



Persistent Communications for LEO Spacecraft

Program Objectives

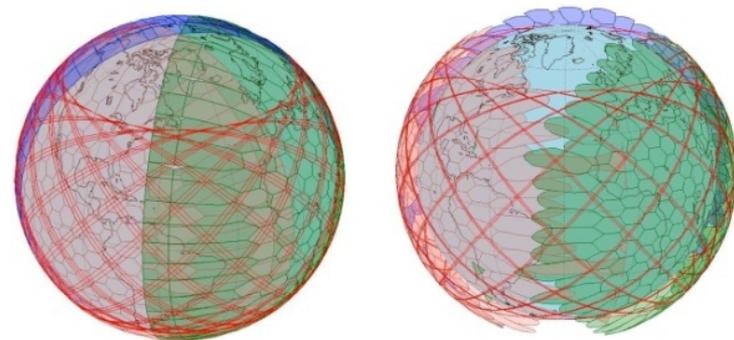
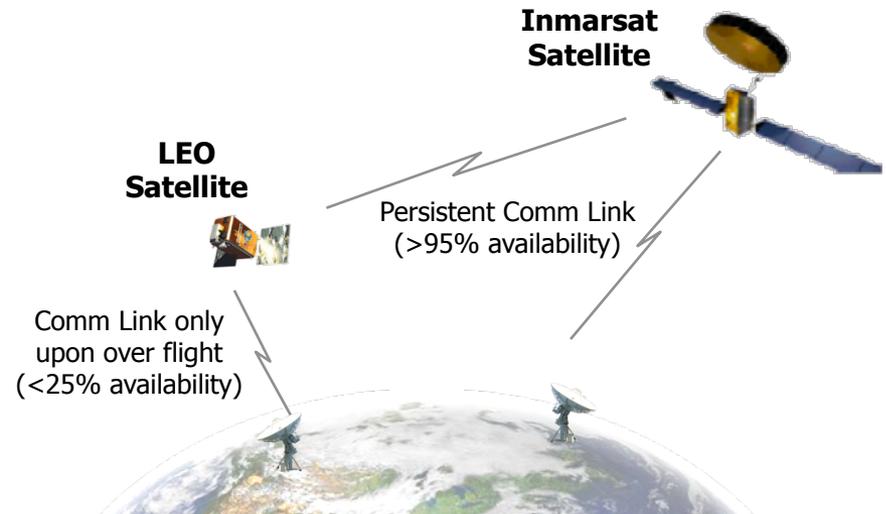
- The Persistent Comm for LEO Spacecraft program leverages the Broadband Global Area Network (BGAN) service provided by the Inmarsat communications satellite constellation to provide near-24/7, low-latency communications for Low Earth Orbiting (LEO) spacecraft.
- Includes development, testing and integration of a space-based transceiver to utilize the existing BGAN service of the Inmarsat satellite network.
- Provides persistent, inexpensive connectivity as a service between LEO spacecraft and their ground systems.

Performance Metrics

- Unscheduled on-demand access and per-megabyte or per-minute charges.
- Orbit-average availability in excess of 95%, as opposed to current 5-25%.
- Full-duplex communications with data rates of 492 kbps.
- End-to-end transmission latency less than 1 sec.

Utility

- Persistent communications capability for time-sensitive spacecraft control (e.g., defense maneuvers) or critical mission data (e.g., solar flare events).
- Enables direct-from-theater control of spacecraft and direct-to-theater data delivery with a small terrestrial transceiver footprint.



SB-SAT Global Coverage at 300 & 900km, 45° incl.