In-depth assessment of the key players at the heart of the satellite industry

FSS Operators
Benchmarks & Performance Review

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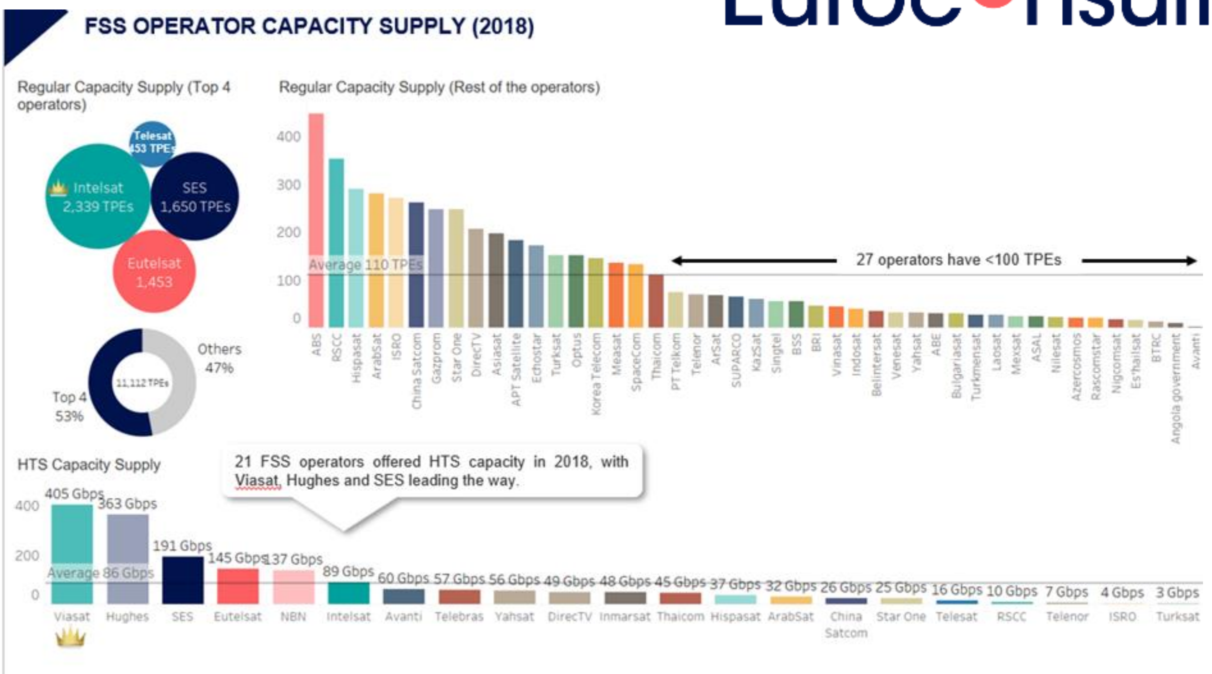


Euroconsult shows that 11 new FSS providers have emerged over the last five years including two in 2018. Many of these companies are state-owned national operators, which will mostly serve national interests. Twelve new satellite operators are planning to enter the FSS geostationary (GEO) market by the early to mid 2020s, including companies targeting national market such as NepalSat, and Royal Group of Cambodia. Included in these twelve operators, are three with plans for small GEO satellites, which may indicate a new trend in the FSS industry facilitated in part by digital payloads, electric propulsion, and lower launch costs.

The research demonstrates that the market structure of the FSS industry remains concentrated at the top with growing fragmentation at the bottom. The top four operators (SES, Intelsat, Eutelsat and Telesat) today represent approximately 60 percent of the industry's revenue, a share that has decreased in recent years. Five years ago, they combined for 64 percent of total revenue. The landscape behind the top five is rapidly evolving with three new companies joining the top ten in the past five years. These include YahSat, China Satcom, and ISRO.

To meet data-driven market demand, the survey reports that many FSS operators are shifting their investments from traditional satellites to High Throughput Satellites (HTS). The number of FSS operators with an HTS payload doubled between 2014 and 2019, growing from 12 to 24 with the total HTS supply expected to reach more than two terabits per second by the end of 2019.

The commercial satellite ground segment market, including satcom applications, EO applications and user terminals for satcom applications, is going through significant expansion in terms of both capabilities and demand and will grow from $264 million in 2018 to nearly $360 million in 2028. The aggregated market value in the next decade is expected to achieve $4 billion. The initial Euroconsult report covers only large gateways, while the second part of the report dedicated to user terminals will be published in several months.

2018 has entailed a point of inflexion in the ground segment industry with the preparation of the OneWeb ground network, the launch of additional HTS systems and the need of further ground stations to provide connectivity with EO constellations. After some years of market consolidation in the teleport industry for satcom applications, the number of ground sites is expected to grow from 2019 driven by new installations in emerging regions. Int eh EO ground segment, the number of ground stations is steadily growing to serve the increasing demand on EO data and value-added services.

ABOUT FSS OPERATORS: BENCHMARK & PERFORMANCE REVIEW

This report presents Euroconsult's benchmarking of the satellite operators and the key highlights from the industry. Each profile contains:

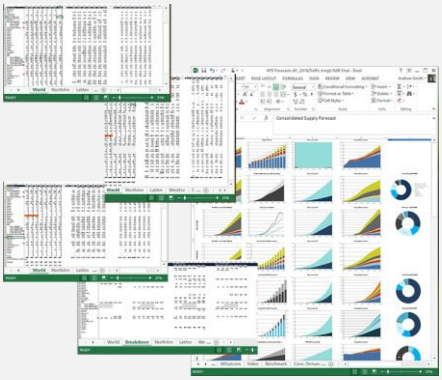
- ✓ Company performance including revenue between 2014 and 3Q 2019 when available, regular capacity and HTS fill rates (2014-2018) and revenue per transponder (2014-2018)
- ✓ Commercial overview including top video orbital positions and a sample of telecom clients
- ✓ Recent news and strategic positioning
- ✓ Recent contract announcements (as recent as October 2019)
- ✓ Satellite assets with a focus on regular capacity and HTS capacity supply (2014-2022) by frequency band and by region. Includes information on the average fleet age, the number of active satellites in orbit and the number of satellites under construction.

EXTENSIVE FIGURES & ANALYSIS FOR THE PAST YEAR

All Euroconsult reports have, at their core, data derived from over 30 years of tracking all levels of the satellite/space value chain. To this we add dozens of dedicated industry interviews each year, along with the continual refinement of our data models, and the collection and interpretation of company press releases and financial filings. Our consultants have decades of experience interpreting and analyzing our proprietary databases in light of the broader value chain.

When you purchase research from Euroconsult, you receive thousands of data points and the expert interpretation of what this means for specific verticals and sectors of the satellite value chain, including forecasts based on years of data and highly refined models.

This report contains Extensive Knowledge on each of the operators and their performance.



THE REPORT INCLUDES:

- ✓ Detailed profiles of 31 active FSS operators with more than one active satellite in orbit
- ✓ Section on emerging operators (with one active satellite or with plans to launch a first satellite)
- ✓ Benchmark of key NGSO operators
- ✓ Benchmark of vertically integrated operators
- ✓ Extensive Database with thousands of data points; provides KPIs for all active FSS operators including:

A MUST READ FOR:

- ✓ Administrations & Space Agencies
- ✓ Service Providers
- ✓ Satellite Operators
- ✓ Investors & Financial Institutions

FSS Operators: Benchmark & Performance Review is a reference for industry & finance players around the globe. The report provides critical information for business and strategic planning in the FSS business, including:

- ✓ **Strategy outlook** containing global trends, FSS Operators capacity supply and performance
- ✓ A Larger focus on HTS KPIs including HTS capacity demand and HTS fill rates
- ✓ Details profiles of 31 main leading and new operators

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