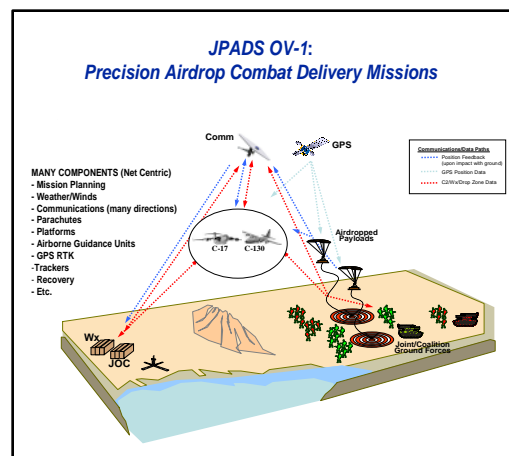




Enhanced Vision Navigation for Joint Precision Air Drop System (JPADS)

Project Summary: This project continues the development of autonomous Guidance, Navigation and Control (GN&C) to enable Department of Defense (DoD) missions in Contested and Denied Environments (CDEs) where Global Positioning System (GPS) data is either suspect due to spoofing or unavailable due to environmental conditions (i.e., urban canyons) or active jamming. This RDT&E effort will include experimental, numerical, and flight (powered and airdrop) test reports, a prototype system for Ultra-light weight (ULW) class (150-450 lbs), and initial testing of the technologies on a JPADS 2K system at the end of year 3.

Return on Investment: This capability enhances joint defense distribution by improving the ability to deliver material directly to the personnel on the ground, in good weather and bad, and in just about any location. The innovative aspects of JPADS are the ability to drop accurately from very high altitude and substantial horizontal standoff, thus increasing the safety of air crews and aircraft. The subject work of this proposal, enhanced autonomous GN&C in areas of reduced or denied GPS, will significantly expand airdrop concept of operations and make receiving supplies simpler and safer for troops in austere or difficult to access locations.



Duration of project: FY16-FY20

Participants: United States Army Natick Soldiers Center

Project advocacy (funding or otherwise): Air Mobility Command