

Control Non-Payload Communication Testing for Unmanned Aircraft Systems

Purpose

- The Control Non-Payload Communication (CNPC) flight demonstration will prove the feasibility of using a small radio in a small Unmanned Aircraft Systems (sUAS) airframe that allows flexible employment of sUAS, and answers the following question:
 - Can a radio developed based on the RTCA Minimum Operational and Performance Standards (MOPS) be practical to use for all sUAS?

Background

- RTCA Special Committee (SC)-228 UAS Working Group has developed a set of MOPS for CNPC radios. It is important to verify the technical practicality of the MOPS and the feasibility of using a small form radio developed based on the MOPS in a real operating environment

Projected Benefit of Research

- The output from the CNPC testing will be important to the validation of Command & Control communication performance of sUAS, which is an important step forward toward integration of sUAS into the NAS

Research Approach

- Acquire, configure, set up, and maintain a lab test environment
- Assess and evaluate the appropriate suite of avionics system for the Scan Eagle Flight Test/Demo
- Review commercially available avionics for system function and required performance

Research Partners

- National Aeronautics and Space Administration (NASA)
- Rockwell Collins
- Boeing/Insitu
- FAA William J. Hughes Technical Center

Status

- Flight testing completed October 2015
- Lab testing conducted January 2016
Expected to be completed September 2016