

Satellite Broadcast Distribution

EBU Uses NovelSat NS3 to Deliver 50% More TV Channels Per Transponder

“Our members are demanding more and more HD video content. At our major sporting events, NovelSat showed that NovelSat NS3 is the right choice for our network.”

Paolo Pusteria
Head of Procurement & Network Partnerships, EBU



EBU

Challenge

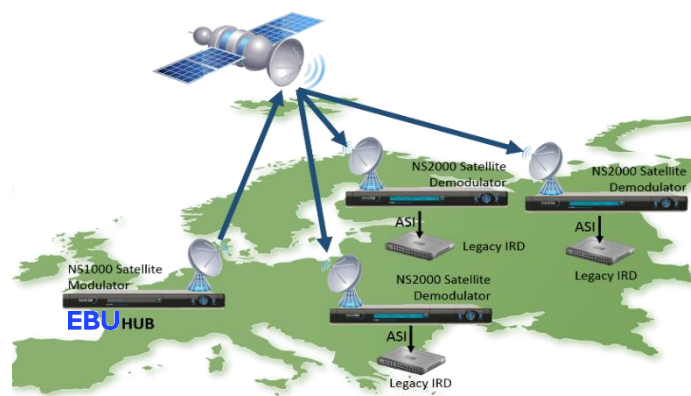
The European Broadcasting Union (EBU) needed to upgrade their global satellite TV distribution network to ensure that it would be able to continue to grow profitably and to meet increasing demand for more content channels. The EBU wanted a solution that met these needs while taking into consideration continued future growth without incremental cost increases as they roll out new channels, including more HD and 4K UHDTV (Ultra High Definition TV) programming.

Goal

Implement a satellite transmission solution in the global EBU satellite TV distribution network to maximize the number of broadcast TV channels using a 72MHz satellite transponder.

Background

The EBU operates the world's largest satellite and fiber live video network. It is the world's foremost alliance of public service media organizations and premier distributor and producer of high-end live sport and news, as well as entertainment, culture and music content.



NovelSat technologies have successfully supported live EBU satellite transmissions of the London 2012 Olympic Games, Euro-Cup 2012, NBA, Formula One and other major events. In 2014 the EBU upgraded its European satellite network with modulating equipment using NovelSat NS3™ third generation satellite technology. This upgrade effectively made the EBU satellite network the most spectrally efficient and resilient in the world.

The EBU global distribution network is increasingly required to support demand for more content channels of both recorded and live TV, including HD and 4K UHDTV streams. This growing demand stretches the network's satellite bandwidth resources. That is one of the key reasons that the EBU chose the spectral efficiency of NovelSat.

For more information, please contact NovelSat at info@novelsat.com

Solution

With hundreds of sites worldwide, the EBU needed to find the most spectrally efficient solution for adding satellite distribution capacity while ensuring optimal long-term profitability.

To achieve their goals, the EBU selected NovelSat NS1000 and NS2000 Satellite Modulators and Demodulators powered by the NovelSat NS3 waveform, the industry's most bandwidth efficient satellite transmission technology.

Using NovelSat technology, the EBU can now distribute 18 TV content channels per carrier using a single 72MHz transponder where before they could transmit only 12. That's a 50% boost in spectral efficiency that translates directly into profit for the EBU. What's more, with the NovelSat solution, the EBU can take advantage of this cost saving technology while continuing to use the installed base of legacy IRDs that are deployed throughout the network.

NovelSat NS3 efficiency boosting software goes further to improve EBU signal quality through superior resilience to channel impairments such as phase noise, non-linearity, jamming and interference and other factors.

Technology

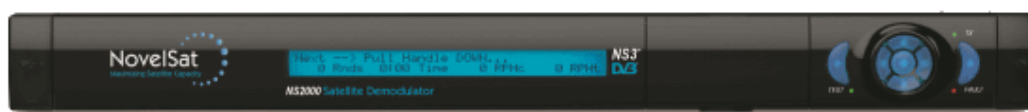
The EBU broadcast hub uses NovelSat NS1000 Satellite Modulators to transmit using NovelSat NS3 waveform at 70MSPs and 16APSK modulation. NovelSat NS2000 Satellite Demodulators at all the remote sites receive the broadcasts and deliver the signals to legacy IRDs via ASI interface.

In addition to maximum spectral efficiency, the NovelSat solution also ensures the best possible signal quality, even with saturated transponders. Taking advantage of the entire available spectrum, saturation can distort the satellite signal. NovelSat DDC, non-linear Dynamic Distortion Compensation, effectively reduces the saturation effect at the receive side. The EBU network benefits further from Dual Channel Mode which enables both ASI video and IP data to be transmitted over a single channel.

All NovelSat satellite transmission products support major satellite transmission industry standards, including DVB-S and DVB-S2, plus optional NovelSat NS3. They enable optimal interoperability, throughput and scalability. The NovelSat NS1000 Modulator and NS2000 Demodulator power the satellite industry's most scalable point-to-multipoint transmission applications, enabling applications from 64Kbps to 365Mbps on a single carrier.

Summary

NovelSat NS1000 Satellite Modulators and NS2000 Satellite Demodulators using the NovelSat NS3 waveform, with superior spectral efficiency, scalability and high-end software-definable feature set, boosted the EBU's capacity per 72MHz transponder from 12 to 18 TV channels. With optimized bandwidth and equipment costs and no need to replace legacy IRDs, EBU profitability gets a lift while millions of people around the globe enjoy more and more high quality EBU programming.



NovelSat NS1000 Satellite Modulator

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