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BOB DEHAVEN: MICROSOFT

There was an air of excitement at the recent Mobile World Congress event in Barcelona. The promise of 5G is providing a valuable opportunity for telco firms across the globe to make their mark and establish themselves as frontrunners.

Microsoft is committed to help. In the pages that follow you can discover how the flexibility of Azure, teamed with our Cognitive Services Lab, is providing a backbone for companies to leverage AI, process big data, improve operations and increase revenue.

Modernising data centres in a telco world

The race is on for today's telco companies to rollout their superfast 5G data networks. Here we discover how Microsoft is facilitating a leading position for many of the biggest operators

BY LINDSAY JAMES

At the recent Mobile World Congress event in Barcelona, there was one topic on everybody's lips: the move to 5G. Carriers including T-Mobile, Telefonica and Deutsche Telekom announced plans to bring 5G to their customers. And technology providers such as Intel and Qualcomm showcased how 5G will transform everything from smart cities to virtual reality.

“We are helping carriers to achieve the scale they need to deploy networks rapidly and with a lower capital expenditure than in the past”

RICK LIEVANO, MICROSOFT

The fact that this would be the main area of discussion at the event was no surprise. Since the new 5G standard – 5G New Radio (NR) – was agreed upon in December last year, the global mobile industry has been grappling to begin large scale trials and commercial deployments, with the first expected as early as 2019.

“While broad rollout isn't expected until after 2020, operators are already keen to position themselves as leaders,” explains Rick Lievano, Microsoft's worldwide director of Industry Technology Strategy for Telecommunications. “At Microsoft we have a significant part to play in this shift – we are helping carriers to achieve the scale they need to deploy networks rapidly and with a lower capital expenditure than in the past.”

This scale can only be achieved with the cloud. “Many of the strategies imply a reliance on a suitable cloud platform to perform certain tasks,” explains Eric Troup, chief technology officer for the telecommunications industry at Microsoft. “Network workloads are being virtualised as what could be seen as an interim step. What is actually needed, however, is cloudification of the network. This implies several things. First, the network functions software architecture must be rewritten to be truly cloud aware, not just virtualised. Second, a stable cloud platform system is necessary to host these workloads consisting of a distributed network of both hyper-scale and edge data centres that can perform the various cloud tasks required. It also requires software defined networking (SDN) within the data centres and



software defined wide area networks (SD-WAN) between the data centres and out to 5G edge devices. Finally, it requires artificial intelligence (AI) and machine learning (ML) for enhanced management of resources.”

This is where Microsoft’s proven cloud offering comes into its own. “Microsoft Azure is a truly software defined everything environment,” Troup says. “It is capable today of hosting the operators’ network workloads and IT workloads in a consistent and easily managed way.”

AI and ML are also fundamental to Microsoft’s approach. “Although service providers recognise that AI is uncharted territory, they also understand if they’re not at the table, they’re on the menu,” says Lievano. “There’s a real opportunity for Microsoft to be a trusted partner in helping telcos craft their AI strategy, provide them with technical expertise, and with the breadth of our internal resources such as our Cognitive Services Lab. Currently we’re working to help telcos leverage AI to process big data, improve

operations, and increase revenue. Specifically, telcos are integrating AI within the body of the company through network systems, products and services as well as leveraging AI to empower their customers through digital agents, bots and new speech capabilities.”

Looking ahead, it seems certain that the telco industry will continue to leverage hyper-scale cloud providers to an increasing degree to host both network and IT workloads. “Microsoft Azure will likely serve an increasingly significant role by enabling network efficiencies at the edge or via agile, hyper-scale cloud. This will be enhanced with AI and data analytics to provide the most cost-efficient infrastructure to telco companies,” concludes Troup. “Edge cloud will also play an increasingly important role as 5G rolls out during the 2020s. The Azure stack is well positioned to extend the capabilities of Azure in an operationally consistent manner to include any low-latency or edge processing requirements in the future.” ■

The move to 5G was a key focus at the recent Mobile World Congress event

Better communication

US telco company TDS Telecom has chosen Microsoft Office 365 and Yammer to help remote employees collaborate and feel part of a team

TDS Telecom has evolved phenomenally over the last few years. It has expanded into new areas by acquiring local cable and broadband companies in those communities. A work-from-home initiative allowed roughly 400 employees to work 100% remotely, and TDS also converted customer support call-centre jobs to work-from-home positions so people in rural areas could join the company more easily. What's more, a large base of tenured employees nearing retirement has made knowledge transfer increasingly important.

"We were becoming more geographically dispersed while also facing the potential isolation of employees working from home," says DeAnne Boegli, national public relations manager at the company. "Our employees longed to have a feeling of community. We wanted to help them get to know their colleagues – and learn best practices for their own jobs – faster with social sharing tools."

TDS explored different social networking solutions and ended up choosing Microsoft Office 365 and Yammer. Brian Gullett, manager of the Content and Collaboration Services Team at TDS Corporate, explains: "With Yammer, we get all the social-sharing features we need. Plus it's part of Office 365, so under a single license we get additional cloud-based services like Teams, Exchange Online, SharePoint Online, Forms, Flow, and Power Apps along with built-in support for mobility."

Following implementation, Gullett observed an immediate increase in communication efficiency. "My team now uses Yammer to communicate so we don't have to dig around in email for things," he says. "It works well for learning new technology – we can read a thread, watch a video, and follow a person, hashtag, or group on any platform, external or internal. And it's not static. We find and share our knowledge as part of two-way conversations."



Boegli agrees, adding: "I use Yammer to talk with my own team. We've cut down on emails because it requires fewer responses to the original message, which is easily visible at the top of each post every time you visit it."

TDS recruiters can better attract prospective employees when they share that the company has modern tools like Yammer and other Office 365 components. Patrick Yates, manager of Diversity and Inclusion at TDS Telecom, considers it a compelling engagement factor. "Younger generations entering the workforce especially want a modern, inclusive environment – to be part of something that's larger than themselves," he says.

After spurring companywide conversations through Yammer, TDS looks forward to applying its communication success to live video experiences, using Yammer and Skype for Business Online for its company meetings. "We're excited to harness the way Yammer gives everyone at TDS a voice," remarks Gullett. "I look forward to more engagement, knowledge sharing, inclusion, mobility, and relationship building supported by Yammer. Employees have a platform for helping each other – and learning from each other is an excellent foundation to build on." ■

Employees at TDS now have a platform for helping each other

Get more from your content archive with AI



PAULA MINARDI: OOYALA

Many companies struggle to find, manage and monetise their video assets. Ooyala Flex works with Microsoft Video Indexer to bring advanced metadata management and artificial intelligence to archived content

There's a common refrain we hear at Ooyala: "I don't even know what I have in my archive at this point."

Content companies dealing with the pressures of creating content more quickly with fewer budget resources are struggling to find, manage and monetise the vast amounts of video assets that now exist in their archives.

Ooyala's new white paper *'Make more money with your content archive and AI'* aims to help companies solve these issues. It discusses how Ooyala Flex works with Microsoft Video Indexer

"With Ooyala Flex content companies can turn archives into gold"

to bring advanced metadata management and artificial intelligence to archived content.

Too often, assets are missing rich or accurate metadata attached to them (or possibly any metadata at all). Perhaps metadata was never correctly labeled or was categorised differently by various team members doing the work. In other cases, a plethora of correct metadata may have been collected, but teams may not have known how best to use it.

In all of these scenarios, assets may be used for a single production cycle, transferred to storage and archival systems, and then forgotten or essentially lost. The result: an untapped goldmine waiting to be re-discovered.

Ooyala Flex and Microsoft Video Indexer are integrated, data-driven digital tools that can

reach into large and idle video reserves to extract their riches. Together, they help companies: find and identify lost archived content; add metadata and subtitles automatically; sort by themes, objects, facial recognition, visual text and even emotional sentiment; and reuse and monetise video for greater returns.

Microsoft Video Indexer analyses and describes video content and Ooyala Flex, deeply integrated with it, automates the indexing process of the archived assets and manages the mass amount of metadata that is created as a result – transforming assets into productive, monetisable content.

Such an integration takes the heavy lifting out of the archive discovery process by enabling creative teams to tackle many tasks: review transcriptions, finalise subtitles, confirm and teach facial recognition and more. Owning a deeply and instantly searchable archive means more commercial possibilities. Ooyala Flex enables teams to search archives easily using keywords and Ooyala Flex Query Language finds clips and content rapidly. With Ooyala Flex and Microsoft Video Indexer, content companies can turn archives into gold.

Suddenly, it's possible to cost-effectively turn archived assets into new revenue streams via clip shows, syndication to new geographies and platforms, more personalised advertising and more. Indeed, our experience shows that when content companies can find their assets easily, they naturally use them more often and more efficiently to grow their business. ■

Paula Minardi is head of content strategy at Ooyala



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