

Table of Contents

1 Beyond, Inc. 71
AJA Video Systems71
Beamr 72
Conviva
DVEO division of Computer Modules, Inc. 73
Epiphan Video73
EuclidIQ
EZDRM 74
Haivision
Kollective 75
Matrox Electronic Systems Ltd
Panopto 76
TalkPoint 77
Tulix Systems77
VisualOn 78
Wowza Media Systems

How to Be a Leader



Joel Unickow, Publisher, Streaming Media

I'M NOT A TONY ROBBINS KIND OF GUY, BUT I TAKE A real interest when successful people speak. I have inspirational quotes all over my office. But for running a successful business, it takes more than just words—it takes actions.

Few people have combined words and deeds as well as Sir Richard Branson, who went from starting *Student* magazine in a church to boasting a personal net worth of more than \$5 billion. And it's no surprise that Branson has plenty of quotes that anyone can easily apply to their lives, especially business leaders

looking for advice on how to build a successful team. My favorite is, "Train people well enough so they can leave, treat them well enough so they don't want to."

Here's the bottom line: If you look after your staff, they will look after your business.

There are a lot of people out there, and lots of jobs. I can't help but feel that good leaders inspire people, rather than threaten. Good leaders make employees happy, which brings out their best and creates a positive workplace that's fun and energetic. In a time when many work to live, there are still people who actually live to work. I believe that most days, that's me too. I'm betting that's you, as well.

If I'm asked what one component is required for leaders to help their companies grow, it would most certainly be incentives. You know, performance rewards. Especially for salespeople who are inherently competitive. I think most people respond more favorably to the carrot than the stick

Now I don't hang on every word Branson says, but I did find an interesting blog post he wrote on the Virgin website. It's one I think everyone who operates in the very risky online video industry should read (go2sm .com/branson). The blog post is—surprise—a collection of Branson's favorite quotes about risk. Take a few minutes to read it. You won't be sorry, and it's short enough to remember and share. My personal favorite is, "If you don't play, you can't win," from author Judith McNaught. So simple, yet it really hits home.

When the Streaming Media team puts together the Streaming Media 100 list each year, it's a painstaking endeavor. Thankfully, we've been at at it a very long time, so the changes in the industry, the innovations, and the real advances made by real companies don't go unnoticed. This section, however, is where we ask leaders of the companies on this list if they would like to say a few words of their own. I hope you find them inspirational, and that you can apply these words of wisdom not just to your business, but also to the rest of your life.

–Joel Unickow





1 Beyond, Inc.



Terry Cullen Founder/CEO 1 Beyond, Inc.

I've always been a maverick. I enjoy introducing Disruptive Technology that changes everything. Our modus operandi at 1 Beyond has been: look over the horizon, anticipate what's about to happen and invent products to help customers get there. Over the past 20 years we've done this with the first digital video editing systems, self-contained data wrangling, low cost Petabyte storage and the largest selection of LTO archive products. Now

we're doing the same with our streaming, recording and conferencing products.

It's no secret that streaming video is the future of communications. It's how we're consuming our news and entertainment and how corporations are communicating, people are meeting and students are learning. So the question now is how to provide the tools to make this easier, more affordable and up to the high standards the public has come to expect. With Facebook LIVE, Skype, Zoom, YouTube... the "pipes" are there. What 1 Beyond offers are the cameras and systems to feed these "pipes".

We started by introducing the StreamMachine[™], the first all-in-one professional switcher/encoder/recorder for under \$5000... now with more capability under \$4000. We followed that with a line of HD-SDI cameras at a fraction of the cost of existing broadcast cameras.

We now see the future: to cut costs, reduce personnel requirements and simplify operation, customers want more automation. We are already shipping the next set of breakthrough products: the AutoTracker™ cameras and Automate RCS™ and Collaborate AVS™ systems. These solutions give the audience the experience of a manned production but without personnel: automatic video switching triggered by microphone inputs, calendar-scheduled multi-camera recordings and a PTZ camera that automatically follows a speaker. All are at prices that enable companies large and small, schools, churches and others to expand their communication with streaming video.

Hello future, this is 1 Beyond calling.

1 Beyond, Inc. 529 Main St. Ste 109 Boston, MA 02129 USA www.1Beyond.com



AJA Video Systems



Bryce Button, Product Marketing Manager

OVER THE LAST FEW YEARS, AJA'S recognized expertise in broadcast solutions has been brought to bear in ProAV as technologies from both industries converge. To address the needs of a rapidly expanding client base in ProAV, AJA has been at the forefront of a range of streaming implementations, HDBaseT workflows, HDMI conversion and more, all with a commitment to low latency, reliability and unparalleled support.

Our recently announced HELO H.264 streaming and recording appliance for instance uniquely offers the ability to simultaneously stream video signals directly to CDNs while recording either to an SD card, USB drives or network-based storage. With both 3G-SDI and HDMI inputs and outputs, and the power to handle up to 1080p 60 recording formats, HELO opens up a new world of streaming workflows for producers.

AJA's new ROI-SDI is a powerful scan-converter in a small form factor. ROI-SDI makes it easy to customize video signals to meet a range of display and image demands; users can rotate source signals, define a portion of an image or reframe the source image from any 3G-SDI signal. In combination with HELO, this can be a powerful tool for many streaming workflow needs.

Our customers are also increasingly looking at technologies such as HDBaseT, allowing transmission and delivery of video and audio signals up to 100 meters, utilizing common category cable. AJA's RovoCam is an integrated UltraHD/HD compact block camera with single cable support for video, audio, power and control via an HDBaseT interface. RovoCam together with the RovoRx-SDI or HDMI receivers and HELO, offer a range of pipeline choices for streaming producers.

AJA is committed to leading the way in technological innovation and helping our customers both future-proof and bridge their workflows, whether that's through Broadcast IP technology, 4K/UltraHD/HD/SD streaming, and more.

AJA Video Systems 180 Litton Drive Grass Valley, CA 95945 USA (530) 274-2048 aja.com



Beamr



Sharon Carmel, Founder & CEO

Content Adaptive Technology is the heart of next-gen encoding and optimization solutions

The story of Beamr Began seven years ago after a large consumer technology company told me that my proposal of moving their customer's photos and videos to the cloud was impractical due to storage cost. Having spent my career building digital media technologies, be-

ginning with the earliest days of H.264, I theorized there had to be a way to reduce the size of block-based coded files, without introducing artifacts.

Beamr was founded as a result of our research that led to the development of a perceptual quality measure. This quality measure is unique as it operates in a closed loop, per frame, resulting in the purest application of content adaptive technology available commercially. And I am proud to report that we have 20 patents granted with more than 30 pending.

The market is validating the need for fresh encoding approaches since a digital distributor whether a pure play OTT, MSO or new media publisher can no longer fall back on ageold encoding profiles which always fall short when compared to content adaptive encoding solutions. As a result, Beamr sees significant pent-up demand for improved encoding architectures that can adapt seamlessly to the needs of every video asset in the library.

To address this market need, Beamr acquired a well-known video technology company, Vanguard Video in April 2016. Vanguard Video has supplied HEVC and AVC encoder and decoder SDK's to some of the largest and best-known companies in the broadcast, streaming, and OEM markets for the last fifteen years. As a result of this acquisition, Beamr is delivering on the promise to deliver an encoder that is guaranteed to produce the highest video quality possible in the smallest file size for Live and VOD applications.

Beamr 974 Commercial St. Palo Alto, CA 94303 USA beamr.com



Conviva



Dr. Hui Zhang, Co-Founder & CEO

CONVIVA'S MULTI-SCREEN OOE ANALYTICS

Conviva, THE LEADER IN OTT EXPERIENCE management, has expanded the availability of QoE Ecosystem Analytics that will enable the use of specific video experience statistics for each constituent in a publisher's OTT video work flow, and will give them visibility into customer experience in the client player. By sharing video experience service analyt-

ics provisioned for each constituent (OVP, CDN, ISP, etc), a publisher is ensuring that all their vendors are able to act and respond in the shortest period of time to any issues that might arise across the ecosystem work flow.

"Giving visibility to all constituents will not only remove the burden from the publisher, but will reduce time to resolution and consequent impact of any issues as soon as, or even before, they are visible to the consumer viewing the video for both live and on-demand content," said Dr. Hui Zhang, CEO of Conviva.

Conviva QoE Analytics will enable streaming video product and service providers to adopt data-driven best practices resulting in improved consumer viewing experiences. These experience statistics will be made available by region, platform type, content type, and many others. It will also be possible to correlate these experience metrics with engagement statistics such as viewing time, minutes/device, and others for more detailed analysis and prioritization of issue resolution.

This complements the current effort with the SVA and CTA to provide consistent metrics to ensure a standard way to report and measure video quality of experience. We believe that both these proposed standards and access to QoE analytics will enable all constituents in the production, serving, distribution, and playing of streaming video to deliver the highest quality viewing experience possible for the consumer in the Internet today and tomorrow.

Conviva 989 E. Hillsdale Blvd. Suite 400 Foster City, CA 94401 USA conviva.com

>> @conviva



DVEO



Laszlo Zoltan, Vice President, DVEO division of Computer Modules, Inc.

VIDEO DELIVERED THROUGH IP NETWORKS has now surpassed traditional RF-based delivery. While hardly a surprise, there is an underbelly to this irreversible trend: many underserved communities won't be enjoying the benefits due to poor local IP infrastructure and associated packet loss problems, the enemy of real-time video.

In time critical applications using UDP, e.g. streaming (real-time) video, VoIP and online multiplayer games, packet loss negatively affects the user experience. Networks mixing TCP/IP data and UDP

real-time video traffic pose problems for UDP when congested due to TCP/IP's packet recovery mechanism, which slows down UDP video too when sharing buffers. Video playback suffers due to delayed or lost packets unless a low-latency automatic packet recovery mechanism can correct the situation.

DVEO was recently granted a U.S. patent for its award-winning DOZER™ ARQ (Automatic Repeat reQuest) technology, which guarantees error-free real-time UDP video transmission over congested IP networks, including the Internet, and over long distances. It won the Society of Broadcast Engineers (SBE) Technology Award 2014.

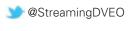
A use case underscoring the power of this automated packet loss recovery technology is an IPTV operator in New Caledonia, a French island territory in the Pacific. The operator imports content from Paris, through multiple IP networks and via undersea cable, covering 14,000 miles! Using DVEO transcoders featuring DOZER ARQ technology, it receives error-free IP video in Noumea, the territory capital.

The DOZER ARQ technology, which differs from competing FEC offers, achieves TCP/IP's reliability without the overhead, making it ideal for demanding real-time applications like streaming video. It completely changes the value proposition of using the Internet for real-time applications and pays for itself quickly.

DVEO is now inviting prospective licensees of the DOZER ARQ technology, offered as an SDK plus a Permanent License, for integration into all kinds of IP video products.

DVEO

11409 West Bernardo Court San Diego, CA 92127 USA www.dveo.com



Epiphan Video



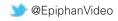
Mike Sandler, CEO

It's an exciting time for live video streaming. This year, we're seeing the tip of the 4K live streaming iceberg. Video on demand and OTT companies including Netflix have started offering 4K video streaming, and as a result are driving higher bandwidth support for individuals everywhere. We're also seeing event spaces and hotels differentiating themselves by offering dedicated high-bandwidth connections, making it easier than ever be-

fore to stream high-bandwidth content. With all the uplink and downlink issues sorted out, more and more CDNs will support 4K video ingestion. And thus the 4K revolution begins. Epiphan Video is on the cutting edge of this 4K revolution with Pearl-2, our live video production system that encodes 4K video at an affordable price point today.

Parallel to this 4K trend, I also see the progression of communication and marketing through live video production by companies of all sizes, not just large enterprises with broadcast-level productions. These users want high-quality without the big-ticket price or personnel overhead. This change is largely due to offerings from Facebook, YouTube and Twitter showing everyday users that live streaming is a possibility. For these users, there is a huge gap between expensive, difficult to use professional AV gear (that they don't own and can't afford) and the low quality of mobile phones and web cameras (that don't produce the quality results they want). This gap is where I see significant growth over the next year and Epiphan is positioned with Pearl-2 and our new AV.io family of video grabbers that let you use HD and 4K cameras in your live streaming events.

Epiphan Video 116 University Avenue Suite 100 Palo Alto, CA 94301 USA epiphan.com



Euclid10



Misty Farrell-Pennington. Sales and **Business** Development Director

We're seeing three trends defining the media landscape in the coming years - content owners taking tighter control of their content monetization, a focus on thin bundles and OTT affording the audience a long promised level of choice, and a completion of the migration from linear broadcast channels to on-demand IP video channels.

There is neither a shortage of compelling content nor screens consuming it. Video distributors must deliver exceptional user experiences to remain viable in such a

competitive media environment. Bandwidth will always be finite, successful media will be mindful of users' bandwidth limitations - both what's available to the user at the current location and how much the user can consume.

At EuclidIQ we continue to devote the lion's share of our R&D to improving the image quality of encoded video while lessening its bandwidth load. As we've deployed IQ264 we've learned we are well suited to address content owner's distribution and monetization challenges. It's an exciting time for our company as we bring Optiiq.ly, a new OTT platform that opens new business models to content owners previously excluded from that space.

At Streaming Media West, we are also announcing Uptiiq, a service for social media video publishers. As the industry evolves so too must its tools.

EuclidIQ

30 Monument Square Suite 212 Concord, MA 01742 euclidig.com



EZDRM



Olga Kornienko, Co-Founder and COO

EZDRM is a premier hosted Digital Rights Management provider with over 15 years of proven industry experience of delivering a complete, studio-approved multi-DRM solution. Our goal is to enable content owners and service operators with a flexible way to monetize their content securely while reaching the broadest possible audience.

The need to reach a wide array of devices is driving the over-the-top video service

offerings as the best business practice. As the content protection requirements continue to become more stringent, the ever-growing media consumption audience will increasingly demand an invisible-to-them DRM technology. EZDRM's services are founded on the core idea of enabling the latest native content security that our clients demand while allowing the end consumers to choose their favorite playback device.

Our flexible and cost-effective approach to key management and license authorization gives our customers the ability to tie DRM into their existing business process. The solution is:

- Complete. EZDRM's Universal DRM, a combination of Google's Widevine Modular and Microsoft's PlayReady via Common Encryption (CENC) over DASH, combined with EZDRM's Apple FairPlay Streaming fulfills all the requirements to reach and monetize the broadest audience possible.
- Customizable. Our APIs are designed for dynamic, ondemand DRM rule sets tailored to your business while creating new revenue streams for your digital assets.
- · Adaptable. As content owners continue to diversify their infrastructure, including a mix of on premises and cloud-based solutions for their media delivery, EZDRM's simple method of DRM key management allows for the easy addition of DRM into any existing work flow.

These core features enable our clients large and small to leverage the full power of DRM through our wide network of partners. For more information, please visit www.ezdrm.com

EZDRM

440 North Broadway Suite 21 Yonkers, NY 10701 USA ezdrm.com





Haivision



Mirko Wicha, Chief Executive Officer

VIDEO AT WORK

VIDEO STREAMING HAS EMERGED TO become a critical workflow not only for the world's top broadcasters, but also as an important technology for businesses and governments alike. As Haivision celebrates 12 years of delivering video streaming and media management solutions, I want to take this opportunity to share some of the fundamentals behind our vision of providing customers with

an end-to end video solution that is easy to use and easy to deploy.

Quality. High quality video starts with encoding and we pride ourselves on providing the highest quality, lowest latency HD and 4K encoders, so that our customers can deliver pristine viewing to any audience, no matter where they are.

Low Latency. Our highly efficient encoding and video transport technologies make sure video is delivered at extremely low latency, in milliseconds, so viewers get the best experience without delay.

Security. Designed for the strictest security standards in medical and government environments, Haivision solutions give all organizations the confidence that their content is protected from contribution to distribution.

Flexibility. We continue to develop video solutions that can fit any network and every environment so that our customers can reach internal viewers, remote offices or Internet audiences with on-premise, cloud and hybrid video streaming solutions.

Customer success. We thrive by putting customers first. By embracing customer environments and investing in R&D, product development, deployment, training and support to deliver custom and tailored solutions, we have tackled the most urgent streaming challenges in every industry.

Haivision

4445 Garand St. Montreal, Quebec H4R 2H9 CANADA (877) 224-5445 haivision.com



Kollective



Todd Johnson, Chairman and President at Kollective

IT IS TIME. IT IS TIME FOR COMPANIES who have not adopted enterprise video as a key form of communicating internally to do so. First, your employee base lives in a video world. The influence of consumer technologies has never been so profound. Video is everywhere in our digital world; it is how we consume news, how we update friends and family, how we interconnect.

The other big reason it is time for companies to embrace video is that it is now a solvable problem. Gone are the days

of deploying caching hardware boxes to all of your offices. Video delivery across the network can be done more efficiently and successfully with software. The software-defined enterprise content delivery network (SD ECDN) is a time-tested way to solve the video scalability problem in your enterprise. No need to buy additional hardware, for the solution can be deployed in a week on a global scale. Getting video to remote offices is really the power of the SD ECDN - no one is left out!

At Kollective we help over one hundred of the world's most important brands use video to update employees on critical company news: to launch new products internally, to roll out new company initiatives, address competitive threats and to show how they are contributing to the creation of a better world. Video is the medium to build empathy and connection between people on a global basis, and to build a rapport between employees and executives. Video is compelling, it is everywhere and it is easier and more cost-effective than ever to "video enable" your enterprise.

Kollective (previously Kontiki)

1230 Midas Way Suite 120 Sunnyvale, CA 94085 USA kollective.com



SPONSORED CONTENT STREAMING MEDIA | OCTOBER 2016

VIEW FROM THE TOP

Matrox Electronic Systems Ltd.



Alberto Cieri, Senior Director of Sales & Marketing, Matrox Video

OVER THE PAST DECADE, STREAMING HAS rapidly transformed from a non-existent technology to an integral part of almost every industry imaginable. For the past 40 years, Matrox has been in the business of moving pixels, putting us in a unique vantage point to predict where streaming is headed next.

A WEALTH OF RICH CONTENT

With content being produced at the highest quality and quantity, the bottleneck is no longer found with the producers but

with the total available viewer attention. This wealth of content has placed a huge amount of control in the hands of the streaming consumer. Widespread distribution of streaming content to virtually any device further empowers the viewer, to the point where streaming is expected in every potential situation, be it entertainment, education, worship, or communications in general.

MULTI-DIMENSIONAL EXPERIENCES

While streams have opened up a world of broader content distribution, a single stream experience still doesn't match what a live attendee can see or do. The ability to provide multi-source streams is the next evolution of streaming, allowing all participants—attending in person or remotely—the opportunity for similar experiences. The ability to view content from multiple cameras or sources puts even more choice in the hands of the audience.

FOCUS ON STREAMING AND RECORDING

With control and experiential streaming in mind, the Matrox Monarch LCS was launched at NAB 2016. Accepting video from any SDI or HDMI camera and AV content from computers over HDMI, the Monarch LCS allows a complete streaming experience, with the dual inputs encoding or recording independently and syncing video for use with the latest multi-stream video players.

Easy to set up and integrate into any open Video (VMS) or Lecture Management System (LMS), once the versatile H.264 encoding Monarch LCS is configured, it can be operated by anyone at the push of a button. And it won't break your budget!

Matrox Electronic Systems Ltd. 1055 St-Regis Blvd. Dorval, Quebec Canada, H9P 2T4 matrox.com/video

Panopto



Eric Burns, Co-Founder and CEO

TEN YEARS AGO, THE COST AND COMPLEXITY OF VC carts and telepresence rooms prevented widespread adoption of video conferencing. Two trends brought video conferencing to everyone. First, cameras got better and cheaper, with 12 megapixel sensors now standard in our iPhones and Galaxies. Second, companies like Apple and Microsoft addressed demand for consumer-friendly technology with simple apps like Facetime and Skype.

The same trend is now playing out in video content management and delivery. Specialized capture and streaming appliances are giving way to commodity laptops and mobile devices. Industry giants like IBM and Microsoft are entering the market in a rush to meet demand for easy-to-use streaming software and video portals. Individual employees are using consumer-friendly apps to create their own live and on-demand video presentations.

The trend is in its early days. For example, there are still too many manual tasks involved in capturing and sharing live video from online meetings. It's still too difficult to produce events that incorporate multiple video feeds and geographically-distributed presenters. And there are still too many content management systems and online services that don't support video as a first-class data type. To achieve widespread adoption, video platform providers should simplify their video creation and distribution workflows. Video content management systems that don't provide easy creation tools leave users in the era of hardware-based video conferencing.

The easier we make it for any employee to capture valuable information as video and share it with co-workers, the greater the value of their organization's video collection. And the greater the value of the video collection, the more likely people will be to create and share more video content. As video replaces the document, this virtuous cycle will ultimately make video libraries as pervasive as video conferencing, and will enable organizations to preserve their company culture and tribal knowledge.

Panopto 506 2nd Ave Suite 1600 Seattle, WA 98104 USA panopto.com





TalkPoint



Nick Balletta, Founder, TalkPoint

HTML5 - CARPE DIEM IN 2017!

ALTHOUGH OFFICIALLY RELEASED IN 2014 it wasn't until 2016 that HTML5 had its coming of age. In the world of enterprise streaming and webcasting security trumps all. Snazzy bells and whistles and sexy player features shrink to insignificance when staring down the barrel of a gun held by the corporate security officer. Enterprise IT and multimedia professionals are continually walk-

ing the tightrope balancing between keeping up with the latest and slickest new technologies and keeping the enterprise information assets secure. Every conversation, sales pitch, and RFP in the world of enterprise streaming and webcasting starts and ends with security. The Chief Security Officer for the IT and Multimedia professional is considered the most important internal client in the enterprise.

Enter the Zero Day exploit! 2016 was the rise of HTML5 and the demise of Flash. One exploit too many has driven the industry to rethink its strategy. Firefox and Chrome have begun the process of blocking Flash. Some large enterprises have completely eliminated the use of Flash globally. The Corporate Security gods have spoken and Flash is now in the crosshairs; Flash is now a four letter word. HTML5 is here to stay and is winning the war in what is for now a zero sum game and a battle of attrition. It is the beginning of the end for Flash and end of the beginning for HTML5. The warriors @OccupyFlash are on the vanguard of the battle and it seems the day is theirs.

TalkPoint

100 William St. 8th Floor New York, NY 10038 USA www.talkpoint.com



Tulix Systems



George Bokuchava, CEO

It's been another exciting year for us at Tulix. We've seen unprecedented growth not just for ourselves, but from our customers, many of whom have had tremendous success streaming and monetizing their content with the help of our end-to-end OTT solution. Beyond the quality and scalability of our CDN and streaming services, a core component of that success has been the subscription-based business model that we have per-

fected over the last few years, which has paired transparent and predictable costs with consistent and sustainable revenues for our customers.

While many content providers struggled trying to make advertising-based business models work, we concentrated on building our own monetization engine, believing that the existing cost structure and technology made advertising unviable for most OTT operators. However, we believe the industry has reached a turning point in this regard, and Tulix is now working on innovating an advertising platform from the ground up that will provide cross-device adinsertion which will serve targeted advertisements to viewers based on user profiles.

This will be a completely fresh, independent architecture that will serve the needs of advertisers, provide a better viewer experience, and generate sustainable income for operators. We will be launching this new system by the end of this year, and are excited for the opportunities it will bring to current and future customers in 2017.

Tulix Systems 55 Marietta St. Suite 1740 Atlanta, GA 30319 USA tulix.com



VisualOn



Andy Lin, **Chief Executive** Officer. President

AT THE RECENTLY CONCLUDED IBC IN Amsterdam, it was clear that OTT operators are still struggling to resolve the challenges of device reach, Quality of Service, content protection, and monetization specifically pertaining to Ads. In addition, OTT operators are also looking to enhance their services with new forms of immersive visual entertainment such as VR, or 360° video. Audiences are accessing services from any number of devices and forcing fragmentation at service delivery end points. Proven broadcast

model of ubiquitous content delivery is being replaced by a consumer preference to VOD. OTT operators are continually forced to invest in new tools to provide quality playback, enable continuous measurement, and ensure a good quality user experience at all device end points.

OTT experiences are determined by how well the operators plan for content acquisition, device reach, subscriber acquisition, retention, and monetization. OTT Operators have to balance their spend in these areas while growing the service and sustaining consumer demand. OTT Operators are observing that Ad funded premium video adoption is experiencing expansion, but there are significant technology hurdles for ad-enablement across devices. While everyone agrees on the need for better measurement, the OTT revolution on multi-screen devices is showing gaps in coverage. In addition savvy consumers are transitioning to so-called OTT mini-bundles, and customer retention is a major concern.

At VisualOn we are addressing these challenges by providing our customers with cutting-edge technologies with software-based media frameworks that encompass playback, security, analytics, tracking and Ad flow enablement. VisualOn helps operators reach massive device end points, achieve content protection via multi-DRM integration, provide detailed client side analytics, tracking information for achieving higher QOS and reduced churn, and also enabling Ad insertion for revenue generation.

VisualOn 2590 North First St. Suite 100 San Jose, CA 95131

USA visualon.com



Wowza Media Systems



Dave Stubenvoll, CEO and Co-Founder of Wowza Media Systems

LIVE VIDEO STREAMING IS CONSTANTLY evolving, which is part of what inspired the birth of Wowza nearly a decade ago. That's a long time in the technology world, and we've seen things change massively from then to now. Back in 2007, Flash was the thing. In 2016, HTML5 and HTTP streaming have replaced it.

Overall, that's been a good development. However, the notably high latency of HTTP streaming can be a drag. In the worst case, there might be more than a minute of latency in an HLS or MPEG-

DASH stream. That's far more than the typical 5-20 seconds of Flash streaming and broadcast latency to which we'd been accustomed. And any delay is much more noticeable now that mobile communication and social media connect us to the actual events. Now when people are tweeting the action from inside the stadium as plays happen, you're seeing their commentary a minute or more ahead of your reality. That changes the expectation of "live" and messes with your mind. Suddenly the idea of latency becomes more critical.

Generally speaking, customers want the lowest latency possible. Fundamentally, if you can deliver content in less time than your competitors you have an advantage. Wowza technology was designed for multiple types of streaming—highscale or one-to-one; HTTP or real-time streaming. This flexibility is at the core of everything we do, and it's why clients with no time to spare—auction houses, gaming companies, live-chat apps, and more—rely on Wowza streaming technology.

Wowza Media Systems 523 Park Point Drive

Suite 300 Golden, CO 80401 USA

wowza.com

@wowzamedia



143 Old Marlton Pike, Medford, NJ 08055

streaming media

VIEW FROM THE TOP SPONSORS



1 BEYOND, INC. 529 Main St. Ste 109 Boston, MA 02129 USA www.1Beyond.com



DVEO 11409 West Bernardo Court San Diego, CA 92127 USA www.dveo.com

Haivision Talk

HAIVISION 4445 Garand St. Montreal, Quebec H4R 2H9 Canada (877) 224-5445 haivision.com



TALKPOINT 100 William St. 8th Floor New York, NY 10038 USA www.talkpoint.com



AJA VIDEO SYSTEMS 180 Litton Drive Grass Valley, CA 95945 USA (530) 274-2048 aja.com



EPIPHAN VIDEO 116 University Avenue Suite 100 Palo Alto, CA 94301 USA epiphan.com



KOLLECTIVE (PREVIOUSLY KONTIKI) 1230 Midas Way Suite 120 Sunnyvale, CA 94085 USA kollective.com



TULIX SYSTEMS 55 Marietta St. Suite 1740 Atlanta, GA 30319 USA tulix.com



974 Commercial St. Palo Alto, CA 94303 USA beamr.com



EUCLIDIQ
30 Monument Square
Suite 212
Concord, MA 01742
USA
euclidiq.com



MATROX ELECTRONIC SYSTEMS LTD. 1055 St-Regis Blvd. Dorval, Quebec Canada, H9P 2T4 matrox.com/video



VISUALON 2590 North First St. Suite 100 San Jose, CA 95131 USA visualon.com



CONVIVA 989 E. Hillsdale Blvd. Suite 400 Foster City, CA 94401 USA conviva.com



EZDRM 440 North Broadway Suite 21 Yonkers, NY 10701 USA ezdrm.com



PANOPTO 506 2nd Ave Suite 1600 Seattle, WA 98104 USA panopto.com



WOWZA MEDIA SYSTEMS 523 Park Point Drive Suite 300 Golden, CO 80401 USA wowza.com