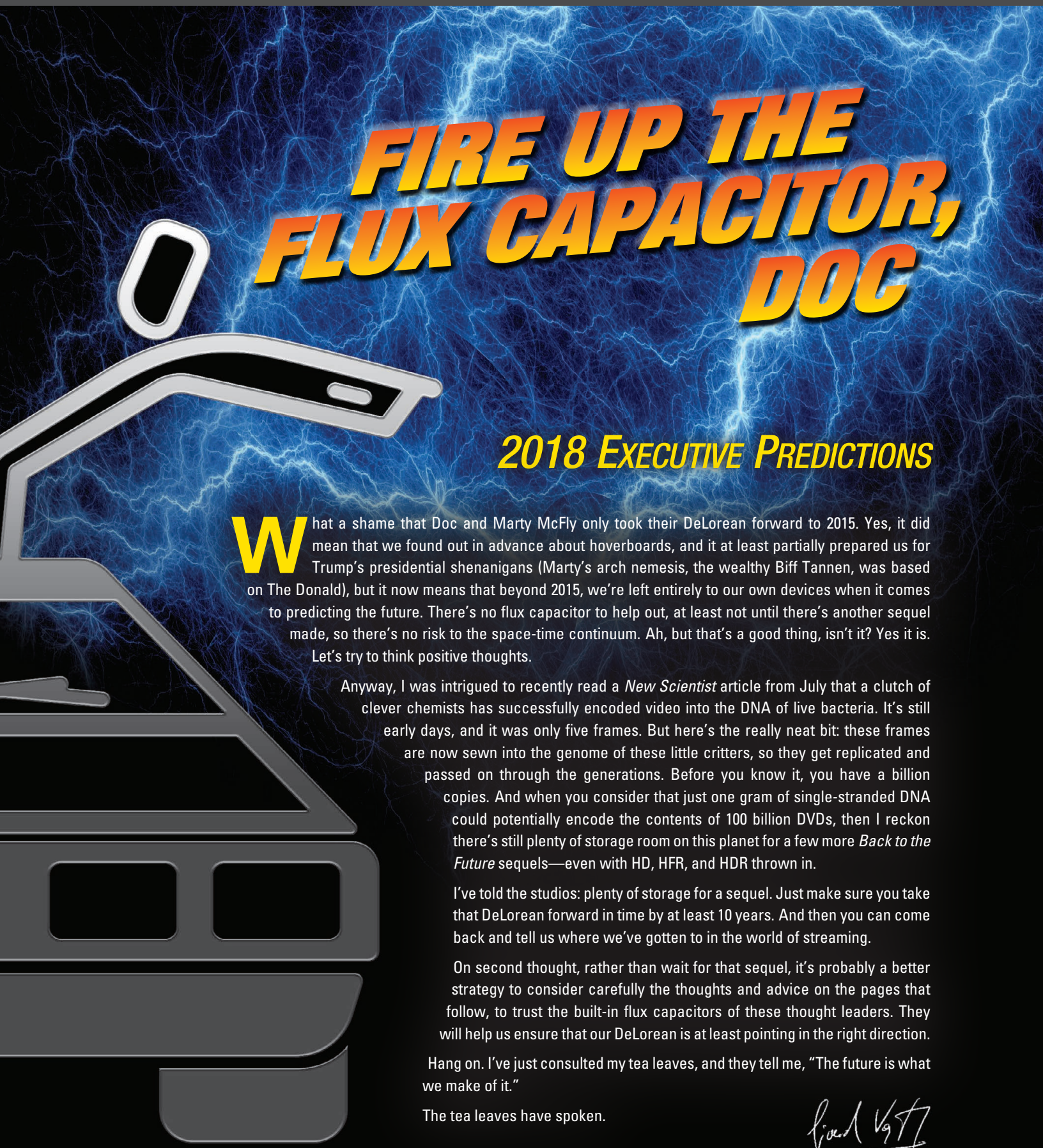


FIRE UP THE FLUX CAPACITOR, DOC

2018 Executive Predictions

What a shame that Doc and Marty McFly only took their DeLorean forward to 2015. Yes, it did mean that we found out in advance about hoverboards, and it at least partially prepared us for Trump's presidential shenanigans (Marty's arch nemesis, the wealthy Biff Tannen, was based on The Donald), but it now means that beyond 2015, we're left entirely to our own devices when it comes to predicting the future. There's no flux capacitor to help out, at least not until there's another sequel made, so there's no risk to the space-time continuum. Ah, but that's a good thing, isn't it? Yes it is. Let's try to think positive thoughts.

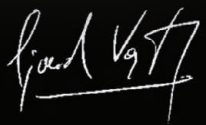
Anyway, I was intrigued to recently read a *New Scientist* article from July that a clutch of clever chemists has successfully encoded video into the DNA of live bacteria. It's still early days, and it was only five frames. But here's the really neat bit: these frames are now sewn into the genome of these little critters, so they get replicated and passed on through the generations. Before you know it, you have a billion copies. And when you consider that just one gram of single-stranded DNA could potentially encode the contents of 100 billion DVDs, then I reckon there's still plenty of storage room on this planet for a few more *Back to the Future* sequels—even with HD, HFR, and HDR thrown in.

I've told the studios: plenty of storage for a sequel. Just make sure you take that DeLorean forward in time by at least 10 years. And then you can come back and tell us where we've gotten to in the world of streaming.

On second thought, rather than wait for that sequel, it's probably a better strategy to consider carefully the thoughts and advice on the pages that follow, to trust the built-in flux capacitors of these thought leaders. They will help us ensure that our DeLorean is at least pointing in the right direction.

Hang on. I've just consulted my tea leaves, and they tell me, "The future is what we make of it."

The tea leaves have spoken.



Sjoerd Vogt • UK and Europe Sales

Let's put ourselves into the shoes of a modern digital content consumer. No matter where we go, what we are doing, we still want to have the same optimal seamless user experience and access to the content on any device that we prefer. This is why we see centralized entertainment offerings in the form of digital platforms as an integral part of our future. There will be for sure changes in the user behaviour, but one will always remain and that is that consumers know exactly what they want, when and where they want it. Simply offering quality content is not enough, and will not be enough, due to the increased demands and requirements of different target groups. Axinom has developed a strong software stack to launch digital platforms that support all use case scenarios in any smart industry. Built on top of our products, they satisfy the needs of a passenger in a disconnected scenario like an aircraft, as well as OTT solutions for broadcasters, telcos and other media consumers in a connected environment. For our customers, there are many benefits from having a centralized digital platform offering built on Axinom, such as revenue increase, streamlining of internal operations and more. By including ads, promotions, special loyalty programs, backed by secure payment methods and mechanisms, companies can increase their revenues, efficiency, and customer loyalty. Besides, accessibility, availability and richness of the digital platform always remains in the centre of our attention throughout the development process.

Ralph Wagner

CEO | AXINOM

Containerization is my pick for the biggest disruptor in the video industry for 2018. This year we have seen a steady growth in the adoption of containerized computing across many industries. In 2018 I predict that this trend will gain momentum as video development teams start to exploit the potential cost savings and performance improvements that are available with software based containerized encoding stacks.

This transition will bring a lot of processes away from the cloud and back to on-premise, as architects build hybrid infrastructures using hardware agnostic platforms such as Kubernetes and Docker. These systems will incorporate on-premise hardware and public cloud infrastructures into massively scalable and flexible video delivery infrastructures. This transition will likely be the beginning of the end for dedicated hardware encoders.

Another area of focus in 2018 will be reducing bandwidth and CDN costs. This is an important topic for every content provider, and for that reason optimizing video delivery is already top of mind for most of the software architects in the industry. There are a range of solutions available today which can reduce bandwidth usage, including Multi-Codec Streaming, Per-Scene Adaptation and Per-Title Encoding. All of these will gain in popularity in 2018.

AV1 will be another hot topic in 2018. Early 2018 will see the code freeze and from there we will see a lot of companies incorporating AV1 into their products. I predict that Youtube and Netflix will be first movers and start using the new standard as part of their delivery and others will follow shortly to benefit from the bandwidth savings and/or improved quality to differentiate their service from others.

Christopher Mueller

CTO | BITMOVIN

castLabs pioneers software and cloud services for digital video markets, delivering billions of DRM licenses worldwide, handling multi-format video processing including embedded session-based watermarking, and offering fully-featured multi-screen player SDKs for online and offline viewing.

2018 is set to be an exciting year for streaming media, driven by applied intelligence and the increased adoption of high quality content formats. Convergence is another hot topic for the coming year.

Developments we're hoping to see include:

- Machine learning and AI taking centre stage. Advertising, content insights, recommendation engines, and content delivery will all become intelligent. Data exchange is key, and video delivery infrastructure components will need to provide integrations with external services to tap into AI.
- CMAF and WAVE will gain additional momentum with a caveat - broad deployment will remain hindered by device fragmentation.
- UHD with HDR and NG Audio. Critical mass of end devices likely to be reached this year. Format fragmentation will still be an issue, while content generation remains complex.
- Increased traction of forensic watermarking, especially for UHD content.
- Offline experiences to enable ubiquitous content consumption.
- Improvements in VBR encoding techniques, some using machine learning, which will improve coding efficiency and extend the lifecycle of H264.

What we believe won't happen in 2018:

- Common Encryption format won't be realized for existing devices, but convergence in newer devices seems possible.
- Common Streaming Format won't materialize. HLS and MPEG-DASH are both here to stay. CMAF however will enable DASH-HLS hybrid content.

Michael Stattmann
CEO | CASTLABS

OTT Projects: Business teams are back!

In the past few years, broadcasters, sports federations and top brands have experimented with different forms of OTT services. We saw a variety of models being tested, some leaning towards a free or ad-funded model, while some looking for paid models – mainly **Pay-per-View** or **Subscription VOD**.

In our experience, these projects were often led by tech teams, who had a significant role in selecting (a set of) providers that will set up a good platform, at the best cost. The decision-making process was largely driven by features and pricing.

Nowadays, the business teams are back in the game. User experience is King, while ROI is Queen. A set of features doesn't make a great service anymore. The full kit of all OTT components makes a great service.

The notion "less is more" will be a key differentiator in the industry. Simplicity and clarity in business models, features, interfaces will drive success, together with the increased focus on quality-of-service and customer care.

Business teams want holistic dashboards that provide a 360° view of the business. They want to know what drives satisfaction, engagement, churn, and ultimately high ROI. The industry has reached a new maturity level, similar to what we've have seen in the retail industry in the late 2000s. Not anyone can be Amazon, neither be Netflix, yet these are the ones to beat in order to succeed with OTT. The future of digital entertainment is bright, and Business is Back!

Gilles Domartini
CEO AND FOUNDER | CLEENG

Broadcast IP production is slowly becoming a reality, and we will see more facilities built on ethernet than on SDI. An IP is essential because it will pave the path to pure software, virtualized, and cloud infrastructures. This results in cost-effectiveness and flexibility. However, before we get there, we will have to start using more of the standard IP formats. Therefore, I will be carefully watching the adoption of open VSF TR-01 standards for IP contribution and remote production. Inside facilities, we will witness a battle between uncompressed and compressed IP. Even if the uncompressed video has its place and proponents, I still believe in compressed IP infrastructures in the long run. The reason is that the bandwidth requirements will be growing with UHD, high dynamic range, and high framerate. The compressed IP is more future proof and necessary for future in the cloud. With that regard, we will see two new compression standards to emerge. The JPEG XS was designed as a light and fast, high-quality compression for broadcast IP and I will be even more interested in a standard called HT-J2K; it is a high throughput (HT) variant of popular JPEG2000 codec. It will bring up to 5x throughput and lower latency and will be a hot candidate for both contribution and local IP video networks. The common denominator will be software processing which brings flexibility and scalability. In 2018, we will witness a renaissance of GPUs which will play an essential role in the real-time processing of high volumes of the video data.

Jiří Matela

CEO & CO-FOUNDER | COMPRIMATO

Smart TV data will start to disrupt the European ecosystem

European Smart TVs are already equipped with automatic content recognition, and we expect this service to be switched on over the next few months pushing a massive new dataset into the market.

This data will challenge the dominance of industry joint ventures (Barb, AGF, SKO) and walled garden OTT measurement. The lack of data in the European ecosystem has hampered the development of next-generation advertising models from retargeting from TV to mobile to attributing conversion from a cross-platform buy that includes TV.

A few of the Pay TV platforms - notably Sky - have dipped their toes in the water with set-top-box data but they've only really used its data for their internal purposes and advertising sales.

We expect this to change in 2018 as Smart TV data begins to become available in European markets. Smart TV data has already disrupted the US market creating whole new categories of advertising products that are not tied to platform providers, and we expect these to thrive in Europe.

GDPR will bite at least one streaming video provider

The new General Data Protection Regulations (GDPR) arrive in May 2018 and require all streaming video providers to re-work not only their terms-and-conditions but also much of their processing pipelines for consumer data. We've already started working with some providers to upgrade their platforms so allow users to erase or update their data history in a fully transparent way - across ALL of their data platforms.

Most providers underestimate what's required, and we expect substantial fines to come to players in the industry who have not prepared sufficiently.

Michael Collette

CEO | DATIVA

As expected, we are seeing OTT becoming more the focus for video. It won't be long now until OTT is the main way video content is consumed. Latency is as big an issue as ever, with the 5-15 seconds that is now the generally accepted "best possible" no longer being low enough for many use cases. We'll see new techniques being pioneered to decrease that latency further. Seeing as HLS is still the lowest common denominator for video playback, many of those techniques will focus on working around HLS' inherent latency problems. I do expect mixed-format delivery to become more common as a way to improve experience on various devices, however. Now that iOS has embraced HEVC and most consumer devices can decode it with hardware acceleration, it's likely to gain more traction over H264. That traction will probably be short-lived, as AV1 is almost upon us and is set to be backed by all major players. The way WebRTC is now fully supported by all major browsers is also interesting, and I'm looking forward to seeing it used more for practical applications besides video conferencing.

All in all, the coming years are promising to be quite exciting, and hopefully will be a turning point in the way we view video delivered over the internet - both literally and figuratively speaking! MistServer will of course keep innovating and pushing the boundaries of what is possible, just like we have done in the past.

Jaron Viëtor
CTO & CO-FOUNDER | DDVTECH B.V.

2018 is the year to step up content protection

Streaming Media recently reported that streaming-specific piracy will equate to losses of $52 billion by 2022. And the last year has seen several high-profile content leaks and huge numbers of viewers consuming programming illegally. At the same time Netflix has announced plans to boost investment in content production and internet-only organizations like Amazon are spending increasingly huge amounts on live sports rights.

All these events are intrinsically linked - brought about by audiences now expecting TV wherever, whenever. So 2018 will see some substantial bolstering of anti-piracy measures.

Watermarking internet-delivered content is one of the key ways content owners can protect programming. Using the latest in delivery technology for streaming media, content owners or distributors can add a unique code to each stream which can be used to track any would-be pirates. Content owners can make unnoticeable changes to pixels, embedding a code directly into streams which is extremely hard for pirates to cover up.

Deploying a self-built content delivery network specifically for TV services can also help protect content. Having eyes on streams all the way through the delivery process is key and broadcasters are increasingly realizing this. By deploying their own TV CDN, they can take complete control of the delivery of their programming because they don't need to relinquish content to a third-party network owner.

With the increased threat of content theft, the coming year will see broadcasters and content distributors taking steps to stop pirates getting their hands on what are becoming increasingly valuable assets.

Johan Bolin
VP PRODUCTS | EDGEWARE

IP video is gaining momentum in the industry as the delivery mechanism of choice for enterprise video. Organisations eager to create more immersive experiences for their core audiences are increasingly turning to this network-based premium content distribution approach to modernise and broaden their communications.

While IP video enables content providers to cater to their customers' evolving needs, ensuring that content is accessed and distributed legally can be an ongoing challenge. In an era with vast amounts of digital content passing across different networks, video piracy and new video consumption habits combine to pose new risks. The onus is on the end user to protect premium content when distributed over IP. It is, therefore, imperative that they adhere to the latest protection requirements – and the increasingly stringent protection demands of broadcasters and other content owners – to ensure that content is secure, controlled and distributed legally across different types of networks and to an ever-widening range of mobile devices.

Being equipped with the latest content protection solutions is a critical step for end users in ensuring the secure, end-to-end delivery of premium content. Technology is readily available from the likes of Pro:Idium®, Verimatrix®, ARRIS SECUREMEDIA®, Samsung LYNK™ DRM and DCP's HDCP Pro, and with this issue becoming a challenge for the entire industry, I anticipate that 2018 will be the year that those who are currently ignoring these standards will no longer be able to get away with circumventing the rules and will have to start taking content security more seriously.

Colin Farquhar

CEO | EXTERITY

In 2018, content delivery architects will use reliable UDP as the default protocol with TCP plus congestion control as a backup, depending on delivery context. Dynamic encoding that takes into consideration specific content features for quality and cost optimization will be the standard for OTT video. HEVC and to a lesser extent DASH will struggle with licensing cost threats. HLS with CMAF will be the road to go. Consumers' tolerance for HTTP streaming end-to-end-latency will go down to 10s. The AV1 codec will get a lot of attention and press coverage, but will not yet be of any practical relevance. New OTT setups will by default be based on Multi-CDN and Multi-Cloud, devops-optimized.

Conversational access to online content via bot interfaces and smart speakers will get a lot of traction in 2018. Navigation by voice will not be a comfort feature but is expected. Content producers will suffer from additional device fragmentation pain and have to produce audio in multiple loudness levels to accommodate for various platforms and consumption environments.

On Monday, July 16th CDNs all over the world will issue press releases stating how the soccer world championship final broke previous records of concurrent users and bitrate delivered.

Alexander Leschinsky

CO-FOUNDER & MANAGING DIRECTOR
G&L GEISSENDÖRFER & LESCHINSKY GMBH

Since forming Garland in 2004, we've helped numerous broadcasters, sports organisations and media companies transition through several generations of video codec. 2018 will see HEVC (High Efficiency Video Coding) fully established as the next generation, and now is the time to embrace the many benefits it offers in the digital video ecosystem.

The adoption of HEVC by iOS devices, and broadcasters introducing it on their latest set top boxes is pushing this new high compression format to the forefront. Improvements from lower data rates to higher quality, increased reliability and broader platform delivery means content providers can give sharper, colour rich pictures without increasing transmission costs, or choose to maintain the same level of quality, and increase revenues by delivering more content.

Imagine having new ways to enhance value to new subscribers. We've been working with leading UK broadcasters to deploy HEVC for football and motorsport coverage. With HEVC, they are providing 4K UHD video across more live content, and producing a wider range of HD content due to lower acquisition costs — where it matters, fans get to see more of what they want and the perceived value of their subscription increases.

In an ever-changing world, it is even more important to report those breaking news stories, particularly from the most difficult to access places. Applying HEVC to bonded cellular technology, you can get pictures clearly over previously unmanageable data rates, and reduce news-gathering costs by using lower data rates while producing the same quality video. The net effect: satisfy the ever increasing demand for live news.

Who doesn't like more content choices, variety and viewing options, and faster downloads? In turn, content owners will gain more subscribers, while existing subscribers stay loyal to brand offerings. Viewers are the barometer of success, and they going to love the adoption of HEVC, even though they may never really know what is behind their pictures!

Lorna Garrett & Malcolm Harland

CO-FOUNDERS | GARLAND

Other than an in-person meeting, video is the most vibrant manner of communication that executives can use to convey their message to large, far-flung audiences within their respective organizations. Streaming video is described as an "effective" tool for business communications by more than 90% of executives (Wainhouse Research Q4, 2017). Despite this statistic, the networking of enterprise video often gets scant attention. We think 2018 will be the year that video networking will be front and center in most large organizations.

There are market dynamics that support this proposition:

- Growing list of Enterprise Collaboration tools have announced support and encourage use of live and on demand video including; Microsoft Stream, Skype Meeting Broadcast, Microsoft Teams, Workplace by Facebook, Slack, and HipChat.
- The Death of Adobe Flash Player will accelerate the search for alternatives and the adoption of standards-based video technologies.
- Growing browser support for WebRTC which will enable peer-based technologies, such as Hive Streaming, to stream live video within enterprises without additional hardware or a software client.

We predict these market dynamics will result in 2018 being the year where live video broadcasts become commonplace in the workplace. Impromptu broadcasts from the executive work desk, not enterprise disrupting town halls, will help reduce a significant portion of corporate travel and help foster unity.

Thanks for your interest in my perspective. Best wishes to you all for a happy and prosperous 2018!

Johan Ljungberg

CEO | HIVE STREAMING

Having secured our first Russian customer, what better then to go there and bag some more whilst the iron was hot.

Of course I could have chosen a better date because there was plenty of the fluffy white stuff on the ground, but nothing that a trusty Lada could not plough through. After a few days urban ice surfing, I had a call from Sjoerd asking for some predictions for 2018.

Frankly, I didn't have a clue so it was time to ask the locals if they knew of any soothsayers or general fortune tellers. I was directed to a monastery where this very old chap was introduced. Apparently he was part of the Putin family because he seemed to be called Mr Rasi-Putin or Rasa-Putin or some such other tongue twister.

Although he keep banging on about how he could cure my ailments in the bedroom department, he did predict:

- As attendances fall, expect some cinema chains to eye up the launch of their own VOD solutions
- More content producers starting their own standalone streaming services rather than relying on aggravators like Netflix
- A bun fight between the studios and the Netflixs' of this world as the studios realise how valuable their content is
- More terrestrial channels to follow BBC3 by going online only
- New codecs to better compress 4k video
- More short form content to plicate decreasing attention spans
- Better targeted content derived from online monitoring
- Someone from China to make a $100 million offer for i2i Media

Philip Radley-Smith

OWNER | i2i MEDIA

Online Media Delivery, now & the future

The original Content Delivery Networks (CDN) were designed for caching traditional content and not built for today's standard of rapidly changing content and the growth of video and audio. As social networks supply users with constantly updated content, and broadcasters and media companies focus on delivering media such as sports and news, traditional CDN's have found it difficult to meet the needs of the industry today. This has kept them strained, vulnerable and expensive to operate with the bulk of the cost having to be passed on to their customers.

To stay up to date with today's needs and to maintain a focus on the future; these media organizations have adopted a video first approach to give users access to the latest and freshest content in real-time. It has now become a necessity for CDN's to be able to deliver seamless video and maintain HD quality regardless of how many users are engaged with the content.

We have built MainStreaming around today's requirements and have made caching a thing of the past with our full stack solution for delivering video and audio in real-time. With our global solution, MainStreaming customers now have complete control over how their media is viewed, played and distributed across all channels.

We foresee tremendous growth in the coming years for all types of media, especially in video and audio, and with our revolutionary Hypernode technology & advanced algorithms in place, MainStreaming is in prime position to support the global delivery of them.

Antonio G. Corrado

CEO | MAINSTREAMING

2018 GO OTT or GO HOME

While 2017 was an exceptional year for OTT adoption, 2018 is going to witness a faster growth momentum with the smaller broadcasters and publishers streaming their content online. Our aim at Mangomolo over the past few years was to make OTT available for every publisher and broadcaster no matter how big or small through providing them with a full ecosystem that includes an AI Powered OVP Backend Part with the Transcoding Services, Realtime Audience Analytics and Behavioral Statistics, etc... moving into the client side apps for smart devices/ tvs or computers and also providing them with a marketing tool that allows them to create short form engaging videos very easily and publish them to social networks and other distribution channels. This has made OTT within the reach of every publisher and in just few weeks and everyone can start making more money starting with the smaller YouTubers that publish viral short form content to bigger broadcasters and networks.

The Focus for 2018 is pushing the bars of innovation and integrating AI into OTT to facilitate the workflow and to better understand audience behavior. Our main implementations of AI include Speech Recognition with On the Fly translation, Topic Extraction to automatically understand what content is about and for automating the meta data process and eventually building topic audience relationships and topic Advertising relationships. Second screen integrations are also increasing which is giving advertisers a more interactive way to engage with captive users. On the AD Serving Perspective we expect more players to adopt SSAI to increase CTRs and Conversion.

Wissam Sabbagh
FOUNDER | MANGOMOLO

Interactive live streaming is definitely a huge trend that will keep rising in the next years. Ultra-low-latency is the main feature of this kind of live streams, as it is necessary to achieve real-time engagement. On the other hand, cloud services are a success and can scale capacity easily, besides adapting to changing viewership. Together with the death of Flash by 2020, these two concepts bring up a new era for live streaming. Live Streaming applications are more and more mainstream and required to work within any kind of business application as a simple "add-on". Customers do not want to hassle with looking to different vendors, devices, formats, etc. and setting up their own infrastructure.

Therefore, in 2018 we can expect an even higher adoption of cloud-based solutions for live streams, mainly focusing on scalability and ultra-low-latency. Since RTMP will lose power for playout, new technologies must come up to fulfill this gap.

Keeping it in mind, nanocosmos has developed nanoStream Cloud and the unique H5Live technology and player, an end-to-end ultra-low-latency solution that works on any HTML5 browser and mobile device, including Safari on iOS.

Adding nanoStream Apps and SDKs, you will find true cross-platform live encoding, while nanoStream WebRTC.live will be the perfect solution for browser-based live streams and webcasts.

nanoStream Cloud lets you go live around the world in 1 second. You only need to get your camera ready, and we do the rest!

Oliver Lietz
CEO | NANOCOSMOS

We are currently experiencing a situation where the technology and viewing behaviours are moving faster than many media companies.

The technology shift, with live OTT as a key driver, is the perfect enabler to start developing new creative concepts that will reach a new and more engaged audience.

New challenges can never be solved by old processes. To do what you have always done, is not an option. It's time to stretch our minds. Work together. Think big and think different.

History is full of companies that refused to change and made it into a sport to sleepwalk through decades of rapid change.

In my mind there has never been a more exciting time to be in the media and broadcasting business. Being able to offer technology that brings people together and creates communities, with a shared experience, is a true pleasure. Being able to offer new revenue streams for the media industry, which have struggled for years, is a bonus. These are the questions you need to ask yourself;

- How can we use technology to broaden our audience?
- How can we use technology to increase the audiences' loyalty?
- How can we integrate our digital strategy cross functional in every touch point?
- How can we make more money and attract new partners?

We are convinced that technology will continue to set the scene, transform business models and drive change years to come. It will also challenge the way we think and do business.

Fredrik Tumegård

CEO | NET INSIGHT

When Streaming Media asked if I wanted to participate in the 2018 executive predictions I answered no. Anything that relates to chance I just run away from. I can never get the coin to flip on the "right" side. When they objected that it was a popular section of their magazine I said to myself: "what? people are going to read about this on top of that". I slept over it and had a vision that night of receiving an academy award. So, I called back and said yes. A couple of things I can also remember from this vision:

- Developers will be the next decision makers: technical complexity has increased over the past few years in the online video industry. Having a team of savvy technical people has no price. They should tell you what to do, because they will be the ones responsible for making your service a great service.
- HLS should continue dominating over DASH. Using DASH could require paying royalties and it is still not available in iOS Safari. With fmp4, HEVC and DRM becoming widely available in HLS most use-cases for streaming should be covered.
- Is a new codec dilemma upon us? HEVC vs. AV1 – HEVC vs. AVC. I will tend towards a yes.
- Who is your average viewer? High mobile usage and emerging economies gaining wide access to the Internet should raise the question of what kind of bandwidth your average viewer can really enjoy ... and what kind of experience you want her/him to have.

Arnaud Leyder

CEO | RADIANT MEDIA PLAYER

There's a continuing and accelerating trend that sees the better integration of technologies. We've already seen some good uses of data to add value to video – but there is a long way to go. We have used data to index video but since our integration with the Press Association we see a great deal of opportunity to use data to create automated and meaningful clips.

Increasingly all these technologies will become wrapped up within the 'AI' label. So 'image processing technologies' that were previously used to identify significant parts of video and images will now be referred to as the 'AI engine'. Despite this added vagueness, the contribution of AI will grow hugely, led by major players such as Amazon Web Services making the technology easy to access. We have already implemented their Amazon Rekognition service to tag live and on-demand video archives and bring these tags into our recommendation engine.

A consequence of this harmonisation of diverse technologies will be the increased value of OTT video rights – particularly within sport. The money generated by OTT is set to surpass traditional broadcast at just about the same time as the latter term becomes redundant. Coincident with this dynamic will be the contractual demand for better securitisation of streams – i.e. really effective DRM combined with Forensic Watermarking and effective policing. The effectiveness of DRM alone has been largely misunderstood, but the ROI advantages from proper application will change that.

Duncan Burbidge

CEO | STREAMAMG

Developing and delivering cutting edge ip Innovations is our task at Teracue.

Virtualization of infrastructure enables players of all sizes to participate in the online video and live streaming environment.

We provide several hardware and software solutions that empower our clients to deliver outstanding experiences to their audiences. For 2018 we see a growing demand for Transcoding Hardware in order to create and distribute multiple streams from a single source signal. Our Live Transcoder „MC-Trans" is a live stream transcoder platform for IPTV headends, OTT broadcast channels and mobile streaming. It supports a wide range of transport streams, encryption and multi stream output.

At the same time multiple stream monitoring is taking its place in the first rows of services at Teracue. Since more streams are published overall, broadcasters need to now in real time how every single stream is performing. ICUE GRID is our latest product and a decentralized, IP-based video wall solution for the variable display of video streams. The ICUE GRID video wall uses pure IP video data and distributed processing, meaning that its architecture is limitless. There is also no limit to the window size, resolution, positioning and number of streams being displayed.

We are more than excited to enter 2018 and well prepared to rock all of the projects being ahead of us.

Thomas Buck

GENERAL MANAGER | TERACUE GMBH

Video is not just a big part of the web; it is on its way to becoming the dominant way we consume content online. Now on average, people watch over an hour of digital video each day, and **online video makes up nearly three quarters of all internet traffic**. Many of the changes over the last 5 years have been led by technological advancements and specifically on the device side with the move from linear TV to on-demand consumption. This is the case for PC, smartphones, tablets and Smart-TVs. The result has increased the market for video services exponentially.

The media industry we have long known is changing. Today's viewers are pulling out tablets, laptops, and smartphones, accessing video content when – and increasingly where – they choose. This transformation has not been subtle. In growing numbers, **consumers are replacing their traditional cable and satellite TV** packages with smaller, more customized, and often less expensive mixes of programming, cobbled together from an array of online and on-demand services.

Where it was typically still sufficient to only support browsers, tablets and smartphones in 2017, in 2018 **your viewers will require support on all their connected devices**. Just like Netflix you will have to support all types of Smart TVs, consoles (Xbox, PlayStation) and streaming devices like Roku or Chromecast. Furthermore, your viewers do not only require you to support these devices, they are also expecting a **consistent experience across these devices**.

THEOplayer is at the forefront of this rapidly evolving online video landscape. Our award winning **Universal Video Player**, built in HTML5, provides a single player across all major devices, platforms and browsers. The Universal Video Player is pre-integrated with leading solutions across the video ecosystem including streaming, analytics, DRM and content monetization to remove the complexity of service development.

Steven Tielemans

CEO AND FOUNDER | THEOPLAYER

Open by default

My prediction for 2018 is that an overwhelming number of companies will be transitioning to open tech. Within ten years, I expect all significantly complex and successful back-end technology to be open source. It is already hard to name a market where open source doesn't either have the most momentum, or outright dominates it – be it mobile operating systems, cloud orchestration, browsers or transcoding software. A lot of money is still being made in these domains, but mostly by companies providing complementary services around a core that is open source. Not a single new successful proprietary database has been released in over a decade, while open variants are flourishing.

Many companies that traditionally kept technology close to their chest, are now betting on open source: Microsoft Edge has an open source engine at its core, Windows 10 embeds Linux as does Azure, and Oracle is acquiring open solutions to complement their proprietary offering. We will also soon see a new open codec called AV1, which is royalty-free and backed by Amazon, Google, Microsoft and Mozilla. Our own cloud encoding scale-up Transloadit will be among the firsts to support it.

Looking at our own company, the advantages of going "open by default" are clear to see. We have been able to decimate expenses in R&D, Marketing and Recruitment, while simultaneously improving product quality and attracting more customers and talent alike.

Whenever we create new software, it's open source – and some of these releases have even become industry standards. tus.io and uppy.io, for instance, are already changing how the world does file uploading. Each of these therefore not only serves as a compelling onramp to our commercial offering, they provide greater value by being free for anyone to use. If there is one thing science teaches us, it is that sharing accomplishments for others to build upon leads to evolutionary progress at revolutionary speed.

Kevin van Zonneveld

CO-FOUNDER | TRANSLOADIT

How 360 video VR might be changing the advertising industry

360 videos can present an opportunity for advertisers to reach massive audiences. This year will be 90 M active VR users worldwide and this figure is predicted to reach at 171 M active VR users globally, while the VR headset shipments will increase from 12 M in 2017 to just over 55 M in 2022.

An experiment was conducted to find out whether 360 video advertising drive more viewer engagement than standard video advertising.

Each campaign featured a 60-second spot, one version was shot and presented in 360 video, and the other was a standard format video ad. Both ads included a call to action button that drove to an extended version, so that we could see if the 360 video ad was better than the standard ad at driving viewers to a full-length video.

The experiment result was interesting with the following facts:

1. 360 video doesn't over perform on traditional viewer metrics
2. 360 ad had a higher click-through rate, meaning that viewers were more interested in checking out the full-length version of the video.
3. 360 video drives viewers to share, subscribe, and view other videos. In total, the 360 ad drove 41% more earned actions than the standard ad. The full-length 360 video had a 46% higher view count than the standard full-length piece.

The conclusion of the experiment is that 360 video has the potential to drive engagement in promising new ways.

Veeplay is a technology company dedicated to helping publishers worldwide deliver the best video experience and better monetize their video content on mobile devices through native mobile video player SDKs.

Alex Dragos Cercel
CEO | VEEPLAY

Over the past few years, our vision for this column has covered the adoption of Just-in-time Video Delivery, the widespread move to Multi-Vendor DRM with EMEs and the simplification of the Live2VOD. Now, if not ubiquitous, at least these subjects are more widely understood. Going forwards next year, our focus is to ensure that these key aspects of video delivery are tightly integrated into robust and flexible, workflows rather than being seen as disparate parts of an overall solution.

At VUALTO, we certainly don't believe in prescribing a one-size fits all video delivery workflow for our clients. From our experience, each Broadcaster and Content Owner has specific requirements for their video workflow, whether it be interfacing with existing systems, dealing with legacy content, non-standard subtitles or just needing to process video in a specific way. Our approach has always been to use our established building blocks/best of breed tools and use them to construct flexible video delivery workflows that are tailored to each of our clients. This flexibility allows us to respond to a fast-changing video landscape more quickly than some established off-the-shelf solutions. This will continue to be our focus for 2018, improving coherence between the individual parts of the delivery workflow, adding more pluggable components and providing the best Workflow Orchestration tools to provide overall control of the video delivery. 2018 will be about even smarter workflows and setting the bar high for Live and On-demand Video Delivery.

Camilla Young
CEO & CO-FOUNDER | VUALTO