

**Question 6:**

Is this authorization to be used for providing communications essential to a research project? (The radio communication is not the objective of the research project)? If "YES", **include as an exhibit the following information:**

- **A description of the nature of the research project being conducted.**
- **A showing that the communications facilities requested are necessary for the research project.**
- **A showing that existing communications facilities are inadequate.**

**A description of the nature of the research project being conducted:**

Research is being conducted on several sensor technologies, sensor data processing algorithms, automated route planning, and autopilot guidance technologies on board a manned helicopter testbed. This research program is sponsored by the Office of Naval Research (ONR).

**A showing that the communications facilities requested are necessary for the research project:**

The program requirements state that a data link shall connect the airborne and ground networks at up to 20 mile (32.2 km) range such that the sensor performance and mission planning algorithms can be evaluated while in a variety of flight scenarios. The wireless communications link is required to allow engineers at the ground station to receive sensor data and live video and send mission plans and other commands to the airborne computers.

**A showing that existing communications facilities are inadequate:**

As this is a new project, there is currently no wireless data link system on the aircraft.