Unprecedented viewing experience with cinema-like picture quality

The vision of the future is fast becoming a reality for millions as the broadcast industry adapts to Ultra HD TV, the new benchmark in commercial broadcasting. Ultra HD (UHD) brings higher resolution, a broader range of colours, progressive scanning, higher frame rates, higher Dynamic Range (HDR) and immersive audio. This creates a stunning, immersive experience that is surpassing consumer expectations today and will continue to do so for decades to come.

Satellites are a natural platform for broadcasting UHD content. Their bandwidth availability and wide coverage areas enable viewers to receive the same quality signal wherever they are located within the satellite coverage. Satellites are fully UHD-ready and deliver content in optimum quality.

UHD broadcasting has been facilitated with the HEVC (High Efficiency Video Coding) standard which offers improved compression rates. At the HOTBIRD video neighbourhood, SPI International’s FunBox UHD, Fashion TV’s FTV UHD and Travelxp 4K have already selected HEVC encoding with 10 bits of colour depth, at 50 fps. These channels address a potential target audience of five million UHD-connected cable homes, as well as IP network operators and DTH homes across the footprint.

HEVC encoding for live events also enables broadcasters and rights holders to deliver major sports and other events at a lower bit rate than in MPEG-4. Eutelsat has been demonstrating this at the tennis French Open, with matches broadcast via Fransat UHD on EUTELSAT 5 West A. During the Euro 2016, Italy’s national broadcaster RAI delivered unprecedented live 4K coverage of the football championships, broadcasting several matches in Ultra HD to audiences in Italy via the Tivùsat platform.

HDR offers a greater dynamic range of luminosity, significantly increasing the contrast ratio for more vivid pictures. Pixels on screen are even brighter, representing outdoor scenes more accurately and giving more detail in the dark. Travelxp is the world’s first 4K HDR channel broadcasting with wide colour gamut and HLG HDR.

As UHD/4K set shipments are expected to surpass 112 million worldwide by 2020*, broadcasters are looking at Ultra HD to differentiate their offer. Satellite provides the perfect distribution platform to handle bandwidth requirements, delivering consistent quality to a maximum of viewers across wide geographic regions.

* IHS Research 2016

KEY FEATURES

→ Bandwidth availability and wide coverage areas
→ Immediate reception of Ultra HD across the satellite coverage with consistent quality
→ Potential market of five million connected cable homes via HOTBIRD
→ Global distribution and local delivery of Ultra HD services to TV and multiscreen
→ Direct (DTH) and indirect delivery – feeding and complementing terrestrial networks
→ De-congestion of terrestrial networks from bandwidth heavy applications
→ Demo channel in HEVC on HOTBIRD for cable, IPTV and pay-TV platforms
### 5° West / EUTELSAT 5 West A

- **12732 MHz Vertical Pol.**
  - DVB-S2, 8PSK, 2/3
  - Symbol rate: 29950
  - Viaccess encryption

### 7° East / EUTELSAT 7A/7B

- **11513 MHz Horizontal Pol. (Europe)**
  - DVB-S2, QPSK, 5/6
  - Symbol rate: 29900
  - Irdeto encryption

- **10887 MHz Horizontal Pol. (Sub Saharan Africa)**
  - DVB-S2, QPSK, 4/5
  - Symbol rate: 30000

### 13° East / HOTBIRD

- **10727 MHz Horizontal Pol.**
  - DVB-S2, 8PSK, 3/4
  - Symbol rate: 30000
  - Viaccess encryption

- **12539 MHz Horizontal Pol.**
  - DVB-S2, 8PSK, 5/6
  - Symbol rate: 30000

- **11219 MHz Horizontal Pol.**
  - DVB-S2, 8PSK, 3/4
  - Symbol rate: 29300
  - Videoguard

### 36° East / EUTELSAT 36B/36C

- **11862 MHz RHCP**
  - DVB-S2, 8PSK, 3/4
  - Symbol rate: 27500
  - Viaccess encryption (NTV Plus)

- **12054 MHz RHCP**
  - DVB-S2, 8PSK, 3/4
  - Symbol rate: 27500
  - DRE Crypt (Tricolor TV)

- **12360 MHz RHCP**
  - DVB-S2, 8PSK, 3/4
  - Symbol rate: 27500
  - DRE Crypt (Tricolor TV)

### 56° East / Express AT1

- **12092 MHz RHCP**
  - DVB-S2, 8PSK, 5/6
  - Symbol rate: 27500
  - Viaccess encryption (NTV Plus)

### 140° East / Express AT2

- **12226 MHz LHCP**
  - DVB-S2, 8PSK, 3/4
  - Symbol rate: 27500
  - Viaccess encryption (NTV Plus)