

The future is brilliant for communications!

March 2019

© BridgeSat, Inc. 2019

Page 1

The Early Motivator: Solving the Battle for Bandwidth



2015 Survey: Approximately 27% of Small Satellite Earth Observation missions can generate more data than they are able to downlink ... and its only going to get worse





3-500 kg LEO Satellites In-orbit, by segment

BRIDG



LEO Commercial Earth Observation Satellites Annual Data

Enabling the adoption of FSOC for LEO Missions by building a Ground Network (1st Gen)





Locations assessments include evaluation for:

- Atmospheric Conditions (including cloud history)
- Terrestrial Connectivity
- Common LEO Orbit
- \$\$\$

With a 10Gbps terminal, ~ 2 to 3 TB of downlink per day per satellite is available







BridgeSat Network Operations Center



- BridgeSat monitors and controls Optical Ground Stations remotely from a state-of-the-art Network Operations Center (NOC)
 - Tasking software receives real-time weather and satellite status, and provides predictive cloud analysis
- Customer interface through web and app-based software, providing near real-time status of their satellite and data downlinks
- NOC based in BridgeSat offices in Denver, Colorado



OGS #1 Installed





Denver NOC

Next-Gen Solutions for Satellite Communications

SPACENEWS.

GEO satellite orders continued to underwhelm in 2018

by Caleb Henry — February 4, 2019

World Satellite Business Week: May the satellite industry live in interesting times

by Jeff Foust - September 26, 2018

The FSS sector and the LEO-GEO stalemate

by J. Armand Musey — September 10, 2018

Are GEO satellite orders still a good measure of industry health?

by Brian Berger — September 15, 2017

Broadcast and Fixed Satellite Services, the core of GEO SatCom, are waning in the new world order of IP-based media consumption

FSOC allows for the efficient utilization of RF



Adopting FSOC for Feeder/Backhaul links:

- Allows for utilization of RF spectrum to be dedicated to the revenuegenerating user links
- Capability of 100+ Gbps (scalable technical path to Tbps-class) to single Optical Ground Station provides an alternative to the linear growth of RF gateways

AstroTerrace, BridgeSat to Support Japan's ETS 9 Program









Clouds ... Mitigated by Diversity



BRIDGE

AT INC

"The industry wants trusted communications that RIDGE SAT IN is high performance and abundant."

Trusted Communications

- The intended receiver is the only party actually receiving a signal (LPI / LPD)
- Solution to RF denied environments (intentional / unintentional

High performance

- RF at 100s of *megabits* per channel, but demand increasing
- Customers want 10s to 100s of gigabits per channel

Abundant

- Current RF spectrum saturated
- o Market growth needs limitless capacity

Needs Transcends the Space Industry -BridgeSat actively involved in bringing FSOC solutions to adjacent industries





Thank you!

>

© BridgeSat, Inc. 2019