5G AND THE WORLD OF HYBRID CONNECTIVITY

What's the realistic impact of 5G networks in terms of contribution/ distribution for the video industry and the possible effects on existing technologies, asks Juliet Walker, chief marketing officer, Globecast.

There's no avoiding the trials and initial deployments of 5G networks: they're the talk of the town in terms of connectivity across both B2C and B2B. But what's the realistic impact in terms of contribution/distribution for the video industry and the possible effects on existing technologies? This also begs a wider question: what are the connectivity possibilities across distribution and contribution in today's hybrid connectivity world?

We can't get away from the fact that 5G has potential negative ramifications for aspects of satellite distribution, specifically any service that uses C-band. Why? Without going into the full technical details, the issue is one of spectrum. Spectrum is finite and in order to cater for 5G services, some frequencies that are currently used for C-band will need to be relinquished. The debate is how much spectrum that is, and that debate is particularly loud in the US and across Asia. But 5G will – indeed in parts of Asia already does – cause interference.

Looking at the US, there's lobbying on both sides, with satellite operators on one side and telcos/smaller wireless operators on the other. There have been offers made in terms of releasing spectrum, the monetary value of that spectrum and how, potentially, that money could be used to finance increased fibre reach. But there are other players too – for example, the National Oceanic and Atmosphere Administration, a US government entity, which has also expressed worry about the spectrum it requires.

Any service that uses C-band is threatened by this but the one generating the most concern is video distribution from programmers to multichannel video program distributors (MVPDs) such as cable, DTH and telco. This primary means of content distribution represents significant revenue for broadcasters. While many larger MVPDs are connected to programmers via diverse fibre connections, many rural headends are not, and the logistics and cost for connecting these locations via fibre are subjects of great discussion. The FCC in

the US has suggested that a resolution/decision about this will be published soon.

The situation in Asia is more complex simply because of the number of countries involved, demographic and economic diversity and great disparity in the level of mobile, internet and fibre penetration/bandwidth versus satellite distribution.

The effect does depend on each customer and each market. If a broadcaster is targeting the hotel market across Asia then it's not economically realistic to protect the satellite downlink from interference at each hotel site. This could trigger a change in the technologies that hotels use, either to Ku-band or to fibre. But the volume of content being distributed will prove challenging for IP solutions, certainly at a realistic price point.

On the professional contribution and delivery side – we're talking major sporting events that, of course, use both satellite and fibre – the downlinks can be protected using filters/screening technologies and it might be possible to protect some zones from 5G interference. This filtering applies to affiliates too and is likely to be economically viable.

Globecast's role is vital here. Satellite will remain a great option but with a shift to Ku-band where we have tremendous strength, including in the US with our Galaxy 19 capacity. In parallel, we believe that the situation is likely to accelerate OTT deployments and we have B2B and B2C OTT solutions for that. Finally, we have a telco parent – Orange - and that brings huge strength and depth in terms of our understanding and experience with designing and deploying IP solutions. We also have the strength and depth to continue developing new technologies to solve issues like these.

Our job has always been to deliver content from broadcasters or rights holders to consumers, either directly or via affiliates. We are uniquely positioned to be able to continue to do this, no matter what the outcome of this situation. Because we know the satellite and telco markets so well, what we are looking for is to establish even closer relationships with our customers to create and deploy solutions that satisfy their requirements. The demand for content clearly isn't going to disappear.

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In terms of 5G on the contribution side, it will come as little surprise that we have been involved in tests. We have taken part in a full end-to-end demonstration highlighting that the technology works, with all the requirements associated with broadcast quality, from production via a 5G modem to the base station to hub, and that it's fully functional for a broadcast use case.

5G could be an accelerator for remote production. It could challenge the existing ecosystem of production. It's potentially a route to bring more flexibility to capture and produce pictures from another location via remote production. But there's still a lot to resolve in terms of bandwidth availability for B2B services and the real-world business cases/cost implications versus existing fibre or satellite.

In terms of contribution and media management more widely, we already offer expanded capabilities courtesy of the possibilities that cloud and virtualised technologies are bringing. For example, with the ever-increasing costs of sports rights globally, there's customer demand to create more and more content for reach across more platforms and screens in order to achieve maximum ROI.

By aggregating multiple virtualised and cloud-based technologies into a single ecosystem, our Digital Media Hub suite of integrated, yet modular services, allows a live feed to be treated in multiple ways to create content suitable for cross-platform use, both in real-time or at a later date.

The live feed can be used for linear playout or to stream to live platforms of the rights holder's choice, including social media, apps or websites. Using the same live feed, short- or long-form content can be manually or automatically clipped, edited, metadata attached and shared. For example, highlight clips can be shared quickly on social media to maximise viewer engagement or packages created for OTT platforms.

All the clipped content is then made available via Globecast's Content Marketplace Platform in multiple formats/different sizes – including at broadcast quality - and branded using customers' brand guidelines. This platform facilitates content exchange between any relevant parties, including selling that content, in hassle-free transactions. Content Marketplace was used at the recent Total Africa Cup of Nations and is also being deployed across multiple events by Amaury Sport Organisation (ASO).

We live in a constantly evolving world of hybrid solutions where we are as far away as possible from a one-size-fits-all approach. There are important conversations to be had and we are using our years of expertise to both listen and advise.