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NEXTGEN TV Adoption

ATSC 3.0 and Public Broadcasting: A Case for Flash Cut

Don Smith, Fred Engel | *PBS North Carolina | Research Triangle Park, N.C., United States*
Bill Hayes | *Iowa PBS | Johnston, Iowa, United States*

ATSC 3.0 Hybrid Delivery and Virtual Channels

Peter Gogas | *Gray Television | Bryan, Texas, United States*

OTT/Connected TV

Stretching Elasticity: Traffic Peak Management in an Efficiently Designed Telco-CDN

Gwendal Simon | *Synamedia | Rennes, France*

Perceptually-aware Live VBR Encoding Scheme for Adaptive AVC Streaming

Vignesh V. Menon | *Christian Doppler Laboratory ATHENA, Alpen-Adria-Universität | Klagenfurt, Austria*
Prajit T. Rajendran | *CEA, List, F-91120 Palaiseau, Université Paris-Saclay | France*
Christian Feldmann, Martin Smole | *Bitmovin | Klagenfurt, Austria*
Mohammad Ghanbari | *Christian Doppler Laboratory ATHENA, Alpen-Adria-Universität and School of Computer Science and Electronic Engineering | Klagenfurt, Austria and University of Essex, United Kingdom*
Christian Timmerer | *Christian Doppler Laboratory ATHENA, Alpen-Adria-Universität | Klagenfurt, Austria*

Ultra-low Latency OTT Delivery: The Killer Technology for Betting, Social Networking and Metaverse

Mickaël Raulet | *ATEME | France*
Khaled Jerbi | *ATEME | Canada*

National Security Applications of ATSC 3.0

BPS ATSC 3.0 Broadcast Emission Time Stabilization System Proof-of-concept

Mark T. Corl | *Triveni Digital, Inc | Princeton, N.J., United States*
Vladimir Anishchenko | *Avateq Corp. | Markham, Ontario, Canada*
Tariq Mondal | *National Association of Broadcasters | Washington, D.C., United States*

Delivering Traceable Reference Time for ATSC 3.0-based Broadcast Positioning System (BPS)

Patrick Diamond | *Diamond Consulting | Ayer, Mass., United States*
Tariq Mondal, Robert D. Weller | *National Association of Broadcasters | Washington, D.C., United States*
Andrew Hansen | *Volpe Center | Cambridge, Mass., United States*



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How NextGen Broadcasting Improves Public Safety and Community Security by Providing Advanced Emergency Information Service

Niem Dang, Kevin Wong | *Sinclair Broadcast Group | Hunt Valley, Md., United States*

Innovation in Radio

High-power Digital FM Field Test Project

David Layer | *National Association of Broadcasters | Washington, D.C., United States*

Alan Jurison | *iHeartMedia | Syracuse, N.Y., United States*

Russ Mundschenk | *Xperi, Inc. (retired) | Columbia, Md., United States*

Steve Shultis | *New York Public Radio | New York, N.Y., United States*

E. Glynn Walden | *Audacy, Inc. (retired) | Philadelphia, Pa., United States*

Advanced FM HD Radio™ Service Modes WTLP Field Test Results

Paul Peyla | *Xperi, Inc. | Columbia, Md., United States*

Dave Kolesar | *Hubbard Broadcasting, Inc. | Washington, D.C., United States*

Audio Services Over ATSC 3.0: A Proof of Concept

Liam Power | *ONEMEDIA | Hunt Valley, Md., United States*

Media and Cloud 1

Case Study: How BBC Studios Leveraged the Cloud for SRT Distribution of Her Majesty the Queen's Funeral

Paul Calleja | *GlobalM | Geneva, Switzerland*

Daniel Maloney | *Matrox Video | Montreal, Quebec, Canada*

Software-only Facilities Running on an Asynchronous Framework: A Better Approach to Live Cloud Productions

Dr. Richard Cartwright, Ph.D. | *Matrox Video | Montreal, Quebec, Canada*

Video Coding Techniques

Configuring Versatile Video Coding: Technical Guidelines for Broadcast and Streaming Applications

Łukasz Litwic | *Ericsson | Gdańsk, Poland*

Dmytro Rusanovskyy | *Qualcomm Technologies Inc | San Diego, Calif., United States*

Sean McCarthy | *Dolby Laboratories, Inc. | San Francisco, Calif., United States*

Alan Stein | *InterDigital Communications, Inc. | Princeton, N.J., United States*

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Media Workflow

Sinclair Cloud Media Pipeline

Mike Palmer | *Sinclair Broadcasting* | *Hunt Valley, Md., United States*

Elastic Frame Protocol: An Open-Source Alternative to MPEG-2 TS

Mikael Wånggren | *Agile Content S.A.* | *Stockholm, Sweden*

Immersive and Interactive AR Graphics and Environments for Broadcast Applications *(not presented at conference)*

Caroline Stedman Mishra, MA., BSc. | *Disney Star* | *Mumbai, Maharashtra, India*

Saurabh Ranjan, Btech., Sanjyot Dale, BE. | *Liminal* | *Mumbai, Maharashtra, India*

Broadcast Facility Design

Unified System Design

Lukas Odhner | *NTC, A Deloitte Business* | *Los Angeles, Calif., United States*

An Open Platform for Media Over IP Network Load Testing with Off-the-Shelf Hardware

Ievgen Kostiukevych, Pavlo Kondratenko | *European Broadcasting Union* | *Geneva, Switzerland*

Thomas Kernen | *NVIDIA* | *Zurich, Switzerland*

Willem Vermost | *VRT* | *Brussels, Belgium*

Redefining the Control Plane

Dan Murphy | *NEP Group* | *Pittsburgh, Pa., United States*

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Filling the Gaps in Video Transcoder Deployment in the Cloud

Vibhoothi, Daniel Joseph Ringis, Xin Shu, François Pitié | *Sigmedia Group, Department of Electrical Engineering, Trinity College Dublin* | *Dublin 02, Ireland*

Zsolt Lorincz, Philippe Brodeur | *Overcast HQ* | *Dublin 02, Ireland*

Anil Kokaram | *Sigmedia Group, Department of Electrical Engineering, Trinity College Dublin* | *Dublin 02, Ireland*

Zero Trust Network Access Considerations for Remote Live and Postproduction

Karen D. Gondoly | *Leostream Corporation* | *Boston, Mass., United States*



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RF Technology and Spectrum Issues

Reconfigurable Manifold Combiner

Derek Small | *Dielectric LLC* | *Raymond, Maine, United States*

ENG and DoD: Update On 2 GHz Sharing

Robert J. Russell | *Technical Broadcast Solutions Inc.* | *Dover, Del., United States*

Robert D. Weller | *National Association of Broadcasters* | *Washington, D.C., United States*

AI and Data Analytics in Media

"Generative AI:" Supercharging Humans, Transforming Creativity

Naveen Narayanan | *Quickplay* | *Toronto, Ontario, Canada*

Delivering Broadcast Quality, Fully Automated Sports Production Through AI-Powered Sports Action Tracking and PTZ Cameras

David Edwards, Siddhi Imming | *Vislink* | *Colchester, Essex, United Kingdom*

Radio Technology

AM Radio FCC NRSC Compliance Reports

James Dalke | *Dalke Broadcast Service, Inc.* | *Bellevue, Wash., United States*

Martin Hadfield | *The Hadfield Group, LLC* | *Seattle, Wash., United States*

How AI Can Reduce Energy Consumption and Drive Sustainability in FM Radio Broadcasting

Daniel Werbrouck | *WorldCast Systems* | *Bordeaux, France*

Integral Broadcast Filter Switch

Anthony Travaglini | *Dielectric LLC* | *Raymond, Maine, United States*

Cybersecurity and Trusted Content

Cybersecurity "Proof of Performance" for the Broadcast IT System

Wayne Pecena | *Texas A&M University – KAMU TV and FM* | *College Station, Texas, United States*

Fighting Misinformation with Authenticated C2PA Provenance Metadata

Nigel Earnshaw | *The British Broadcasting Corporation* | *London, United Kingdom*

Jonathan Dupras | *CBC/Radio-Canada* | *Montreal, Quebec, Canada*

Bruce MacCormack | *Neural Transform* | *Lunenburg, Nova Scotia, Canada*

Real Radio Hosts Working Virtually: How Real Humans Work with Containerized Broadcast Systems

Kirk Harnack | *Telos Alliance* | *Nashville, Tenn., United States*

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Sustainability and 5G

Pop-up 5G Standalone Non-public Networks (SNPNS) for Live Broadcast Production

Samuel R. Yoffe, Malcolm Brew, Douglas Allan, Kenneth Barlee, Dani Anderson, Odianoson Ighagbon, Cameron Speirs, Robert Stewart | *Neutral Wireless Ltd. and StrathSDR, University of Strathclyde | Glasgow, Scotland*

Ian Wagdin | *British Broadcasting Company, Research and Development | London, United Kingdom*

Morten Brandstrup | *TV 2 Danmark | Copenhagen, Denmark*

Jack McGill, Gareth Gordon | *QTV | Glasgow, Scotland*

Don Mullane, Liam Murray | *RTÉ | Dublin, Ireland*

Mark Smith, Muki Kulhan | *IBC | London, United Kingdom*

John Canning, Aaron Behman | *AMD | Santa Clara, Calif., United States*

Matt Stagg | *BT Sport | London, United Kingdom*

Jonathan Hale | *Warner Bros. Discovery | London, United Kingdom*

Hands On Towards Next Generation Media Distribution with the 5G-Mag Reference Tool

Daniel Silhavy | *Fraunhofer FOKUS | Berlin, Germany*

Richard Bradbury, David Waring, Dev Audsin | *British Broadcasting Corporation | London, United Kingdom*

Thomas Stockhammer, Aytac Biber | *Qualcomm CDMA Technologies | Carlsbad, Calif., United States*

Kurt Krauss | *Dolby Germany GmbH | Nuremberg, Germany*

JordiJoan Gimenez | *5G-MAG Association | Geneva, Switzerland*

Johann Mika | *ORS | Vienna, Austria*

Media and Entertainment Sustainability on the Cloud

Thomas Edwards, Jason O'Malley | *Amazon Web Services | Seattle, Wash., United States*