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Satellite: A Key Position in the Future of Broadcast

Hans Massart, Head Media & Broadcast, ST Engineering iDirect, considers the trends developing in the media and broadcast satellite sector...

The last few years have heralded a significant change in the media and broadcast sector. Applications and technology are evolving, on a variety of different levels. The way in which individuals consume content has changed, markedly. The digitisation of the sector has meant that the use of IP is overtaking more traditional means of broadcasting. The rise of the internet and availability of mobile and personal devices has sparked a revolution in streaming services. This is a market in transformation and it's an exciting time as more and more becomes possible - more choice, more content, more personalisation.

The effect of COVID-19 has also had an impact on the current broadcasting landscape in positive and negative ways. The requirement for people to stay at home has resulted in a huge rise in subscriptions for and overall usage of streaming services. This demand is creating congested networks and a struggle to serve some customers on overloaded terrestrial networks. On the other hand, the pandemic has negatively impacted outside broadcasting (OB), especially due to the lack of live sports broadcasts and newsgathering, as satellite news gathering (SNG) trucks are parked up waiting for some sort of normality to return.

The role of satellite in this transformation is going to be significant due to its innate and unique ability to deliver content to a large geographical area, anywhere on the planet and far beyond the reach of any terrestrial network. The satellite industry itself is also going through change as operators introduce new, High Throughput Satellites (HTS) that deliver more throughput, low latency services for less cost.

ST Engineering iDirect's roots lie in the media and broadcast sector and for over 30 years we have been at its heart on both the contribution and distribution side, from the heyday of traditional DTH TV all the way through to the rise of IP content distribution. We have been at the centre of remote production, live events broadcast, SNG and IP contribution.

In this article, we will look at two key areas where satellite forms a critical part of the broadcast connectivity jigsaw and the reasons why satellite is now more relevant than ever for mass market, premium content.

Trend One: How Satellite Remains Critical in the Age of OTT

As millions of subscribers continue to indulge in streaming sites, Over-the-Top (OTT) services are expected to replace traditional viewing behaviour. The demand for streaming services is skyrocketing, as people binge on applications to watch the latest and most talked about shows.

The expected growth of OTT services, however, did not take into account the current global uncertainty. And as a result of this, demand has suddenly spiked significantly. ▶

Satellite has a significant role to play in the developing media sector
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▶ With several initiatives in place to stay at home across the world to slow down the spread of COVID-19, streaming services are being used more than ever before. This can create challenges as such vast numbers of people wish to use services to their full potential at the same time.

The question for broadcasters is how can they meet this demand both in the short and long term? Previously, satellite wasn't thought to be compatible with OTT services - but it actually has a critical role to play as we move towards the future of content delivery - the OTT era.

As millions of people go online for entertainment, utilising streaming services such as Netflix and Amazon Prime Video, internet usage has surged between 50% and 70% amid the global pandemic. In fact, 68% of internet users have been searching for COVID-19 related updates, with 58% listening to music and 49% of users streaming movies or TV shows, according to the Global Web Index, Coronavirus Research Report. These figures show that a number of quarantine internet activities are increasing, with pastimes varying between different age groups.

If service providers are to deliver on the promise of OTT both amid a global pandemic and way ahead into the future, they must evolve and look beyond traditional methods of connectivity - and it is crucial that service providers are able to deliver it both seamlessly and cost-effectively.

Video consumption on second screens, such as smartphones, tablets, and PCs, is also increasing dramatically. In addition to being able to stream content on a range of devices, consumers expect to receive their content on demand, at any time, at any location and with the best image quality and uninterrupted playback. Satellite transmission is the ideal solution for keeping costs under control, which is something operators and service providers have historically struggled with. Satellite's ability to multicast is unrivalled and it is integral to successful content distribution.

It is widely expected that OTT viewership will replace traditional TV globally within a matter of years. The attractive price point of satellite transmission is just one advantage it brings, with the capability to multicast as one of the main drivers. Another benefit is that the technology can also deliver content efficiently over a vast geographical area. It can be cost-effectively scaled to a growing population of receivers and can be easily scaled to address more content. For example, as almost the entire global sporting calendar has been suspended to help reduce the spread of the virus, media organizations have had to react quickly with new programming schedules to fill the void and to stay in touch with fans at home.

Reinforcing satellite's role as an enabler of OTT delivery, ST Engineering iDirect teamed up with DVB at IBC 2019 to demonstrate the future of universal OTT television services. Using our MCX7000 Multi-Carrier Satellite Gateway as a receiver, DVB showcased its 'single hybrid offering' known as DVB-I. This is an ongoing initiative to develop technical standards for delivering television services over IP.

Today, growing traffic is a fundamental challenge for service providers, especially when broadcasting popular content to a wide audience. Therefore, bandwidth needs to be used efficiently and traffic needs to be minimised, as the hours of content being streamed rise exponentially and stay at home initiatives continue across the globe.

The solution lies with satellite, and the growing industry is already working out where it fits in to the future of broadcasting. Satellite is also constantly developing and evolving, as we sit on the cusp of the 5G era, making it the perfect solution to provide streaming services and ultimately, remains critical in the age of OTT, whether we are challenged by a global pandemic or not.

Trend Two: All-IP Newsgathering

Another major trend with satellite at its core is All-IP newsgathering. At the moment, live broadcasts are suspended, but sports and events will come back. The live experience has become an essential ingredient for broadcast networks everywhere with broadcasters recreating that feeling of immediacy, of being there. The OB or SNG truck has become increasingly sophisticated as time has moved on, enabling broadcasters and news agencies to get to the scene rapidly, to set up and start broadcasting within minutes and to deliver their broadcast back to the studio *via* a contribution link.

When we talk about the more sophisticated nature of OB, we are talking about the advent of IP and the internet. Today, a mix of technologies are employed to cover live events over a multiservice communications link. The power of IP makes this possible. For broadcasters, the ability to use multiple networks, such as 3G and 4G or Ka- and Ku-band satellite, is essential. When terrestrial transmission becomes contended, the satellite link must also be able to adapt and scale dynamically to higher bandwidths.

Today, a simple contribution link to relay the OB pictures back to headquarters is not enough. OB operators also require access to phone lines, the internet, email and file transfer services. However, installation of these essential services is normally provided by fixed line operators and is very costly.

Once the installation is completed, the services are often used on a one-time basis and very rarely used again. Installation of these critical services on board OB trucks eliminates the need for one-off installations and means that the services travel with the trucks wherever they are required.

The key to All-IP newsgathering is successful transmission - and satellite lies at the heart of this. Broadcasters need a flexible and adaptable satellite bandwidth management system which can send IP traffic over satellite as efficiently as possible.

During the Copa America football event last year, Casablanca Online, a leading Brazilian SNG and service provider, sought a reliable and cost-effective solution. Powered by our Newtec Dialog®, SES' OU Flex solution provided IP connectivity to broadcasters' outdoor production teams at the Morumbi Stadium São Paulo where a Copa America game was held between Chile and Peru. Combining live video transmission and IP connectivity *via* satellite, the OU Flex enabled both data and video applications for Occasional Use (OU) services.

The solution was integrated into Casablanca Online's existing SNG trucks *via* our MDM3310 broadband modem, which requires significantly less investment compared to other technologies.

This enabled a two-way connection between the stadium and the studio, providing greater flexibility to facilitate remote production and distribute video content to online platforms. As a result, Casablanca Online was able to provide guaranteed and glitch-free IP connectivity over a 40 Mbps link, allowing the field teams to operate optimally.

All-IP newsgathering provides a very flexible solution that enables reliable broadcasts and reduces overall costs. Scalability in geography and volume is also enabled by the IP-based transmission, creating endless options for content distribution across the globe.

Time to Bust the Myths

Satellite is too often overlooked in the broadcast world, as many still consider it an expensive option and perhaps even consider it latent, but it is time to start busting some of these myths. Satellite is a huge asset to any broadcaster's portfolio and it has an enormously bright future in the sector. Where terrestrial networks become congested, satellite steps in. Where terrestrial networks cannot reach, satellite can. Where the ability to multicast is not available, satellite prevails. Where terrestrial connectivity is not available, satellite provides the infrastructure no matter where it's needed.

The media landscape may be evolving, but satellite has the agility to move with it - anywhere.

Learn about the transformation of the sector here: https://www.idirect.net/media-and-broadcast/ ■

Cost-effective: MDM3310 broadband modem