

### Description of research project

The purpose is to test the capability of two-way communication between a remotely piloted aircraft (RPA) and a ground data terminal. The nature of the data is command/control message in command link and payload/telemetry in return link. The airborne test station is equipped with two antennas, one directional and one omnidirectional. The ground data terminal is equipped with three antennas, i.e., high-gain directional, low-gain directional, and omnidirectional.

This is a new digital line-of-sight communication system operating on low C-band, which is not currently equipped either on the RPA or on the ground.