Industry Predictions:
SEEING 2020

'd love to have been a fly on the wall through the last decade or so of a major network's annual brainstorming meeting when this OTT fuss all began. Imagine the conversations …

2008

Junior Executive: Hey boss, we've really got to get our video online! Hulu just launched, and it's going to put us out of business. People don't want to wait to see their favorite programs. They want to watch when they want, on demand.

Boss: I guess …

2014

Junior Executive: Hey boss, we've really got to launch a second-screen experience so people can play along on their devices while they watch their favorite shows.

Boss: I guess …

2016

Junior Executive: Hey boss, we've really got to release entire seasons at once so people can binge watch. People are done with the idea of appointment TV.

Boss: I guess …

2019

Junior Executive: Hey boss, Disney+ and Apple TV+ are launching original content that follows a weekly release schedule. We've got to …

Boss: You know …

By now, that junior executive is either the boss or he's flipping burgers somewhere. Don't get me wrong: This industry has always thrived on innovation. But it seems that what people really want may be what they had all along—seeing stories unfold an episode at a time, waiting eagerly for the next one. It makes sense, doesn't it? Would you like to watch an entire hockey or football season in one long sitting? Heath concerns aside, it's actually quite boring. After pacing ourselves during the first two seasons of *Stranger Things*, my family felt ripped off when we binged season three. It wasn't half as fun without the anticipation and discussions about what will happen in the next episode.

Another case in point? I enjoyed *Watchmen*, and I couldn't wait to see it every week. That wasn't always when it aired, and it was mostly on my iPad, but I got my carefully measured dose doled out to me, which was exciting and addictive. Good content will always be king, and it's always worth the wait, whether in theaters, on network TV, or on an OTT platform.

I know this hasn't followed the format of my annual predictions; I usually talk about the technology changes we'll see tackled in the upcoming year. Rest assured, we've already planned our coverage of the most important topics in our 2020 editorial calendar, webinars, Solution Series, and of course Streaming Media East and West. Come along with us and you will stay on the bleeding edge of OTT and everything else related to online video. Now, I'm going to let the executives who are building this industry guide you through what they see every day with their own eyes and through the eyes of their customers in this year's Executive Predictions.

Joel Unickow
VP/Publisher, Streaming Media

Delivering exceptional QoE will continue to be critical for pay-TV operators in 2020. Operators need to provide broadcast-quality video for multiscreen and adaptive bitrate services. The good news is solutions exist. Using multicast ABR technology for live applications, operators can achieve scalability and create the network conditions necessary to reduce latency below 5 seconds. By implementing CMAF and chunked transfer encoding (CTE) or Low-Latency HLS, they can reduce latency even further to less than 2 seconds.

Content personalization is another big trend, including personalized ad insertion and replacement for all types of content, from VOD to live and cloud PVR. Being able to adapt video streaming to the context of the user based on content, device type, and subscription will be essential to a pay-TV operators' success.

At Broadpeak, we believe transparency is crucial from an operators' perspective. The best way to achieve this is with full analytics and monitoring, allowing for efficient troubleshooting and analysis of user behavior, while respecting GDPR rules. Home network optimization is also key. Operators must analyze, in real time, traffic in the home network to allocate bandwidth resources in the smartest way possible, in order to optimize user's QoE.

With the 5G rollout under way, operators will also begin exploiting the benefits of 5G networks, including caching closer to the edge to improve QoE and scalability, fixed wireless access leveraging 5G networks, and taking advantage of network slicing to guarantee service level agreements.

Overall, the harmonization of relationships between operators and content providers will be important going forward.

Jacques Le Mancq
CEO | BROADPEAK | BROADPEAK.TV

As predicted in the past, the transition to IP-based video consumption is happening at an ever growing rate. As CEO of DVEO, I believe DVEO is well-positioned to take advantage of the increasing rate of change toward IP.

Prognostication for 2020 is relatively easy as long as you watch the trends. There are three we are following with possible impact on DVEO:

In 2019, RIST (Reliable Internet Stream Transport) will Emerge as a Powerful Alternative to SRT/

Created by the Video Services Forum (VSF), RIST is an interoperable (open) protocol for reliable streaming over the internet. RIST is a new open standard created by a consortium industry and multiple technology developers. Most significantly there is likely going to be support from the main standards creating bodies who initiated meetings via the Video Standards Forum (VSF).

CMAF (Common Media Application Format) will be Important

All DVEO's streaming products now support CMAF compliant HLS. Fragmented fMP4, enables our products to use the same stream segment for HLS/fMP4 and DASH inputs. CMAF includes a low latency mode—file segments are divided into "chunks" so video playout can start before the video segment is fully encoded. CMAF files can also be encrypted.

Content will become Even More Important

Content continues to drive the industry. Less-watched streaming services shut down, but new content sources are announced every week. Viewers are new looking for more non-homogenous cloud-delivered content. Everyone including corporations and educational institutions are also streaming more content.

To compete in 2020 and beyond, DVEO developed comprehensive "Cloud" or "On Premises" video platforms with built-in ad insertion. Our VIDEO PLATFORM II™: OTT and VIDEO PLATFORM II™: IPTV offer a complete end-to-end solution for secure content delivery almost everywhere on almost any device.

Laszlo Zoltan
CEO | DVEO | DVEO.COM

For more than a decade now, Epiphan Video has worked hard to build cutting-edge, user-friendly video encoding hardware. The positive response to our products and services, especially when it comes to our Pearl family of hardware encoders, has been gratifying — and emboldening.

By further listening to our customers, we can keep delivering powerful tools for capturing, streaming, and recording high-resolution video in classrooms, corporate offices, conference halls, and more. We'll also continue looking forward so we can provide innovative AV solutions that meet our customers' needs.

So, what does the future hold for the video industry?

Automation will upend video production

The biggest change we see looming is automation — for all aspects of video production. With the high availability and low entry of video creation today, combined with the impressive advancements we've seen in artificial intelligence and machine learning, it's only a matter of time.

Epiphan will do its part to create solutions for assisting and automating live and recorded video production.

Demand for remote video production will boom

Another trend on the horizon is remote video production. While professional video equipment is more affordable than ever before, customers in enterprise expect well-produced, high-quality video delivered fast. But the complexities of today's standalone AV hardware and software challenge this.

By building centralized infrastructures and integrating AV-over-IP-based remote production studios into the video production process, businesses can tap into the talents of highly skilled AV professionals working offsite. Providing remote video production as a service this way would also decrease capital expenditures. Lower costs and greater efficiency will put high-quality live and on-demand video production within reach for everyone.

Mike Sandler
CEO | EPIPHAN VIDEO | EPIPHAN.COM

OTT Live Streaming:
Can We Unify HLS and DASH Formats in 2020?

Now that we have CMAF, a common file format that can unify both DASH and HLS, it is time to see how it will be implemented practically. The first hurdle to overcome is the encryption, and there is currently unified support for the CBCS encryption scheme by all of the major DRM systems such as Apple FairPlay for HLS, and Google Widevine and Microsoft PlayReady for DASH. With this approach a single media file can be encrypted in the CBCS format and distributed to any player, no matter what DRM system is in use. This fulfills the initial promise of CMAF.

The second hurdle is low latency, especially with the newly published Apple LL-HLS protocol, which diverges from the chunk transfer encoding mode defined by MPEG DASH in 2018. Apple has realized that, even using CMAF, unifying the two systems would require effort on its side. There are positive signs DASH and HLS can come up with a single cacheable media file format to make the promise of CMAF become a reality and enable low latency. The third hurdle that needs to be resolved is ad insertion. The balls are up in the air on both HLS and DASH, so convergence might take more time.

In 2020, all signs point toward the industry developing a unified CMAF-based, live OTT streaming system that supports common encryption with CBCS, along with ad insertion and low latency for both HLS and DASH delivery formats. Under this approach, media files are only stored once, which saves processing, storage and delivery costs. This will create an optimized delivery scheme that will enable all of the key features OTT service providers are looking for. Accomplishing this will resolve fragmentation issues, make OTT live streaming more profitable and speed up its development.

Thierry Fautier
VICE PRESIDENT OF VIDEO STRATEGY | HARMONIC
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At Lightcast.com we predict that the year 2020 will be influenced by two OTT trends:

1. Diversified revenue models for independent content creators
2. More intuitive real-time control over OTT properties and apps

During 2019 we have seen an increase in demand for innovative OTT services and business models across new verticals and industries. For 2020 we predict that independent content creators, who have relied heavily on shared ad revenue from leading social video networks, will explore opportunities to expand their reach and viewership, and to diversify their business model. Rather than relying on one specific revenue model, publishers will increasingly deploy multiple monetization tools parallel across their OTT apps and content offerings. The need for creative, outside-the-box revenue models is bound to grow consistently, as traditional monetization may not prove to be relevant for specific verticals, markets and viewership demographics. Lightcast.com offers the most diversified monetization toolbox, with innovative revenue models and bespoke business consultation for content creators and publishers.

Regarding the creation and operation of OTT properties, such as WebApps, TV Apps and Mobile Apps, we see a clear trend towards intuitive customization and a real-time build process. Lightcast.com's advanced App Framework, with single-codebase apps, instant multi-platform deployment and an intuitive build process through the Lightcast Media Cloud, provides publishers of OTT properties across all platforms and app-stores with maximum control and real-time management. From complete control over corporate design and branding, deployment of individualized feature-sets, order of custom functionalities, to real-time creation and modification of multi-tier navigation structures of categories, sub-categories, genres, series and seasons, the Lightcast Media Cloud provides the ultimate cockpit and allows to put streaming media publication and distribution on autopilot wherever needed. With this we are catering to the continuous trend in 2020: the simplification OTT! Utilizing the Lightcast Media Cloud's automation capabilities through programmable workflow presets for publishing of live-events, linear streams, on-demand contents, archives, gallery thumbnails and other image artwork, metadata, security settings, sharing preferences, multi-language subtitles and other sidecar files, allows content creators to simplify media management and distribution and to save time on tedious upload and administrative work. Automate whatever you can and focus on what matters the most!

Andreas Kisslinger
CEO | LIGHTCAST.COM | WWW.LIGHTCAST.COM

It should surprise nobody that the adoption of video-over-IP technology significantly accelerated in 2019. The ongoing maturation of technologies including NDI and SMPTE 2110 has opened the floodgates to widespread deployments, aided by conversion solutions like our Pro Convert products that ease the transition. But as tremendous as these strides have been, we expect the use of IP-based transport in production workflows will be even further catalyzed in 2020 by significant advances in wireless communication technologies.

While designed for different environments, Wi-Fi 6 (802.11ax) and 5G both promise higher throughput and lower latency that may further drive the use of video-over-IP technologies by freeing them from wired network infrastructures. While initial rollouts of these technologies may not yet deliver on their full potential, they are still major steps forward. More important than pure speed gains, Wi-Fi 6 also offers far greater efficiency than earlier standards when many devices are moving data on the same network (for example, multiple cameras feeding a production switcher over IP), making Wi-Fi more viable for real-world production applications.

The flexibility of untethering their production equipment from wired connections will provide even greater motivation for customers who have not yet adopted IP. We should see emerging solutions that enable users to reliably take advantage of these wireless innovations in their workflows.

Of course, the impact of Wi-Fi 6 and 5G won't be only on the creation end of the media chain; they will have an even broader impact on content consumption. With in-home Wi-Fi and mobile network throughput no longer bottlenecks, audience demand for 4K content with HDR is bound to escalate. Full 4K HDR production will start becoming the norm in the streaming industry, powered by the latest achievements in CPU and GPU technology and new tools that continue to make 4K production increasingly cost-effective.

Nick Ma
CEO AND CTO | MAGEWELL | WWW.MAGEWELL.COM

EXECUTIVE *predictions*

Video is a profound tool for teaching and learning, and we're seeing the need – and expectation – for high-quality, interactive content continue to grow in all industries. As we enter 2020, we predict that the world of enterprise video will collide in full force with the multi-billion-dollar (and growing) unified communications (UC) space.

We strongly believe that all recorded videos are not created equal, and easily captured and conveniently accessible content is crucial. The convergence of enterprise video and UC will ensure that the valuable conversations that take place in the increasingly popular huddle rooms, Zoom Rooms and other collaborative spaces are captured and easily referenceable on-demand.

We have perfected how to extend the value of UC solutions by integrating with leading conference services and bridges. The result? Flat recordings from meetings and classes are transformed into dynamic, interactive video that is available anytime, anywhere in a searchable video library. Equally as important, we believe that not every video is meant for everyone. So, we've ensured there is end-to-end protection of video libraries, allowing only authorized viewers access.

Now more than ever we believe companies, healthcare organizations and higher education institutions are missing an essential piece of the puzzle if they're not jumping in head first to create the most useful video content possible for their students, employees, physicians and patients. In the next year we will see video and UC solutions come together even more to create effective learning experiences and support a true culture of collaboration.

Michael Nørregaard
CEO | MEDIASITE | MEDIASITE.COM

Subscription fatigue

With so many content and subscription services (HBO Go, Netflix, Disney+, Apple TV+ …), people are going to get tired of the top-quality, "yet now bland", content top players have to offer. This should leave the door open to middle market and entry-level players. Those players should aim at localized content and easy to implement technology to bring back the link between viewers and their day-to-day environment.

AVOD is back

In the direct continuity of subscription fatigue, viewers are still going to want to consume content but without having to pay for it. This should lead the way for renewed interest in advertisement supported media content. With better capabilities to detect client-side ad-blockers and improved workflow for SSAI solutions we can expect publishers to give AVOD a new go.

Continuity of adoption of new technologies

HEVC is just beginning to be thing in 2019. We can expect the inevitable adoption of new standards to continue: CMAF, AV1, low latency HLS, 5G. This adoption seems to be going slower than expected though. We can see market consolidation and decision makers going more conservative to ensure QoS.

Data-driven customization

True customization of viewing experience based on actionable data is becoming a reality. Listening to what viewers have to say is going to be the new kingmaker in years to come. At Radiant Media Player we are putting our focus on that listening. Achievable customization, reliable AVOD and secure adoption of new technologies can become a reality for you with our go-everywhere HTML5 video player.

Arnaud Leyder
CEO | RADIANT MEDIA PLAYER
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Competition, emerging formats and platforms and technological advancements promise to make 2020 another dynamic year for the industry.

My colleagues CTO Ian Hamilton and CSO Rick Clarkson join me in sharing some thoughts on 2020.

It's a hybrid cloud/multi-cloud world

My prediction is that media companies will increasingly drive their technical infrastructure toward a hybrid cloud/multi-cloud future. The industry is moving beyond a simplistic view of "the cloud" as a single public cloud platform. Technical leaders now envision agile, distributed global storage and compute environments, with multiple commercial infrastructure providers and large-scale private clouds. They want to be able to choose the optimal resource configuration for each workflow or asset class, based on cost, performance, and adjacency to other services.

The evolution of machine learning

Ian predicts, "While applying supervised machine learning to train computers to perform tasks that humans are good at (and machines haven't traditionally been good at), like natural language processing and image recognition, is interesting and useful, I think we'll see an increase in strategies for enabling machines to do things that the majority of humans aren't good at, like creating photorealistic images or devising strategies for maintaining privacy in aggregate data."

A paradigm shift in media technology

Rick shares, "I look at the need for business agility driven by changes in consumer behavior. The industry is moving away from expensive, bespoke solutions in favor of lighter weight, off-the-shelf, multi-tenant SaaS. I envision some market consolidation in media technology where companies building solutions using a combination of cloud technologies, microservices, open source software and commercial applications will be in an enviable position."

The Signiant team is excited to see how the industry evolves in 2020 and we're committed to the further innovation of our SaaS platform to help connect an ever more complex global media supply chain.

Margaret Craig
CEO | SIGNIANT | WWW.SIGNIANT.COM

2020 is set to become a pivotal year in the broadcast and electronic media markets. For some time, new technologies have been evolving that present radically different ways to produce and consume content at home and on the move.

We will see a growing trend where broadcasters will migrate parts of their complex production workflows at scale into the cloud, versus just net new projects. One of the big advantages of cloud-based operations is rapid scalability and we will see the move to capex light environments taking off. In today's business environment, I believe that there is very little appetite for capex outlays in light of high cost of content.

In 2020, longtail content will increase in importance and urgency as content producers and aggregators spend more and more capital on new content creation/licensing.

2019 has seen the rise and rise of OTT services that meet the consumption needs of a new young generation. The fight for consumer attention will reach fever pitch and OTT streaming companies will partner with one another to create better scale.

In this environment, OTT streaming competitiveness will make stream monitoring table stakes for any competitive service. 2019 saw Telestream introduce a new and radically different approach to the channel creation challenge called OptiQ. Introduced at IBC, OptiQ Monitor enables OTT service to implement elegant monitoring capabilities within thin channels easily and cost-effectively – early 2020 will see the first commercial implementations of this.

Within the content distribution field, I believe that 2020 will be the breakthrough year for 5G. 5G will gain a significant hold and streaming video will become an anchor application in this new technology environment. 5G networks offer virtual CDNs and distributed processing environments to their operators – this will be a key enabler to new business models.

Scott Puopolo
CEO | TELESTREAM | WWW.TELESTREAM.NET

EXECUTIVE *predictions*

During 2020 we will see the rapid growth in OTT installations globally continue. Consumers will be able to access more unique content tailored to their niche interests, rather than the generic content line-up usually available on major platforms. This is a result of lower barriers to entry in the market, particularly from a technological perspective. Not only is OTT back-end technology is becoming more cost effective to run, advances mean that media groups can now run a virtually unlimited number of channels or VOD assets on their OTT platforms.

Previously technical limitations involving; adding terrestrial or cable channels, integrating the user interface from set-top boxes, and DVR functionality were major limiting factors in being able to provide viewers with better targeted content and more choice.

These changes will also impact CTV advertisement inventory, as increasingly niche content coupled with AI will allow for better targeted ad-experiences. We will also see higher demand for AVOD and Linear-Ad installations as the ad-revenue model starts to compete against subscription OTT models.

Lastly, 4K HDR and 8K live content streaming will continue to grow from both a consumption and availability perspective. The increased demand for low latency 4K HDR and 8K content will see CDN companies collaborating at an unprecedented level to what we have seen before in order to provide a better experience to the end user.

George Bokuchava

CEO | TULIX | WWW.TULIX.COM

The streaming landscape was filled with headlines in 2019. We saw the introduction of immensely popular streaming services, connected TV sales continued to rise, and 5G deployment grew at an amazing pace. Here are three things we expect everyone to be talking about in the coming year.

New technology and new players will shake up the market

Cloud, edge, and AI technologies will play a fundamental role in the future of video content delivery and workflows, making it easier for new streaming players to build scalability into their business model. Unencumbered by legacy systems, they have the ability to adapt their strategy to provide content that meets global or local demand at any given point in time, with fewer restrictions on the types of programming they want to create.

Streaming into our homes

Connected TVs (CTVs) have now superseded mobile devices as the primary means of viewing streamed content. There are expected to be over 200 million connected TV viewers in the U.S. alone by 2021. CTV already accounts for 55% of premium video dynamic ad insertion (DAI) inventory across the U.S. and Europe, demonstrating a YOY growth of 48%, and I predict this growth to increase in 2020.

OTT: The future of live sports

New innovations in 4K streaming, enhanced playback features, and hyper-personalization are enabling streaming content service providers to create an alternative viewing experience for fans. More consumers will choose to watch live sports via streaming platforms as they now offer the same quality experience as broadcast. More streaming service providers will look to acquire sports rights in 2020, and with a number of global sporting events taking place in the summer, we'll see higher concurrent viewer numbers and higher data traffic than ever before.

Ralf Jacob

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