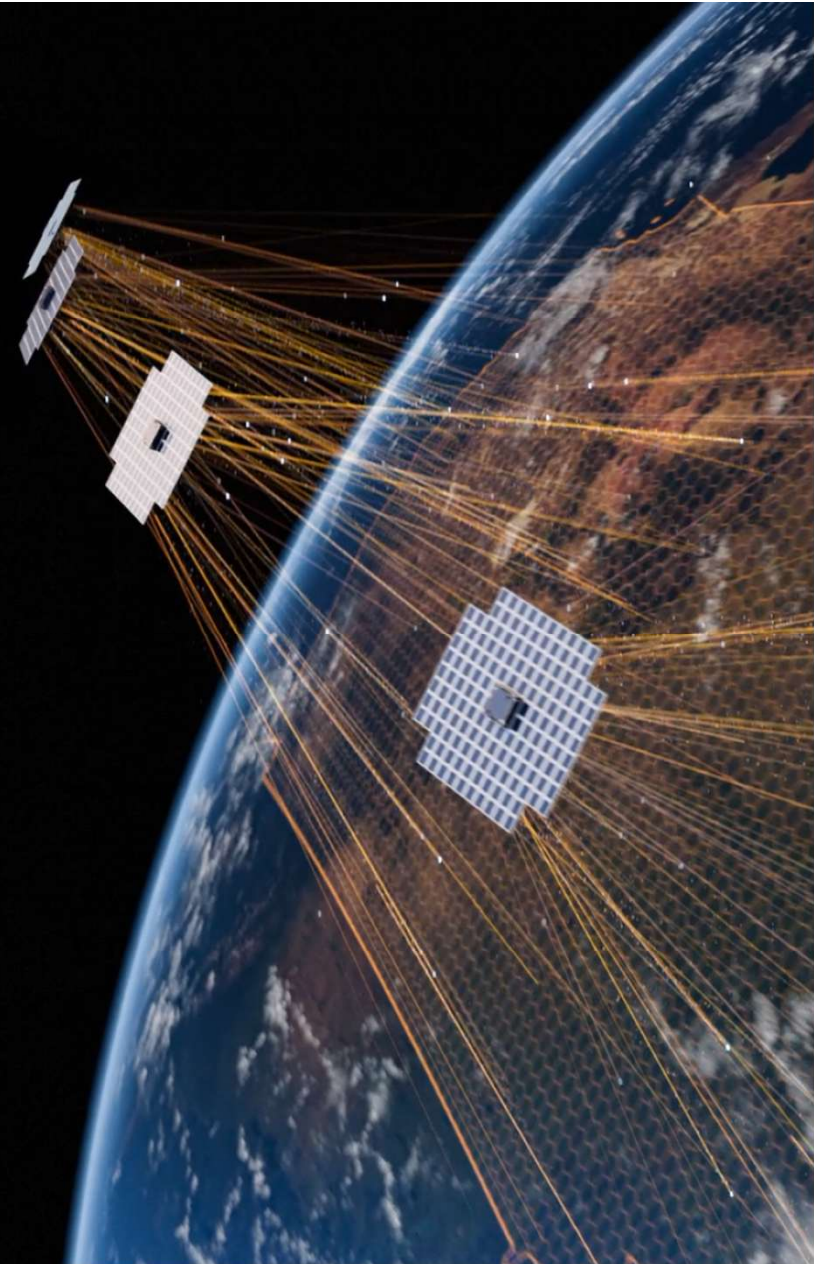




CONNECTING THE UNCONNECTED THROUGH BROADBAND D2D

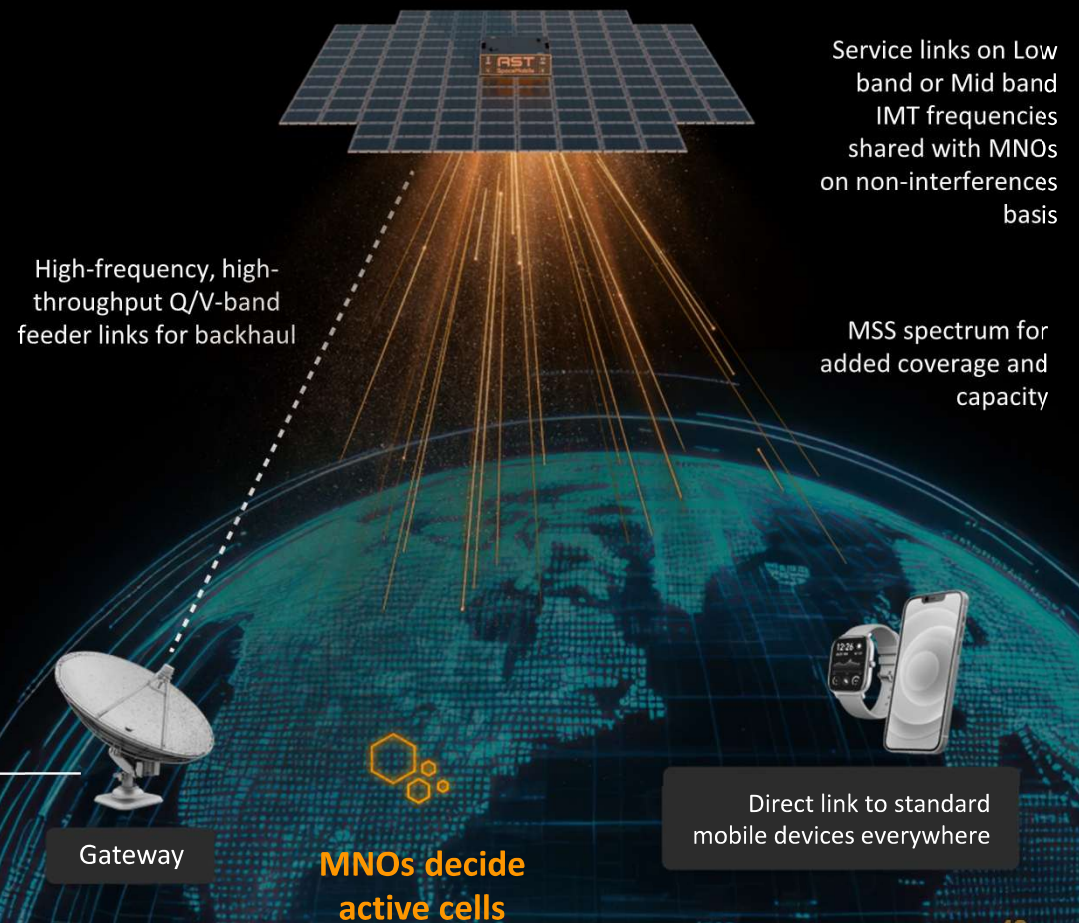
Jennifer A. Manner
Sept. 3, 2026



AST'S FLEXIBLE ARCHITECTURE



- Low-orbit satellites offer low latency and attractive viewing angles
- Large satellites create thousands of broadband-capable fixed ground cells
- Leveraging terrestrial spectrum and MSS spectrum
- Connects to unmodified user equipment (UE)
- Advanced beam forming, beam shaping and interference mitigation
- RAN equipment with full 3GPP functionalities for feature parity with terrestrial network
- Satellites function as bent pipes with traffic landed nationally or regionally



MNO
core



NodeB

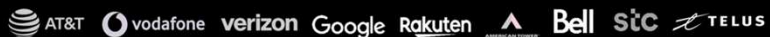


Gateway

MNOs decide
active cells

Direct link to standard
mobile devices everywhere

STRATEGIC INVESTORS



2 Different Flavors of D2D; 2 Different Regulatory Regimes

Enabling sufficient spectrum to support global coverage and broadband capacity

Mobile Satellite Service

- Licensed to operator
- Allocations already exist (e.g., S, L)
- No new rules needed; subject to existing ITU Radio Regulations

IMT Terrestrial

- Licensed to MNO
 - Need agreement with MNO
 - Must operate consistent with MNO technical restrictions or create realistic protections
 - Until action at WRC-27, must operate internationally under ITU RR 4.4 (non-interference, unprotected basis)
 - Can create domestic MSS allocation
-
- NOTE: Any consumer protection or national security rules must be appropriate for the technology

ENABLING REGULATION TO UNLOCK D2D BENEFITS GLOBALLY

Regulatory Requirements to Harmonize D2D Globally Under AI 1.13

- ✓ Adopt an MSS allocation to enable a secure and long-term D2D implementation
- ✓ Adopt technical criteria that protects incumbent services in-band and in adjacent bands and provides satellite operators with operational flexibility
 - ✓ Require an agreement with the MNO to use IMT spectrum
- ✓ Use balanced and non-restrictive parameters, especially for cross-border operations, recognizing that IMT operations are protected by the D2D service being secondary to the mobile/IMT service
- ✓ Oppose inclusion of bands with a primary MSS allocation (1980-2010 MHz / 2170-2200 MHz globally and 2010-2025 MHz / 2160-2170 MHz in Region 2)