SpaceMesh™ Orchestrator

SpaceMesh Orchestrator (SMO) provides a service-based solution to generate network graphs and route tables to manage a constellation of satellites and ground stations. SMO also provides a user interface that gives insight into the mesh network topology and the associated route tables.

USE CASES

Configuration of networks from space down to edge nodes in land, sea and air

Dynamic and resilient routing

Generation of router configuration files for terrestrial and space-based routing devices

Analysis of networking scenarios for bandwidth, route selection and more

COMPONENTS

Infrastructure

- Core product comes with standard RESTful APIs making integration simple
- Plugins are also supported via RESTful APIs allowing for customers to produce their own plugins in a language of their choice
- All services are containerized and cloud agnostic
- Plugin based architecture allowing for mission specific logic if desired

Core Platform

- Computes network graphs to show connectivity of a constellation for a specific time interval
- Creates routing tables which can then be translated to a hardware specific router configuration file format
- Allows an operator to view and interact with the network graph via intuitive UI
- Includes a REST API which can trigger mesh generation and allow for data retrieval about the constellation

KEY FEATURES

- Dynamic graph generation
- Route table generation
- Supports any router hardware
- User interface for 3D visualization
- Resilient algorithm application
- Open and standards-based APIs

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