ROBUST DISTRIBUTED WIRELESS DATA NETWORK

PROBLEM STATEMENT

CURRENT SYSTEM



when a sensor needs to be moved:



Currently, hundreds of sensors on New Shepard, shown to the left, are wired directly to Blue Origin's Data Acquisition System (DAS). These wires take up space and weight, reducing payload capacity.

Sensors are often repositioned between missions to gather new data from a different part of the vehicle. To do this, an engineer must design a new route for wires from the sensor's new position to the DAS and then go into the vehicle and physically place these cables.

Wireless sensor nodes eliminate the space and weight taken up by these wires and reduce the engineer time required for sensors to be repositoned between missions.

WHAT WE BUILT



We built a proof-of-concept of a sensor node that wirelessly transmits data from a sensor on New Shepard over 20 ft to a receiver that interfaces with Blue Origin's DAS.

ABOUT BLUE ORIGIN



Blue Origin is a privately owned space company with the goal of making space travel more frequent by making it more affordable. Blue Origin's pilot reusable vehicle, New Shepard, is the first rocket ever to make it into space and return successfully 5 times.

BLUE ORIGIN





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