Success Stories at a Glance

**EBU**
- Broadcast Distribution: NovelSat NS3
  - TV Distribution: Major Sports Events
  - 1st live UHDTV satellite transmission
  - Hundreds of sites worldwide
  - Increased throughput by more than 30%
  - Enabled 18 TV Channels instead of 12 over the same Satellite Bandwidth

**GLOBOSAT**
- NovelSat Trans-Modulator
  - Trans-Modulator: NS3000 Modem configured:
    - Input - NovelSat NS3/NS4
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Complementary NovelSat Solutions for Broadcast

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Related products:
- NS3000 Professional High-Data Rate Satellite Modem (up to 850Mbps), NS300X IP Satellite Modem (up to 30Mbps), NS1000 Satellite Modulator, NS2000 Satellite Demodulator.
- www.novelsat.com • info@novelsat.com
- Hayetzira 3, Raanana 43634/9 Israel
Cost-effective satellite transmission solutions for broadcasters

Video distribution networks transmit TV content to billions of customers worldwide. Whether they are Digital Terrestrial TV, Cable or even Direct-To-Home (DTH) Satellite TV providers, all make use of the satellite space segment for video distribution.

In a typical TV distribution network, satellite transmission is used to bridge large geographical areas. This can be between the main distribution head end that uplinks the TV content to the head ends of each service provider (DTT, Cable and DTH) and to receive contributed TV content generated by mobile utilities such as flyaways and SNG vehicles. The cost of satellite bandwidth presents a significant percentage of broadcasters’ OPEX.

NovelSat offers a wide range of solutions to meet each of the TV distribution network’s challenges, enabling major reduction in satellite bandwidth costs.

Boosting TV Distribution Network Efficiency

TV distribution networks can easily reduce operating costs without replacing existing network elements.

- Replace the existing DVB modulator at your Hub site with a NovelSat NS1000.
- Simply add a NovelSat NS2000 Satellite Demodulator in front of the existing IRD stack in the head ends.

With the NovelSat NS4 waveform used in these devices broadcasters can improve spectral efficiency by up to 45% compared with DVB-S2. That efficiency boost allows broadcasters to either reduce bandwidth use, potentially saving millions of dollars annually, or to provide more content channels and advanced services (HDTV, UHD) without acquiring additional bandwidth.

NovelSat NS4 technical advantages include unsurpassed 2% Roll-Off-Factor, enhanced spectral efficiency algorithms and improved tolerance for signal impairments and all types of interference.

Direct-To-Home: More TV Channels. Same Set-top Boxes

The DVB-S standard for satellite transmission still plays a major role in the Direct-To-Home (DTH) satellite TV industry: Millions of deployed DVB set-top boxes continue to receive more than 30,000 TV channels worldwide. Boosting spectral efficiency to enable more TV channels per MHz normally means upgrading all installed STBs for compatibility with newer standards such as DVB-S2/S2X, resulting in substantial investment.

With a simple OTA software upgrade, NovelSat modulators and modems can support DVB-S/S2 waveforms with 5% Roll-Off Factor (ROF). Compare that with 35% ROF specified by the DVB-S standard and a minimum of 20% ROF with DVB-S2. At 5% ROF, a NovelSat modulator can increase your capacity or enable you to transmit the same traffic using less bandwidth without replacing legacy set-top boxes and without effecting your link budget.

SNG Fleet: Bandwidth Saving Solution

When using a NovelSat NS300X or NS3000 Modem, an SNG operator covering an event can send and receive bi-directional video and IP data between the remote and the studio using existing bandwidth at no additional cost.

This is accomplished using:

- NovelSat DUET CeC – Software which enables you to double traffic without increasing satellite bandwidth
- Dual Channel Mode – Simultaneous mix of ASI and IP over the same carrier
- NovelSat FreeBand – Optional solution offering free SNG contribution bandwidth (using very low transmit power)

For example, an SNG can simultaneously deliver live HD video and recorded files while receiving IP data and VoIP from the home studio plus access Internet for SNG personnel.

“We had an urgent need to improve our satellite efficiency, and we came to the conclusion that NovelSat NS3 technology was the best solution to go with.”
— Laurencio Carvano, Director of Technology, Globosat

“We using resources that we already have in our distribution network to support our remote contribution units just makes sense. And now we know it is possible.”
— Henry Barz, CTO, Rede Novo Tempo de Comunicação

“With the NovelSat NS3 platform, EBU was able to increase throughput of its satellite transponders by 30%.”
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