

Replacing Satellite with Credible Hybrid Alternatives

Partner with a trusted, global digital ecosystem enabler

Challenges with Satellite

Broadcasters using satellite for contribution and distribution face three main challenges today:

- High operational expenditure, which spirals out-of-hand with new-age requirements
- Restrictive, in that only a limited number of signals can be distributed on satellite
- Accompanying transmission lag also makes it unsuitable for remote operations and runs the risk of increased latency

Alternatives Available in the Market

To solve some of the challenges inherent in satellite, fiber and IP (internet) are the options currently in the market.

| Satellite Alternative | Potential Advantages | Limitations |
|-------------------------|---|---|
| Pure-play Fiber | <ul style="list-style-type: none">• Uninterrupted high-quality feed• Capacity to transmit high-resolution signals across long distances | <ul style="list-style-type: none">• Limited number of physical end-points• Access to fiber is limited and expensive in developing economies• Requires large-scale addition of new equipment to existing infra at content sources, massive changeouts in processes throughout the delivery chain |
| Pure-play Internet (IP) | <ul style="list-style-type: none">• Broadcasters are increasingly already on the Internet• Ease of connectivity reduces lead times for new locations• Can diversify content delivery to individual broadcaster packages catering to individual markets, thus increasing value of the content• Saves added burden of developing, managing a dedicated delivery infrastructure | <ul style="list-style-type: none">• Distribution over unmanaged, public network means quality is dependent on Internet speed, and subject to high latency• Lack of guaranteed QoS• Unreliable and no central co-ordination to resolve issues |

While pure-play fiber-based and IP-based distribution promise an exciting future for broadcasters, the challenges of an extensive shift to these mediums can prove to be technically overwhelming and comes with limitations as above. **A hybrid alternative that can enable savings on total cost of distribution technology, while increasing revenue by delivering flexibility and customization in the delivery model is the need of the hour for broadcasters.**

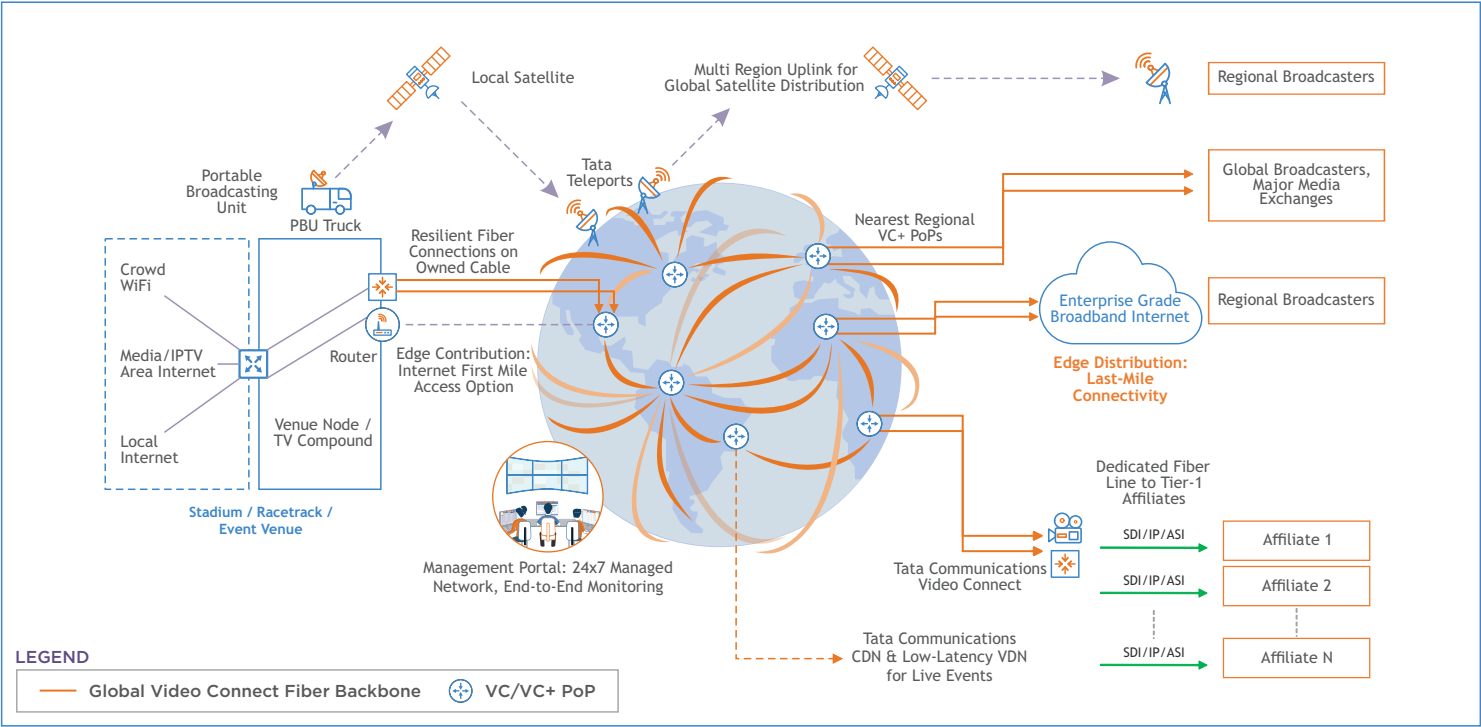
Our Solution: An All-Inclusive Hybrid Distribution Model

This is where engaging with an expert media transformation partner like Tata Communications can help. Our end-to-end hybrid IP and dedicated fiber-based transmission services enable broadcasters gain the freedom to test content and services in new markets without investing in new infrastructure. We ensure that you get value by partnering with us, since all these services are owned, provided, and managed entirely by Tata Communications under a single SLA with end-to-end monitoring. We deliver broadcast quality distribution enhanced for a flexible future.

Our smart, secure managed distribution approach is enabled by our global video-optimized fiber network that allows end-to-end connectivity, regional last mile breakout, and regional satellite distribution for markets where this remains a requirement.

How We Do It

Tata Communications' **Video Connect Plus (VC+)** solution helps broadcasters achieve this through its end-to-end managed service layers. We manage broadcast video distribution over our global 100 GB **Video Connect (VC)** backbone with pre-existing 1+1 fibre connectivity to most leading broadcasters. Coupled with the ability to run over the core network and breakout regionally to deliver the last mile over IP, we significantly reduce the reliance on open internet for distribution. Additionally, we have a global footprint of Tata Communications owned as well as third-party satellite uplink locations that can meet the need for satellite distribution where it is required. We peer with multiple local Internet providers and can provide deterministic routing on their networks.



*PoP locations in this diagram are indicative and for representation only. A full list of locations can be shared separately.

The Tata Communications Advantage

Our fully managed service allows broadcasters to operate their hybrid, next-generation delivery architecture. Additionally, with a good network presence globally, we can enable a hybrid satellite alternative for a large segment of potential consumers. Our global private network helps broadcasters leverage the public internet in a managed way through first- and last-mile connectivity. Here are the top advantages that we can deliver to you:

- From expensive satellite links to extensive savings:** Save on total cost of contribution & distribution technology by significantly reducing expenditure on satellite distribution.
- A futuristic approach to higher definitions:** IP allows for flexible scale-up of transmission bandwidth aiding easy addition of new channels, which compared to satellite is a more cost-efficient approach to catering to audience's demands of high-quality programming
- Simplify your content distribution:** The bi-directional nature of connectivity allows for regionalization of feeds, insertion of local ads, and other last-mile customizations; not possible through traditional satellite distribution
- New opportunities:** Our network allows tagging of channels for distribution to enable bespoke packages of content, that can be sold to individual broadcasters. For instance, in live sports, country # 1 can have the world feed plus 5 supporting feeds, while country # 2 can have the same world feed but with 10 supporting feeds and a country specific edit: increasing the value of the event.
- Seamless integration:** Our hybrid distribution model integrates seamlessly with both traditional and cloud playout platforms.

Customers Who Have Benefitted from Our Solutions



Future-proof your content distribution strategy by switching to our end-to-end, managed and hybrid ecosystem!
Talk to one of our experts today at MES@tatacommunications.com