It’s an exciting time to be working in the communications and media industry. The pace of change is phenomenal, with new challenges being presented to us at an unprecedented rate.

While many organisations operating in this space are feeling the pressure, those that succeed are the ones that turn these challenges into opportunities. ‘Fast fail’ is the key to success; by leveraging the cloud, pioneers are able to try out new ideas and scale up or down in a way they’ve never been able to in the past. Read more on the pages that follow.
As the digital transformation of the media industry puts greater power in the consumer’s hands, media companies are looking towards scalable, cloud-based solutions to help them adapt.

BY LINDSAY JAMES
The media industry is in the midst of a revolution and a fundamental shift of power is affecting virtually every media organisation. “Rather than a broadcaster ‘pushing’ content it selects out to viewers for them to watch at scheduled times on a TV set, the viewers are now increasingly in charge – ‘pulling’ whatever content they want to consume from whichever media organisation has it, at whatever time suits them and on whatever device they want to watch it,” explains Lorenzo Zanni, lead analyst at IABM, the international trade association for suppliers of broadcast and media technology. “I’m not saying what we would traditionally call ‘broadcasting’ is dying, but it is having to compete with new kids on the block – and develop a new business model which mines new ‘digital pennies’ alongside slowly decreasing ‘broadcasting dollars’ from advertising or subscriptions.”

Tony Emerson, Microsoft’s managing director for Worldwide Media and Cable, echoes Zanni’s thoughts. “The industry is having to move from mass media to personalised media,” he says. “Prime time is a thing of the past. Now consumers can watch whatever they want, when they want. Instead of releasing an episode of a series per week, many broadcasters are making a whole boxset available. It’s an interesting change and presents a number of challenges.”

According to Emerson, one of the biggest challenges is that digital distribution is simply not as profitable as traditional broadcasting. “This means that media companies need to get better at understanding their audiences,” he says. “By having access to the critical information about who is watching what show and when, they can better target shows and charge more money for every impression made.”

However, the disintermediation of the media industry means that this valuable information often lies in the wrong hands. “All too often it’s the streaming companies that hold the data,” Emerson explains. “That’s why many media companies are creating direct to consumer offerings. Disney Life is a recent example.”

With so many companies making media their business, another challenge lies in the ability to deal with files in any number of differing formats. “Companies need to be able to move around or alternatively have access to files and not be restricted by employee locations,” says Nigel Booth, executive vice president of Business Development and Marketing at Microsoft partner IPV. “This is why having the right asset management system in place becomes incredibly important.”

A further challenge lies in the ability for broadcasters and media companies to have the flexibility and agility they need to attract and retain fickle viewers who have ever-increasing media options at their fingertips. “They need to be able to scale up – and scale down – instantly, or launch a new service quickly – and take it down just as rapidly too,” says Zanni. “That’s not easy with fixed, on-premise infrastructure, so media companies are increasingly looking to IP signal flows and the cloud to deliver this, and moving to a pay as they use (Opex) business model rather than making one-off investments (Capex) in fixed infrastructure. They are also beginning to exploit the power of artificial intelligence across their entire operations – increasing workflow.

Over the last few years, customers have forced media organisations to deliver information to an overwhelming number of upcoming and decreasing platforms. In tandem with this, on demand services such as Netflix and Amazon Prime have grown exponentially and news is consumed increasingly through social media channels. This change in user behaviour is forcing media companies to adapt faster than they can with current workflows. Costs are increasing, while ad revenue is decreasing.

But there is a solution. The Microsoft Azure cloud is enabling media companies to adapt quickly in order to meet consumer expectations. Resources can be subscribed to as and when needed, providing much needed scalability. Business intelligence can on the other hand provide a faster and more accurate feedback loop, providing the information needed for media companies to react faster to user expectations.

In the years ahead, the specific needs of media companies to win or keep their audience will only be met by using these cloud-based services instead of capex investments. Intelligent automation services will help to maintain the cost in a realistic range, while a new focus will be put on creative storytelling.

Andreas Pongratz is CEO at x.news

Adapt or lose out
By embracing cloud-based solutions, media companies can evolve and prosper Andreas Pongratz says

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We've seen two major trends in the media industry over the last few years – the first being a drastic increase in the creation of and demand for video content. According to a study by Deloitte on digital media, video and audio will generate about 89% of consumer internet data traffic by 2018 – a 60% increase from just five years before.

The second trend is the way in which all of this data is stored. Historically, companies who create this video content have been storing it in large data facilities, which can be siloed, geographically constrained, and expensive in terms of maintenance and human capital. Today, these same companies are transitioning their storage strategy to the cloud. Because the cloud enables them to scale, improve costs, and make processes more efficient, they’re also turning to the cloud for the rest of the media workflow – from content creation and management to delivery and consumption.

Cross platform media delivery is only just beginning. The challenge for media companies is to keep pace with the ever-increasing number of platforms, capabilities, technologies, interaction and authenticated streams for all devices used to consume video content. When you add 360-degree video, virtual reality, augmented reality, mixed reality and internet of things related demands to the table, it’s clear that telcos and operators need to transform into fast, agile, flexible and scalable businesses. And to better deliver customer benefits, these companies need to become more cost-effective – better managing the ever-increasing data consumption and network traffic, while reducing operating costs. To do this, they need to harness the power of the cloud and adopt artificial intelligence, machine learning and bots into their eco-system and workflows. Microsoft Azure offers a huge opportunity to make this necessary transformation. Partners like StreamingBuzz are key, providing a complete end-to-end solution.

John Motz is CTO at GrayMeta

Facilitating an evolution

Jon Vink explains why the media industry needs to fundamentally evolve into a digital media eco-system, enabling cross-platform delivery whenever, wherever and on whatever device the consumer wants

How to truly understand your data

As the amount of video content explodes, companies operating in the media industry are realising the value of AI and machine learning says John Motz

We've seen two major trends in the media industry over the last few years – the first being a drastic increase in the creation of and demand for video content. According to a study by Deloitte on digital media, video and audio will generate about 89% of consumer internet data traffic by 2018 – a 60% increase from just five years before.

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While more and more companies are turning to the cloud for their media workflow needs, there is still the challenge of managing the increasing amount of data that is created every day. This includes understanding what content they have, where it is, and – especially for video content – what’s in it.

But there is a solution. Through a partnership between Microsoft Cognitive Services and the GrayMeta Platform, companies now have the opportunity to truly understand their data by leveraging the power of AI and machine learning. Machine learning technology enables companies with an overwhelming and growing amount of data to not only find and use their assets but also to drive monetisation of these assets. As the industry transitions away from on-premise solutions, Microsoft and GrayMeta can also help companies evolve to a cloud model while unifying their platforms and services.

Jon Vink is owner of StreamingBuzz
efficiency in content management, monetisation, distribution and delivery.”

Despite this upheaval, the recently published IABM End-User survey found the great majority of broadcasters and media organisations are optimistic about the future, with multi-platform delivery and IP infrastructure at the top of their purchasing priorities. “The cloud came in at number six, behind social media broadcasting and media asset management,” explains Zanni. “This may be surprisingly low to some readers, but while the new media players such as Amazon and Netflix have been able to build their new-wave infrastructure from scratch, many traditional media companies simply can’t afford to ditch expensive, existing infrastructure wholesale, so are transitioning step-by-step. According to the survey, 37% of end-users have already deployed cloud-based solutions, with a further 55% intending to do so in the next 2-3 years. From an historical perspective, this is a record-high for cloud adoption, indicating that media technology users are becoming more aware of its benefits.”

Microsoft and its partners are helping to facilitate this shift, supporting the entire broadcasting supply chain, covering both pre- and post-production. “We’re delivering content storage, media encoding, rendering, advanced analytics and more,” says Emerson. “Our partners are strengthening our proposition. Avid, for example, is using the Microsoft Azure cloud to power customers’ content, globally, and we will co-develop cloud-based solutions and services for the media and entertainment industry, powered by the Avid MediaCentral Platform, an open, tightly integrated and efficient platform designed for media.

Microsoft Azure can integrate with IPV’s Curator system to allow Microsoft users to work remotely through advanced proxy workflows. “The combined technology lets users collaborate on a global scale through Curator, removing traditional location based restraints,” says Booth. “Remote working is becoming increasingly important as it allows companies to manage the greater volume of content they are producing.”

“Then there’s Ooyala, a Microsoft partner and provider of premium video platforms, media logistics and advertising, which is integrating its Ooyala Flex media logistics platform with Microsoft Cognitive Services,” Emerson continues. “As a result, the company is able to simplify metadata capture by extracting transcripts, detecting faces within videos, and analysing text to detect key topics. Ooyala then uses that rich metadata to recommend relevant videos to viewers and to deliver targeted advertising.”

MPP Global, meanwhile, is leveraging the processing power of Microsoft Azure to enhance eSuite – a solution which, using machine learning, provides targeted subscription video on-demand and transactional video on-demand models which optimise conversions, and increase engagement opportunities throughout the customer lifecycle.

“Such an approach opens the gates to a goldmine of untapped customer data,” explains Paul Johnson, MPP Global’s CEO and co-founder. “With digital content, media companies can build much closer and more engaged relationships with consumers.”

What’s more, as an individual progresses through the journey to become a paying customer, eSuite handles the entire billing lifecycle of the subscription, determining the content entitlements of users to authorise or deny access of content or apply surcharges for new releases or premium content. “The ability to handle all international payment types, methods and currency in a secure environment is a necessity for the majority of media companies today,” Johnson adds.
The rapid digitisation of the media value chain has created enormous challenges as well as exciting opportunities. Media organisations and content creators must create and distribute the highest quality content to increasingly sophisticated audiences over multiple channels and devices, while adhering to various constraints. Heritage production environments aren’t as flexible or efficient as needed to produce ever-greater volumes of content at a time when budgets are shrinking rather than expanding.

Avid’s strategic alliance with Microsoft is critical to meeting these challenges – connecting people globally and giving the tools needed to share, develop and distribute media assets quickly and efficiently. Together, Avid and Microsoft are leveraging the cloud by collaboratively developing cloud-based solutions and services specifically for the media and entertainment industry.

Avid’s software as a service (SaaS) and platform as a service (PaaS) offerings are powered by MediaCentral – an open, tightly integrated and efficient platform for media – and the Microsoft Azure platform. The open nature of Microsoft Azure makes it easy for Avid customers to adopt and integrate the platform with other aspects of their IT infrastructures. And Azure’s flexible deployment options – public cloud, private cloud or on-premise data centre – allow media organisations to migrate to the cloud in a way, and at a pace, that best fits their specific needs. Media organisations and creative professionals are able to quickly and easily leverage the efficiencies, flexibility and agility that the cloud enables while innovating around new media workflows, new operational capabilities and new business opportunities to distribute and optimise media.

Providing the right tools

Avid’s strategic alliance with Microsoft is enabling media companies to meet many of the challenges they face today says Tom Cordiner

Getting more from your data

Artificial intelligence is revolutionising the way in which media companies can index information Drew Hilles explains

The media industry data sphere is growing rapidly and is drowning in petabytes and petabytes of data. Traditional metadata tagging is a manual, time-consuming process, making it cost-prohibitive to capture anything more than basic information for large-scale stored content.

But there is a solution. Artificial intelligence (AI) can emphasise and enhance the process of quantifying and measuring broadcast content, native advertising and on-air product placements. In order to continue growing this revenue stream, ad efficacy and validation, as well as reporting efficiency and analytics, are increasingly important.

In 2018 and beyond and with AI, broadcast media will be very quickly indexed down to every second of audio and every frame of video. On-demand media as we know it today will turn into organic, real-time libraries created by AI by atomising previously unstructured data.

Drew Hilles is senior vice president and general manager of Veritone Media
This is just the start of a monumental shift across the industry. While no one knows exactly what the future holds, Zanni is confident that the customer experience will be at the crux of new changes. “We are very much at the beginning of the next media revolution today,” he says. “Live programming using IP signal flows and the cloud is the next step forward. Quality of experience will be a key factor in its success – as with all internet-delivered media; buffering is no longer acceptable, for example; consumer expectations continue to rise.

“There will be more and more media options for viewers – and more media organisations looking to protect their brands (such as the Disney example provided earlier). This throws up a new challenge in providing simple and quick routes for viewers to find the media they want; some form of platform consolidation is therefore likely. What will not change, though, is the need for great content to engage audiences, and both traditional broadcasters and the new media companies will continue to invest more and more heavily in creating such content.”

Zanni believes that there will be greater emphasis too on fully exploiting existing content, and AI will be able to help here with automated indexing so relevant material can be quickly found and aired. “AI will become a dominant force in helping media organisations to exploit and monetise all their assets ever more effectively – underpinning an ever-closer knowledge and understanding of every individual viewer’s preferences as big data continues to get bigger – and go deeper. The cloud will continue to grow in importance and be key to storing, processing and delivering media to any place, at any time on any device.”

Both Zanni and Emerson agree that the endgame for media organisations is dematerialisation – their new premises will ultimately be the cloud, and while this will ultimately give them access to a practically unlimited resource, they will only be paying for what they actually use, so delivering profitability even in a very fragmented viewership.

“The cloud will undoubtedly open new doors across the industry,” Emerson says. “It will enable broadcasters and media companies to trial new ideas without huge investment. For example, they can test virtual reality downloads – which may prove to be a gamechanger in the industry, or may sink fast – in a pay as you go manner. The cloud will enable the flexibility to evolve and better meet customer expectations in new and exciting ways.”

**VIEWPOINT**

The cloud is a perfect fit for media companies

Consumers are demanding that more content is being created and delivered to a lot more places – and everything must still happen with speed and accuracy. That’s a very tall order. Margaret Craig explains how the cloud can help

In today’s operating environment, new entrants and legacy media companies must compete for consumer attention by producing lots of content that is compelling and original, and making it ever more granular and targeted. As a result, business models and partner ecosystems need to evolve, and technical infrastructure must become much more agile and distributed.

The Microsoft Azure cloud is by definition agile, distributed global technical infrastructure – so it’s a perfect fit for the evolving media industry. From the largest media enterprises to small production facilities, on-demand storage and compute make a lot of sense. As media-specific functionality becomes available via Microsoft’s partner ecosystem, many companies can envision a future where very little on-premise infrastructure is needed.

As media companies move to the cloud, several factors make Microsoft a logical choice. Content security is a never-ending challenge in the media world, and a trusted enterprise software provider like Microsoft provides comfort on this front. Most media companies have a long-standing business relationship with Microsoft and regard the company as a strong partner with deep experience building and maintaining enterprise relationships. On the innovation front, Microsoft Azure’s leadership in video-centric artificial intelligence is a draw. And one simple fact should not be underestimated: Microsoft does not compete in the content creation and distribution world.

*Margaret Craig is CEO at Signiant*
For decades, the media business was dominated by television, movie and music studios, who distributed content via traditional platforms like radio stations, cable and satellite TV, and home entertainment formats like CDs and DVDs. However, these forms of communication are now often derided as ‘old media.’ With their rivals moving at internet speed, it sometimes seems like these great communications powerhouses have been reduced to the status of media dinosaurs.

New artificial intelligence (AI) technologies are giving the so-called old media firms a chance to turn the tables on their internet rivals. Forward-looking organisations are harnessing the power of cognitive engines to unlock value previously trapped within their content and advertising data. By efficiently tracking not only paid commercial spots, but also organic or ‘native’ brand mentions and placements integrated into the content itself, cognitive engines allow broadcasters to demonstrate every penny of value they deliver to their clients. The result is incremental advertising revenue opportunity. Just as importantly, cognitive engines represent a key tool to expand beyond the boundaries of broadcast by allowing traditional media firms to repurpose their content for search, on-demand and social-media services.

The fate of media companies now hinges upon whether they can capitalise on all avenues of communication – particularly internet-based channels. Cognitive engines allow traditional media firms to attain a competitive advantage in today’s digital marketplace.

With cognitive engine technology delivered by Veritone, the time and cost needed to monitor media channels and process advertising information can be dramatically reduced. For example, the time required to monitor thousands of hours of video can be cut to a matter of minutes, or even seconds.

The Veritone aiWARE platform orchestrates the power of multiple cognitive engines from various providers into a single software platform. Combined with powerful applications and services aimed at the media segment, the platform can analyse and share the data gathered through monitoring. This allows broadcasters to prove the efficacy of advertising campaigns while checking for quality and compliance. With these capabilities, media channels can demonstrate their value proposition to advertisers and maximise their revenue potential.

Veritone aiWARE allows media firms to monitor, analyse, share and repurpose advertising information and content. With this powerful tool, media companies can look forward to a bright future based on new revenue sources and exposure across all communication channels.

Drew Hilles is senior vice president and general manager of Veritone Media.
Seizing the opportunity

TOM CORDINER: AVID

As the demands on companies in the media sector shift increasingly towards digital, having the right tools in place can be a gamechanger when it comes to gaining an advantage over the competition.

The consumerisation of content creation and distribution has forced media organisations to adjust to a new reality of content wherever, whenever and however consumers want it.

At the same time, declines in traditional revenue sources have required a recalibration of business approaches. The relentless pressure for operational efficiency has further challenged an industry already filled with disconnected people, tools, and workflows. These market conditions have changed everything – from workflows to business models to revenue streams.

Media organisations must work more collaboratively and efficiently, and overcome the limitations of proprietary solutions. Artists need the best tools tied seamlessly to the rest of the ecosystem. Everyone needs to be more connected at a much lower cost.

“...The flexibility and elasticity of cloud services enables organisations to maximize the value of their assets...”

Avid is a provider of professional tools for the creation, distribution, and monetisation of media assets. We have teamed with Microsoft to cooperatively develop cloud-based solutions and services designed specifically to address these challenges.

By extending MediaCentral – our open, tightly integrated and efficient platform designed for media – to the cloud on Microsoft Azure, media organisations now have complete flexibility to create, distribute and monetise their content using the deployment type best suited to their needs.

Regardless of their deployment model, organisations of every type and size will have the same user experience, workflow power, speed, efficiency and collaboration capabilities.

Cloud production increases capacity and eases the financial burden of content creation and distribution. Media organisations gain the licensing flexibility and business agility to align their technology solutions with the needs of their production environment. They can also connect and collaborate from anywhere – whether through a workstation, laptop or mobile device – all while increasing efficiency across every facet of the media value chain.

Beyond operational efficiencies and increased creative capabilities, this new way of working allows media organisations to grow viewership and brand affinity. The flexibility and elasticity of cloud services enables organisations to maximise the value of their assets by expanding to new outlets. They can repurpose material to exploit new revenue streams and grow brand affinity across a broader range of viewers by making content available everywhere they want to consume it, whether on TV, online, or on a mobile device. It’s also easy to scale resources as needed to address peaks in demand and tap into massive economies of scale across workgroups and departments.

While the challenges of the new media landscape are great, so are the opportunities. The reality of full-scale media production in the cloud is here to help bring those possibilities within reach.

Tom Cordiner is senior vice president of global sales at Avid.
Enhancing the passenger and guest experience before, during and after their trip is increasingly important. But placing a screen on every seat is both costly and complex, as well as adding weight onboard.

StreamingBuzz offers an end-to-end cloud service with a streaming platform for the delivery of all live and on-demand content, secured by world-class protection, to an international audience on any device. The entertainment solution enables bus, coach, airline, cruise ship, ferry, train, tram and oil rig operators and the automotive industry to provide their passengers with a full entertainment system worldwide. It gives passengers access to features including movies, television series, games, customer surveys, location-specific route information and more – via a browser or native app on their own smartphones, tablets and laptops.

The solution removes the cost of placing a screen on every seat by using a ‘bring your own device’ approach. It provides all the benefits of a full entertainment package at a fraction of the cost, without the complexity of installing a hardware-based system or the high costs of maintenance. It also enables operators to save a huge amount of weight onboard and inflight, reducing their fuel consumption and their carbon footprint.

Openmatics, a connectivity expert of ZF Friedrichshafen, is using StreamingBuzz to deliver its Roadcaster onboard entertainment system to its bus and coach operator customers. “Our solution harnesses technologies from StreamingBuzz and the power of Microsoft Azure to handle streaming and digital rights management for blockbuster Hollywood movies, the latest must-watch TV series and more, and can be configured for use in both online and offline environments,” says Thomas Rösch, managing director of Openmatics.

StreamingBuzz’s fully automated studio-grade workflows are completely built, managed and run in Microsoft Azure, which reduces the complexity and costs of cross-platform delivery. The workflows have integrated, dynamic, on-the-fly content ingest, encoding, transcoding, content protection, storage, CDN, payment, billing, reporting and analytics (big data, media intelligence, metadata).

The solution takes advantage of several Microsoft Azure services including Azure Media Services, IoT Hub, SQL Data Warehouse and Stream Analytics. StreamingBuzz will soon unleash artificial intelligence and cognitive services such as facial and emotion recognition, machine learning, chatbot, 360° virtual reality, augmented reality and mixed reality to further streamline boarding, check-in and baggage processes and make the experience more pleasant, efficient and safe.

“This is a great example of how our partners are developing Microsoft Azure solutions to help businesses in every stage of their digital transformation,” says Tony Emerson, worldwide managing director, media and cable at Microsoft.
MTV3 is a popular free channel of Finnish media company MTV, which is owned by the Swedish media company Bonnier AB. Launched as a small start-up in 1957, MTV was the first commercial television network in Finland and one of the earliest nationwide commercial TV stations in Europe. Since then it has grown into a media company that broadcasts news, entertains viewers and creates new experiences through MTV3 and its other channels, Sub and AVA.

MTV3’s newsroom journalists faced the challenge of efficiently researching news stories in an online environment awash with information. Social media is a vital source of information for the newsroom team, but the volume of noise and disinformation also makes it a challenge. When newsroom journalists were working on a report, they usually had as many as 15 to 20 different windows open. They spent a lot of time hunting down information in different places instead of focusing on the news story itself.

“Newsroom journalists of MTV News are facing the same problems as the rest of the world,” says Tommi Tynys of MTV Oy. “An overwhelming flood of information from various sources comes in continuously. In addition to more traditional agency bulletins and video streams, web sources and archive material, they also use more and more information from social media. Twitter, especially, has become a vital source of information.”

MTV3 implemented x.news, as its new newsroom research tool. x.news is an award-winning on-demand solution for the modern newsroom and enterprise market, running on the Microsoft Azure platform. It transforms the way journalists work by monitoring the different sources – such as news agencies, social media sites, web and internal sources – all on one screen.

The x.news user interface provides the team with all the information they need in one single location. The solution is closely integrated into Avid Media Central which makes it easy for journalists to use and quote all sources from the solution in their story.

“We can provide our journalists with a custom view of all sources that interest our audience and at the same time they can also follow what our competitors are publishing,” says Tynys. “Working with an amazing tool like x.news, it is still up to the journalists to gauge the reliability of all the information they are receiving. The final responsibility stays with the journalist.”
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