

## DEFINITIONS

**Air Traffic Control Assigned Airspace** – Airspace of defined vertical/lateral limits, assigned by ATC, for the purpose of providing air traffic segregation between the specified activity being conducted within the assigned airspace and other IFR traffic.

**Air Vehicle Control Station (AVCS)** - A site configured to allow a pilot in command of an ROA to operate and monitor all ROA operations conducted under his or her authority.

**ATC Communication Link** - Two-way data or voice link between the ROA system and Air Traffic Control and/or other aircraft.

**Autonomous operation** – Operations that do not require direct pilot control.  
**Certificate of Authorization (COA)** - An FAA grant of approval for a specific Operation (s).

**Civil Aircraft** – aircraft other than public aircraft.

**Command and Control Link** – The two-way data link between the ROA pilot and the ROA that is used to control and monitor the health and status of the ROA.

**Concept of Operation** – A detailed description of the means for implementing an operational concept that is necessary to integrate ROA into the NAS in order to accommodate a “file and fly” capability.

**Control Station** – The equipment from which the HALE ROA’s pilot remotely controls and monitors the flight and mission activity of the ROA.

**Cooperative Traffic** - Traffic that broadcasts position or other information, which assists in detecting and assessing conflict potential.

**Detect, See, and Avoid** – The ability to sense traffic which may be a conflict, evaluate flight paths, determine traffic right-of-way, and maneuver to avoid other traffic.

**Equivalent Level of Safety** - An evaluation, often subjective, of a system and/or operation to determine the acceptable risk to people and property.

**File and Fly** - The ability of ROA operators or pilots to file an IFR flight plan and operate in all class of airspace, consistent with the regulatory criteria and operational requirements for manned aircraft. Additionally, ROA shall have compatible performance capabilities with manned aircraft operating at the same altitude(s). The flights require no pre-coordination with ATC. As with manned aircraft, ROA flights requiring special ATC handling in order to achieve mission objectives are not 'file and fly' and shall be pre-coordinated with ATC.

**Flight Management Control System** – An operable system that is contained onboard a HALE ROA that performs the flight control actions from input received from the pilot via the command and control communication link or that autonomously operates the HALE ROA from data previously inserted. This system does not require any additional pilot intervention.

**Flight Team Member** – Any individual whose duties could affect the safe outcome of the flight.

**Flight Termination System** – A device or pre-planned course of action that is used when continued safe flight is impractical.

**High Altitude Long Endurance (HALE) ROA** – An ROA capable of performing the mission objectives at an altitude of 40,000-foot mean sea level (MSL) or higher with sufficient cruise capability to transit the NAS.

**Letter of Agreement** – A document that is negotiated by ATC facilities and other persons/facilities/organizations for a variety of purposes. For a HALE ROA operation, the letter of agreement would normally be established to define airspace areas and associated operating procedures.

**Levels of Autonomy:**

**1.) Real-time command and control** -The capability for the Pilot to routinely respond to ATC instructions within (3) three seconds of issuance of the ATC instruction.

**2.) Near Real-time command and control** - The capability to routinely respond to ATC instructions within greater than (3) three seconds but less than (30) seconds of issuance the ATC instruction.

**3.) Non Real-time command and control** – The capability for an operator to change the pre-programmed flight mission instructions of a ROA routinely within greater than 30 thirty seconds of issuance of ATC instructions.

**4.) Autonomous command and control** - The ability for an aircraft to fully execute its flight missions

**Line-of-Sight** – The condition where the air vehicle control station and the ROA are within electronic point-to-point link.

**Manned Aircraft** – Aircraft that are piloted by a human onboard.

**Mission Area** – Airspace of defined horizontal and vertical dimensions and a defined duration within which the ROA may operate freely, and not associated with the flight route between the departure and arrival airport(s).

**Mission Route** – That portion along the route where sensors or other applications are exercised and course changes normally would adversely affect the mission objectives.

**Non-Cooperative Traffic** - Traffic that does not broadcast position or other information.

**Operational Concept** - A high level description of ATM services necessary to integrate ROA into the NAS by a given time horizon.

**Operator** - The individual that monitors and controls an ROA through near-real-time issuance of command and control input to the aircraft and possesses the applicable aeronautical knowledge but is not necessarily an FAA rated pilot.

**Over-the-Horizon** – The condition where the control station and the ROA are beyond line-of-site from each other.

**Pilot** – The individual that monitors, controls and maneuvers the ROA / RPA / UAV through the real-time issuance of command and control input to the aircraft and posses the applicable FAA pilot certifications and ratings.

**Pilot in Command** – The person responsible for the safe flight operation of a HALE ROA during all aspects of the operation, including the time that the ROA is under the direct command of a subordinate ROA pilot. The Pilot in Command (PIC) may be responsible for multiple ROA at a given time. In addition, the PIC may act as the pilot. (See also "pilot-in-command" in 14CFR, Part 1.)

**Positive Flight Control (PFC)** – A situation where the pilot is always assured of having line-of-sight or over-the-horizon command and control communication capability.

**Public Aircraft** – an aircraft used only for the United States Government, or owned and operated (except for commercial purposes), or exclusively leased for at least 90 continuous days, by a government (except the United States Government), including a State, the District of Columbia, or a territory or possession of the United States, or political subdivision of that government.

**Remotely Operated Aircraft** – An aircraft that is operated from a remote location by an operator that issues command and control instructions to the aircraft, which are executed near real-time by an onboard autonomous flight management control system.

**Remotely Piloted Aircraft** – An aircraft that is operated from a remote location by a pilot that issues command and control instructions to the aircraft, which are executed real-time by an onboard autonomous flight management control system.

**ROA Airport** - An airport that is capable of handling ROA operations.

**ROA Mission** – Those flight operations that have been approved by the appropriate FAA Air Traffic Division in the Certificate of Authorization.

**Route** – The flight path of HALE ROA from the departure airport to the arrival airport, excluding any mission route and mission area, and where course changes have no impact on the mission objectives.

**Routine operations** - See "File and Fly".