

VIDEO

COMBINING SATELLITE AND OTT DELIVERY





HYBRID SOLUTIONS BETTER MEET THE NEEDS OF TV AUDIENCES TODAY

OVER-THE-TOP (OTT) SOLUTIONS ARE WIDELY BEING PROMOTED AS THE FUTURE OF TELEVISION; BUT QUESTIONS REMAIN AS TO HOW THIS FAST-CHANGING LANDSCAPE IS LIKELY TO EVOLVE.

As audiences demand greater image definition, can OTT content be delivered in optimum quality? And how does satellite fit into the picture?

Media and broadcast service providers must adapt to keep up with viewer expectations. Can hybrid satellite and OTT solutions help broadcasters optimise their services and reach more homes?

CONSUMER VIEWING HABITS ARE CHANGING

Today's viewers have more choice and control than ever before, with interaction and content on-demand changing in particular how younger audiences consume content.

Viewing habits are diversifying as we watch content wherever and whenever we want. We consume at our convenience and want the best TV experience irrespective of how we're accessing it.

At the same time, broadcast TV still has widespread appeal. Television is a central part of our daily lives and the key medium that enables advertisers to reach several million homes. It is essential for building strong brands, and a very efficient means for content owners to deliver sports, news and popular entertainment.

Although viewing times are often said to be declining, a recent report by communications regulator Ofcom¹ which compared TV viewing habits in 16 countries,

found that the average daily time spent watching live broadcast television dropped by only two minutes between 2015 and 2016, to 3 hours 28 minutes per person. Countries such as Australia, China and Sweden saw the steepest decline compared to other markets. The highest growth rates came from India (up 7%) and Brazil (+9%).

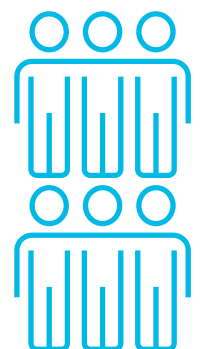
In the United Kingdom², the average time spent watching TV dropped by just four minutes to 3 hours 32 minutes a day, and the weekly reach remains high with 91% of the TV population watching TV at least once a week – which is similar to a decade ago.



3h28mns

Average daily time
spent watching live TV

91% in UK

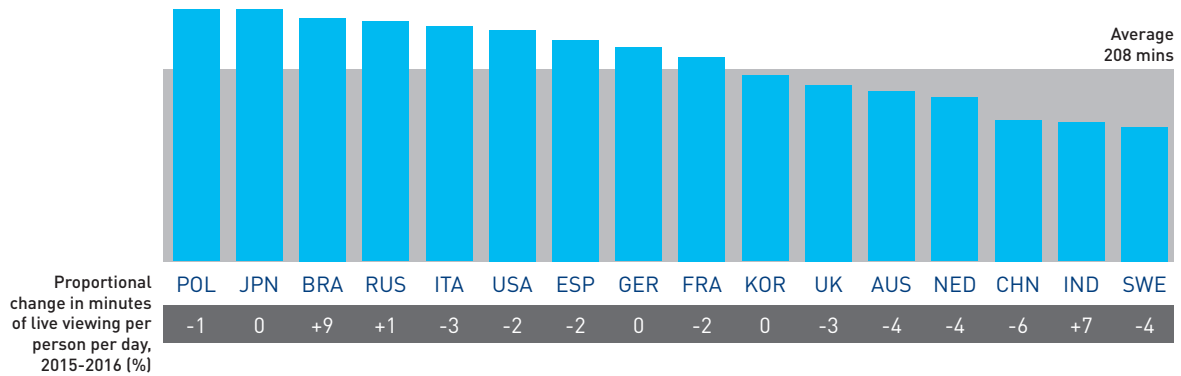


TV population watching
TV at least once a week



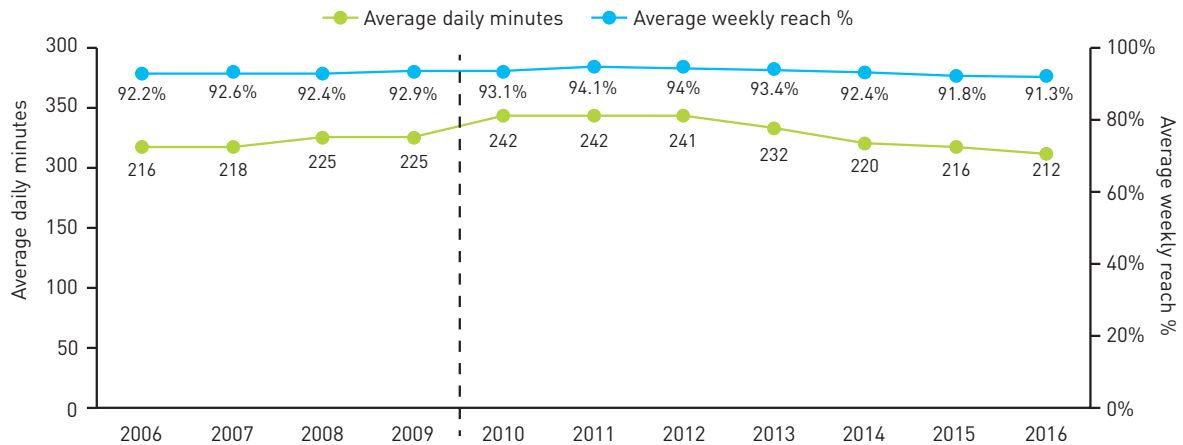
VIDEO BROADCAST TV VIEWING

LIVE BROADCAST TV VIEWING: AVERAGE MINUTES PER PERSON PER DAY IN 2016



Source: Médiamétrie, Eurodata TV Worldwide - One Television Year in the World 2017.

AVERAGE WEEKLY REACH AND DAILY MINUTES OF TV WATCHED: 2006-2016



Source: BARB, Individuals 4+, network, total TV. Reach criteria: 15+ consecutive minutes of viewing at least once in the average week.
Note: New BARB panel introduced 1 Jan 2010. Therefore pre-and post-panel change data must be treated with some caution (see dotted line).



INCREASING DEMAND FOR HIGHER IMAGE QUALITY

Image quality is increasingly important to audiences, as we see with the acceleration in take-up of HD and Ultra HD (UHD).

In 2017, almost 9000 HD channels were being distributed worldwide, an increase of 12% over the year³.

The rapid growth of HDTV is demonstrated in Eutelsat's latest research on TV markets. The 2017 TV Observatory for MENA reveals that the number of free-to-air channels broadcast in HD at the leading 7/8° West video neighbourhood increased by 44% in just one year, and 66% of homes at 7/8° West are now equipped for HD reception.

To meet this demand, bandwidth requirements are increasing. Demand for UHD is also growing, with over 75 million 4K TVs shipped in 2017

While UHD delivery can be challenging via OTT platforms, even in Europe, satellite bandwidth handles UHD seamlessly. This is why already over a dozen UHD channels have chosen Eutelsat satellites to feed both DTH and terrestrial networks in Europe, Russia and MENA.

If you want to provide a nationwide UHD quality service, only satellite has the bandwidth to do so. Satellite delivery guarantees an optimal service quality as the bandwidth is entirely dedicated to the video service, unlike OTT where it is shared with other services and viewers.

Without the necessary bandwidth, UHD channels may not display to their full potential on larger screens. In the USA, for example, when Netflix launched its first UHD titles in mid-2014, it was only accessible to homes with a 20+Mbps internet connection. Using an Adaptive Bit Rate, content quality dropped down to HD when the network saturated.

DirectTV, however, launched their UHD VoD service in November 2014 with content preloaded via satellite. By leveraging their existing HD set-top boxes, the offer was accessible to all subscribers nationwide. Subscribers only needed a UHD screen to enjoy the content.

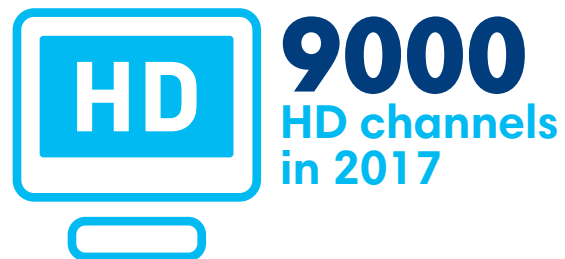
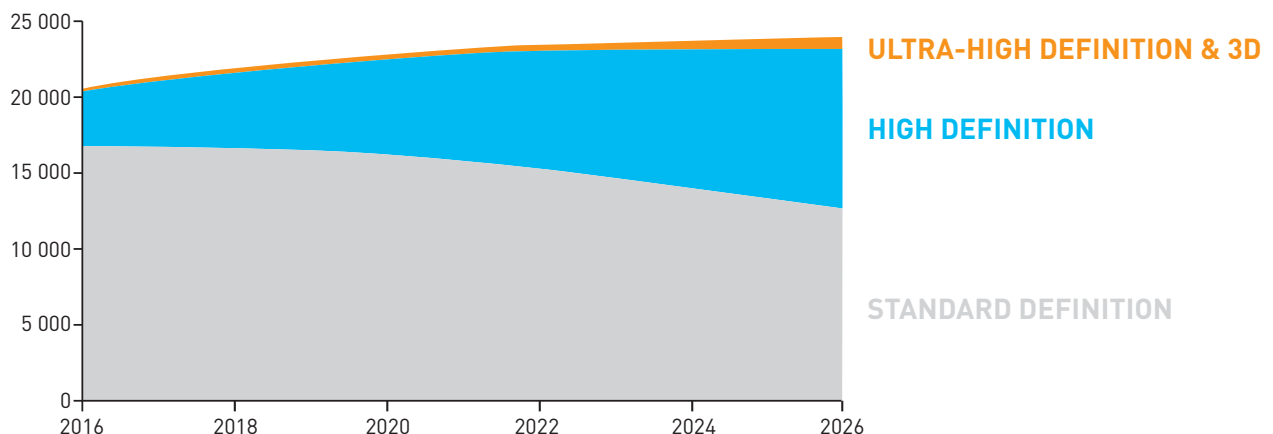


IMAGE QUALITY STEADILY INCREASING





SATELLITE TV CONTINUES TO GROW

The latest industry data shows that satellite TV is continuously growing.

A recent study of global pay-TV subscribers by Dataxis reported a 3% growth in satellite TV subscribers between 2016 and 2017, taking the pay-TV audience to 245 million homes; to which should be added more than 135 million free-to-air homes. Satellite delivery continues to gain market share worldwide, and is predicted to grow by 50 million homes between 2016 and 2021 to 430 million homes – 26% of the global market.

In terms of TV channels, Euroconsult’s 2018 Satellite Communications and Broadcasting Market Survey foresees the launch of an additional 2,130 satellite TV channels over the next ten years, with close to 44,300 channels by 2027.

But there are also changes on the horizon. We are seeing a move towards more hybrid solutions involving both DTH and OTT, with OTT often used in addition to traditional services, for viewers seeking more on-demand content as well as specific live programming.

Case study



Meeting viewer demand whenever and wherever

For the Pyeongchang 2018 Olympic Winter Games, Discovery announced both record linear and digital audiences across its platforms, highlighting viewer demand to access live content whenever and on whatever screen they want.

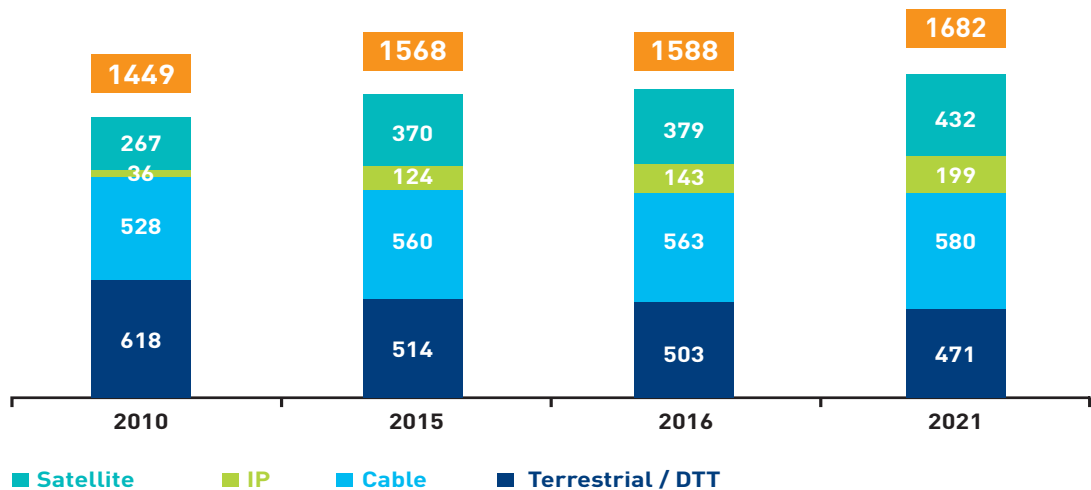
In Discovery’s top ten markets across Europe, approximately 58% of the population watched free-to-air and pay-TV channels, both its own and those of partner broadcasters, with a record-breaking 90% TV audience share in Sweden and Norway.

A record breaking 76 million users also enjoyed the Games online, on social and through the integrated Eurosport app.

In just the first weekend alone, the Games saw 212 million users across the various platforms, with an audience of 186 million via free-to-air and pay-TV.



MILLIONS OF TV HOMES BY DISTRIBUTION MODE GLOBALLY



Source: Digital TV research, June 2016



DISTRIBUTION CHALLENGES WITH OTT

OTT services rely on a shared network, where the bandwidth is used by a number of services. This can lead to quality issues when large amounts of internet bandwidth are consumed.

During peak hours, and for highly watched content such as sports events or popular TV shows, network overload can cause buffering, delays, poor picture quality and loss of service. This can even affect major events such as America's Super Bowl in 2018, which saw screens go dark for 30 seconds during the game, hugely impacting customer satisfaction.

The problem is that OTT service providers have trouble solving network overload issues. Content Delivery Networks have no impact on potential network overload on the ISP network itself, they only guarantee the fluid and scalable signal transmission from broadcaster server to ISP network gateways.

Increased video compression, such as MPEG-4, is not a long-term solution to network overload either as it can only partly compensate for the parallel bandwidth increase coming from higher market standards and customer expectations in terms of video definition – be it HD or UHD.

In contrast, satellite guarantees an optimal video QoS, as bandwidth is entirely dedicated to the video service instead of being shared with other services. Dedicated bitrates are guaranteed, with fully redundant ground and space infrastructure if required by the customer.

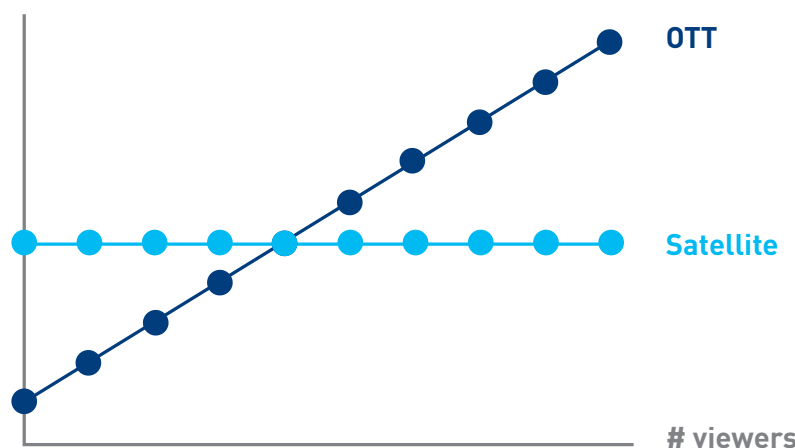
PROVIDING A CONSISTENT SERVICE TO ALL HOMES

The exclusive use of terrestrial broadband networks for interactivity could leave a significant proportion of consumers permanently unable to access linear and non-linear services in areas with no terrestrial coverage. Compared to the coverage and capabilities of terrestrial networks, satellite provides cost-effective and immediate access to TV customers virtually anywhere, with consistent signal quality across the coverage, and while OTT costs rise with the number of viewers, satellite costs remain fixed.

Satellites are a very cost-effective way to reach large numbers of people, particularly in regions with widely dispersed populations and in challenging environments. They cover all households within the footprint, including those unable to access OTT services due to insufficient internet bitrates. They enable all citizens to be supplied with a similar service across regions instantaneously, and maximise the route to market as they deliver to all networks.

And from a viewer perspective, in most emerging markets the end-user monthly fee for a data rate sufficient to use OTT services is too high. Consequently, even if technically the network would allow live TV via OTT, the majority of viewers would be unable to use the service due to prohibitive data plan pricing models.

SATELLITE COSTS DON'T RISE AS VIEWER NUMBERS INCREASE



Source: Eutelsat

DEDICATED BANDWIDTH FOR CUSTOMER SATISFACTION

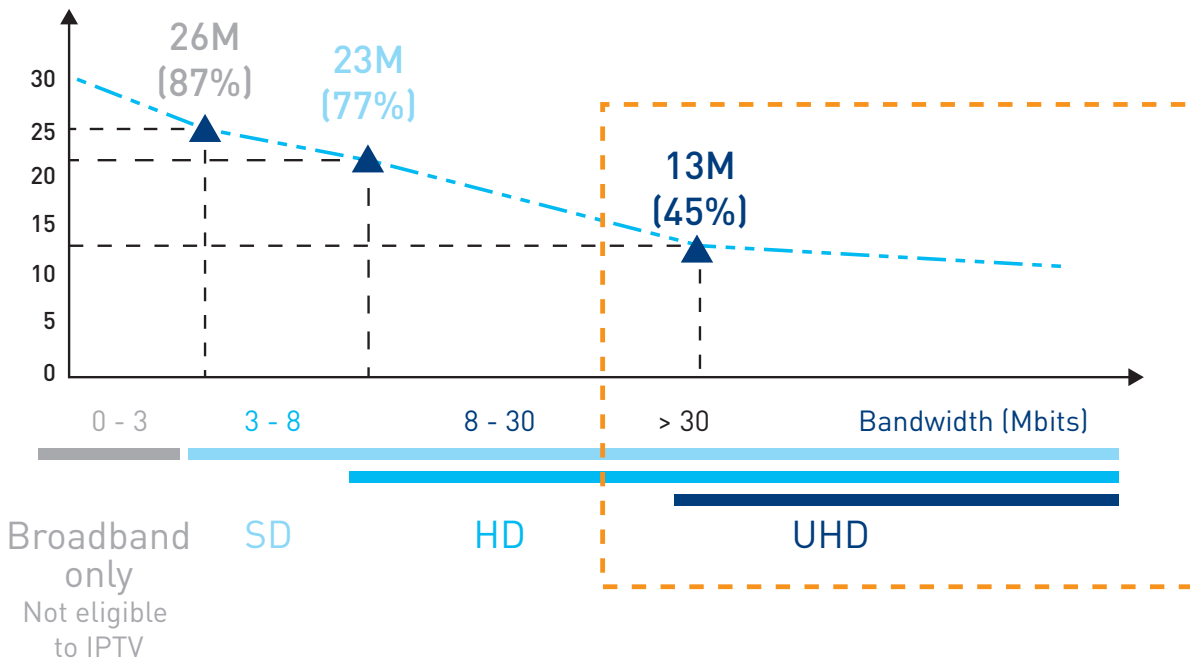
SATELLITE COVERS ALL TV HOUSEHOLDS

Satellite coverage reaches all TV households in a region, including those not eligible for OTT due to absent or insufficient internet bit rates.

For example, in 2017 less than 50% of the broadband access in France could receive UHD channels, even though France is well-equipped with 86% broadband penetration.

ELIGIBLE BROADBAND ACCESS RATES TO RECEIVE OTT IN FRANCE

**Repartition of Broadband Access
per bandwidth
(Million and % Penetration)**



Source: Analysis Mason, World Bank, Eutelsat Analysis



VIDEO HYBRID SATELLITE OTT SOLUTIONS

EVOLVING THE USER EXPERIENCE

Traditionally, the satellite user experience was limited by the absence of a return link; now it's catching up. Solutions using terrestrial technologies as an alternate return path help maximise reach and monetisation, offer multiscreen capabilities, and are paving the way for analytics and targeted advertising.

Cross-device consumption via OTT enables users to watch content from any device, at any location and at any time. With satellite, this is now becoming possible as hybrid satellite-OTT delivery solutions like Eutelsat CIRRUS enable broadcasters to offer a flexible, seamless content experience across multiple screens.

MEETING CUSTOMER EXPECTATIONS

Combining broadcast and broadband can offer the best of both worlds, with hybrid solutions for consumers bundling content from satellite broadcasting and broadband internet streaming.

Satellite broadcasting delivers a huge catalogue of linear TV channels as well as short-tail on-demand content, with the best possible quality.

At the same time, a long-tail on-demand content catalogue can be provided via broadband, along with audience measurement, targeted advertising, and video consumption outside the home.

Hybridisation enables broadcasters to extend the range of services they offer by leveraging the benefits of satellite and OTT.

EUTELSAT CIRRUS: YOUR CONTENT SIMPLY ANYWHERE

Eutelsat CIRRUS is the hybrid satellite-OTT solution from Eutelsat. It's the reliable, high quality and cost-effective answer for broadcasters to get their content into more homes.

Designed to overcome the challenges inherent in building a content distribution business, the fully integrated, user-friendly platform delivers consistent quality content to customers, anytime, anywhere, on any screen.

Enabling broadcasters to meet increasing customer expectations for a flexible, seamless content experience across multiple screens, the turnkey content delivery solution delivers video and channels simply anywhere, with audience analytics to help better monetise content.

Eutelsat CIRRUS is fully supported, with a modular approach that meets varying video delivery needs.

A turnkey DTH service provides end-to-end video distribution combined with cloud-based service management. Bringing together the strengths of traditional DTH with next-generation features, the fully integrated platform delivers an enriched viewer experience, with the highest image quality and a consistent end-user experience on all screens.

A multi-screen offer complements the DTH broadcast service with OTT streaming. This enables end-users to watch video content on devices such as mobile phones and tablets, accessing live TV, start-over programmes, catch-up TV and on-demand catalogues.

EXTEND MULTI-SCREEN DELIVERY VIA SATELLITE

In addition to internet based (OTT) multi-screen delivery, Eutelsat CIRRUS leverages SmartBEAM technology by using a combination of satellite and Wi-Fi to deliver IP-native video content to end-users.

SmartBEAM provides a Content Delivery Network (CDN) which can extend OTT distribution where the internet is insufficient. Live content is served directly, while on-demand content is locally cached for the end-user to access at any time.

Case study

Enhancing the viewing experience on mobile devices

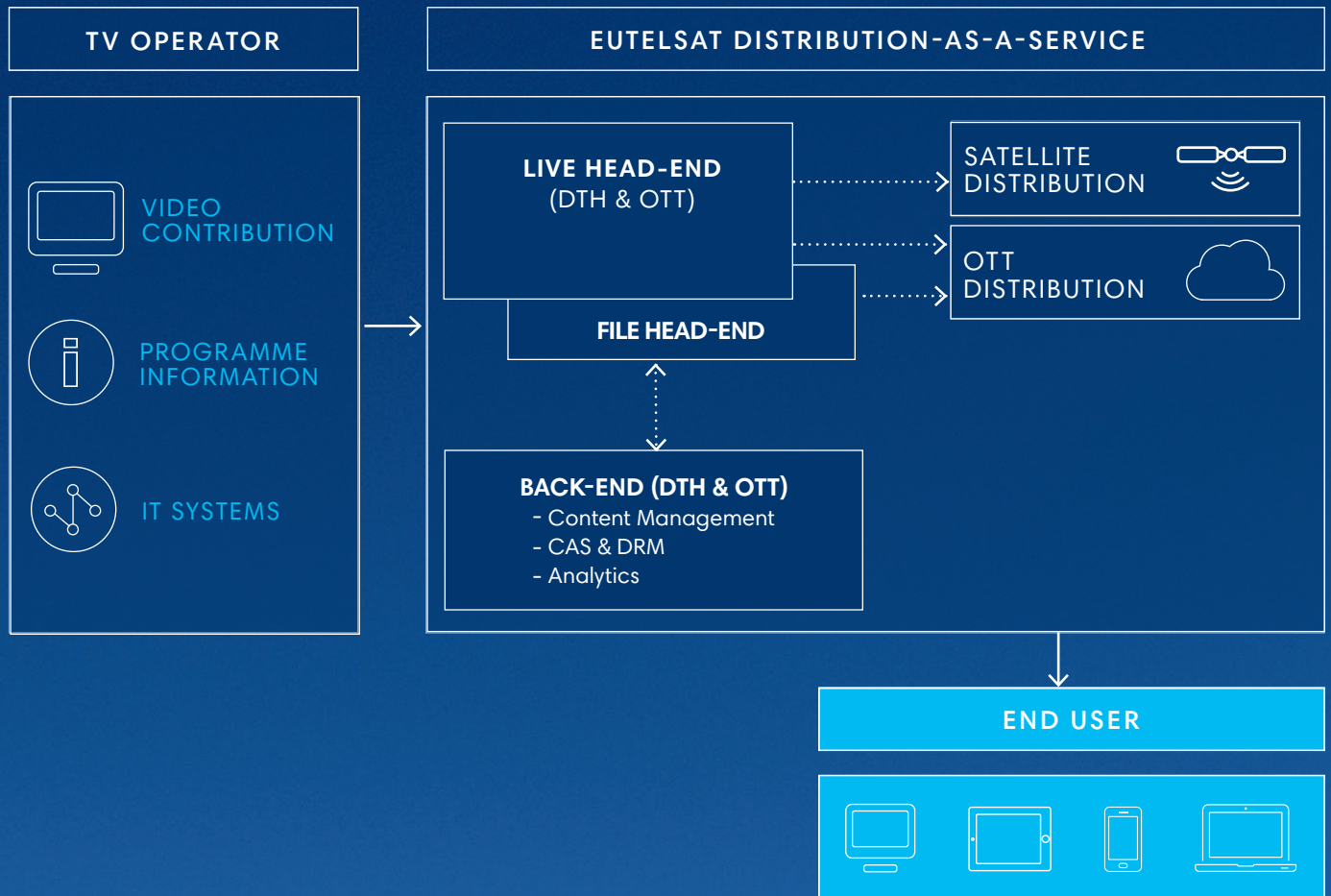


Russia's leading TV operator Tricolor TV has launched the SmartBEAM solution in response to demand from enterprises, further expanding their audience. Called Territoria TricolorTV, the innovative satellite-based service enables consumers in hotels, airports and other public venues to watch a bouquet of 50 TV channels on their mobile devices without consuming their mobile data allowance.

This unique offer in Russia enables enterprises to enhance their relationship with their customers who benefit from a high-quality viewing experience on their mobile devices while at the venue. SmartBEAM gives users better picture quality compared to unmanaged terrestrial networks and Tricolor can guarantee quality of service to end-users.



VIDEO OPTIMISE REACH WITH EUTELSAT CIRRUS





AUDIENCE INTELLIGENCE FOR ADVANCED TV SERVICES

HbbTV (Hybrid Broadcast Broadband TV) is an industry standard designed to meet both consumer expectations of the viewing experience, and broadcaster needs for visibility on the use of content and services.

Used by a growing number of players in video content distribution worldwide, it supports interactive services on connected equipment (e.g. TVs, set-top boxes) which interact with HbbTV-compatible user equipment. In practice, HbbTV combines broadcast networks such as satellite, for high quality channel distribution, with internet for interactive services and content. It opens the door to personalisation, enabling broadcasters to optimise knowledge of their audience profile and habits, and allow targeted, personalised advertising.

Case study



Unlocking new opportunities with personalised services

French Digital Terrestrial Television platform, FRANSAT, is an early adopter of HbbTV. Launched in 2009, FRANSAT offers free French national channels and thematic pay-TV bundles to around two million households.

In 2013 they added the HbbTV FRANSAT Connect portal, with an enriched TV guide, “catch-up” TV option and VOD catalogue.

The service will be further developed, including audience intelligence and preference tracking and personal recommendation in order to continually improve the viewing experience.



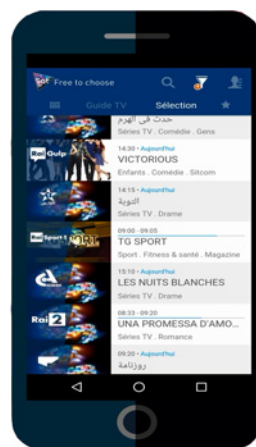
ENSURING CONTENT VISIBILITY FOR FREE-TO-AIR CHANNELS

Visibility is another important factor. With the sheer amount of content available, visibility on a platform is crucial so that people can find the right content. Satellite and terrestrial networks are focused on regional delivery, so channels only compete with a finite number of other channels. However, OTT platforms are available on the internet, where competition can be worldwide, and service providers often produce their own content, funnelling market share from existing content providers.

Apps such as Eutelsat’s Sat.tv enhance content discoverability, enabling free-to-air TV channels to give their customers the best TV experience. Sat.tv is a new-generation electronic programme guide (EPG) for smartphones, tablets and smart TVs, designed to enrich the viewing experience. Available for the HCTBIRD and 7/8° West video neighbourhoods in EMEA, it promotes better access and visibility for free-to-air TV channels, providing them with a new way to engage with audiences.

Sat.tv has already been downloaded more than 1.2 million times, and currently references over 400 free-to-air channels. Rich programme information enables content classification by genre, theme and language, providing users with recommendations based on preferences, alerts on events and generally simplifies the viewing experience. Using the HbbTV standard, viewers can directly access both personally selected and recommended programmes on their connected TVs.

PROMOTING BETTER ACCESS AND VISIBILITY FOR FTA CHANNELS





EUTELSAT AN IDEAL PARTNER TO REACH MORE TV HOMES

Now more than ever, satellite broadcast and broadband must work together where terrestrial networks cannot deliver high-quality linear TV on their own.

Satellite plays a vital role in digital migration and offers a clear advantage, especially when it comes to delivering linear content. It is the natural solution in rural areas and anywhere with varied topography and where the cost of deploying fibre is simply too high.

Combining the best of both worlds, a hybrid offer of linear TV reception via satellite and on-demand services via OTT will be the most viable, future-ready solution to deliver a rich portfolio of video content.

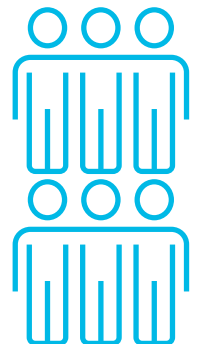
As an expert in digital migration, Eutelsat is ideally placed to help broadcasters maximize their reach, with innovative advanced satellite services to enhance the viewing experience and meet evolving consumer demand.

By enabling clients to reduce the complexity and cost of their operations in a new digital world, we help them to maximise their service potential while minimising the complexity of their operations.



430M
SATELLITE TV HOMES
BY 2021

91%
in UK



TV population watching
TV at least once a week



44,300
SATELLITE TV
CHANNELS BY 2026



55M
4K TV'S SHIPPED
IN 2016



9000
HD channels
in 2017



3h28mns
Average daily time
spent watching live TV

Eutelsat is one of the world's leading and most experienced operators of communications satellites. Our extensive network of high-performance satellites, located between 133° West and 174° East, provides capacity to clients that include broadcasters and broadcasting associations, pay-TV operators, video, data and Internet service providers, enterprises and government agencies.

Eutelsat's satellites provide ubiquitous coverage of Europe, the Middle East, Africa, Asia-Pacific and the Americas, enabling video, data, broadband and government communications to be established irrespective of a user's location.

Headquartered in Paris, with offices and teleports around the globe, Eutelsat represents a workforce of 1,000 men and women from 46 countries who are experts in their fields and work with clients to deliver the highest quality of service.

What can we do for you? Please visit
www.eutelsat.com/enquiries

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