

Integration of Blockchain Technology into Satellite Internet Networks

What?

With the recent innovative approaches to satellite communication technology, this kind of communication now offers new horizons. Low earth orbit (LEO) satellite networks, like **Starlink**, have attracted considerable attention in recent years.

LEO satellite networks are indeed useful in a variety of scenarios. In some remote, **rural areas** with small populations and the ocean, it is difficult to provide internet services due to the high costs of infrastructure. In addition, when traveling in fast-moving vehicles such as **airplanes**, the internet connection needs to switch between different ground stations which results in poor service quality. LEO satellite networks can provide broadband communication, global coverage and high-quality uninterrupted connectivity. As such LEO satellite communication systems can provide high-quality access for all users at any time and any place.

Why?

A blockchain-based architecture is similarly decentralized, potentially limiting internet censorship as it is implemented by several distributed nodes. Is there a symbiosis possible between blockchain-based networks and satellite networks?

Satellite communication use cases can be split into three categories: **service continuity**, **service ubiquity** and **service scalability**. Can **blockchain technology** be integrated into satellite communication systems to advance the principles of decentralization and overcome relevant satellite communication challenges such as having limited onboard resources and moving quickly, bringing high dynamics to the network access?

Can this add value for future smart grid scenarios, internet of things, artificial intelligence, edge computing, 5G, electric vehicles...?

Visit case:

