

## 52. Starlink

In the years between 2015 and 2018, Elon Musk evolved SpaceX's aspirations beyond space exploration to include revolutionizing global internet accessibility through the creation of Starlink, a subsidiary aimed at deploying a network of satellites into low-Earth orbit. Initially motivated by the ambitious goal to fund human colonization of Mars—a vision deeply ingrained in SpaceX's philosophy from its early days—Starlink emerged as a practical venture to tap into the lucrative trillion-dollar internet service industry. By targeting a modest share of the market, Musk saw the potential to generate revenues far exceeding NASA's annual budget, directly supporting his broader Martian ambitions.

To accomplish this, Starlink planned to establish a "megaconstellation" of 40,000 satellites positioned at an altitude of 340 miles, significantly lower than traditional geosynchronous satellites' 22,000-mile orbit. This strategic choice aimed to reduce signal latency, although it required a vastly increased number of satellites to provide comprehensive coverage. The project, however, encountered significant operational and manufacturing challenges, specifically with the initial satellite models being too expensive, large, and complex for the production scale needed for profitability.

In response to these hurdles, Musk, driven by a distinctive amalgam of urgency and vision, took dramatic action in the summer of 2018 by replacing Starlink's top management with senior SpaceX engineers, including Mark Juncosa. Juncosa, a multifaceted engineer with a background ranging from surfboard crafting to Formula One racing team involvement, was characterized by his dynamic problem-solving skills and his alignment with Musk's fast-paced and risk-tolerant approach to innovation. His leadership marked a crucial turning point for Starlink, emphasizing rapid development and cost-effectiveness to meet the project's ambitious goals. Through these efforts, Musk aimed to not only democratize global internet access but also to create a financially sustainable model to support SpaceX's interplanetary objectives, reflecting a seamless blend of visionary space exploration with ground-breaking technological entrepreneurship.