

FOR IMMEDIATE RELEASE

Adaptive Aerospace Group, Inc. addresses certification of fly-by-wire aircraft

Hampton, VA – September 9, 2019

Hampton, Virginia based Adaptive Aerospace Group, Inc. (AAG) announces receipt of an FAA contract to help develop certification requirements for fly-by-wire general aviation aircraft. “General aviation” represents any non-scheduled flights, but this work is focused on the forthcoming electric Vertical Takeoff and Landing (eVTOL) aircraft that are different from current aircraft in many ways. Their complex power distribution and inherent instability in some flight conditions require computer compensation (fly-by-wire) to replace directly connected mechanical flight control devices. “Fly-by-wire” means the pilot controls the aircraft indirectly by providing an input to a computer that takes the pilot’s input and sensor data (indicating what the aircraft is currently doing) and determines how to manipulate flight control devices to achieve the desired response. Fly-by-wire technology has been in military aircraft since the 1980s; more recently it is being used on large commercial transports and business jets. In most cases fly-by-wire has mimicked mechanical controls. New eVTOL aircraft under development by a number of companies around the world are incorporating control strategies that are decidedly different than traditional mechanical controls. At present, the FAA has no effective methods to certify these new aircraft. This work will help the FAA develop means to certify the new aircraft, enabling future transportation methods envisioned by NASA and others as Urban Air Mobility. See the following web links as examples: <https://www.nasa.gov/aero/nasa-embraces-urban-air-mobility/> and <https://www.uber.com/us/en/elevate/>.

AAG founder and president Keith Hoffler pointed out that the potential benefits offered by emerging electric propulsion, fly-by-wire, and unmanned aircraft systems will likely converge to change general aviation and air transportation as we know it. Hoffler said, “We are excited to have this opportunity to help enable the next evolution of flight.”

Adaptive Aerospace Group is joined in this work with several sub-contractors. Dr. Noel Duerksen is a consultant in Kansas that has many years of experience developing and certifying new avionics and more recently working on novel flight control concepts. Dr. Borja Martos of Flight Level Engineering in Florida brings experience with novel flight control concepts implemented on FLE’s variable stability Navion. David Mitchell is a consultant in California and is an aircraft and helicopter handling qualities expert. Dr. Erik Theunissen of Information Systems Delft in The Netherlands has decades of experience with novel display concepts and will support that part of the work.

Adaptive Aerospace Group, Inc. was founded in 2003 and performs research and development for advanced aviation and space flight vehicle technologies.

Website: <https://www.adaptiveaero.com>