

IAF SPACE COMMUNICATIONS AND NAVIGATION SYMPOSIUM (B2)
Advances in Space-based Communication Systems and Services, Part 2 (3)

Author: Mr. Ryan Xiao
Massachusetts Institute of Technology (MIT), United States, ryxiao@mit.edu

Mr. James Dingley
Massachusetts Institute of Technology (MIT), United States, jdingley@mit.edu

WINNING THE INTERNET: HOW LOW CAN (SATELLITE-BASED INTERNET COSTS) GO?

Abstract

The demand for satellite-based internet services has exploded in recent years with new entrants - such as Starlink and OneWeb - joining the older players - such as SES and Intelsat. Understanding how this multiplayer ecosystem will operate and evolve is essential in understanding industry sustainability, but is limited by access to reliable cost data. This paper compares several models to predict the investment required to build and maintain these complex systems. Publicly available shareholder reports, industry cost estimates, and fundamentals-based analysis is presented. An enhanced cost model is then synthesized and used to build a Pareto frontier for use in benchmarking future constellation proposals.