Introducing StellarStation
The Satellite Antenna Sharing Platform

May 30th, 2018
Our Vision

2022

- Earth-Orbit Communications
- CubeSat Community Growth

2030

- Deep Space Communications
- CubeSat Technology Consolidation
Who are we?

Naomi Kurahara  
Co-Founder / CEO  
PhD. Electrical Engineering  
Core Member, GENSO Project

Ricardo Tubío-Pardavila  
Senior Systems Engineer  
PhD. Systems Engineering  
5 CubeSat projects / Former PM at CINAE

Swathinath “Vijay”  
Vijayan  
Business Development
StellarStation
Satellite Antenna Sharing Platform
Why StellarStation?

- A ground station for 1 satellite uses less than **5%** of its total capacity.
- Satellite operators can **gain access** to passes at other ground stations when they **share** their ground station.

“all-you-can-use per day”
What is StellarStation

Satellite Operators would earn credits when they share their ground station.

These credits could be simply exchanged for cash, or could be spent on using other ground stations by using StellarStation API or GUI.
What's under the hood?

Antenna holder

StellarStation

- Antenna Evaluation
- Matching
- Processing
- Interface

Satellite operator
Receive free credits while joining the network.

**Partner A**
Has a Ground Station

Share Antenna idle time to receive credits.

**Partner B**
Do NOT have a Ground Station

Buy Credits to access other Antennas.

**Partner C**
eg: Ground Station in Japan

Use your credits to access other antennas around the globe

**Partner D**
eg: Ground Station in Ghana

**Partner E**
eg: Ground Station in Lithuania
Traditionally Satellite Operators would have to pay Third Party Ground Station Providers to scale the number of passes.

Using StellarStation, Satellite Operators would be able to ‘earn’ extra passes, without any additional cost, bringing flexibility and scalability to Satellite Operation.
Non-commercial Services

- CubeSat technology:
  - Community-based growth!
- Infostellar’s commitment:
  - Boost CubeSat Growth!
- Community Feedback!
- Passive downlink tracking:
  - LEOP phase
  - Tracking upon request
- Licensing assistance
Non-commercial UHF Network

https://www.stellarstation.com/amateur

We want to track your satellite!
Request it online!

**Ground Stations:**
- **Active:** 3
- **Pipeline:** 19

**Satellites:**
- **Tracked daily:** 16
- **Total passes per day:** 30
Increase your mission returns.
Bring down operational costs.
Constellation Management Made Easy
Constellation Management - Cloud-based Scheduler

- Automatic scheduling
  - Priority depending on satellite status
    - SAFE / SURVIVAL status are prioritized.
    - Payload operations get prioritized depending on satellite parameters like battery level or memory storage.
- Automated balance loading
  - Avoid single-satellite overloading
  - Equal per-satellite working load
Constellation Management - Integrated MCS

- Integrated MCS
  - Individual satellite status
  - Overall System Status
  - Automated commanding for routine tasks
  - Switch to human operation whenever necessary (SAFE / SURVIVAL modes)

- Multiple MCS support
  - Manufacturer independent
  - Compatible through operational procedures
User request management
  - Automated operational plans generation

Automated payload data delivery
  - Web API for data access

Data can be piped directly into specific servers to meet regulations on the location for data processing.
Join the StellarStation Network!

Thank You