



SES'S END-TO-END SOLUTIONS FOR TODAY'S VIDEO DRIVEN WORLD

MNOs, Telcos and Online Operators

Video provides many advantages, whether it's linear TV, any form of VOD or live sports and events, helping to drive demand for triple- and quadruple-play services with customers looking for seamless in-home and out-of-home viewing experiences.

THE KEY ROLE OF VIDEO

The Mobile Network Operator (MNO), Telecommunications Company (Telco) and 'Online' markets are evolving rapidly. Growing demand for ultra-fast internet connectivity, coupled with the accelerating arrival of 5G, is putting increasing pressure on ROI while the amount of video traffic over networks is rising rapidly. According to the Visual Networking Index (Cisco 2019), by 2022, 82% of global internet traffic will be driven by video.

5G will support more than 10% of the world's mobile connections by 2023 with an average speed of 575 megabits per second (Mbit/s). Users will expect to be able to watch video content seamlessly on their devices, and actively seek out the companies that can offer state-of-the-art viewing experiences. MNOs, Telcos and online operators will look to implement them to satisfy customer demand, mitigate customer churn, and provide a valuable new revenue stream to help amortize the cost of building next-generation networks.

Video helps to facilitate increased customer retention, and unlock significant new revenue streams by driving additional subscriptions and data usage – in an era where revenue from calls and texts is largely flat, or continuously threatened by competition.



CHALLENGES IN IMPLEMENTATION

The video market, while decades old, has seen tremendous changes with new technologies creating new opportunities to reach the end-consumer. There are multiple complexities to entering it, however, and challenges of costs, expertise, and agility that need to be addressed.

The importance of knowledge

MNOs, Telcos and sometimes even online operators have decades of deep-level experience in all aspects of telecommunications, but the challenges of managing and delivering video signals to multiple devices are unique and multi-faceted. Video is an industry like no other with a rich and complex technological heritage of specific workflows, quality aspects and production methodologies that both vary from broadcaster to broadcaster and are currently experiencing accelerated change. Expertise in the field and deep understanding – especially for live and/or linear video content – of its specific processes is vital to effective operations. It is also effectively a global cottage industry where previous relationships and reputation are often key factors in achieving business objectives.

Controlling operational and content costs

The costs of implementing a technology stack capable of delivering state-of-the-art viewing experiences to audiences, which can scale quickly into the millions, can be prohibitive. While the movement towards cloud-based solutions has largely seen this become an operational expense rather than capital one, the need for constant investment to keep up with rivals and adapt to a harsh competitive landscape can be a burden. Some content costs have risen dramatically, driven by a variety of factors including video-based sports rights trading. At the same time, the demand for higher production value content and the need to maintain deep libraries with, where possible, exclusive material has exacerbated this trend in recent years. Classic and linear video content is also still an attractive alternative for end-consumers, making finding the right balance a major task for MNOs, Telcos and online operators.

The need for agility

The video market is in constant flux as new devices and viewing formats, coupled with ever-changing end-consumer interests, generate new business models with unprecedented speed. The results are successful operations that were only concepts several years ago and a proven need to be able to respond to market conditions in an agile manner. Scalability is crucial to be able to flex with demand, while there is a continuing requirement to offer the latest content and service features and keep pace with the front-runners in the market. Rapid time-to-market is a key attribute of new broadcast operations as this adaptability allows companies to enhance their product, take advantage of new opportunities as they present themselves, and subsequently launch new features and services.



DELIVERING EXCELLENT VIDEO - FAST

Our end-to-end solutions are designed to enable the swift deployment and monetisation of high-quality video services so that companies can grow their subscriber base rapidly, in a similar way that SES has driven SD to HD deployment.

One of the key issues that MNOs, Telcos and online operators face, when looking to expand into video offerings, is that the complex content aggregation and distribution requirements for multi-device viewing can mean a slower time to market. Projects can be tied up for months, and even years, as different solutions from multiple vendors are painstakingly sourced and then integrated while all the time the market opportunity is slipping by.

SES provides a unique combination of technology solutions, world-class infrastructure, and extensive and proven technical expertise all under one roof. That enables us to offer pre-integrated solutions that shrink lead times from months to weeks, and can make video deployments painless, efficient, and successful from the very start.

Genuine global distribution

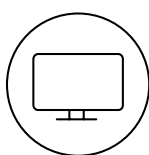
At SES, our unique access to our satellite fleet with over 70 positions is part of a key component of a global hybrid distribution network that also includes fibre, IP and streaming solutions. This enables us to deliver your content exactly where your consumers want it: everywhere!

It provides a global reach of one billion people, numerous fibre hubs and POPs (Point of Presences), and professional media centres for delivering managed services and 24/7 customer support. For example:



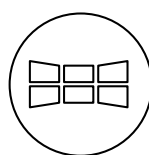
Worldwide reach of

1B+
people



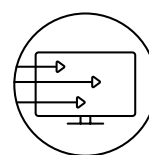
Distributes

8,300+
TV channels



Manages playout of

525+
TV channels



Delivers

8,400+
hours of online video
streaming daily

2020 Figures

Business customers demand quality and content rights owners demand that their intellectual property is professionally protected. We use the latest codecs to maximise bandwidth, support highest quality video for the best viewing experiences and genuine service differentiation, and rigorously protect content against piracy and illegal restreaming with best-in-class encryption standards.

Expanding reach to new audiences

Our end-to-end video services allow us to seamlessly manage and deliver linear and on-demand content directly to any viewing platform, letting you reach your viewers wherever they are, on whatever device they are watching.

Historically and today, SES provides comprehensive linear TV content distribution services to meet your business needs, including content aggregation and any type of preparation for further distribution. No other company has more than 8,300 TV channels aggregated within their portfolio, highlighting our expertise in this field and making us an important partner when it comes to supplementing VOD offerings with linear content in a single, universal package for maximum consumer choice and flexibility.

Meanwhile our playout and originating services allow you to avoid heavy infrastructure investments and choose an operational model that fits your requirements. These include:

- **Fully managed playout** – we take on complete operational responsibility for all your TV channels
- **Self-managed playout** – we let you handle multiple steps of the operational process, like scheduling, ad insertions, and live programming, without the need for heavy investment to get your infrastructure in place
- **Cloud playout solution** – we allow you to create new channels quicker and more cost-effectively than ever before, with no infrastructure investments required. Designed for Public Cloud operation and based on Microsoft Azure, our cloud-based playout leverages the many benefits of cloud systems to provide an accelerated launch speed, OPEX cost base, and more

For on-demand services, the SES Online Video Platform (OVP) allows MNOs, Telcos and online platforms the opportunity to swiftly launch OTT services, whether SVOD, AVOD, or TVOD in combination with linear video content delivery (i.e. classic TV channels), depending on national, or regional market requirements. A pre-integrated solution streamlines the process of taking content online to reach more viewers, offering a seamless workflow from video packaging to providing a state-of-the-art audience experience.

Unique end-to-end workflows

Our ability to aggregate, manage contribute and distribute content via a global network with global capabilities, delivering it to multiple platforms, including mobile, is unmatched. We offer the complete range of fully integrated end-to-end video solutions available via a single point of contact.

This enables us to offer several key innovations, such as our OVP, and rapidly bring to the market new innovations, such as the Linear Content Hub. The Hub provides tailored content packages that have already been prepared for dynamic ad insertion/replacement, providing a one-click, fast-to-deploy service for MNOs and Telcos, prioritising swift deployment. Different linear channel packages aimed at different market segments, such as documentaries, world news, or Ultra HD/4K, are selectable, with all content aggregation taken care of before distribution to the PoPs of choice.

All SES services are offered under one roof, reducing complexity and management overheads, while also helping companies pivot towards an OPEX expenditure model when launching video services.



Cloud-based scalability

Our established global network means we can scale. Other service providers may crash when subscriber numbers ramp up rapidly into the millions whereas we can maintain a reliable, stable service at this scale and more.

In addition, we are expanding our cloud-based solutions in co-operation with Microsoft Azure, offering a fast and economical route to market for those looking to set up linear channels with an even greater reduction in the need for technical set-up or contracts with public cloud providers.

We have always prided ourselves on our ability to offer a one-stop shop for a wide range of video services, providing end-to-end solutions from a single point of contact. By moving an increasing number of these services into the cloud, we enable a faster time to market than ever before, along with increased agility, scalability, and the opportunity to move all video services onto an OPEX footing.

A stable long-term partner

One of SES's key attributes is our longevity, truly coupled with extensive video experience in the digital treatment and preparation of video content. We have been in the video business for over three decades and are a solvent, exceptionally well-run public company that has spent billions of euros in a continuing investment program, which has established our world-leading communications satellite fleet and supporting global infrastructure. We are a transparent, accountable partner and as one of the largest players in the industry very much here for the long run.

This is an important factor. The timeframes of broadcast projects are often measured in decades and the companies that we work with do so safe in the knowledge that we will be working with them through the changing product cycles and capabilities of consumer equipment, and ever-evolving consumer demands, both now and in the future.

Monetisation

It is important for companies entering, or even considering the video market to be able to choose the business model that best fits their market. SVOD, AVOD, freemium, TVOD... our solutions are adaptable to the specific requirements of your business, whilst SES takes care of the operational necessities of the video treatment and preparation in the background.

The effective use of business analytics in ensuring video services satisfy audience demands and operate at maximum efficiency has been one of the defining trends of the recent broadcast industry. Leveraging and segmenting first party data has led to the impressive recent growth in targeted advertising; a rapidly growing monetisation path that allows media companies to use their audience data to offer segmented advertising slots to a growing range of interested advertisers, brands, and agencies.

Our server-side ad insertion technology lets users adapt the ad experience for multiple devices and platforms, enabling advertisers to find audiences on whatever device they're watching as well as insert ads into OTT linear streams, VOD, Catch-up and nPVR.

A full suite of analytics and reporting tools gives MNOs, Telcos and/or online operators access to viewer preferences and behaviours, enabling them to serve different ads to different target groups, even within the same video content and ad break. This allows our customers to maximise monetisation opportunities from each advertising slot. Furthermore, by showing more targeted commercials in line with viewer interests, advertising fatigue is lowered, and ad effectiveness is increased, mitigating churn.

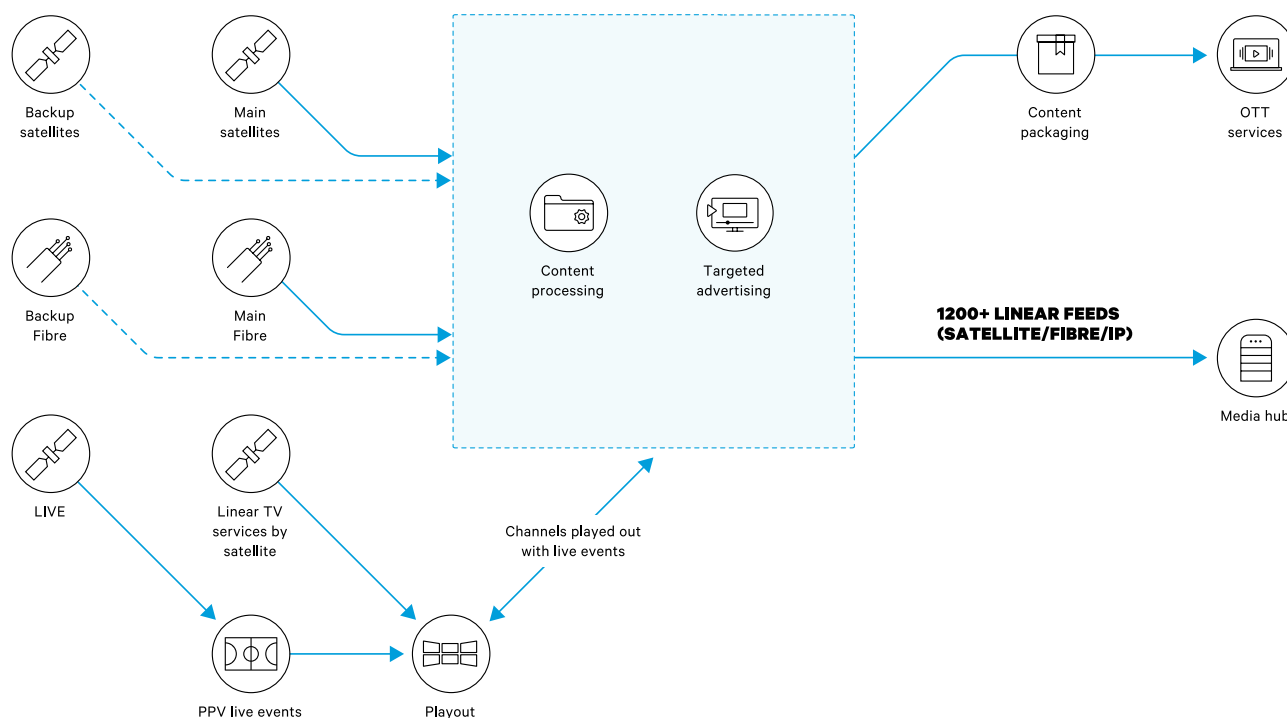
SUCCESS STORY

Expanding MNOs, Telcos and online Platforms' Reach

SES provides solutions for tier 1 MNO, Telco and online platform customers, offering a comprehensive service that allows us to aggregate linear TV channels, live and on-demand content and deliver to takers with the best viewing experience on a global basis. This means that MNOs, Telcos and online platforms can take advantage of an end-to-end solution from our dedicated media facilities. SES provides solutions to aggregate, process and deliver content in any format, and/or profile to any screen, or any MNO, Telco, online affiliate. The resulting service provides MNOs, Telcos and online platforms with:

- Content in their required format and profile, following comprehensive formatting, transcoding, and encoding processes
- Content aggregation and delivery of live and linear as well as on-demand content as needed through the SES global network with optimised delivery over satellite, fibre, IP and streaming
- Payout services to manage 24/7 linear TV channels and Pay-Per-View content
- Targeted advertising solutions
- Network management and video monitoring services

400+ CHANNELS DOWNLINKED BY SATELLITE WITH MULTIPLE AUDIO



All in all, SES aggregates over 400 channels, and delivers as output over 1200 feeds, supporting live, linear and on-demand content for Telcos and MNOs. This provides a powerful, plug and play service for MNOs, Telcos and Online platforms that are looking to bring services online with minimal time to market and reduced exposure, costs, and resource drain.

Learn more about SES's full portfolio of services and solutions.

Website: [ses.com](https://www.ses.com)

