It's streaming. It's broadcast. It's Native IP.

Enabling standards-based OTT delivery on DVB broadcast networks

- Create new business opportunities **using existing DVB infrastructure**
- Deliver broadcast quality to all devices, **including existing smartphones**, even in low-connectivity areas and mobility contexts
- Reduce the cost and complexity of media distribution with a **single converged platform** feeding both IP and broadcast networks
- Simplify **content and service personalization** and ease **content monetization** with targeted ad insertion, regionalization, etc.
- **Improve sustainability** by eliminating duplicated streaming sessions

Early application areas

- Feeding hotspots in communities or public venues with high-quality linear OTT, even in areas with poor connectivity or during live events and at peak hours; smart pushing content over satellite during down times ('download to go') for:
  - Community service centres, e-learning programmes
  - Hospitality venues, shopping malls, holiday resorts, etc.
  - Mobility scenarios (maritime, aviation, long-distance transport)
- Offloading mobile network traffic, with popular OTT services delivered over broadcast to in-home devices while mobile networks are used for niche services.
- Also allows the VSAT sector to embrace video distribution, providing an effective tool to carry video over bidirectional satellite IP networks. Furthers the convergence of IP data transport and 'traditional' video distribution.

See dvb.org/dvbscene60

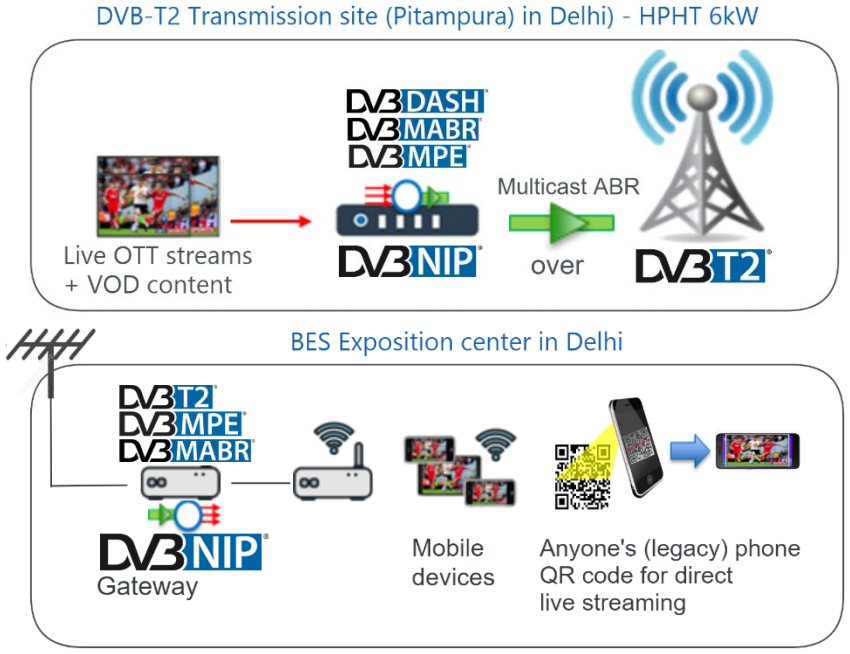
See list of demo partners overleaf.

DVB-NIP demonstration at BES India 2023

A live terrestrial feed is received on a DVB Native IP gateway serving live OTT and VOD content to a range of receivers without internet connectivity.

This feed uses DVB-T2 transmission with multi-protocol encapsulation (DVB-MPE) to carry multicast ABR streams. At the gateway, the streams are converted back to unicast to feed IP-enabled devices with typical OTT formats.

Using DVB-MPE (an option in DVB-NIP) allows IP packets to be carried within an MPEG-2 Transport Stream, thus making it possible to reach existing legacy devices. In situations where a transition phase is not required, DVB-NIP uses DVB-GSE (generic stream encapsulation) for link layer adaptation.



Demonstration partners

Contributions to our DVB-NIP demo at BES India 2023

EasyBroadcast – CMS and applications for gateways and receivers

EKT – gateways for DVB Native IP

Quadrille Ingénierie – DVB- MABR encapsulation and client

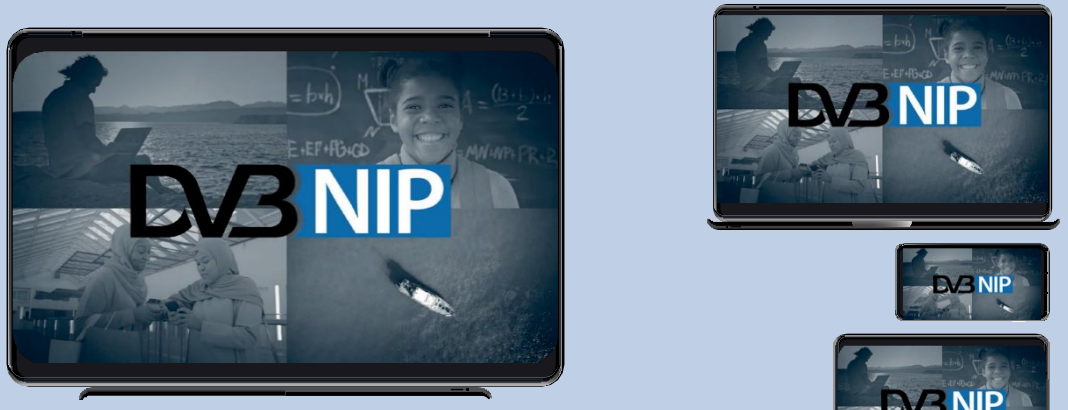
ST Engineering iDirect – IP encapsulation and modulation

What is DVB-NIP?

DVB-NIP (native IP broadcasting) defines a protocol stack for satellite and terrestrial television broadcasting **entirely based on IP and no longer relying on the MPEG-2 Transport Stream layer**. It covers, with the same broadcast signal, both professional content distribution applications (to CDN caches, mobile or broadcast tower sites, public hotspots, transportation, etc.) and consumer applications (DTH to IP in-home devices).

DVB-NIP reuses many of DVB's existing IP-based standards, adapting them for use on DVB broadcast networks where necessary. Alongside DVB-I for service discovery and programme metadata, it uses DVB-AVC and DVB-DASH for AV coding and packaging, DVB-MABR for multicast distribution, and DVB-GSE (generic stream encapsulation) for link layer adaptation. Physical transport uses DVB-S2X and DVB-T2. Additionally, some DVB-HB (Home Broadcast) functionality is used for in-home distribution scenarios.

To support the migration of existing DVB networks, the DVB-NIP standard also includes an optional backwards-compatible mode that uses multi-protocol encapsulation (DVB-MPE) to carry the IP packets within an MPEG-2 Transport Stream, for example using DVB-S2.



All device types are fed with the same IP-based encoding and packaging format