

- Resources to use:
 - SMAD Chapter 28, Ground System Design
 - ASTE 566 Notes from Barnhart
 - Satellite Communication Ground Segment and Earth Station Handbook, Bruce Elbert, ISBN-13

- SMAD Notes

28.1 Antenna Services

- > Q: Do we have an existing ground station with which the spacecraft must be compatible?
- > There are a bunch of antennas listed in SMAD if we just want to use some
- > Latency Requirements ; Data Rate Requirements probably primary concerns, access frequency ; period perhaps

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28.3 Ground System Driving Requirements & Sizing

- Main Drivers:
 - > Orbit / Trajectory:
 - > Latency:
 - > On-board Storage Capability of Spacecraft
 - > Data Recovery Percentage: low, high
 - > Level of Automation / Cost
 - > Amount of Data Needed

• Barnhart Notes:

- Ground Segment objectives:
 - > Support space segment:
 - Command and Control
 - Monitor spacecraft health
 - Track Spacecraft
 - > Relay mission data to users
- Subsystems:
 - > Transmit:
 - Information Source
 - Modulator
 - Transmitter
 - Power amplifier
 - Antenna
 - > Receive:
 - Antenna
 - Receiver
 - Demodulator
- Ground Segment design:
 - Antenna Aperture & Equipment
 - RF Equipment
 - Mission operations center
 - Payload operations center
 - Customer
 - Archiving

