

The Transformation of Ground Stations:

New Technology on the Rise



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ATLAS
SPACE OPERATIONS™



ATLAS Space Operations, Inc. is a **state-of-the-art** satellite data communications company that **leads the industry** in providing customers with the highest quality of service and the most cost-effective solutions, **bar none.**

The Future Is Now



ATLAS
SPACE OPERATIONS™



- Named a top 12 disruptor in the satellite industry by Morgan Stanley in 2017
- Company growth > 100% in the past year
- Working to grow Space / Aerospace industry in Michigan

New Technology, New Thinking

The Data Bottleneck



Existing Networks

- § Contain outdated, legacy hardware
- § Are limited in bandwidth
- § Lack software
- § Are not automated
- § Are prone to failure
- § Require human operators

Not only are existing networks costly to maintain and to operate, they can't keep up.

This is the "data bottleneck."

The ATLAS Solution



ATLAS Eliminates the Data Bottleneck

- § ATLAS antenna technology provides for multiple satellites to simultaneously connect.
- § ATLAS software-centric cloud based network is fully automated.

ATLAS = More data... Faster!

ATLAS Around the World



Global Antenna Network

FREEDOM™ GROUND NETWORK



Revolutionary Product Offering

LINKS™
Electronically Steered Array



Reach™
Launch Support



Freedom™ Software Platform

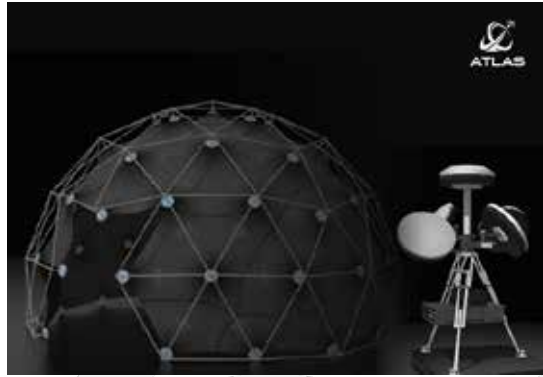
Freedom™ Software Platform

- § Creates a software-centric cloud based network that is fully automated.
- § Provides intuitive user interface, flexible scheduling & a single endpoint for all
- § Enables network to scale with customer demand



The satcom solution you've been dreaming of

LINKS™ ... Concept to Reality



2016



2017



2018



2018

Links™ Electronically Steered Array

- § LINKS antenna technology provides for multiple satellites to simultaneously connect.
- § Automatically integrated into Freedom software, creating a system capable of supporting satellite communications detection, tracking, & exploitation.
- § Standing only 28 inches tall and 40 inches in diameter, LINKS™ weighs approximately 55 pounds.
- § 4 LINKS can be set up and operational in less than 1 day.



Wallops Space Flight Center, VA

Reach™ Launch Support

- § Powered by ATLAS Freedom Platform & LINKS
- § S-Band downlink entry point for your launch event anywhere on the globe
- § Using LINKS™ we're able to provide telemetry and data services in both established and non-traditional locations
- § Global launch sites – soon to be in Michigan

Making launch as easy as 1, 2, 3



ATLAS Changing the Industry

- § First ever multi-band, multi-satellite antenna
- § ATLAS can service all satellite and launch providers
 - § Both commercial & government
- § Breadth and scope of these capabilities is immense



ATLAS Links™ Electronically Steered Array



Wallops Space Flight Center, Virginia

Aveopt Proving Grounds and UAS Test Range

ATLAS Space Development and Test Range

ATLAS D&T Range

- § Ops Center Interface
- § Design and test infrastructure
- § Operational UHF site
- § LINKS test site
 - § Satellite TT&C
 - § Passive radar
 - § Telemetry



Commercialization of LINKS

- § New Product Introduction à Production Operations
 - § Engineering Design House
 - § Printed Circuit Board Designer/Manufacturer
 - § Inventory Management, Final Assembly, and Test
 - § Quality Control Processes
- § Need Manufacturability, Quality and Maintainability all built into the design.
 - § Antenna Systems are in remote locations

Where we could use help

- § Initially, we would like to purchase Finished Goods
 - § Work on a production design
 - § Design for Manufacturability
 - § Finalize the BoM
 - § 3rd Party manage inventory and production
- § Long term, vertical integration may make sense, depending on product set
- § Sales Forecasts are still being determined

*ATLAS = A diverse and global team delivering
More- YOUR data... Faster!*





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