

Pro Talk

Can savvy satellite operators use Ka-band to compete with fibre and cable? asks Paul Scardino



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The answer to the question above is 'yes'. Traditionally, satellite communication technology offered the benefit of delivering a 'one to many' broadcast performance while providing continent-wide coverage.

But to meet changing demand for communications – including vast amounts of voice, video and data, and to bring broadband coverage to rural areas around the world – progressive companies are taking advantage of the unique capabilities of an emerging satellite and network option.

Most readers will be familiar with the C and Ku-bands normally used for digital TV, and many may also know about S-band. But as the need for wide bandwidth signals grows and the lower bands become more crowded, Ka-band offers additional frequency ranges of 26.5-40GHz at already occupied satellite positions.

Ka-band advantages

Providers must deliver the speed, power and bandwidth needed to operate in a world where TVs and computers have become one and the same. People want to watch news and sports live as it happens and view other programming at a time of their choosing. Those expectations require a delivery platform that is robust, flexible and totally interactive.

Ka-band satellites can meet the challenges of the digital divide, and in doing so, allow operators and service providers to harvest the profitable low-hanging fruit in demand-intensive markets.

It can enable satellite providers to be far more cost-effective compared with fibre and cable offerings. Traditional telcos and cable providers can also use Ka-band to meet the fast-growing demand for broadband services in rural areas, and particularly in notorious 'white spots' where broadband connections are insufficient or non-existent. Industry observers also note that Ka-band satellites offer the ability to extend triple play capabilities into the delivery of popular and growing services such as social media and multi-screen viewing.

Compared with legacy satellite communications, Ka-band satellites provide spot beam technology that delivers high-powered coverage over smaller areas. This enhances the satellite's ability to provide greater capacity and higher throughput, thus establishing greater interactivity for the users.

Ka-band satellites can aim beams at selected regions, increasing channel capacity by reusing the same radio frequencies in different areas of coverage. They enable operators to deliver high-powered signals to precisely defined areas, improving their ability to compete with cable broadcasters.

Unique Capabilities

The impacts this technology can have put it on an equal footing with fibre broadband delivery. Traditional telcos and providers can use Ka-band to reach more customers, while satellite news gatherers can move to smaller, smarter reporting terminals.

As the internet has become the dominant infrastructure for TV, broadcasters rush to develop file delivery capabilities and revenue streams to fit this emerging model. Service providers are embracing the power of Ka-band satellites. Hughes Network Systems, Viasat and Eutelsat are drawing on the technology, as is O3b, the company whose mandate is to reach the 'other three billion' global consumers who currently lack internet and broadband connectivity.

To ensure full performance and competitiveness in a Ka-band satellite solution, organisations should seek partners capable of addressing not only ground system design and implementation, but also the media centre and interactivity aspects of a successful Ka-band system.

At Globecom, we've been involved in Ka-band network design since the founding of the company, and have developed our own family of Ka-band stations, including flyaway, truck-mount and fixed systems. Furthermore, providers can use the Globecom worldwide network to distribute their content on Ka-band platforms.

Paul Scardino oversees the sales, marketing and strategic direction of Globecom's new and emerging products and services