In-Orbit Servicing
Pioneering the Future of Space

Global Satellite Servicing Forum
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Space Logistics, LLC
A Northrop Grumman Strategic Venture

CURRENT STATUS
- A Wholly Owned Subsidiary Of Northrop Grumman
- MEV-1
  - 5 Year Service Contract – Intelsat
  - Launch Period: Spring 2019; ILS
  - Integration & Testing Underway
  - FCC and NOAA Licenses Issued
  - L+1 Insurance Placed
- MEV-2
  - 5 Year Service Contract – Intelsat
  - Launch Period: Early 2020; Ariane
  - Build to Print of MEV-1

Service Offerings
- Station Keeping
- Incline Reductions
- Relocations
- Inspections

Value Proposition
- Defer Capex
- Start New Orbital Roles
- Capitalize On Old Assets
- Anomaly Attribution

MEV Docked Life Extension
Demonstrating the Fundamentals of Satellite Servicing
The Current Generation Mission Extension Vehicle (MEV™)

- Reusable “Jet Pack” propulsion and attitude control system
- Performs orbit and attitude control of the combined vehicle stack
- Docks to the aft end of a host and stays there until service no longer needed
- Mechanical interface only
- Multi-use vehicle that can perform multiple life extension missions for multiple customers
- High Reliability, 15.6 Year Design Life
- Significant Delta-V >> 15 years (w/2000kg Client)
- Fault Tolerant Design
- Leased Service or Purchased Asset
MEV 1 Integration & Testing

Core Bus

Equipment Panels
Next Generation Life Extension

**Mission Extension Pods (MEP™)**
- Propulsion Augmentation Using EP
- 6 Years Life Extension (2000kg Client)
- Fast & Simple Install to LAE
- Self Contained Power
- Self Contained Telemetry & Commanding

**Mission Robotic Vehicle (MRV™)**
- Carries up to 12 MEPs
- Installs MEPs Into Client LAE
- Built on MEV Heritage
- Adds Simple Robotics
- Subsequent MEP Replenishment

Low Risk – Low Cost Life Extension; Built on MEV Heritage
Demonstrating the Fundamentals of In-Orbit Assembly
What’s Next

- Other Augmentation Pods to extend capabilities
- Design next generation satellites with servicing ports that allow integrated augmentation
- In-orbit assembly of spacecraft