

We're continuing to see that AV1 offers generational improvement in coding efficiency over any web codec available today. Netflix <u>announced</u> it has started streaming AV1 to its Android mobile app, providing 20 percent improved compression efficiency over its VP9 encoder. During Intel's CES <u>keynote</u>, Netflix's Anne Aaron joined Intel Data Platforms Group EVP Navin Shenoy on stage to discuss the importance of video codecs, their collaboration on SVT-AV1, and AV1 gains.

Additionally, Samsung was one of several manufacturers that <u>announced</u> full hardware support for AV1 at CES in select 2020 TVs and set-top boxes. Consumers will be able to enjoy AV1 encoded videos in resolutions up to 8K on Samsung QLED 8K TVs. Samsung is working with partners like YouTube to stream AV1 8K content through the native app.

In addition to the activity at CES, AOMedia kicked off its first Research Symposium this past fall to work with the academic community to develop new coding tools that deliver improved compression performance. The conference attendees and presenters included AOMedia members and leading academics from universities worldwide.

As a result of ongoing AV1 improvements in encoder performance and decoder penetration, we expect to see a continuing increase in the return on investment from AV1 in 2020 and beyond. We are very excited about the widespread adoption of AV1 across the ecosystem.

Regards,

Matt Frost,
AOMedia VP of Communications and Membership
Director at Google



Event Recap: AOMedia Research Symposium, October 20-21, 2019, San Francisco

AOMedia kicked off its first Research Symposium in October to bring together the AOMedia member community and researchers from leading universities. The packed 2-day program offered <u>stimulating presentations</u> to more than 200 attendees in sunny San Francisco.

A 2019 <u>Cisco study</u> predicts that global internet traffic is expected to rise three-fold between 2017-2022, of which 82% will be video. AOMedia is focused on developing new formats that set the standard for video compression performance to deal with this additional traffic.



Adrian Grange, AOMedia's Chair of the Video Codec Working Group, Google

Achieving improved performance has become more challenging with each codec generation, so AOMedia Research is seeking active collaboration. This first symposium attracted contributions from many leading universities: Bristol University, Carnegie Mellon University, Hangzhou Normal University, Purdue University, New York University, University of Nantes, Stanford University, UCSB, USC, the University of Texas at Austin, Trinity College Dublin, and Yale University.

To view the agenda, abstracts, slide decks, videos of the presentations and full list of attendees visit https://aomedia.org/aomedia-research-symposium-2019/.

To see event recaps featuring Alliance leads spotlighting AV1 visit: https://aomedia.org/av1-show-demos/

Tencent

We're excited to have Tencent, a leading provider of Internet value-added services in China, join as a member at the Board level. Please join me in welcoming them to AOMedia in our collaboration portal. Tencent invests heavily in talent and technological innovation, actively promoting the development of the Internet industry.

"Together with AOMedia members, we hope to explore new possibilities for AV1 royalty-free, cross-platform, online video across a wide range of applications, including eSports and elearning. We are also actively contributing to the development of future standards."

- Dr. Shan Liu, Vice President and General Manager, Tencent Media Lab

Read the full release here.



At RTC Beijing, Agora.io's CEO Tony Zhao announced the company's AOMedia membership during his keynote.

"We're thrilled to be part of the Alliance for Open Media and have the opportunity to work alongside some of the world's most innovative technology and media companies, bringing our real-time video and voice platform to AV1 to deliver an engaging experience for users. This membership brings real-time video and voice to a broader range of applications, and we are excited to see how the community at large adopts those rich features."

- Tony Zhao, CEO, Agora

Read the full release here.



AOMedia Member Spotlight: ATEME

Mickael Raulet, ATEME's Vice President of Innovation, discusses AV1 highlights:

"In the past months, we have been working on designing our own AV1 encoder implementation, focusing on bandwidth efficiency. In July 2019, we productized AV1 in our TITAN Solution and are now in field trials for Video-On-Demand (VOD) transcoding with Tier-1 customers. Because AV1 is available as a simple software update, customers enjoy AV1's benefits of bandwidth efficiency and royalty optimization while being able to have a product widely-deployed and in use today." - *Mickael Raulet*

Read ATEME's Member Spotlight on AOMedia's website here.

If you are interested in submitting a member spotlight blog, please fill out the form here.



Spotlight Your AV1 Successes

Share Your Successes and AV1 Activities

We are excited to hear from you regarding your AV1 activities and successes. Please submit any news or updates about your company so that we can help spread the word across our social media platforms and other communication channels! <u>Click here</u> to share your AV1 activities, work, or demos.

Tell Us About Your AV1 Plans Future Events and Conferences

And let us know where you will be showcasing your AV1 innovations at conferences or events throughout the year, <u>click here to tell us more</u>.



AOM and AV1 In The News

- Engadget, Netflix switches to the AV1 codec for data-saving streams on Android
- AnandTech <u>CES 2020: Samsung's 8K QLED TVs Use AI Quantum 8K SoC, Add Support For AV1 Video</u>
- Phoronix, Intel SVT-AV1 0.8 AV1 Video Encoding Benchmarks
- IBC, Interview with Matt Frost: Creating a codec for tomorrow's content
- LG, LG To Unveil 2020 Real 8k Tv Lineup Featuring Next-Gen Al Processor At CES 2020
- RethinkResearch, <u>Adapt to multi-codec world or die, warns Bitmovin as AV1</u> escalates
- TV Technology, <u>Audimus.Media is Voice Interaction's flagship automatic closed</u>
 <u>captioning system's newest feature enables it to add closed captions into live video</u>
 <u>streams encoded with the AV1 video codec in addition to previous supported</u>
 <u>codecs</u>
- Phoronix, Rav1e Achieves Another ~20% Speed-Up For Rust-Based AV1 Video Encoding
- CNX.Software, <u>Broadcom BCM7218X STB SoC Comes with AV1 Hardware Decoding</u>, <u>WiFi 6</u>
- CSI, Intel and Netflix team on open source SVT-AV1 codec
- Media & Entertainment Services Alliance, <u>IBC 2019</u>: <u>AWS to Showcase Flexible Cloud Workflows for Content Creation</u>, <u>Distribution</u>
- StreamingMedia, IBC '19: Facebook, Netflix, Google Talk AV1, HEVC, and Support

AOMedia Member AV1 News

The following is the latest member news. If you have any member news to share, please

click here.

- Netflix Tech Blog, Netflix Now Streaming AV1 on Android
- Netflix Tech Blog, AVIF for Next-Generation Image Coding
- Intel, 2020 CES: <u>Intel Brings Innovation to Life with Intelligent Tech Spanning the</u> Cloud, Network, Edge and PC
- Samsung, Samsung Electronics Unveils 2020 QLED 8K TV at CES
- Samsung, Samsung Partners with 8K Association to Launch Certification Program
- Samsung, <u>The HDR10+ Ecosystem Makes A Major Leap Forward with Expanded Support</u>
- CNX.Software, <u>AV1 codec is also coming to lower-cost media processors as shown</u> by <u>Amlogic 2020 roadmap</u>
- Intel, Highlights from Intel's CES Keynote
- Allegro, Silicon IP Provider Allegro DVT Acquires Amphion Semiconductor to Create a New Leader in the Video Codec IP Space
- Amlogic, <u>DV8845 Amlogic S905C1 Android TV Hybrid Set-top Box Comes with DVB-T2 or DVB-C Tuner</u>
- ATEME, <u>ATEME and Broadpeak Enable High-Quality</u>, <u>Ultra-Low-Latency Live</u> Multiscreen Video For DVB-I Services
- Intel, Intel confirms 'Tiger Lake' is the next Intel Core processor you need to care about
- Mozilla, Rav1e Kicks Off 2020 With Speed Improvements For Rust-Based AV1 Encoding

AV1 Resources

AV1 dedicated resource pages:

- Bitmovin: https://bitmovin.com/av1/
- Facebook: https://www.facebook.com/330716120785217/videos/engineering-at-facebook/330723190784510/
- Intel: https://github.com/OpenVisualCloud/SVT-AV1
- Mozilla: https://research.mozilla.org/av1-media-codecs/
- Visionular: https://www.visionular.com/#portfolio

Featured AV1 Demos and Presentations

- AOMedia Research Symposium 2019
 - View agenda, abstracts, slide decks and videos of the presentations at https://aomedia.org/aomedia-research-symposium-2019/.
- NAB Show Streaming Summit AOMedia presented "<u>The Latest Technical and Business Progress with AV1.</u>"
- IBC Intel Visual Cloud Conference AV1 panel session, "Video will remain foundational to Visual Cloud realizing the future of AV1"
- Big Apple Video Conference (BAV) 2019- Presented by Vimeo and Mozilla
 - <u>Cisco</u> Real-Time AV1 Codec, Cisco's presentation at <u>BAV2019 AV1 in video collaboration</u>
 - <u>Twitch</u> -Towards a healthy AV1 ecosystem for UGC platforms_
 - Videolan High-performance AV1 coding with dav1d and Eve
 - <u>Visionular</u> Aurora An AV1 Encoder for VoD and Real-Time Communications
 - Intel SVT-AV1 Overview, Latest Performance Results and Roadmap
- AllThingsRTC2019 Presented by new AOM member Agora.io
 - Google Opening Keynote: The Past, Present, and Future of AV1
 - Visionular Machine Learning for AOM/AV1 and its Application in RTC
- <u>Vimeo Staff Picks</u> channel will be delivered using the AV1 codec on supported platforms (including the recent versions of Chrome and Firefox). Check out <u>David Jervidal</u>'s Staff Picked film "Capture the North", which is just one example of one of the many videos that will be leveraging AV1.

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