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Hardware Verification of Lunar Terrain Relative Navigation

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Hardware Verification of Lunar Terrain Relative Navigation (TRN)

Hardware Verification Platform



Sends TRN/VO Estimated Pose
Data to the Base Station

Sends True Pose Data
to the Base Station

Camera, Capture
Images of Lunar Surface

Drone

Records Data to
Validate Estimation

Sends True Pose Data
to the Base Station

Motion Tracker,
Tracks True Movement
Motion Tracker

Accomplishments

- Converted True Texture Maps to CNC Routed MDF Board
- Drone Performs Steady Flight Over Terrain Map
- Data Recorded On Realsense Lidar, Offboard



Future Work

- Record Realsense Lidar
 Images during Flight
- Repeat TRN, Onboard

Creating "Lunar Tiles"

