
 - “New” NDA v. Prior ones (that may or may not work)

Legal Issues

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- **Regulatory Issues**
 - Compliance with FCC Regulation (Carrier responsibility)
 - Privacy (*e.g.*, Event attendees' consent to share "PI", "CPNI")
 - Net Neutrality: "Premises Operator" exemption from carrier regulation
 - Underlying Rights: City franchise; Rights-of-way
 - Environmental Issues
- **Building Access/ Occupancy Rights**
 - Carrier Access & Egress (*e.g.*, business hours, personnel control)
 - Carrier Space - License v. Lease v. Easement
 - Subordination /Non-disturbance
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Conclusion

This Is All Very Complicated !

So for more information, please contact:

- Thierry Chau, Commscope; Thierry.chau@commscope.com
- Michael Conley, Cleveland Cavaliers; mconley@cavs.com
- Kevin Pope, AMB Sports & Entertainment; kpope@ambse.com
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THANK YOU FOR ATTENDING !

Thierry Chau
Vice President, Global Market Development



Thierry Chau is the Vice President of Global Market Development at CommScope where he leads the company's Vertical Business Development teams, focusing on integrated technology solutions across CommScope's various business units.

With almost 30 years of industry experience spanning both networking and mobile broadband, Thierry was recently recognized as a "Power Players in Venue Technology" by the Sports Business Journal in 2021 for his work in Large Venues.

Thierry represents CommScope across several key technologies including digital distributed antennas systems, wired and wireless networking, as well as copper and fiber connectivity infrastructure. He is a subject matter expert on digital transformation and its business impact on traditional industries, and is a frequent speaker, panelist, and blogger on this topic.

He is a graduate of Northwestern University.

Michael Conley

Executive Vice President & Chief Information Officer
Cleveland Cavaliers

- ▶ Mike Conley is the Chief Information Officer and Senior Vice President of the Cleveland Cavaliers and Rocket Mortgage FieldHouse, which includes the Cleveland Monsters (AHL), Canton Charge (NBAGL) and Cavs Legion Gaming Club (NBA2K). Conley oversees all the information technology, data governance, emerging technology and digital operations for the franchise. Most recently, Conley led the technology ideation and application for the Transformation of Rocket Mortgage FieldHouse, a major renovation project to transform the nearly 26-year-old venue.
- ▶ With over two decades worth of experience in media, digital and technology-related positions, Conley's leadership has helped set a solid business foundation from which the Cleveland Cavaliers, Cleveland Monsters, Canton Charge, Cavs Legion GC and Rocket Mortgage FieldHouse have flourished into one of the most successfully-operated and technology-driven sports and entertainment teams in the country.

Kevin Pope

Vice President & Chief Information Officer AMB Sports & Entertainment

Kevin Pope is vice president, chief information officer for AMB Sports and Entertainment (AMBSE), parent company of the NFL's Atlanta Falcons, Atlanta United of Major League Soccer, and Mercedes-Benz Stadium (MBS). Kevin oversees and leads teams responsible for design, implementation, and operation of all technology and information systems to enable business capabilities and services across the AMBSE enterprise. Additionally, Kevin leads the shared services technology team that provides support to the chairman's family of businesses including Mountain Sky Guest Ranch, West Creek Ranch, and the Arthur M. Blank Family Foundation.

Kevin has been with the Blank Family of Business for more than 12 years serving in several important roles. Kevin started with the organization in 2009 as a technical analyst for the Atlanta Falcons. Throughout his tenure, Kevin has participated and led key initiatives, including the launch of the Atlanta United, and the construction of the award-winning Mercedes-Benz Stadium. Kevin helped lead the technology development as part of the construction of the Atlanta United Training Grounds as well as the West Creek Ranch. He also led the organization's adoption of important IT platforms like Office 365, OneLogin, and Microsoft Teams, as well as fan centric technology such as state of the art Wi-Fi, cell phone coverage, digital signage, AV, and point-of-sale systems at MBS.

Kevin has also served two separate times in his career as an IT leader within the University of Georgia technology team.

Kevin graduated from the University of Georgia with a Bachelor of Science in Computer Science and Mercer University with a Master of Business Administration.

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Walt Saprnov has represented corporate clients in telecom transactions, regulation and privacy for over thirty years. He has been named in Georgia Super Lawyers and in the International Who's Who of Telecom Lawyers. Together with his affiliates, Saprnov & Associates with offices in Atlanta and Washington DC, represent clients in complex commercial transactions, cross-border finance, and international dispute resolution.

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